

GW - 1

MONITORING REPORTS

DATE:

2005-2004

COVER LETTER

December 27, 2005

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

RE: River Terrace - 12/05

Order No.: 0512175

Dear Cindy Hurtado:

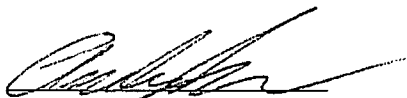
Hall Environmental Analysis Laboratory received 2 samples on 12/14/2005 for the analyses presented in the following report.

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-Dec-05

CLIENT: San Juan Refining
Lab Order: 0512175
Project: River Terrace - 12/05
Lab ID: 0512175-01

Client Sample ID: MW #49
Collection Date: 12/13/2005 2:20:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	1.1	1.0		mg/L	1	12/20/2005 2:40:01 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	12/20/2005 2:40:01 PM
Surr: DNOP	125	58-140		%REC	1	12/20/2005 2:40:01 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	0.46	0.050		mg/L	1	12/22/2005 4:02:52 PM
Surr: BFB	113	79.7-118		%REC	1	12/22/2005 4:02:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	12/22/2005 4:02:52 PM
Benzene	27	1.0		µg/L	1	12/22/2005 4:02:52 PM
Toluene	ND	1.0		µg/L	1	12/22/2005 4:02:52 PM
Ethylbenzene	8.5	1.0		µg/L	1	12/22/2005 4:02:52 PM
Xylenes, Total	ND	3.0		µg/L	1	12/22/2005 4:02:52 PM
Surr: 4-Bromofluorobenzene	110	82.2-119		%REC	1	12/22/2005 4:02:52 PM
EPA METHOD 8310: PAHS						Analyst: JMP
Naphthalene	8.9	2.5		µg/L	1	12/22/2005 1:09:29 AM
1-Methylnaphthalene	ND	2.5		µg/L	1	12/22/2005 1:09:29 AM
2-Methylnaphthalene	ND	2.5		µg/L	1	12/22/2005 1:09:29 AM
Acenaphthylene	ND	2.5		µg/L	1	12/22/2005 1:09:29 AM
Acenaphthene	ND	2.5		µg/L	1	12/22/2005 1:09:29 AM
Fluorene	ND	0.80		µg/L	1	12/22/2005 1:09:29 AM
Phenanthrene	ND	0.60		µg/L	1	12/22/2005 1:09:29 AM
Anthracene	ND	0.60		µg/L	1	12/22/2005 1:09:29 AM
Fluoranthene	ND	0.30		µg/L	1	12/22/2005 1:09:29 AM
Pyrene	ND	0.30		µg/L	1	12/22/2005 1:09:29 AM
Benz(a)anthracene	ND	0.020		µg/L	1	12/22/2005 1:09:29 AM
Chrysene	ND	0.20		µg/L	1	12/22/2005 1:09:29 AM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	12/22/2005 1:09:29 AM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	12/22/2005 1:09:29 AM
Benzo(a)pyrene	ND	0.020		µg/L	1	12/22/2005 1:09:29 AM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	12/22/2005 1:09:29 AM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	12/22/2005 1:09:29 AM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	12/22/2005 1:09:29 AM
Surr: Benzo(e)pyrene	66.8	54-102		%REC	1	12/22/2005 1:09:29 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-Dec-05

CLIENT: San Juan Refining
Lab Order: 0512175
Project: River Terrace - 12/05
Lab ID: 0512175-02

Client Sample ID: River Near MW #49
Collection Date: 12/13/2005 2:30:00 PM

Matrix: AQUEOUS

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	12/22/2005 1:32:07 PM
Benzene	ND	1.0		µg/L	1	12/22/2005 1:32:07 PM
Toluene	ND	1.0		µg/L	1	12/22/2005 1:32:07 PM
Ethylbenzene	ND	1.0		µg/L	1	12/22/2005 1:32:07 PM
Xylenes, Total	ND	3.0		µg/L	1	12/22/2005 1:32:07 PM
Surr: 4-Bromofluorobenzene	98.7	82.2-119		%REC	1	12/22/2005 1:32:07 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-Dec-05

CLIENT: San Juan Refining
 Work Order: 0512175
 Project: River Terrace - 12/05

QC SUMMARY REPORT

Method Blank

Sample ID: MB-9435	Batch ID: 9435	Test Code: SW8015	Units: mg/L	Analysis Date: 12/20/2005 1:01:49 PM	Prep Date: 12/20/2005
Client ID:		Run ID: FID(17A) 2_051219A		SeqNo: 434124	
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	1.202	0	1	0	120 58 140 0

Sample ID: Reagent Blank 5m	Batch ID: R17704	Test Code: SW8015	Units: mg/L	Analysis Date: 12/22/2005 9:00:09 AM	Prep Date:
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435099	
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	21.79	0	20	0	109 79.7 118 0

Sample ID: Reagent Blank 5m	Batch ID: R17704	Test Code: SW8021	Units: µg/L	Analysis Date: 12/22/2005 9:00:09 AM	Prep Date:
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435104	
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	1			
Toluene	ND	1			
Ethylbenzene	ND	1			
Xylenes, Total	ND	3			
Surr: 4-Bromofluorobenzene	20.79	0	20	0	104 82.2 119 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: 0512175
 Project: River Terrace - 12/05

QC SUMMARY REPORT

Method Blank

Sample ID: MB-9419	Batch ID: 9419	Test Code: SW8310	Units: µg/L	Analysis Date: 12/21/2005 7:33:25 PM	Prep Date: 12/16/2005						
Client ID:	Run ID: HUGO_051221A	SeqNo: 434880									
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	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	7.13	0	10	0	71.3	54	102	0			

Quantifiers: 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

Date: 27-Dec-05

QC SUMMARY REPORT

Sample Matrix Spike

Project: River Terrace - 12/05

Sample ID: 0512175-02a.msd	Batch ID: R17704	Test Code: SW8021	Units: µg/L	Analysis Date: 12/22/2005 3:32:42 PM		Prep Date:					
Client ID: River Near MW #4	Run ID:	PID/FID_051222A		SeqNo: 435114							
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19.32	2.5	20	0	96.6	64.5	133	19.93	3.11	28	
Benzene	18.48	1	20	0	92.4	88.5	114	18.65	0.897	27	
Toluene	19.03	1	20	0	95.1	87.2	114	18.97	0.291	19	
Ethylbenzene	19.64	1	20	0	98.2	88.6	113	19.35	1.49	10	
Xylenes, Total	39.33	3	40	0	98.3	83.3	114	39.12	0.540	13	
Surr: 4-Bromofluorobenzene	21.64	0	20	0	108	82.2	119	21.37	1.23	0	

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ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: 27-Dec-05

CLIENT: San Juan Refining

Work Order: 0512175

Project: River Terrace - 12/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9435	Batch ID: 9435	Test Code: SW8015	Units: mg/L	Analysis Date: 12/20/2005 1:34:36 PM				Prep Date: 12/20/2005			
Client ID:		Run ID: FID(17A) 2_051219A		SeqNo: 434125							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.334	1	5	0	127	81.2	149	0			

Sample ID: LCSD-9435	Batch ID: 9435	Test Code: SW8015	Units: mg/L	Analysis Date: 12/20/2005 2:07:19 PM				Prep Date: 12/20/2005			
Client ID:		Run ID: FID(17A) 2_051219A		SeqNo: 434161							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.393	1	5	0	128	81.2	149	6.334	0.915	23	

Sample ID: GRO lcs 2.5ug	Batch ID: R17704	Test Code: SW8015	Units: mg/L	Analysis Date: 12/22/2005 10:30:33 A				Prep Date:			
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435100							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5288	0.05	0.5	0	106	82.6	114	0			

Sample ID: GRO lcsd 2.5ug	Batch ID: R17704	Test Code: SW8015	Units: mg/L	Analysis Date: 12/22/2005 11:00:45 A				Prep Date:			
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435101							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5524	0.05	0.5	0	110	82.6	114	0.5288	4.37	8.39	

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limitsS - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limitsB - Analyte detected in the associated Method Blank
/

CLIENT: San Juan Refining

Work Order: 0512175

Project: River Terrace - 12/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: BTEX lcs 100ng Batch ID: R17704 Test Code: SW8021 Units: µg/L Analysis Date: 12/22/2005 11:30:58 A Prep Date:

Client ID:

Run ID: PIDFID_051222A

SeqNo: 435105

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	22.01	2.5	20	0	110	64.5	133	0			
Benzene	19.71	1	20	0	98.5	88.5	114	0			
Toluene	19.68	1	20	0	98.4	87.2	114	0			
Ethylbenzene	20.63	1	20	0	103	88.6	113	0			
Xylenes, Total	40.68	3	40	0	102	83.3	114	0			

Sample ID: LCS-9419 Batch ID: 9419 Test Code: SW8310 Units: µg/L Analysis Date: 12/21/2005 8:21:25 PM Prep Date: 12/16/2005

Client ID:

Run ID: HUGO_051221A

SeqNo: 434892

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	24.36	2.5	40	0	60.9	34.8	97.4	0			
1-Methylnaphthalene	25.34	2.5	40.1	0	63.2	34.7	100	0			
2-Methylnaphthalene	25.12	2.5	40	0	62.8	35	98.1	0			
Acenaphthylene	27.19	2.5	40.1	0	67.8	48.3	95.1	0			
Acenaphthene	27.1	2.5	40	0	67.8	45	95	0			
Fluorene	2.84	0.8	4.01	0	70.8	46.8	93.4	0			
Phenanthrene	1.52	0.6	2.01	0	75.6	48.7	104	0			
Anthracene	1.54	0.6	2.01	0	76.6	47.5	102	0			
Fluoranthene	2.92	0.3	4.01	0	72.8	46.3	108	0			
Pyrene	2.87	0.3	4.01	0	71.6	43.8	109	0			
Benz(a)anthracene	0.28	0.02	0.401	0	69.8	40.3	115	0			
Chrysene	1.38	0.2	2.01	0	68.7	42.6	107	0			
Benzo(b)fluoranthene	0.31	0.05	0.501	0	61.9	48.6	107	0			
Benzo(k)fluoranthene	0.18	0.02	0.25	0	72.0	23.3	136	0			
Benzo(a)pyrene	0.19	0.02	0.251	0	75.7	33.4	117	0			
Dibenz(a,h)anthracene	0.39	0.04	0.501	0	77.8	27.3	139	0			
Benzo(g,h,i)perylene	0.36	0.03	0.5	0	72.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.87	0.08	1.002	0	86.8	39.9	125	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

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CLIENT: San Juan Refining

Work Order: 0512175

Project: River Terrace - 12/05

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCSD-9419		Batch ID: 9419		Test Code: SW831D		Units: µg/L		Analysis Date: 12/21/2005 9:09:26 PM		Prep Date: 12/16/2005	
Client ID:		Run ID:		PQL		SPK value		SeqNo: 434893			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	21.93	2.5	40	0	54.8	34.8	97.4	24.36	10.5	32.1	
1-Methylnaphthalene	23.41	2.5	40.1	0	58.4	34.7	100	25.34	7.92	32.7	
2-Methylnaphthalene	22.96	2.5	40	0	57.4	35	98.1	25.12	8.99	34	
Acenaphthylene	25.89	2.5	40.1	0	64.6	48.3	95.1	27.19	4.90	38.8	
Acenaphthene	25.9	2.5	40	0	64.8	45	95	27.1	4.53	38.6	
Fluorene	2.81	0.8	4.01	0	70.1	46.8	93.4	2.84	1.06	39.3	
Phenanthrene	1.59	0.6	2.01	0	79.1	48.7	104	1.52	4.50	25	
Anthracene	1.63	0.6	2.01	0	81.1	47.5	102	1.54	5.68	23.9	
Fluoranthene	3.18	0.3	4.01	0	79.3	46.3	108	2.92	8.52	15.7	
Pyrene	3.18	0.3	4.01	0	79.3	43.8	109	2.87	10.2	15.3	
Benz(a)anthracene	0.31	0.02	0.401	0	77.3	40.3	115	0.28	10.2	119	
Chrysene	1.44	0.2	2.01	0	71.6	42.6	107	1.38	4.26	16.6	
Benzo(b)fluoranthene	0.38	0.05	0.501	0	75.8	48.6	107	0.31	20.3	21.7	
Benzo(k)fluoranthene	0.2	0.02	0.25	0	80.0	23.3	136	0.18	10.5	19.4	
Benzo(a)pyrene	0.21	0.02	0.251	0	83.7	33.4	117	0.19	10.0	16.7	
Dibenz(a,h)anthracene	0.42	0.04	0.501	0	83.8	27.3	139	0.39	7.41	17.3	
Benzo(g,h,i)perylene	0.38	0.03	0.5	0	76.0	38.2	117	0.36	5.41	118	
Indeno(1,2,3-cd)pyrene	0.91	0.08	1.002	0	90.8	39.9	125	0.87	4.49	17.7	

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

12/14/2005

Work Order Number 0512175

Received by AT

Checklist completed by



12/14/05
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

Client: SAN JUAN RETURN

Project Name:

Other: _____
Subject Name: River Terrace - 12/05

Address: #50124990

Blomfield, Nym

89413

Phone #: 505-632-4161

Fax #: 505-632-3911

Date	Time
------	------

Time	Matrix
0	0
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
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88	0
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90	0
91	0
92	0
93	0
94	0
95	0
96	0
97	0
98	0
99	0

Sample I.D. No.

Number/Volume

HEAL No.

12/13/05

2200	1
------	---

0249	MW #49
------	--------

2-V0A

2176

12/13/05 2:30 pm

420

River Near MW #49

2-VDA

1

~~12/15/79~~

[illegible]

--	--

Date:

Time:

Relinquished By: (Signature)

Received By: (Signature)

Remarks:

Tab:

Time:

Relinquished/By: (Signature)

Received By: [Signature]

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

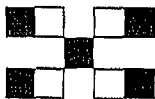
ANALYSIS LABORATORY

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel. 505.345.3975 Fax 505.345.4107

TEL: 008:540:5570 FAX 00:
www.hallenvironmental.com



ANALYSIS REQUEST

[illegible]

Remarks:

COVER LETTER

December 15, 2005

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

RE: TK #33 Effluent - 12/05

Order No.: 0512076

Dear Cindy Hurtado:

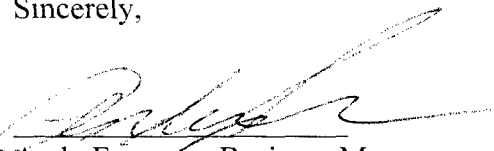
Hall Environmental Analysis Laboratory received 2 samples on 12/6/2005 for the analyses presented in the following report.

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: 15-Dec-05

CLIENT: San Juan Refining
Project: TK #33 Effluent - 12/05

Lab Order: 0512076

Lab ID: 0512076-01 Collection Date: 12/5/2005 11:00:00 AM
Client Sample ID: TK #33 Effluent Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	12/14/2005 10:55:19 PM
Toluene	ND	0.50		µg/L	1	12/14/2005 10:55:19 PM
Ethylbenzene	ND	0.50		µg/L	1	12/14/2005 10:55:19 PM
Xylenes, Total	ND	0.50		µg/L	1	12/14/2005 10:55:19 PM
Surr: 4-Bromofluorobenzene	104	82.2-119		%REC	1	12/14/2005 10:55:19 PM

Lab ID: 0512076-02 Collection Date: 12/5/2005 11:10:00 AM
Client Sample ID: Fresh Water Pond Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	12/14/2005 11:25:37 PM
Toluene	ND	0.50		µg/L	1	12/14/2005 11:25:37 PM
Ethylbenzene	ND	0.50		µg/L	1	12/14/2005 11:25:37 PM
Xylenes, Total	ND	0.50		µg/L	1	12/14/2005 11:25:37 PM
Surr: 4-Bromofluorobenzene	99.7	82.2-119		%REC	1	12/14/2005 11:25:37 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: 15-Dec-05

CLIENT: San Juan Refining
 Work Order: 0512076
 Project: TK #33 Effluent - 12/05

QC SUMMARY REPORT

Method Blank

Sample ID: Reagent Blank 5m	Batch ID: R17607	Test Code: SW8021	Units: µg/L	Analysis Date: 12/14/2005 9:37:13 AM	Prep Date:
Client ID:		Run ID: PIDFID_051214A		SeqNo: 432140	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Benzene	ND	0.5			
Toluene	ND	0.5			
Ethylbenzene	ND	0.5			
Xylenes, Total	ND	0.5			
Surr: 4-Bromofluorobenzene	21.29	0	20	0	106
				82.2	119
					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: 15-Dec-05

CLIENT: San Juan Refining
Work Order: 0512076
Project: TK #33 Effluent - 12/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: BTEX lcs 100ng		Batch ID: R17607	Test Code: SW8021	Units: µg/L	Analysis Date: 12/14/2005 12:11:05 P		Prep Date:				
Client ID:			Run ID: PIDFID_051214A		SeqNo: 432141						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.14	0.5	20	0	95.7	88.5	114	0			
Toluene	19.4	0.5	20	0	97.0	87.2	114	0			
Ethylbenzene	20.12	0.5	20	0	101	88.6	113	0			
Xylenes, Total	40.25	0.5	40	0	101	83.3	114	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:

12/6/2005

Work Order Number 0512076

Received by GLS

Checklist completed by

Signature

Date

12/6/05

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?

2°

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						
QA / QC Package: ☐ Std ☐ Level 4 ☐ Other:						
Client: <u>SAN JUAN Refining</u>		Project Name: <u>TK # 33 Effluent - 12/05</u>				
Address: <u>#50 Rd 4990</u>		Project #: _____				
<u>Blossa Field, NM</u>		Project Manager: _____				
<u>87413</u>		Sampler: <u>Cindy Hurtado</u>				
Phone #: <u>505-632-4161</u>		Sample Temperature: <u>2°</u>				
Fax #: <u>505-632-3911</u>						
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl ₂ HNO ₃	HEAL No. (512076)
12-05-05	11AM	H ₂ O	TK # 33 Effluent	2-VOA	X	1
1	11:04am	1	Fresh Water Pond	2-VOA	X	2
Date: <u>12-05-05</u>		Time: <u>10:5pm</u>		Relinquished By: (Signature) <u>Cindy Hurtado</u>		
Date: _____		Time: _____		Received By: (Signature) <u>D. Schepa</u>		
				HEAL No. <u>1716105</u>		



Wayne Price
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Dr
Santa Fe, NM 87505

Certified Mail: 7004 2510 0005 1641 4668

November 21, 2005

RE: Giant Refining Company, Bloomfield Refinery
EPA ID# NMD089416416
GW - 001

Dear Mr. Price,

Please find attached analytical results for the October 19, 2005 and November 9, 2005 sampling events for Tank #33 Effluent and the Fresh Water Ponds at the Giant Refining - Bloomfield facility. Note that the results for Tank #33 had a detection of benzene at a concentration of 0.93 ug/L for October and 0.61 ug/L for November. BTEX samples were taken from the fresh Water Pond outlet during each sampling event. The results of both of those samples were non detect. We will continue to monitor Tank #33 Effluent on a monthly basis and evaluate the concentration trends.

The fourth quarter 2005 sampling event for the San Juan River was conducted October 24, 2005. Analytical results are enclosed with this packet. There was not an exceedance of any WQCC standard or EPA maximum contaminant level during this sampling event.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,

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

Cindy Hurtado
Environmental Coordinator
Giant Refining - Bloomfield

Cc: Hope Monzeglio - NMED - Hazardous Waste Bureau
Ed Riege - Environmental Superintendent - Giant Refining
Randy Schmaltz - Environmental Manager - Giant Refining

PHONE

505-632-8013

FAX

505-632-3911

RECEIVED

NOV 28 2005

**OIL CONSERVATION
DIVISION**

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

COVER LETTER

November 01, 2005

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

RE: TK #33 - Effluent-10/05

Order No.: 0510199

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 2 samples on 10/20/2005 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: 01-Nov-05

CLIENT: San Juan Refining
Project: TK #33 - Effluent-10/05

Lab Order: 0510199

Lab ID: 0510199-01

Collection Date: 10/19/2005 1:15:00 PM

Client Sample ID: TK#33

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						
Benzene	0.93	0.50		µg/L	1	10/31/2005 10:04:37 AM
Toluene	ND	0.50		µg/L	1	10/31/2005 10:04:37 AM
Ethylbenzene	ND	0.50		µg/L	1	10/31/2005 10:04:37 AM
Xylenes, Total	ND	0.50		µg/L	1	10/31/2005 10:04:37 AM
Surr: 4-Bromofluorobenzene	98.4	82.2-119		%REC	1	10/31/2005 10:04:37 AM

Analyst: NSB

Lab ID: 0510199-02

Collection Date: 10/19/2005 1:20:00 PM

Client Sample ID: Fresh Water Ponds

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						
Benzene	ND	0.50		µg/L	1	10/31/2005 10:35:31 AM
Toluene	ND	0.50		µg/L	1	10/31/2005 10:35:31 AM
Ethylbenzene	ND	0.50		µg/L	1	10/31/2005 10:35:31 AM
Xylenes, Total	ND	0.50		µg/L	1	10/31/2005 10:35:31 AM
Surr: 4-Bromofluorobenzene	104	82.2-119		%REC	1	10/31/2005 10:35:31 AM

Analyst: NSB

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: 01-Nov-05

CLIENT: San Juan Refining
 Work Order: 0510199
 Project: TK #33 - Effluent-10/05

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R17139	Test Code: SW8021	Units: µg/L	Analysis Date 10/31/2005 8:13:11 AM	Prep Date					
Client ID:			Run ID: PIDFID_051031A		SeqNo: 416877						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	21.06	0	20	0	105	82.2	119	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: 01-Nov-05

CLIENT: San Juan Refining

Work Order: 0510199

Project: TK #33 - Effluent-10/05

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0510199-02a.ms	Batch ID:	R17139	Test Code:	SW8021	Units:	µg/L	Analysis Date	10/31/2005 11:06:18 A	Prep Date		
Client ID:	Fresh Water Pond	Run ID:	PIDFID_051031A	SeqNo:	416884							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		20.63	0.5	20	0	103	88.5	114	0			
Toluene		19.6	0.5	20	0	98.0	87.2	114	0			
Ethylbenzene		19.64	0.5	20	0	98.2	88.6	113	0			
Xylenes, Total		58.82	0.5	60	0	98.0	83.3	114	0			
Surr: 4-Bromofluorobenzene		24.59	0	24	0	102	82.2	119	0			

Sample ID	0510199-02a msd	Batch ID: R17139	Test Code: SW8021	Units: µg/L	Analysis Date	10/31/2005 11:37:09 A	Prep Date				
Client ID:	Fresh Water Pond	Run ID:	PIDFID_051031A		SeqNo:	417021					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.3	0.5	20	0	107	88.5	114	20.63	3.20	27	
Toluene	19.99	0.5	20	0	100	87.2	114	19.6	2.01	19	
Ethylbenzene	19.92	0.5	20	0	99.6	88.6	113	19.64	1.39	10	
Xylenes, Total	60.42	0.5	60	0	101	83.3	114	58.82	2.69	13	
Surr: 4-Bromofluorobenzene	24.82	0	24	0	103	82.2	119	24.59	0.927	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: 01-Nov-05

CLIENT: San Juan Refining

Work Order: 0510199

Project: TK #33 - Effluent-10/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX Ics 100ng	Batch ID: R17139	Test Code: SW8021	Units: µg/L	Analysis Date	10/31/2005 12:07:58 P	Prep Date				
Client ID:			Run ID: PIDFID_051031A		SeqNo: 416878						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.26	0.5	20	0	106	88.5	114	0			
Toluene	19.79	0.5	20	0	99.0	87.2	114	0			
Ethylbenzene	20.01	0.5	20	0	100	88.6	113	0			
Xylenes, Total	40.71	0.5	40	0	102	83.3	114	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:

10/20/2005

Work Order Number 0510199

Received by SSB

Checklist completed by

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?	4°	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 505.345.4901
www.hallenvironmental.com

[illegible]

COVER LETTER

November 15, 2005

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

RE: TK #33 - Effluent-11/05

Order No.: 0511102

Dear Cindy Hurtado:

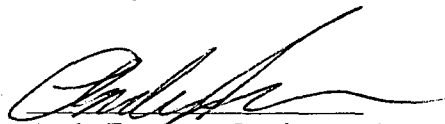
Hall Environmental Analysis Laboratory received 2 samples on 11/10/2005 for the analyses presented in the following report.

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: 15-Nov-05

CLIENT: San Juan Refining
Project: TK #33 - Effluent-11/05

Lab Order: 0511102

Lab ID:	0511102-01	Collection Date:	11/9/2005 2:10:00 PM			
Client Sample ID:	Tk #33 Effluent	Matrix:	AQUEOUS			
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.61	0.50		µg/L	1	11/14/2005 9:39:08 PM
Toluene	ND	0.50		µg/L	1	11/14/2005 9:39:08 PM
Ethylbenzene	ND	0.50		µg/L	1	11/14/2005 9:39:08 PM
Xylenes, Total	ND	0.50		µg/L	1	11/14/2005 9:39:08 PM
Surr: 4-Bromofluorobenzene	103	82.2-119		%REC	1	11/14/2005 9:39:08 PM

Lab ID:	0511102-02	Collection Date:	11/9/2005 2:30:00 PM			
Client Sample ID:	Fresh Waterpond	Matrix:	AQUEOUS			
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	11/14/2005 10:10:12 PM
Toluene	ND	0.50		µg/L	1	11/14/2005 10:10:12 PM
Ethylbenzene	ND	0.50		µg/L	1	11/14/2005 10:10:12 PM
Xylenes, Total	ND	0.50		µg/L	1	11/14/2005 10:10:12 PM
Surr: 4-Bromofluorobenzene	98.9	82.2-119		%REC	1	11/14/2005 10:10:12 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: 15-Nov-05

CLIENT: San Juan Refining
 Work Order: 0511102
 Project: TK #33 - Effluent-11/05

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R17290	Test Code: SW8021	Units: µg/L	Analysis Date 11/14/2005 7:37:31 AM	Prep Date					
Client ID:			Run ID: PIDFID_051114B		SeqNo: 422075						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	21.77	0	20	0	109	82.2	119	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: 15-Nov-05

CLIENT: San Juan Refining
 Work Order: 0511102
 Project: TK #33 - Effluent-11/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX lcs 100ng	Batch ID: R17290	Test Code: SW8021	Units: µg/L	Analysis Date	11/14/2005 8:05:39 PM	Prep Date				
Client ID:			Run ID: PIDFID_051114B		SeqNo: 422077						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.91	0.5	20	0	105	88.5	114	0			
Toluene	18.83	0.5	20	0	94.2	87.2	114	0			
Ethylbenzene	19.49	0.5	20	0	97.5	88.6	113	0			
Xylenes, Total	57.38	0.5	60	0	95.6	83.3	114	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:

11/10/2005

Work Order Number 0511102

Received by AT

Checklist completed by

Signature

Date

11/10/05

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?	4°	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

ANALYSIS REQUEST

Air Bubbles or Headspace (Y or N)

QA/QC Package:

Std ☐ Level 4 ☐

Other:

Project Name:

TK #33 Effluent - 11/05-

Project #:

Project Manager:

Sampler: Cindy Huotz

01

Sample Temperature:

HEAL No.

Preservative

$$\text{HgCl}_2 \quad \text{HNO}_3$$

Number/Volume

Sample I.D. No.

Matrix

Time

10/09/05	210pm	H ₂ O	TK#33 Effluent
----------	-------	------------------	----------------

11/1/05	2:30pm	H ₂ O	Fresh Water End
---------	--------	------------------	-----------------

2-V0A

2-VOR

0511102-1

-2

Time:

5/16/19

Relinquished By: (Signature)

Washed Quarts

Received By: (Signature)

✓

11/10/05

1705

Remarks:



COVER LETTER

November 09, 2005

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

RE: River Sampling 4th Qtr. 2005

Order No.: 0510245

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 4 samples on 10/25/2005 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



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Hall Environmental Analysis Laboratory

Date: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River N of MW #46

Lab Order: 0510245

Collection Date: 10/24/2005 1:10:00 PM

Project: River Sampling 4th Qtr, 2005

Lab ID: 0510245-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CMC
Fluoride	0.12	0.10		mg/L	1	10/25/2005
Chloride	3.3	0.10		mg/L	1	10/25/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	10/25/2005
Bromide	ND	0.50		mg/L	1	10/25/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	10/25/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	10/25/2005
Sulfate	67	0.50		mg/L	1	10/25/2005
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO3)	88	2.0		mg/L CaCO3	1	11/7/2005
Carbonate	ND	2.0		mg/L CaCO3	1	11/7/2005
Bicarbonate	88	2.0		mg/L CaCO3	1	11/7/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/27/2005 7:20:30 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/27/2005 7:20:30 AM
Surr: DNOP	130	58-140		%REC	1	10/27/2005 7:20:30 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/3/2005 10:49:23 AM
Surr: BFB	103	79.7-118		%REC	1	11/3/2005 10:49:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/3/2005 10:49:23 AM
Benzene	ND	0.50		µg/L	1	11/3/2005 10:49:23 AM
Toluene	ND	0.50		µg/L	1	11/3/2005 10:49:23 AM
Ethylbenzene	ND	0.50		µg/L	1	11/3/2005 10:49:23 AM
Xylenes, Total	ND	0.50		µg/L	1	11/3/2005 10:49:23 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	ND	10		µg/L	1	11/2/2005
Acenaphthylene	ND	10		µg/L	1	11/2/2005
Aniline	ND	20		µg/L	1	11/2/2005
Anthracene	ND	10		µg/L	1	11/2/2005
Azobenzene	ND	10		µg/L	1	11/2/2005
Benz(a)anthracene	ND	15		µg/L	1	11/2/2005
Benzo(a)pyrene	ND	15		µg/L	1	11/2/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	11/2/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/2/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	11/2/2005
Benzoic acid	ND	50		µg/L	1	11/2/2005
Benzyl alcohol	ND	20		µg/L	1	11/2/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/2/2005

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

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Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	ND	15		µg/L	1	11/2/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	11/2/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	11/2/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/2/2005
Butyl benzyl phthalate	ND	15		µg/L	1	11/2/2005
Carbazole	ND	10		µg/L	1	11/2/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	11/2/2005
4-Chloroaniline	ND	20		µg/L	1	11/2/2005
2-Chloronaphthalene	ND	10		µg/L	1	11/2/2005
2-Chlorophenol	ND	10		µg/L	1	11/2/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	11/2/2005
Chrysene	ND	15		µg/L	1	11/2/2005
Di-n-butyl phthalate	ND	10		µg/L	1	11/2/2005
Di-n-octyl phthalate	ND	15		µg/L	1	11/2/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/2/2005
Dibenzofuran	ND	10		µg/L	1	11/2/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	11/2/2005
Diethyl phthalate	ND	10		µg/L	1	11/2/2005
Dimethyl phthalate	ND	10		µg/L	1	11/2/2005
2,4-Dichlorophenol	ND	10		µg/L	1	11/2/2005
2,4-Dimethylphenol	ND	10		µg/L	1	11/2/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	11/2/2005
2,4-Dinitrophenol	ND	50		µg/L	1	11/2/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	11/2/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	11/2/2005
Fluoranthene	ND	10		µg/L	1	11/2/2005
Fluorene	ND	10		µg/L	1	11/2/2005
Hexachlorobenzene	ND	10		µg/L	1	11/2/2005
Hexachlorobutadiene	ND	10		µg/L	1	11/2/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/2/2005
Hexachloroethane	ND	10		µg/L	1	11/2/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/2/2005
Isophorone	ND	10		µg/L	1	11/2/2005
2-Methylnaphthalene	ND	10		µg/L	1	11/2/2005
2-Methylphenol	ND	15		µg/L	1	11/2/2005
3+4-Methylphenol	ND	20		µg/L	1	11/2/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/2/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	11/2/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/2/2005

Qualifiers: ND - Not Detected at the Reporting Limit

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B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Date: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River N of MW #46

Lab Order: 0510245

Collection Date: 10/24/2005 1:10:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Naphthalene	ND	10		µg/L	1	11/2/2005
2-Nitroaniline	ND	50		µg/L	1	11/2/2005
3-Nitroaniline	ND	50		µg/L	1	11/2/2005
4-Nitroaniline	ND	20		µg/L	1	11/2/2005
Nitrobenzene	ND	10		µg/L	1	11/2/2005
2-Nitrophenol	ND	15		µg/L	1	11/2/2005
4-Nitrophenol	ND	50		µg/L	1	11/2/2005
Pentachlorophenol	ND	50		µg/L	1	11/2/2005
Phenanthrene	ND	10		µg/L	1	11/2/2005
Phenol	ND	10		µg/L	1	11/2/2005
Pyrene	ND	15		µg/L	1	11/2/2005
Pyridine	ND	30		µg/L	1	11/2/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/2/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/2/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	11/2/2005
Surr: 2,4,6-Tribromophenol	67.9	16.6-150		%REC	1	11/2/2005
Surr: 2-Fluorobiphenyl	66.2	19.6-134		%REC	1	11/2/2005
Surr: 2-Fluorophenol	43.1	9.54-113		%REC	1	11/2/2005
Surr: 4-Terphenyl-d14	70.2	22.7-145		%REC	1	11/2/2005
Surr: Nitrobenzene-d5	66.2	14.6-134		%REC	1	11/2/2005
Surr: Phenol-d6	30.8	10.7-80.3		%REC	1	11/2/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: TES
Specific Conductance	340	0.010		µmhos/cm	1	11/1/2005
EPA METHOD 245.1: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	10/26/2005
EPA METHOD 6010B: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/7/2005 2:56:44 PM
Barium	0.064	0.0020		mg/L	1	11/7/2005 2:56:44 PM
Cadmium	ND	0.0020		mg/L	1	11/7/2005 2:56:44 PM
Calcium	38	1.0		mg/L	1	11/7/2005 2:56:44 PM
Chromium	ND	0.0060		mg/L	1	11/7/2005 2:56:44 PM
Copper	ND	0.0060		mg/L	1	11/7/2005 2:56:44 PM
Iron	ND	0.020		mg/L	1	11/7/2005 2:56:44 PM
Lead	ND	0.0050		mg/L	1	11/7/2005 2:56:44 PM
Magnesium	6.5	1.0		mg/L	1	11/7/2005 2:56:44 PM
Manganese	0.014	0.0020		mg/L	1	11/7/2005 2:56:44 PM
Potassium	1.9	1.0		mg/L	1	11/7/2005 2:56:44 PM
Selenium	ND	0.050		mg/L	1	11/7/2005 2:56:44 PM
Silver	ND	0.0050		mg/L	1	11/7/2005 2:56:44 PM
Sodium	19	1.0		mg/L	1	11/7/2005 2:56:44 PM
Uranium	ND	0.10		mg/L	1	11/7/2005 2:56:44 PM

Qualifiers: ND - Not Detected at the Reporting Limit

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E - Value above quantitation range

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Date: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River N of MW #46

Lab Order: 0510245

Collection Date: 10/24/2005 1:10:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Zinc	0.027	0.0050		mg/L	1	11/7/2005 2:56:44 PM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	10/28/2005 12:55:23 PM
Barium	0.083	0.020		mg/L	1	10/28/2005 12:55:23 PM
Cadmium	ND	0.0020		mg/L	1	10/28/2005 12:55:23 PM
Chromium	ND	0.0060		mg/L	1	10/28/2005 12:55:23 PM
Lead	ND	0.0050		mg/L	1	10/28/2005 12:55:23 PM
Selenium	ND	0.050		mg/L	1	10/28/2005 12:55:23 PM
Silver	ND	0.0050		mg/L	1	10/28/2005 12:55:23 PM
EPA METHOD 160.1: TDS						Analyst: TES
Total Dissolved Solids	190	50		mg/L	1	10/27/2005

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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: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River N of MW #45

Lab Order: 0510245

Collection Date: 10/24/2005 2:00:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CMC
Fluoride	0.12	0.10		mg/L	1	10/25/2005
Chloride	3.3	0.10		mg/L	1	10/25/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	10/25/2005
Bromide	ND	0.50		mg/L	1	10/25/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	10/25/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	10/25/2005
Sulfate	67	0.50		mg/L	1	10/25/2005
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO3)	88	2.0		mg/L CaCO3	1	11/7/2005
Carbonate	ND	2.0		mg/L CaCO3	1	11/7/2005
Bicarbonate	88	2.0		mg/L CaCO3	1	11/7/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/27/2005 7:53:18 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/27/2005 7:53:18 AM
Surr: DNOP	127	58-140		%REC	1	10/27/2005 7:53:18 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/3/2005 11:20:27 AM
Surr: BFB	106	79.7-118		%REC	1	11/3/2005 11:20:27 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/3/2005 11:20:27 AM
Benzene	ND	0.50		µg/L	1	11/3/2005 11:20:27 AM
Toluene	ND	0.50		µg/L	1	11/3/2005 11:20:27 AM
Ethylbenzene	ND	0.50		µg/L	1	11/3/2005 11:20:27 AM
Xylenes, Total	ND	0.50		µg/L	1	11/3/2005 11:20:27 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	ND	10		µg/L	1	11/2/2005
Acenaphthylene	ND	10		µg/L	1	11/2/2005
Aniline	ND	20		µg/L	1	11/2/2005
Anthracene	ND	10		µg/L	1	11/2/2005
Azobenzene	ND	10		µg/L	1	11/2/2005
Benz(a)anthracene	ND	15		µg/L	1	11/2/2005
Benzo(a)pyrene	ND	15		µg/L	1	11/2/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	11/2/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/2/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	11/2/2005
Benzoic acid	ND	50		µg/L	1	11/2/2005
Benzyl alcohol	ND	20		µg/L	1	11/2/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/2/2005

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 J - Analyte detected below quantitation limits
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 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River N of MW #45

Lab Order: 0510245

Collection Date: 10/24/2005 2:00:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	ND	15		µg/L	1	11/2/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	11/2/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	11/2/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/2/2005
Butyl benzyl phthalate	ND	15		µg/L	1	11/2/2005
Carbazole	ND	10		µg/L	1	11/2/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	11/2/2005
4-Chloroaniline	ND	20		µg/L	1	11/2/2005
2-Chloronaphthalene	ND	10		µg/L	1	11/2/2005
2-Chlorophenol	ND	10		µg/L	1	11/2/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	11/2/2005
Chrysene	ND	15		µg/L	1	11/2/2005
Di-n-butyl phthalate	ND	10		µg/L	1	11/2/2005
Di-n-octyl phthalate	ND	15		µg/L	1	11/2/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/2/2005
Dibenzofuran	ND	10		µg/L	1	11/2/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	11/2/2005
Diethyl phthalate	ND	10		µg/L	1	11/2/2005
Dimethyl phthalate	ND	10		µg/L	1	11/2/2005
2,4-Dichlorophenol	ND	10		µg/L	1	11/2/2005
2,4-Dimethylphenol	ND	10		µg/L	1	11/2/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	11/2/2005
2,4-Dinitrophenol	ND	50		µg/L	1	11/2/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	11/2/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	11/2/2005
Fluoranthene	ND	10		µg/L	1	11/2/2005
Fluorene	ND	10		µg/L	1	11/2/2005
Hexachlorobenzene	ND	10		µg/L	1	11/2/2005
Hexachlorobutadiene	ND	10		µg/L	1	11/2/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/2/2005
Hexachloroethane	ND	10		µg/L	1	11/2/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/2/2005
Isophorone	ND	10		µg/L	1	11/2/2005
2-Methylnaphthalene	ND	10		µg/L	1	11/2/2005
2-Methylphenol	ND	15		µg/L	1	11/2/2005
3+4-Methylphenol	ND	20		µg/L	1	11/2/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/2/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	11/2/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/2/2005

Qualifiers: ND - Not Detected at the Reporting Limit
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Date: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River N of MW #45

Lab Order: 0510245

Collection Date: 10/24/2005 2:00:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Naphthalene	ND	10		µg/L	1	11/2/2005
2-Nitroaniline	ND	50		µg/L	1	11/2/2005
3-Nitroaniline	ND	50		µg/L	1	11/2/2005
4-Nitroaniline	ND	20		µg/L	1	11/2/2005
Nitrobenzene	ND	10		µg/L	1	11/2/2005
2-Nitrophenol	ND	15		µg/L	1	11/2/2005
4-Nitrophenol	ND	50		µg/L	1	11/2/2005
Pentachlorophenol	ND	50		µg/L	1	11/2/2005
Phenanthrene	ND	10		µg/L	1	11/2/2005
Phenol	ND	10		µg/L	1	11/2/2005
Pyrene	ND	15		µg/L	1	11/2/2005
Pyridine	ND	30		µg/L	1	11/2/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/2/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/2/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	11/2/2005
Surr: 2,4,6-Tribromophenol	60.8	16.6-150		%REC	1	11/2/2005
Surr: 2-Fluorobiphenyl	62.6	19.6-134		%REC	1	11/2/2005
Surr: 2-Fluorophenol	52.5	9.54-113		%REC	1	11/2/2005
Surr: 4-Terphenyl-d14	74.1	22.7-145		%REC	1	11/2/2005
Surr: Nitrobenzene-d5	61.4	14.6-134		%REC	1	11/2/2005
Surr: Phenol-d6	37.1	10.7-80.3		%REC	1	11/2/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: TES
Specific Conductance	340	0.010		µmhos/cm	1	11/1/2005
EPA METHOD 245.1: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	10/26/2005
EPA METHOD 6010B: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/7/2005 2:59:51 PM
Barium	0.065	0.0020		mg/L	1	11/7/2005 2:59:51 PM
Cadmium	ND	0.0020		mg/L	1	11/7/2005 2:59:51 PM
Calcium	38	1.0		mg/L	1	11/7/2005 2:59:51 PM
Chromium	ND	0.0060		mg/L	1	11/7/2005 2:59:51 PM
Copper	ND	0.0060		mg/L	1	11/7/2005 2:59:51 PM
Iron	ND	0.020		mg/L	1	11/7/2005 2:59:51 PM
Lead	ND	0.0050		mg/L	1	11/7/2005 2:59:51 PM
Magnesium	6.5	1.0		mg/L	1	11/7/2005 2:59:51 PM
Manganese	0.016	0.0020		mg/L	1	11/7/2005 2:59:51 PM
Potassium	1.9	1.0		mg/L	1	11/7/2005 2:59:51 PM
Selenium	ND	0.050		mg/L	1	11/7/2005 2:59:51 PM
Silver	ND	0.0050		mg/L	1	11/7/2005 2:59:51 PM
Sodium	19	1.0		mg/L	1	11/7/2005 2:59:51 PM
Uranium	ND	0.10		mg/L	1	11/7/2005 2:59:51 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: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River N of MW #45

Lab Order: 0510245

Collection Date: 10/24/2005 2:00:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Zinc	0.013	0.0050		mg/L	1	11/7/2005 2:59:51 PM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	10/28/2005 12:58:29 PM
Barium	0.079	0.020		mg/L	1	10/28/2005 12:58:29 PM
Cadmium	ND	0.0020		mg/L	1	10/28/2005 12:58:29 PM
Chromium	ND	0.0060		mg/L	1	10/28/2005 12:58:29 PM
Lead	ND	0.0050		mg/L	1	10/28/2005 12:58:29 PM
Selenium	ND	0.050		mg/L	1	10/28/2005 12:58:29 PM
Silver	ND	0.0050		mg/L	1	10/28/2005 12:58:29 PM
EPA METHOD 160.1: TDS						Analyst: TES
Total Dissolved Solids	200	50		mg/L	1	10/27/2005

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-05

CLIENT: San Juan Refining

Client Sample ID: River Upstream

Lab Order: 0510245

Collection Date: 10/24/2005 2:25:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CMC
Fluoride	0.10	0.10		mg/L	1	10/25/2005
Chloride	3.3	0.10		mg/L	1	10/25/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	10/25/2005
Bromide	ND	0.50		mg/L	1	10/25/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	10/25/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	10/25/2005
Sulfate	65	0.50		mg/L	1	10/25/2005
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO3)	88	2.0		mg/L CaCO3	1	11/7/2005
Carbonate	ND	2.0		mg/L CaCO3	1	11/7/2005
Bicarbonate	88	2.0		mg/L CaCO3	1	11/7/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/27/2005 8:26:07 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/27/2005 8:26:07 AM
Surr: DNOP	130	58-140		%REC	1	10/27/2005 8:26:07 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/3/2005 11:51:22 AM
Surr: BFB	107	79.7-118		%REC	1	11/3/2005 11:51:22 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/3/2005 11:51:22 AM
Benzene	ND	0.50		µg/L	1	11/3/2005 11:51:22 AM
Toluene	ND	0.50		µg/L	1	11/3/2005 11:51:22 AM
Ethylbenzene	ND	0.50		µg/L	1	11/3/2005 11:51:22 AM
Xylenes, Total	ND	0.50		µg/L	1	11/3/2005 11:51:22 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	ND	10		µg/L	1	11/2/2005
Acenaphthylene	ND	10		µg/L	1	11/2/2005
Aniline	ND	20		µg/L	1	11/2/2005
Anthracene	ND	10		µg/L	1	11/2/2005
Azobenzene	ND	10		µg/L	1	11/2/2005
Benz(a)anthracene	ND	15		µg/L	1	11/2/2005
Benzo(a)pyrene	ND	15		µg/L	1	11/2/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	11/2/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/2/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	11/2/2005
Benzoic acid	ND	50		µg/L	1	11/2/2005
Benzyl alcohol	ND	20		µg/L	1	11/2/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/2/2005

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-05

CLIENT: San Juan Refining

Client Sample ID: River Upstream

Lab Order: 0510245

Collection Date: 10/24/2005 2:25:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	ND	15		µg/L	1	11/2/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	11/2/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	11/2/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/2/2005
Butyl benzyl phthalate	ND	15		µg/L	1	11/2/2005
Carbazole	ND	10		µg/L	1	11/2/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	11/2/2005
4-Chloroaniline	ND	20		µg/L	1	11/2/2005
2-Chloronaphthalene	ND	10		µg/L	1	11/2/2005
2-Chlorophenol	ND	10		µg/L	1	11/2/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	11/2/2005
Chrysene	ND	15		µg/L	1	11/2/2005
Di-n-butyl phthalate	ND	10		µg/L	1	11/2/2005
Di-n-octyl phthalate	ND	15		µg/L	1	11/2/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/2/2005
Dibenzofuran	ND	10		µg/L	1	11/2/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	11/2/2005
Diethyl phthalate	11	10		µg/L	1	11/2/2005
Dimethyl phthalate	ND	10		µg/L	1	11/2/2005
2,4-Dichlorophenol	ND	10		µg/L	1	11/2/2005
2,4-Dimethylphenol	ND	10		µg/L	1	11/2/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	11/2/2005
2,4-Dinitrophenol	ND	50		µg/L	1	11/2/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	11/2/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	11/2/2005
Fluoranthene	ND	10		µg/L	1	11/2/2005
Fluorene	ND	10		µg/L	1	11/2/2005
Hexachlorobenzene	ND	10		µg/L	1	11/2/2005
Hexachlorobutadiene	ND	10		µg/L	1	11/2/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/2/2005
Hexachloroethane	ND	10		µg/L	1	11/2/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/2/2005
Isophorone	ND	10		µg/L	1	11/2/2005
2-Methylnaphthalene	ND	10		µg/L	1	11/2/2005
2-Methylphenol	ND	15		µg/L	1	11/2/2005
3+4-Methylphenol	ND	20		µg/L	1	11/2/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/2/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	11/2/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/2/2005

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: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River Upstream

Lab Order: 0510245

Collection Date: 10/24/2005 2:25:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Naphthalene	ND	10		µg/L	1	11/2/2005
2-Nitroaniline	ND	50		µg/L	1	11/2/2005
3-Nitroaniline	ND	50		µg/L	1	11/2/2005
4-Nitroaniline	ND	20		µg/L	1	11/2/2005
Nitrobenzene	ND	10		µg/L	1	11/2/2005
2-Nitrophenol	ND	15		µg/L	1	11/2/2005
4-Nitrophenol	ND	50		µg/L	1	11/2/2005
Pentachlorophenol	ND	50		µg/L	1	11/2/2005
Phenanthrene	ND	10		µg/L	1	11/2/2005
Phenol	ND	10		µg/L	1	11/2/2005
Pyrene	ND	15		µg/L	1	11/2/2005
Pyridine	ND	30		µg/L	1	11/2/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/2/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/2/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	11/2/2005
Surr: 2,4,6-Tribromophenol	64.0	16.6-150		%REC	1	11/2/2005
Surr: 2-Fluorobiphenyl	64.2	19.6-134		%REC	1	11/2/2005
Surr: 2-Fluorophenol	53.4	9.54-113		%REC	1	11/2/2005
Surr: 4-Terphenyl-d14	74.2	22.7-145		%REC	1	11/2/2005
Surr: Nitrobenzene-d5	64.8	14.6-134		%REC	1	11/2/2005
Surr: Phenol-d8	37.9	10.7-80.3		%REC	1	11/2/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: TES
Specific Conductance	330	0.010		µmhos/cm	1	11/1/2005
EPA METHOD 245.1: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	10/26/2005
EPA METHOD 6010B: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/7/2005 3:02:55 PM
Barium	0.067	0.0020		mg/L	1	11/7/2005 3:02:55 PM
Cadmium	ND	0.0020		mg/L	1	11/7/2005 3:02:55 PM
Calcium	37	1.0		mg/L	1	11/7/2005 3:02:55 PM
Chromium	ND	0.0060		mg/L	1	11/7/2005 3:02:55 PM
Copper	ND	0.0060		mg/L	1	11/7/2005 3:02:55 PM
Iron	0.020	0.020		mg/L	1	11/7/2005 3:02:55 PM
Lead	ND	0.0050		mg/L	1	11/7/2005 3:02:55 PM
Magnesium	6.4	1.0		mg/L	1	11/7/2005 3:02:55 PM
Manganese	0.015	0.0020		mg/L	1	11/7/2005 3:02:55 PM
Potassium	1.8	1.0		mg/L	1	11/7/2005 3:02:55 PM
Selenium	ND	0.050		mg/L	1	11/7/2005 3:02:55 PM
Silver	ND	0.0050		mg/L	1	11/7/2005 3:02:55 PM
Sodium	18	1.0		mg/L	1	11/7/2005 3:02:55 PM
Uranium	ND	0.10		mg/L	1	11/7/2005 3:02:55 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: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River Upstream

Lab Order: 0510245

Collection Date: 10/24/2005 2:25:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Zinc	0.029	0.0050		mg/L	1	11/7/2005 3:02:55 PM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	10/28/2005 1:01:31 PM
Barium	0.080	0.020		mg/L	1	10/28/2005 1:01:31 PM
Cadmium	ND	0.0020		mg/L	1	10/28/2005 1:01:31 PM
Chromium	ND	0.0060		mg/L	1	10/28/2005 1:01:31 PM
Lead	ND	0.0050		mg/L	1	10/28/2005 1:01:31 PM
Selenium	ND	0.050		mg/L	1	10/28/2005 1:01:31 PM
Silver	ND	0.0050		mg/L	1	10/28/2005 1:01:31 PM
EPA METHOD 160.1: TDS						Analyst: TES
Total Dissolved Solids	200	50		mg/L	1	10/27/2005

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-05

CLIENT: San Juan Refining

Client Sample ID: River Downstream

Lab Order: 0510245

Collection Date: 10/24/2005 3:00:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-04

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CMC
Fluoride	0.11	0.10		mg/L	1	10/25/2005
Chloride	3.3	0.10		mg/L	1	10/25/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	10/25/2005
Bromide	ND	0.50		mg/L	1	10/25/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	10/25/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	10/25/2005
Sulfate	68	0.50		mg/L	1	10/25/2005
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO3)	90	2.0		mg/L CaCO3	1	11/7/2005
Carbonate	2.0	2.0		mg/L CaCO3	1	11/7/2005
Bicarbonate	88	2.0		mg/L CaCO3	1	11/7/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/27/2005 8:59:01 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/27/2005 8:59:01 AM
Surr: DNOP	123	58-140		%REC	1	10/27/2005 8:59:01 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/3/2005 12:22:29 PM
Surr: BFB	99.9	79.7-118		%REC	1	11/3/2005 12:22:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/3/2005 12:22:29 PM
Benzene	ND	0.50		µg/L	1	11/3/2005 12:22:29 PM
Toluene	ND	0.50		µg/L	1	11/3/2005 12:22:29 PM
Ethylbenzene	ND	0.50		µg/L	1	11/3/2005 12:22:29 PM
Xylenes, Total	ND	0.50		µg/L	1	11/3/2005 12:22:29 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	ND	10		µg/L	1	11/2/2005
Acenaphthylene	ND	10		µg/L	1	11/2/2005
Aniline	ND	20		µg/L	1	11/2/2005
Anthracene	ND	10		µg/L	1	11/2/2005
Azobenzene	ND	10		µg/L	1	11/2/2005
Benz(a)anthracene	ND	15		µg/L	1	11/2/2005
Benzo(a)pyrene	ND	15		µg/L	1	11/2/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	11/2/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/2/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	11/2/2005
Benzoic acid	ND	50		µg/L	1	11/2/2005
Benzyl alcohol	ND	20		µg/L	1	11/2/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/2/2005

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: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River Downstream

Lab Order: 0510245

Collection Date: 10/24/2005 3:00:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-04

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	ND	15		µg/L	1	11/2/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	11/2/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	11/2/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/2/2005
Butyl benzyl phthalate	ND	15		µg/L	1	11/2/2005
Carbazole	ND	10		µg/L	1	11/2/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	11/2/2005
4-Chloroaniline	ND	20		µg/L	1	11/2/2005
2-Chloronaphthalene	ND	10		µg/L	1	11/2/2005
2-Chlorophenol	ND	10		µg/L	1	11/2/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	11/2/2005
Chrysene	ND	15		µg/L	1	11/2/2005
Di-n-butyl phthalate	ND	10		µg/L	1	11/2/2005
Di-n-octyl phthalate	ND	15		µg/L	1	11/2/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/2/2005
Dibenzofuran	ND	10		µg/L	1	11/2/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	11/2/2005
Diethyl phthalate	ND	10		µg/L	1	11/2/2005
Dimethyl phthalate	ND	10		µg/L	1	11/2/2005
2,4-Dichlorophenol	ND	10		µg/L	1	11/2/2005
2,4-Dimethylphenol	ND	10		µg/L	1	11/2/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	11/2/2005
2,4-Dinitrophenol	ND	50		µg/L	1	11/2/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	11/2/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	11/2/2005
Fluoranthene	ND	10		µg/L	1	11/2/2005
Fluorene	ND	10		µg/L	1	11/2/2005
Hexachlorobenzene	ND	10		µg/L	1	11/2/2005
Hexachlorobutadiene	ND	10		µg/L	1	11/2/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/2/2005
Hexachloroethane	ND	10		µg/L	1	11/2/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/2/2005
Isophorone	ND	10		µg/L	1	11/2/2005
2-Methylnaphthalene	ND	10		µg/L	1	11/2/2005
2-Methylphenol	ND	15		µg/L	1	11/2/2005
3+4-Methylphenol	ND	20		µg/L	1	11/2/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/2/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	11/2/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/2/2005

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: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River Downstream

Lab Order: 0510245

Collection Date: 10/24/2005 3:00:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-04

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Naphthalene	ND	10		µg/L	1	11/2/2005
2-Nitroaniline	ND	50		µg/L	1	11/2/2005
3-Nitroaniline	ND	50		µg/L	1	11/2/2005
4-Nitroaniline	ND	20		µg/L	1	11/2/2005
Nitrobenzene	ND	10		µg/L	1	11/2/2005
2-Nitrophenol	ND	15		µg/L	1	11/2/2005
4-Nitrophenol	ND	50		µg/L	1	11/2/2005
Pentachlorophenol	ND	50		µg/L	1	11/2/2005
Phenanthrene	ND	10		µg/L	1	11/2/2005
Phenol	ND	10		µg/L	1	11/2/2005
Pyrene	ND	15		µg/L	1	11/2/2005
Pyridine	ND	30		µg/L	1	11/2/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/2/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/2/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	11/2/2005
Surr: 2,4,6-Tribromophenol	72.0	16.6-150		%REC	1	11/2/2005
Surr: 2-Fluorobiphenyl	69.5	19.6-134		%REC	1	11/2/2005
Surr: 2-Fluorophenol	49.3	9.54-113		%REC	1	11/2/2005
Surr: 4-Terphenyl-d14	71.3	22.7-145		%REC	1	11/2/2005
Surr: Nitrobenzene-d5	66.0	14.6-134		%REC	1	11/2/2005
Surr: Phenol-d6	36.0	10.7-80.3		%REC	1	11/2/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: TES
Specific Conductance	340	0.010		µmhos/cm	1	11/1/2005
EPA METHOD 245.1: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	10/26/2005
EPA METHOD 6010B: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/7/2005 3:05:57 PM
Barium	0.061	0.0020		mg/L	1	11/7/2005 3:05:57 PM
Cadmium	ND	0.0020		mg/L	1	11/7/2005 3:05:57 PM
Calcium	38	1.0		mg/L	1	11/7/2005 3:05:57 PM
Chromium	ND	0.0060		mg/L	1	11/7/2005 3:05:57 PM
Copper	ND	0.0060		mg/L	1	11/7/2005 3:05:57 PM
Iron	ND	0.020		mg/L	1	11/7/2005 3:05:57 PM
Lead	ND	0.0050		mg/L	1	11/7/2005 3:05:57 PM
Magnesium	6.3	1.0		mg/L	1	11/7/2005 3:05:57 PM
Manganese	0.025	0.0020		mg/L	1	11/7/2005 3:05:57 PM
Potassium	1.9	1.0		mg/L	1	11/7/2005 3:05:57 PM
Selenium	ND	0.050		mg/L	1	11/7/2005 3:05:57 PM
Silver	ND	0.0050		mg/L	1	11/7/2005 3:05:57 PM
Sodium	19	1.0		mg/L	1	11/7/2005 3:05:57 PM
Uranium	ND	0.10		mg/L	1	11/7/2005 3:05:57 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: 09-Nov-05

CLIENT: San Juan Refining

Client Sample ID: River Downstream

Lab Order: 0510245

Collection Date: 10/24/2005 3:00:00 PM

Project: River Sampling 4th Qtr. 2005

Lab ID: 0510245-04

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Zinc	0.021	0.0050		mg/L	1	11/7/2005 3:05:57 PM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	10/28/2005 1:04:32 PM
Barium	0.089	0.020		mg/L	1	10/28/2005 1:04:32 PM
Cadmium	ND	0.0020		mg/L	1	10/28/2005 1:04:32 PM
Chromium	ND	0.0060		mg/L	1	10/28/2005 1:04:32 PM
Lead	ND	0.0050		mg/L	1	10/28/2005 1:04:32 PM
Selenium	ND	0.050		mg/L	1	10/28/2005 1:04:32 PM
Silver	ND	0.0050		mg/L	1	10/28/2005 1:04:32 PM
EPA METHOD 160.1: TDS						Analyst: TES
Total Dissolved Solids	200	50		mg/L	1	10/27/2005

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-05

CLIENT: San Juan Refining

Work Order: 0510245

Project: River Sampling 4th Qtr. 2005

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R17075	Test Code: E300	Units: mg/L	Analysis Date	10/25/2005	Prep Date				
Client ID:			Run ID: LC_051025A		SeqNo:	414801					
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	0.5									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID	MBLK	Batch ID: R17203	Test Code: E310.1	Units: mg/L CaCO3	Analysis Date 11/7/2005	Prep Date					
Client ID:		Run ID: WC_051107A			SeqNo: 420609						
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									

Sample ID	MB-9054	Batch ID: 9054	Test Code: SW8015	Units: mg/L	Analysis Date	10/27/2005 3:31:02 AM	Prep Date	10/26/2005			
Client ID:			Run ID: FID(17A) 2_051026A		SeqNo: 415187						
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	1.252	0	1	0	125	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

CLIENT: San Juan Refining
 Work Order: 0510245
 Project: River Sampling 4th Qtr. 2005

QC SUMMARY REPORT
 Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R17181	Test Code: SW8015	Units: mg/L	Analysis Date 11/3/2005 9:16:25 AM	Prep Date					
Client ID:			Run ID: PIDFID_051103A		SeqNo: 418254						
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	22.56	0	20	0	113	79.7	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R17181	Test Code: SW8021	Units: µg/L	Analysis Date 11/3/2005 9:16:25 AM	Prep Date					
Client ID:			Run ID: PIDFID_051103A		SeqNo: 418230						
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

CLIENT: San Juan Refining
Work Order: 0510245
Project: River Sampling 4th Qtr. 2005

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-9051	Batch ID: 9051	Test Code: SW8270C	Units: µg/L	Analysis Date	Prep Date					
Client ID:			Run ID: ELMO_051102A		SeqNo: 418017	10/26/2005					
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	20									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	15									
Benzo(b)fluoranthene	ND	15									
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	7.52	15									J
Dibenz(a,h)anthracene	8.22	10									J

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: 0510245
 Project: River Sampling 4th Qtr. 2005

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	20
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

CLIENT: San Juan Refining
Work Order: 0510245
Project: River Sampling 4th Qtr. 2005

[illegible]

Sample ID	MB-9056	Batch ID: 9056	Test Code: SW7470	Units: mg/L	Analysis Date	10/26/2005	Prep Date	10/26/2005
Client ID:		Run ID:	MI-LA254_051026A		SeqNo:	415137		
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val
Mercury		ND		0.0002				%RPD RPDLimit Qual

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	
			5

CLIENT: San Juan Refining
 Work Order: 0510245
 Project: River Sampling 4th Qtr. 2005

QC SUMMARY REPORT
 Method Blank

Sample ID	MB	Batch ID: R17214	Test Code: SW6010A	Units: mg/L	Analysis Date	11/7/2005 2:42:47 PM	Prep Date				
Client ID:		Run ID: ICP_051108A			SeqNo: 419786						
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									
Copper	ND	0.006									
Iron	ND	0.02									
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	ND	0.002									
Potassium	0.2787	1									J
Selenium	ND	0.02									
Silver	ND	0.005									
Sodium	ND	1									
Uranium	ND	0.1									
Zinc	ND	0.05									

Sample ID	MB-9066	Batch ID	9066	Test Code	SW6010A	Units	mg/L	Analysis Date	10/28/2005 12:18:27 P	Prep Date	10/27/2005
Client ID:				Run ID:	ICP_051028A			SeqNo:	416073		
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									
Silver	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

CLIENT:

San Juan Refining

Work Order:

0510245

Project:

River Sampling 4th Qtr. 2005

QC SUMMARY REPORT

Method Blank

Sample ID	MB-9053	Batch ID:	9053	Test Code:	E160.1	Units:	mg/L	Analysis Date	10/27/2005	Prep Date	10/26/2005		
Client ID:		Run ID:		WC_051026D				SeqNo:	415548				
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

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

Date: 09-Nov-05

Hall Environmental Analysis Laboratory

QC SUMMARY REPORT
Sample Duplicate

CLIENT: San Juan Refining
 Work Order: 0510245
 Project: River Sampling 4th Qtr. 2005

Sample ID	0510245-01C DUP	Batch ID: R17075	Test Code: E300	Units: mg/L	Analysis Date	10/25/2005	Prep Date				
Client ID:	River N of MW #4		Run ID:	LC_051025A	SeqNo:	414817					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.1101	0.1	0	0	0	0	0	0.1194	8.10	20	
Chloride	3.261	0.1	0	0	0	0	0	3.277	0.492	20	
Nitrogen, Nitrite (As N)	ND	0.1	0	0	0	0	0	0	0	20	
Bromide	ND	0.5	0	0	0	0	0	0	0	20	
Nitrogen, Nitrate (As N)	ND	0.1	0	0	0	0	0	0	0	20	
Phosphorus, Orthophosphate (As P)	ND	0.5	0	0	0	0	0	0	0	20	
Sulfate	66.81	0.5	0	0	0	0	0	66.67	0.206	20	

Sample ID	0510245-01C DUP	Batch ID: R17203	Test Code: E310.1	Units: mg/L CaCO3	Analysis Date	11/7/2005	Prep Date				
Client ID:	River N of MW #4		Run ID:	WC_051107A	SeqNo:	419324					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	90	2	0	0	0	0	0	88	2.25	15	
Carbonate	ND	2	0	0	0	0	0	0	0	15	
Bicarbonate	90	2	0	0	0	0	0	88	2.25	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
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Hall Environmental Analysis Laboratory

Date: 09-Nov-05

CLIENT: San Juan Refining
 Work Order: 0510245
 Project: River Sampling 4th Qtr. 2005

QC SUMMARY REPORT
 Sample Matrix Spike

Sample ID	0510245-01C MS	Batch ID: R17075	Test Code: E300	Units: mg/L	Analysis Date	10/25/2005	Prep Date				
Client ID:	River N of MW #4		Run ID: LC_051025A		SeqNo:	414818					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5589	0.1	0.5	0.1194	87.9	80	120	0			
Chloride	8.054	0.1	5	3.277	95.5	80	120	0			
Nitrogen, Nitrite (As N)	0.8637	0.1	1	0	86.4	80	120	0			
Bromide	2.441	0.5	2.5	0	97.6	80	120	0			
Nitrogen, Nitrate (As N)	2.393	0.1	2.5	0	95.7	80	120	0			
Phosphorus, Orthophosphate (As P)	4.974	0.5	5	0	99.5	80	120	0			

Sample ID	0510245-01C MSD	Batch ID: R17075	Test Code: E300	Units: mg/L		Analysis Date		10/25/2005	Prep Date		
Client ID:	River N of MW #4		Run ID: LC_051025A			SeqNo:	414819				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5632	0.1	0.5	0.1194	88.8	80	120	0.5589	0.766	20	
Chloride	8.184	0.1	5	3.277	98.1	80	120	8.054	1.59	20	
Nitrogen, Nitrite (As N)	0.8757	0.1	1	0	87.6	80	120	0.8637	1.38	20	
Bromide	2.452	0.5	2.5	0	98.1	80	120	2.441	0.462	20	
Nitrogen, Nitrate (As N)	2.439	0.1	2.5	0	97.6	80	120	2.393	1.92	20	
Phosphorus, Orthophosphate (As P)	5.014	0.5	5	0	100	80	120	4.974	0.805	20	

Sample ID	0510245-02a ms	Batch ID: R17181	Test Code: SW8015	Units: mg/L	Analysis Date	11/3/2005 2:27:16 PM	Prop Date				
Client ID:	River N of MW #4		Run ID: PIDFID_051103A		SeqNo:	418260					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5052	0.05	0.5	0	101	82.6	114	0			
Surr: BFB	28.47	0	25	0	114	79.7	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: 0510245
 Project: River Sampling 4th Qtr. 2005

Sample ID	0510245-02a msd	Batch ID: R17181	Test Code: SW8015	Units: mg/L	Analysis Date	11/3/2005 2:58:19 PM	Prep Date					
Client ID:	River N of MW #4		Run ID:	PIDFID_051103A	SeqNo:	418261						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.4984	0.05	0.5	0	99.7	82.6	114	0.5052	1.36	8.39	
Surr: BFB		27.7	0	25	0	111	79.7	118	28.47	2.72	0	

Sample ID	0510245-01a.ms	Batch ID: R17181	Test Code: SW8021	Units: µg/L	Analysis Date	11/3/2005 12:53:43 PM	Prep Date					
Client ID:	River N of MW #4		Run ID: PIDFID_051103A		SeqNo: 418249							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)		19.42	2.5	20	0	97.1	64.5	133	0			
Benzene		21.07	0.5	20	0	105	88.5	114	0			

Sample ID	0510245-01a msd	Batch ID: R17181	Test Code: SW8021	Units: µg/L	Analysis Date	11/3/2005 1:24:52 PM	Prep Date					
Client ID:	River N of MW #4		Run ID:	PIDFID_051103A	SeqNo:	418250						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)		18.33	2.5	20	0	91.6	84.5	133	19.42	5.78	28	
Benzene		21	0.5	20	0	105	88.5	114	21.07	0.350	27	
Toluene		18.13	0.5	20	0	95.7	87.2	114	19.56	2.20	19	
Ethylbenzene		19.27	0.5	20	0	96.3	88.6	113	19.76	2.56	10	
Xylenes, Total		39.5	0.5	40	0	98.8	83.3	114	39.77	0.680	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: 09-Nov-05

CLIENT: San Juan Refining
Work Order: 0510245
Project: River Sampling 4th Qtr. 2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-ST300-05022	Batch ID: R17075	Test Code: E300	Units: mg/L	Analysis Date	10/25/2005	Prep Date				
Client ID:	Run ID:	LC_051025A	SeqNo:	414802							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5275	0.1	0.5	0	108	90	110	0			
Chloride	4.872	0.1	5	0	97.4	90	110	0			
Nitrogen, Nitrite (As N)	0.9603	0.1	1	0	96.0	90	110	0			
Bromide	2.573	0.5	2.5	0	103	90	110	0			
Nitrogen, Nitrate (As N)	2.468	0.1	2.5	0	98.7	90	110	0			
Phosphorus, Orthophosphate (As P)	4.936	0.5	5	0	98.7	90	110	0			
Sulfate	9.862	0.5	10	0	98.6	90	110	0			

Sample ID	LCS-9054	Batch ID: 9054	Test Code: SW8015	Units: mg/L	Analysis Date	10/27/2005 4:03:45 AM	Prep Date	10/26/2005			
Client ID:	Run ID: FID(17A) 2_051026A				SeqNo:	415188					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.585	1	5	0	112	81.2	149	0			

Sample ID	LCSD-9054	Batch ID: 9054	Test Code: SW8015		Units: mg/L		Analysis Date		10/27/2005 4:36:37 AM		Prep Date		10/26/2005	
Client ID:			Run ID:	FID(17A) 2_051026A				SeqNo:		415189				
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)			5.522	1	5	0	110	81.2	149	5.585	1.12	23		

Sample ID	GRO Ics 2.5ug	Batch ID: R17181	Test Code: SW8015	Units: mg/L	Analysis Date	11/4/2005 3:54:48 AM	Prep Date				
Client ID:			Run ID: PIDFID_051103A		SeqNo: 418255						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5062	0.05	0.5	0	101	82.6	114	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: 0510245
 Project: River Sampling 4th Qtr. 2005

Sample ID	BTEX Ics 100ng	Batch ID: R17181	Test Code: SW8021	Units: µg/L	Analysis Date	11/3/2005 1:56:12 PM	Prep Date				
Client ID:			Run ID: PIDFID_051103A		SeqNo: 418231						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18.1	2.5	20	0	90.5	64.5	133	0			
Benzene	20.7	0.5	20	0	104	88.5	114	0			
Toluene	18.91	0.5	20	0	94.5	87.2	114	0			
Ethylbenzene	19.23	0.5	20	0	96.2	88.6	113	0			
Xylenes, Total	39.35	0.5	40	0	98.4	83.3	114	0			

Sample ID	LCS-9051	Batch ID: 9051	Test Code: SW8270C	Units: µg/L	Analysis Date	11/2/2005	Prep Date	10/26/2005			
Client ID:			Run ID: ELMO_051102A		SeqNo: 418018						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	79.16	10	100	0	79.2	11	123	0			
4-Chloro-3-methylphenol	158	20	200	0	79.0	15.4	119	0			
2-Chlorophenol	153.3	10	200	0	76.7	12.2	122	0			
1,4-Dichlorobenzene	67	10	100	0	67.0	16.9	100	0			
2,4-Dinitrotoluene	74.26	10	100	0	74.3	13	138	0			
N-Nitrosodi-n-propylamine	73.86	10	100	0	73.9	9.83	122	0			
4-Nitrophenol	61.86	50	200	0	30.9	-20.5	87.4	0			
Pentachlorophenol	106.2	50	200	0	53.1	-0.355	114	0			
Phenol	84.98	10	200	0	42.5	7.53	73.1	0			
Pyrene	80.64	15	100	0	80.6	12.6	140	0			
1,2,4-Trichlorobenzene	67.22	10	100	0	67.2	17.4	98.7	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: 0510245
 Project: River Sampling 4th Qtr. 2005

Sample ID	LCSD-9051	Batch ID: 9051	Test Code: SWB270C	Units: µg/L	Analysis Date 11/2/2005	Prep Date 10/26/2005					
Client ID:			Run ID: ELMO_051102A		SeqNo: 418019						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	76.02	10	100	0	76.0	11	123	79.16	4.05	30.5	
4-Chloro-3-methylphenol	133.5	20	200	0	66.8	15.4	119	158	16.8	28.6	
2-Chlorophenol	140.5	10	200	0	70.3	12.2	122	153.3	8.71	107	
1,4-Dichlorobenzene	64.54	10	100	0	64.5	16.9	100	67	3.74	62.1	
2,4-Dinitrotoluene	71.52	10	100	0	71.5	13	138	74.26	3.76	14.7	
N-Nitrosodi-n-propylamine	69.1	10	100	0	69.1	9.93	122	73.86	6.66	30.3	
4-Nitrophenol	62.3	50	200	0	31.2	12.5	87.4	61.86	0.709	36.3	
Pentachlorophenol	97.4	50	200	0	48.7	3.55	114	106.2	8.64	49	
Phenol	82.02	10	200	0	41.0	7.53	73.1	84.98	3.54	52.4	
Pyrene	73.7	15	100	0	73.7	12.6	140	80.64	8.99	16.3	
2,4-Trichlorobenzene	62.36	10	100	0	62.4	17.4	98.7	67.22	7.50	36.4	

Sample ID	LCS-9056	Batch ID: 9056	Test Code: SW7470	Units: mg/L	Analysis Date 10/26/2005	Prep Date 10/26/2005					
Client ID:			Run ID: MI-LA254_051026A		SeqNo: 415138						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004627	0.0002	0.005	0	92.5	80	120	0			

Sample ID	LCSD-9056	Batch ID: 9056	Test Code: SW7470	Units: mg/L	Analysis Date 10/26/2005	Prep Date 10/26/2005					
Client ID:			Run ID: MI-LA254_051026A		SeqNo: 415153						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004765	0.0002	0.005	0	95.3	80	120	0.004627	2.94	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: 0510245
 Project: River Sampling 4th Qtr. 2005

Sample ID	LCS	Batch ID: R17214	Test Code: SW6010A	Units: mg/L	Analysis Date	11/7/2005 2:46:17 PM	Prep Date				
Client ID:		Run ID:	ICP_051108A		SeqNo:	419787					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4712	0.02	0.5	0	94.2	80	120	0			
Barium	0.4548	0.02	0.5	0	91.0	80	120	0			
Cadmium	0.4597	0.002	0.5	0	91.9	80	120	0			
Calcium	55.43	1	50.5	0	110	80	120	0			
Chromium	0.463	0.006	0.5	0	92.6	80	120	0			
Copper	0.4397	0.006	0.5	0	87.9	80	120	0			
Iron	0.4643	0.02	0.5	0	92.9	80	120	0			
Lead	0.456	0.005	0.5	0	91.2	80	120	0			
Magnesium	52.23	1	50.5	0	103	80	120	0			
Manganese	0.4859	0.002	0.5	0	87.2	80	120	0			
Potassium	54.5	1	55	0.2787	98.6	80	120	0			
Selenium	0.454	0.02	0.5	0	90.8	80	120	0			
Silver	0.4472	0.005	0.5	0	89.4	80	120	0			
Sodium	55.29	1	50.5	0	109	80	120	0			
Uranium	2.611	0.1	2.5	0	104	80	120	0			
Zinc	0.4812	0.05	0.5	0	96.2	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
 4

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0510245
 Project: River Sampling 4th Qtr. 2005

Sample ID	LCSID	Batch ID	R17214	Test Code	SW6010A	Units: mg/L	Analysis Date	11/7/2005 2:49:35 PM	Prep Date
Client ID:		Run ID:	ICP_051108A				SeqNo:	419788	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Arsenic	0.467	0.02	0.5	0	93.4	80	120	0.4712	0.890 20
Barium	0.4659	0.02	0.5	0	91.2	80	120	0.4548	0.255 20
Cadmium	0.4535	0.002	0.5	0	90.7	80	120	0.4597	1.36 20
Calcium	54.37	1	50.5	0	108	80	120	55.43	1.92 20
Chromium	0.464	0.006	0.5	0	92.8	80	120	0.463	0.226 20
Copper	0.4403	0.006	0.5	0	88.1	80	120	0.4397	0.150 20
Iron	0.4634	0.02	0.5	0	92.7	80	120	0.4643	0.176 20
Lead	0.4495	0.005	0.5	0	89.9	80	120	0.456	1.44 20
Magnesium	51.76	1	50.5	0	102	80	120	52.23	0.919 20
Manganese	0.4861	0.002	0.5	0	97.2	80	120	0.4859	0.0331 20
Potassium	53.63	1	55	0.2787	97.0	80	120	54.5	1.61 20
Selenium	0.4562	0.02	0.5	0	91.2	80	120	0.454	0.484 20
Silver	0.4458	0.005	0.5	0	89.2	80	120	0.4472	0.316 20
Sodium	54.79	1	50.5	0	108	80	120	55.29	0.915 20
Uranium	2.591	0.1	2.5	0	104	80	120	2.611	0.755 20
Zinc	0.4803	0.05	0.5	0	96.1	80	120	0.4812	0.170 20

Sample ID	LCS-9066	Batch ID: 9066	Test Code: SW6010A	Units: mg/L	Analysis Date	10/28/2005 12:21:44 P	Prep Date	10/27/2005			
Client ID:		Run ID:	ICP_051028A		SeqNo:	416074					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5098	0.02	0.5	0	102	80	120	0			
Barium	0.4772	0.02	0.5	0	95.4	80	120	0			
Cadmium	0.4829	0.002	0.5	0	96.6	80	120	0			
Chromium	0.4836	0.006	0.5	0	96.7	80	120	0			
Lead	0.482	0.005	0.5	0	98.4	80	120	0			
Selenium	0.4779	0.05	0.5	0	95.6	80	120	0			
Silver	0.4909	0.005	0.5	0	98.2	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: 0510245
 Project: River Sampling 4th Qtr. 2005

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

Sample ID	LCSD-9066	Batch ID: 9066	Test Code: SW6010A	Units: mg/L	Analysis Date	10/28/2005 12:24:58 P	Prep Date	10/27/2005			
Client ID:			Run ID: ICP_051028A		SeqNo: 416075						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.512	0.02	0.5	0	102	80	120	0.5098	0.433	20	
Barium	0.4704	0.02	0.5	0	94.1	80	120	0.4772	1.45	20	
Cadmium	0.4784	0.002	0.5	0	95.7	80	120	0.4829	0.940	20	
Chromium	0.4756	0.006	0.5	0	95.1	80	120	0.4836	1.67	20	
Lead	0.4809	0.005	0.5	0	96.2	80	120	0.482	0.222	20	
Selenium	0.4751	0.05	0.5	0	95.0	80	120	0.4779	0.587	20	
Silver	0.4833	0.005	0.5	0	96.7	80	120	0.4909	1.55	20	

Sample ID	DOC 1	Batch ID: 9066	Test Code: SW6010A	Units: mg/L	Analysis Date	10/28/2005 1:58:44 PM	Prep Date	10/27/2005			
Client ID:			Run ID: ICP_051028A		SeqNo: 416101						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5017	0.02	0.5	0	100	80	120	0			
Barium	0.4725	0.02	0.5	0	94.5	80	120	0			
Cadmium	0.4757	0.002	0.5	0	95.1	80	120	0			
Chromium	0.4752	0.006	0.5	0	95.0	80	120	0			
Lead	0.4779	0.005	0.5	0	95.6	80	120	0			
Selenium	0.462	0.05	0.5	0	92.4	80	120	0			
Silver	0.4801	0.005	0.5	0	96.0	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
 6

CLIENT:

San Juan Refining

Work Order:

0510245

Project:

River Sampling 4th Qtr. 2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	DOC 2	Batch ID: 9066	Test Code: SW6010A	Units: mg/L	Analysis Date	10/28/2005 2:02:01 PM	Prep Date	10/27/2005			
Client ID:			Run ID: ICP_051028A		SeqNo: 416102						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.506	0.02	0.5	0	101	80	120	0			
Barium	0.4724	0.02	0.5	0	94.5	80	120	0			
Cadmium	0.4798	0.002	0.5	0	96.0	80	120	0			
Chromium	0.4772	0.006	0.5	0	95.4	80	120	0			
Lead	0.4804	0.005	0.5	0	96.1	80	120	0			
Selenium	0.4678	0.05	0.5	0	93.6	80	120	0			
Silver	0.4854	0.005	0.5	0	97.1	80	120	0			

Sample ID	DOC 3	Batch ID: 9066	Test Code: SW6010A	Units: mg/L	Analysis Date	10/28/2005 2:05:14 PM	Prep Date	10/27/2005			
Client ID:			Run ID: ICP_051028A		SeqNo: 416103						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5068	0.02	0.5	0	101	80	120	0			
Barium	0.4758	0.02	0.5	0	95.2	80	120	0			
Cadmium	0.4821	0.002	0.5	0	96.4	80	120	0			
Chromium	0.4789	0.006	0.5	0	95.8	80	120	0			
Lead	0.4822	0.005	0.5	0	96.4	80	120	0			
Selenium	0.4659	0.05	0.5	0	93.2	80	120	0			
Silver	0.4868	0.005	0.5	0	97.4	80	120	0			

Quantifiers:

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: 0510245
 Project: River Sampling 4th Qtr. 2005

Sample ID	DOC 4	Batch ID: 9066	Test Code: SW6010A	Units: mg/L	Analysis Date	10/28/2005 2:17:59 PM	Prep Date	10/27/2005			
Client ID:			Run ID: ICP_051028A		SeqNo: 416105						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4801	0.02	0.5	0	96.0	80	120	0			
Barium	0.4769	0.02	0.5	0	95.4	80	120	0			
Cadmium	0.4802	0.002	0.5	0	96.0	80	120	0			
Chromium	0.4762	0.006	0.5	0	95.2	80	120	0			
Lead	0.4752	0.005	0.5	0	95.0	80	120	0			
Selenium	0.4522	0.05	0.5	0	90.4	80	120	0			
Silver	0.4926	0.005	0.5	0	98.5	80	120	0			

Sample ID	LCS-9053	Batch ID: 9053	Test Code: E160.1	Units: mg/L	Analysis Date	10/27/2005	Prep Date	10/26/2005			
Client ID:			Run ID: WC_051026D		SeqNo:	415549					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	1013	50	1000	0	101	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:

10/25/2005

Work Order Number 0510245

Received by AT

Checklist completed by

Signature

Date

10/25/05

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?

2°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

2 coders

4°

10/25/05

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

Received By: (Signature) *[Signature]* 10/25/05
Received By: (Signature) *[Signature]* 10/25/05

12:00

GIANT

REFINING COMPANY

Wayne Price
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Dr
Santa Fe, NM 87505

RECEIVED

NOV - 7 2005

OIL CONSERVATION
DIVISION

Certified Mail: 7004 2510 0005 1641 4620

October 31, 2005

RE: Giant Refining Company, Bloomfield Refinery
EPA ID# NMD089416416
GW - 001

Dear Mr. Price,

Please find attached analytical results for the September 21, 2005 and October 4, 2005 sampling events for wells MW #48 and MW #49 located on the river terrace at the Giant Refining-Bloomfield facility. Note that the results for well MW #49, located down gradient of the barrier wall, had a detection of benzene at a concentration of 28 ug/L for September and 13 ug/L for October. BTEX samples were taken out of the San Juan River adjacent to MW #49 during each sampling event. The results of both of those samples were non detect. We will continue to monitor both wells on a monthly basis and evaluate the concentration trends.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,

Cindy Hurtado

Cindy Hurtado
Environmental Coordinator
Giant Refining – Bloomfield

Cc: Ed Riege – Environmental Superintendent – Giant Refining
Randy Schmaltz – Environmental Manager – Giant Refining

PHONE

505-632-8013

FAX

505-632-3911

50 ROAD 4990

P.O. BOX 159

BLOOMFIELD

NEW MEXICO

87413

COVER LETTER

October 12, 2005

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

RE: River Terrace 9/05

Order No.: 0509241

Dear Cindy Hurtado:

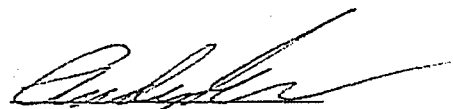
Hall Environmental Analysis Laboratory received 3 samples on 9/22/2005 for the analyses presented in the following report.

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: 12-Oct-05

CLIENT: San Juan Refining

Client Sample ID: MW #48

Lab Order: 0509241

Collection Date: 9/21/2005 2:30:00 PM

Project: River Terrace 9/05

Lab ID: 0509241-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/29/2005 3:19:47 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/29/2005 3:19:47 AM
Surr: DNOP	131	58-140		%REC	1	9/29/2005 3:19:47 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	21	2.0		mg/L	40	9/24/2005 12:11:43 AM
Surr: BFB	116	79.7-118		%REC	40	9/24/2005 12:11:43 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	40	9/24/2005 12:11:43 AM
Benzene	500	20		µg/L	40	9/24/2005 12:11:43 AM
Toluene	ND	20		µg/L	40	9/24/2005 12:11:43 AM
Ethylbenzene	1400	20		µg/L	40	9/24/2005 12:11:43 AM
Xylenes, Total	7500	20		µg/L	40	9/24/2005 12:11:43 AM
Surr: 4-Bromofluorobenzene	108	82.2-119		%REC	40	9/24/2005 12:11:43 AM
EPA METHOD 8310: PAHS						Analyst: JMP
Naphthalene	120	2.5		µg/L	1	10/4/2005 7:43:52 PM
1-Methylnaphthalene	38	2.5		µg/L	1	10/4/2005 7:43:52 PM
2-Methylnaphthalene	42	2.5		µg/L	1	10/4/2005 7:43:52 PM
Acenaphthylene	ND	2.5		µg/L	1	10/4/2005 7:43:52 PM
Acenaphthene	ND	2.5		µg/L	1	10/4/2005 7:43:52 PM
Fluorene	ND	0.80		µg/L	1	10/4/2005 7:43:52 PM
Phenanthrene	1.4	0.60		µg/L	1	10/4/2005 7:43:52 PM
Anthracene	ND	0.60		µg/L	1	10/4/2005 7:43:52 PM
Fluoranthene	ND	0.30		µg/L	1	10/4/2005 7:43:52 PM
Pyrene	ND	0.30		µg/L	1	10/4/2005 7:43:52 PM
Benz(a)anthracene	ND	0.020		µg/L	1	10/4/2005 7:43:52 PM
Chrysene	ND	0.20		µg/L	1	10/4/2005 7:43:52 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	10/4/2005 7:43:52 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	10/4/2005 7:43:52 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	10/4/2005 7:43:52 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	10/4/2005 7:43:52 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	10/4/2005 7:43:52 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	10/4/2005 7:43:52 PM
Surr: Benzo(e)pyrene	58.7	54-102		%REC	1	10/4/2005 7:43:52 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 1 / 10

Page 1 of 3

Hall Environmental Analysis Laboratory

Date: 12-Oct-05

CLIENT: San Juan Refining
Lab Order: 0509241
Project: River Terrace 9/05
Lab ID: 0509241-02

Client Sample ID: MW #49
Collection Date: 9/21/2005 2:00:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/29/2005 3:52:51 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/29/2005 3:52:51 AM
Surr: DNOP	118	58-140		%REC	1	9/29/2005 3:52:51 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	0.52	0.050		mg/L	1	9/24/2005 1:13:01 AM
Surr: BFB	114	79.7-118		%REC	1	9/24/2005 1:13:01 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/24/2005 1:13:01 AM
Benzene	28	0.50		µg/L	1	9/24/2005 1:13:01 AM
Toluene	ND	0.50		µg/L	1	9/24/2005 1:13:01 AM
Ethylbenzene	15	0.50		µg/L	1	9/24/2005 1:13:01 AM
Xylenes, Total	2.6	0.50		µg/L	1	9/24/2005 1:13:01 AM
Surr: 4-Bromofluorobenzene	105	82.2-119		%REC	1	9/24/2005 1:13:01 AM
EPA METHOD 8310: PAHS						Analyst: JMP
Naphthalene	4.0	2.5		µg/L	1	10/4/2005 8:31:52 PM
1-Methylnaphthalene	ND	2.5		µg/L	1	10/4/2005 8:31:52 PM
2-Methylnaphthalene	ND	2.5		µg/L	1	10/4/2005 8:31:52 PM
Acenaphthylene	ND	2.5		µg/L	1	10/4/2005 8:31:52 PM
Acenaphthene	ND	2.5		µg/L	1	10/4/2005 8:31:52 PM
Fluorene	ND	0.80		µg/L	1	10/4/2005 8:31:52 PM
Phenanthrene	ND	0.60		µg/L	1	10/4/2005 8:31:52 PM
Anthracene	ND	0.60		µg/L	1	10/4/2005 8:31:52 PM
Fluoranthene	ND	0.30		µg/L	1	10/4/2005 8:31:52 PM
Pyrene	ND	0.30		µg/L	1	10/4/2005 8:31:52 PM
Benz(a)anthracene	ND	0.020		µg/L	1	10/4/2005 8:31:52 PM
Chrysene	ND	0.20		µg/L	1	10/4/2005 8:31:52 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	10/4/2005 8:31:52 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	10/4/2005 8:31:52 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	10/4/2005 8:31:52 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	10/4/2005 8:31:52 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	10/4/2005 8:31:52 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	10/4/2005 8:31:52 PM
Surr: Benzo(e)pyrene	73.7	54-102		%REC	1	10/4/2005 8:31:52 PM

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 2 / 10

Hall Environmental Analysis Laboratory

Date: 12-Oct-05

CLIENT: San Juan Refining

Client Sample ID: River Near MW #49

Lab Order: 0509241

Collection Date: 9/21/05 1:50:00 PM

Project: River Terrace 9/05

Lab ID: 0509241-03

Matrix: AQUEOUS

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	9/24/2005 1:43:46 AM
Benzene	ND	0.50		µg/L	1	9/24/2005 1:43:46 AM
Toluene	ND	0.50		µg/L	1	9/24/2005 1:43:46 AM
Ethylbenzene	ND	0.50		µg/L	1	9/24/2005 1:43:46 AM
Xylenes, Total	ND	0.50		µg/L	1	9/24/2005 1:43:46 AM
Surr: 4-Bromofluorobenzene	95.6	82.2-119		%REC	1	9/24/2005 1:43:46 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: 12-Oct-05

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
 Work Order: 0509241
 Project: River Terrace 9/05

Sample ID	MB-8838	Batch ID: 8838	Test Code: SW8015	Units: mg/L	Analysis Date	9/29/2005 1:40:35 AM	Prep Date	9/28/2005			
Client ID:			Run ID: FID(17A) 2_050928A		SeqNo: 405070						
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	1.185	0	1	0	118	58	140	0			

Sample ID	Reagent Blank 5m	Batch ID: R16759	Test Code: SW8015	Units: mg/L	Analysis Date	9/23/2005 9:37:19 AM	Prep Date				
Client ID:			Run ID: PIDFID_050923A		SeqNo: 403505						
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	19.6	0	20	0	98.0	79.7	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R16759	Test Code: SW8021	Units: µg/L	Analysis Date	9/23/2005 9:37:19 AM	Prep Date				
Client ID:			Run ID: PIDFID_050923A		SeqNo: 403397						
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	18.66	0	20	0	93.3	82.2	119	0			

Quantifiers: 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: 0509241
 Project: River Terrace 9/05

Sample ID	MB-8824	Batch ID: 8824	Test Code: SW8310	Units: µg/L	Analysis Date	10/4/2005 4:31:50 PM	Prep Date	9/27/2005			
Client ID:											
Run ID:	HUGO_051004A				SeqNo:	408193					
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	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	7.38	0	10	0	73.8	54	102	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: 12-Oct-05

QC SUMMARY REPORT
Sample Matrix Spike

CLIENT: San Juan Refining
Work Order: 0509241
Project: River Terrace 9/05

Sample ID	0509241-02a.ms	Batch ID: R16759	Test Code: SW8015	Units: mg/L	Analysis Date	9/24/2005 2:14:18 AM	Prep Date				
Client ID:	MW #49		Run ID:	PIDFID_050923A	SeqNo:	403557					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.9974	0.05	0.5	0.5154	96.4	82.6	114	0			
Surr: BFB	26.91	0	25	0	108	79.7	118	0			

Sample ID	0509241-02a.ms	Batch ID: R16759	Test Code: SW8015	Units: mg/L	Analysis Date	9/24/2005 2:45:00 AM	Prep Date				
Client ID:	MW #49		Run ID:	PIDFID_050923A	SeqNo:	403559					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	1.018	0.05	0.5	0.5154	100	82.6	114	0.9974	2.00	8.39	
Surr: BFB	28.25	0	25	0	113	79.7	118	26.91	4.86	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: 12-Oct-05

CLIENT: San Juan Refining
 Work Order: 0509241
 Project: River Terrace 9/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-8838	Batch ID: 8838	Test Code: SW8015	Units: mg/L	Analysis Date	9/29/2005 2:13:42 AM	Prep Date	9/28/2005			
Client ID:			Run ID: FID(17A) 2_050928A		SeqNo: 405071						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.069	1	5	0	101	81.2	149	0			
Sample ID	LCSD-8838	Batch ID: 8838	Test Code: SW8015	Units: mg/L	Analysis Date	9/29/2005 2:46:45 AM	Prep Date	9/28/2005			
Client ID:			Run ID: FID(17A) 2_050928A		SeqNo: 405072						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.893	1	5	0	97.9	81.2	149	5.069	3.54	23	
Sample ID	GRO lcs 2.5ug	Batch ID: R16759	Test Code: SW8015	Units: mg/L	Analysis Date	9/24/2005 5:18:23 AM	Prep Date				
Client ID:			Run ID: PIDFID_050923A		SeqNo: 403521						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5116	0.05	0.5	0	102	82.6	114	0			
Sample ID	BTEX lcs 100ng	Batch ID: R16759	Test Code: SW8021	Units: µg/L	Analysis Date	9/23/2005 10:09:01 PM	Prep Date				
Client ID:			Run ID: PIDFID_050923A		SeqNo: 403402						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	23.97	2.5	20	0	120	64.5	133	0			
Benzene	18.83	0.5	20	0	94.1	88.5	114	0			
Toluene	19.17	0.5	20	0	95.9	87.2	114	0			
Ethylbenzene	19.35	0.5	20	0	96.7	88.6	113	0			
Xylenes, Total	39.79	0.5	40	0	99.5	83.3	114	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: 0509241
Project: River Terrace 9/05

Sample ID	LCS-8824	Batch ID: 8824	Test Code: SW8310	Units: µg/L	Analysis Date	10/4/2005 5:19:51 PM	Prep Date	9/27/2005				
Client ID:	Run ID:	HUGO_051004A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Naphthalene	22.79	2.5	40	0	57.0	34.8	97.4	0				
1-Methylnaphthalene	23.37	2.5	40.1	0	58.3	34.7	100	0				
2-Methylnaphthalene	23.13	2.5	40	0	57.8	35	98.1	0				
Acenaphthylene	26.43	2.5	40.1	0	65.9	48.3	95.1	0				
Acenaphthene	25.12	2.5	40	0	62.8	45	95	0				
Fluorene	2.6	0.8	4.01	0	64.8	46.8	93.4	0				
Phenanthrene	1.35	0.6	2.01	0	67.2	48.7	104	0				
Anthracene	1.38	0.6	2.01	0	68.7	47.5	102	0				
Fluoranthene	3.02	0.3	4.01	0	75.3	46.3	108	0				
Pyrene	3.09	0.3	4.01	0	77.1	43.8	109	0				
Benz(a)anthracene	0.31	0.02	0.401	0	77.3	40.3	115	0				
Chrysene	1.47	0.2	2.01	0	73.1	42.6	107	0				
Benzo(b)fluoranthene	0.38	0.05	0.501	0	75.8	48.6	107	0				
Benzo(k)fluoranthene	0.19	0.02	0.25	0	76.0	23.3	136	0				
Benzo(a)pyrene	0.19	0.02	0.251	0	75.7	33.4	117	0				
Dibenz(a,h)anthracene	0.38	0.04	0.501	0	75.8	27.3	139	0				
Benzo(g,h,i)perylene	0.37	0.03	0.5	0	74.0	38.2	117	0				
Indeno(1,2,3-cd)pyrene	0.878	0.08	1.002	0	87.6	39.9	125	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: 0509241
 Project: River Terrace 9/05

Sample ID	LCSD-8824	Batch ID: 8824	Test Code: SW8310	Units: µg/L	Analysis Date	10/4/2005 6:07:51 PM	Prep Date	9/27/2005			
Client ID:	Run ID:	HUGO_051004A	PQL	SPK value	SeqNo:	408198					
Analyte	Result				%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	22.62	2.5	40	0	56.6	34.8	97.4	22.79	0.749	32.1	
1-Methylnaphthalene	23.51	2.5	40.1	0	58.6	34.7	100	23.37	0.597	32.7	
2-Methylnaphthalene	23.59	2.5	40	0	59.0	35	98.1	23.13	1.97	34	
Acenaphthylene	26.58	2.5	40.1	0	66.3	48.3	95.1	26.43	0.558	38.8	
Acenaphthene	25.23	2.5	40	0	63.1	45	95	25.12	0.437	38.6	
Fluorene	2.65	0.8	4.01	0	66.1	46.8	93.4	2.6	1.90	39.3	
Phenanthrene	1.46	0.6	2.01	0	72.6	48.7	104	1.35	7.83	25	
Anthracene	1.47	0.6	2.01	0	73.1	47.5	102	1.38	6.32	23.9	
Fluoranthene	3.43	0.3	4.01	0	85.5	46.3	108	3.02	12.7	15.7	
Pyrene	3.41	0.3	4.01	0	85.0	43.8	109	3.09	9.85	15.3	
Benz(a)anthracene	0.35	0.02	0.401	0	87.3	40.3	115	0.31	12.1	119	
Chrysene	1.66	0.2	2.01	0	82.6	42.6	107	1.47	12.1	16.6	
Benzo(b)fluoranthene	0.47	0.05	0.501	0	93.8	48.6	107	0.38	21.2	21.7	
Benzo(k)fluoranthene	0.21	0.02	0.25	0	84.0	23.3	136	0.19	10.0	19.4	
Benzo(a)pyrene	0.21	0.02	0.251	0	83.7	33.4	117	0.19	10.0	16.7	
Dibenz(a,h)anthracene	0.45	0.04	0.501	0	89.8	27.3	139	0.38	16.9	17.3	
Benzo(g,h,i)perylene	0.41	0.03	0.5	0	82.0	38.2	117	0.37	10.3	118	
Indeno(1,2,3-cd)pyrene	0.938	0.08	1.002	0	93.6	39.9	125	0.878	6.61	17.7	

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:

9/22/2005

Work Order Number 0509241

Received by SSB

Checklist completed by

[Signature]

Date

9/24/05

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?

6° 4° C ± 2 Acceptable
If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

COVER LETTER

October 27, 2005

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

RE: River Terrace - 10/05

Order No.: 0510030

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 3 samples on 10/5/2005 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-Oct-05

CLIENT: San Juan Refining

Client Sample ID: MW #48

Lab Order: 0510030

Collection Date: 10/4/2005 2:00:00 PM

Project: River Terrace - 10/05

Lab ID: 0510030-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	1.9	1.0		mg/L	1	10/12/2005 5:27:54 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/12/2005 5:27:54 AM
Surr: DNOP	126	58-140		%REC	1	10/12/2005 5:27:54 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	10	2.0		mg/L	40	10/6/2005 11:39:05 PM
Surr: BFB	107	79.7-118		%REC	40	10/6/2005 11:39:05 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HLM
Benzene	310	20		µg/L	20	10/15/2005
Toluene	ND	20		µg/L	20	10/15/2005
Ethylbenzene	970	20		µg/L	20	10/15/2005
Methyl tert-butyl ether (MTBE)	ND	20		µg/L	20	10/15/2005
Xylenes, Total	4200	20		µg/L	20	10/15/2005
Surr: 4-Bromofluorobenzene	103	71.2-123		%REC	20	10/15/2005
EPA METHOD 8310: PAHS						Analyst: JMP
Naphthalene	86	2.5		µg/L	1	10/25/2005 7:14:47 PM
1-Methylnaphthalene	40	2.5		µg/L	1	10/25/2005 7:14:47 PM
2-Methylnaphthalene	39	2.5		µg/L	1	10/25/2005 7:14:47 PM
Acenaphthylene	ND	2.5		µg/L	1	10/25/2005 7:14:47 PM
Acenaphthene	ND	2.5		µg/L	1	10/25/2005 7:14:47 PM
Fluorene	1.6	0.80		µg/L	1	10/25/2005 7:14:47 PM
Phenanthrene	2.9	0.60		µg/L	1	10/25/2005 7:14:47 PM
Anthracene	ND	0.60		µg/L	1	10/25/2005 7:14:47 PM
Fluoranthene	ND	0.30		µg/L	1	10/25/2005 7:14:47 PM
Pyrene	ND	0.30		µg/L	1	10/25/2005 7:14:47 PM
Benzo(a)anthracene	ND	0.020		µg/L	1	10/25/2005 7:14:47 PM
Chrysene	ND	0.20		µg/L	1	10/25/2005 7:14:47 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	10/25/2005 7:14:47 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	10/25/2005 7:14:47 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	10/25/2005 7:14:47 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	10/25/2005 7:14:47 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	10/25/2005 7:14:47 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	10/25/2005 7:14:47 PM
Surr: Benzo(e)pyrene	78.4	54-102		%REC	1	10/25/2005 7:14:47 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-Oct-05

CLIENT: San Juan Refining
Lab Order: 0510030
Project: River Terrace - 10/05
Lab ID: 0510030-02

Client Sample ID: MW #49
Collection Date: 10/4/2005 2:45:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/12/2005 6:00:20 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/12/2005 6:00:20 AM
Surr: DNOP	114	58-140		%REC	1	10/12/2005 6:00:20 AM
EPA METHOD 8015B: GASOLINE RANGE						
Gasoline Range Organics (GRO)	0.44	0.050		mg/L	1	10/7/2005 12:09:58 AM
Surr: BFB	105	79.7-118		%REC	1	10/7/2005 12:09:58 AM
EPA METHOD 8260: VOLATILES SHORT LIST						
Benzene	13	1.0		µg/L	1	10/15/2005
Toluene	ND	1.0		µg/L	1	10/15/2005
Ethylbenzene	8.4	1.0		µg/L	1	10/15/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/15/2005
Xylenes, Total	1.7	1.0		µg/L	1	10/15/2005
Surr: 4-Bromofluorobenzene	104	71.2-123		%REC	1	10/15/2005
EPA METHOD 8310: PAHS						
Naphthalene	ND	2.5		µg/L	1	10/25/2005 8:02:47 PM
1-Methylnaphthalene	ND	2.5		µg/L	1	10/25/2005 8:02:47 PM
2-Methylnaphthalene	ND	2.5		µg/L	1	10/25/2005 8:02:47 PM
Acenaphthylene	ND	2.5		µg/L	1	10/25/2005 8:02:47 PM
Acenaphthene	ND	2.5		µg/L	1	10/25/2005 8:02:47 PM
Fluorene	ND	0.80		µg/L	1	10/25/2005 8:02:47 PM
Phenanthrene	ND	0.60		µg/L	1	10/25/2005 8:02:47 PM
Anthracene	ND	0.60		µg/L	1	10/25/2005 8:02:47 PM
Fluoranthene	ND	0.30		µg/L	1	10/25/2005 8:02:47 PM
Pyrene	ND	0.30		µg/L	1	10/25/2005 8:02:47 PM
Benz(a)anthracene	ND	0.020		µg/L	1	10/25/2005 8:02:47 PM
Chrysene	ND	0.20		µg/L	1	10/25/2005 8:02:47 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	10/25/2005 8:02:47 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	10/25/2005 8:02:47 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	10/25/2005 8:02:47 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	10/25/2005 8:02:47 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	10/25/2005 8:02:47 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	10/25/2005 8:02:47 PM
Surr: Benzo(e)pyrene	71.5	54-102		%REC	1	10/25/2005 8:02:47 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-Oct-05

CLIENT: San Juan Refining

Client Sample ID: River Near MW #49

Lab Order: 0510030

Collection Date: 10/4/2005 2:20:00 PM

Project: River Terrace - 10/05

Lab ID: 0510030-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HLM
Benzene	ND	1.0		µg/L	1	10/15/2005
Toluene	ND	1.0		µg/L	1	10/15/2005
Ethylbenzene	ND	1.0		µg/L	1	10/15/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/15/2005
Xylenes, Total	ND	1.0		µg/L	1	10/15/2005
Surr: 4-Bromofluorobenzene	101	71.2-123		%REC	1	10/15/2005

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-Oct-05

CLIENT: San Juan Refining
 Work Order: 0510030
 Project: River Terrace - 10/05

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-8920	Batch ID: 8920	Test Code: SW8015	Units: mg/L	Analysis Date	10/12/2005 3:50:30 AM	Prep Date	10/10/2005				
Client ID:			Run ID: FID(17A) 2_051011A		SeqNo: 410318							
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		1.138	0	1	0	114	58	140	0			

Sample ID	Reagent Blank 5m	Batch ID: R16883	Test Code: SW8015	Units: mg/L	Analysis Date	10/6/2005 9:37:03 AM	Prep Date					
Client ID:			Run ID: PIDFID_051006A		SeqNo: 408430							
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		20.98	0	20	0	105	79.7	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R16841	Test Code: SW8015	Units: mg/L	Analysis Date	10/12/2005 10:20:04 A	Prep Date					
Client ID:			Run ID: PIDFID_051012A		SeqNo: 410774							
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		19.37	0	20	0	96.8	79.7	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

CLIENT: San Juan Refining

Work Order: 0510030

Project: River Terrace - 10/05

QC SUMMARY REPORT

Method Blank

Sample ID	MB-8919	Batch ID: 8919	Test Code: SW8310	Units: µg/L	Analysis Date	10/25/2005 2:26:46 PM	Prep Date	10/10/2005			
Client ID:			Run ID:	HUGO_051025A	SeqNo:	415023					
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	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	7.45	0	10	0	74.5	54	102	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

2

Hall Environmental Analysis Laboratory

Date: 27-Oct-05

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
 Work Order: 0510030
 Project: River Terrace - 10/05

Sample ID	5ml rb	Batch ID: R16972	Test Code: SW8260B	Units: µg/L	Analysis Date	10/14/2005	Prep Date				
Client ID:			Run ID: VAL_051014A		SeqNo:	411560					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									J
Toluene	0.18	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
Xylenes, Total	ND	1									
Surr: 4-Bromofluorobenzene	10.43	0	10	0	104	71.2	123	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: 27-Oct-05

QC SUMMARY REPORT
Sample Matrix Spike

CLIENT: San Juan Refining
Work Order: 0510030
Project: River Terrace - 10/05

Sample ID	0510030-02a ms	Batch ID: R16883	Test Code: SW8015	Units: mg/L	Analysis Date	10/7/2005 12:41:33 AM	Prep Date				
Client ID:	MW #49		Run ID:	PIDFID_051006A	SeqNo:	408440					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.9176	0.05	0.5	0.435	96.5	82.6	114	0			
Surr: BFB	26.28	0	25	0	105	79.7	118	0			

Sample ID	0510030-02a msd	Batch ID: R16883	Test Code: SW8015	Units: mg/L	Analysis Date	10/7/2005 1:12:28 AM	Prep Date				
Client ID:	MW #49		Run ID:	PIDFID_051008A	SeqNo:	408441					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.8692	0.05	0.5	0.435	86.8	82.6	114	0.9176	5.42	8.39	
Surr: BFB	24.23	0	25	0	96.9	79.7	118	26.28	8.08	0	

Sample ID	0510030-02a.ms	Batch ID: R16972	Test Code: SW8260B	Units: µg/L	Analysis Date	10/15/2005	Prep Date				
Client ID:	MW #49		Run ID: VAL_051014A		SeqNo:	411562					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	32.27	1	20	13.48	94.0	80	130	0			
Toluene	19.03	1	20	0.184	94.2	77	121	0			
Surr: 4-Bromofluorobenzene	10.75	0	10	0	108	71.2	123	0			

Sample ID	0510030-02a msd	Batch ID: R16972	Test Code: SW8260B	Units: µg/L	Analysis Date	10/15/2005	Prep Date				
Client ID:	MW #49		Run ID: VAL_051014A		SeqNo:	411563					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	35.6	1	20	13.48	111	80	130	32.27	9.81	15	
Toluene	17.63	1	20	0.184	87.2	77	121	19.03	7.62	14	
Surr: 4-Bromofluorobenzene	10.82	0	10	0	108	71.2	123	10.75	0.575	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: 27-Oct-05

CLIENT:

San Juan Refining

Work Order:

0510030

Project:

River Terrace - 10/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-8920	Batch ID: 8920	Test Code: SW8015	Units: mg/L	Analysis Date	10/12/2005 4:23:00 AM	Prep Date	10/10/2005			
Client ID:			Run ID: FID(17A) 2_051011A		SeqNo:	410319					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.698	1	5	0	114	81.2	149	0			
Sample ID	LCSD-8920	Batch ID: 8920	Test Code: SW8015	Units: mg/L	Analysis Date	10/12/2005 4:55:25 AM	Prep Date	10/10/2005			
Client ID:			Run ID: FID(17A) 2_051011A		SeqNo:	410320					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.938	1	5	0	119	81.2	149	5.698	4.13	23	
Sample ID	GRO lcs 2.5ug	Batch ID: R16883	Test Code: SW8015	Units: mg/L	Analysis Date	10/7/2005 2:14:40 AM	Prep Date				
Client ID:			Run ID: PIDFID_051006A		SeqNo:	408442					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4814	0.05	0.5	0	96.3	82.6	114	0			
Sample ID	GRO lcs 2.5ug	Batch ID: R16941	Test Code: SW8015	Units: mg/L	Analysis Date	10/13/2005 3:56:06 AM	Prep Date				
Client ID:			Run ID: PIDFID_051012A		SeqNo:	410775					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.498	0.05	0.5	0	99.6	82.6	114	0			
Sample ID	100ng lcs	Batch ID: R16972	Test Code: SW8260B	Units: µg/L	Analysis Date	10/14/2005	Prep Date				
Client ID:			Run ID: VAL_051014A		SeqNo:	411561					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.28	1	20	0	101	80	130	0			
Toluene	19.35	1	20	0.18	95.9	77	121	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: 0510030

Project: River Terrace - 10/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-8919	Batch ID: 8919	Test Code: SW8310	Units: µg/L	Analysis Date	10/25/2005 3:14:46 PM	Prep Date	10/10/2005			
Client ID:			Run ID: HUGO_051025A		SeqNo: 415102						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	24.1	2.5	40	0	60.3	34.8	97.4	0			
1-Methylnaphthalene	24.32	2.5	40.1	0	60.6	34.7	100	0			
2-Methylnaphthalene	24.31	2.5	40	0	60.8	35	98.1	0			
Acenaphthylene	25.04	2.5	40.1	0	62.4	48.3	95.1	0			
Acenaphthene	25.47	2.5	40	0	63.7	45	95	0			
Fluorene	2.62	0.8	4.01	0	65.3	46.8	93.4	0			
Phenanthrene	1.43	0.6	2.01	0	71.1	48.7	104	0			
Anthracene	1.39	0.6	2.01	0	69.2	47.5	102	0			
Fluoranthene	2.92	0.3	4.01	0	72.8	46.3	108	0			
Pyrene	2.72	0.3	4.01	0	67.8	43.8	109	0			
Benz(a)anthracene	0.29	0.02	0.401	0	72.3	40.3	115	0			
Chrysene	1.4	0.2	2.01	0	69.7	42.6	107	0			
Benzo(b)fluoranthene	0.34	0.05	0.501	0	67.9	48.6	107	0			
Benzo(k)fluoranthene	0.18	0.02	0.25	0	72.0	23.3	136	0			
Benzo(a)pyrene	0.18	0.02	0.251	0	71.7	33.4	117	0			
Dibenz(a,h)anthracene	0.38	0.04	0.501	0	75.8	27.3	139	0			
Benzo(g,h,i)perylene	0.23	0.03	0.5	0	46.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.779	0.08	1.002	0	77.7	39.9	125	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: 0510030

Project: River Terrace - 10/05

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID	LCSD-8919	Batch ID: 8919	Test Code: SW8310	Units: µg/L	Analysis Date	10/25/2005 4:02:47 PM	Prep Date	10/10/2005			
Client ID:			Run ID:	HUGO_051025A	SeqNo:	415104					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	28.45	2.5	40	0	71.1	34.8	97.4	24.1	16.6	32.1	
1-Methylnaphthalene	29.46	2.5	40.1	0	73.5	34.7	100	24.32	19.1	32.7	
2-Methylnaphthalene	29.28	2.5	40	0	73.2	35	98.1	24.31	18.5	34	
Acenaphthylene	29.95	2.5	40.1	0	74.7	48.3	95.1	25.04	17.9	38.8	
Acenaphthene	30.52	2.5	40	0	76.3	45	95	25.47	18.0	38.6	
Fluorene	3.16	0.8	4.01	0	78.8	46.8	93.4	2.62	18.7	39.3	
Phenanthrene	1.63	0.6	2.01	0	81.1	48.7	104	1.43	13.1	25	
Anthracene	1.62	0.6	2.01	0	80.6	47.5	102	1.39	15.3	23.9	
Fluoranthene	3.24	0.3	4.01	0	80.8	46.3	108	2.92	10.4	15.7	
Pyrene	3.31	0.3	4.01	0	82.5	43.8	109	2.72	19.6	15.3	R
Benz(a)anthracene	0.33	0.02	0.401	0	82.3	40.3	115	0.29	12.9	119	
Chrysene	1.47	0.2	2.01	0	73.1	42.6	107	1.4	4.88	16.6	
Benzo(b)fluoranthene	0.39	0.05	0.501	0	77.8	48.6	107	0.34	13.7	21.7	
Benzo(k)fluoranthene	0.2	0.02	0.25	0	80.0	23.3	136	0.18	10.5	19.4	
Benzo(a)pyrene	0.2	0.02	0.251	0	79.7	33.4	117	0.18	10.5	16.7	
Dibenz(a,h)anthracene	0.41	0.04	0.501	0	81.8	27.3	139	0.38	7.59	17.3	
Benzo(g,h,i)perylene	0.24	0.03	0.5	0	48.0	38.2	117	0.23	4.26	118	
Indeno(1,2,3-cd)pyrene	0.614	0.08	1.002	0	61.3	39.9	125	0.779	23.7	17.7	R

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

10/5/2005

Work Order Number 0510030

Received by AT

Checklist completed by

Signature

Date

10/5/05

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 _____



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

Certified Mail: 7099 3220 0010 2242 5204

January 14, 2005

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 is the hardcopy of the analysis of samples taken from December 7, 2004. There was not an exceedance of any WQCC standard or EPA maximum contaminant level during the monitoring event.

GRC – Bloomfield has completed four months of sampling with results that indicate no evidence of pollutants in the San Juan River. As per the Monitoring and Contingency Plan issued in August 2004, GRC – Bloomfield will reduce the river sampling frequency to quarterly.

Please contact me if you have any questions.

Sincerely,


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

December 23, 2004

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

RE: River Sampling December 2004

Order No.: 0412087

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 4 samples on 12/8/2004 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: 23-Dec-04

CLIENT: San Juan Refining
Project: River Sampling December 2004
Lab Order: 0412087

CASE NARRATIVE

Method 8270C: Acid surrogate recoveries are low due to the presence of organic matter in the samples.

Hall Environmental Analysis Laboratory

Date: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: River-Upstream

Lab Order: 0412087

Collection Date: 12/7/2004 11:00:00 AM

Project: River Sampling December 2004

Lab ID: 0412087-01

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	12/9/2004 10:31:49 AM
Chloride	4.4	0.10		mg/L	1	12/9/2004 10:31:49 AM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	12/9/2004 10:31:49 AM
Bromide	ND	0.10		mg/L	1	12/9/2004 10:31:49 AM
Nitrogen, Nitrate (As N)	0.16	0.10		mg/L	1	12/9/2004 10:31:49 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	12/9/2004 10:31:49 AM
Sulfate	100	2.5		mg/L	5	12/9/2004 1:42:33 PM
EPA METHOD 310.1: ALKALINITY						
						Analyst: MAP
Alkalinity, Total (As CaCO3)	92	4.0		mg/L CaCO3	2	12/20/2004
Carbonate	ND	4.0		mg/L CaCO3	2	12/20/2004
Bicarbonate	92	4.0		mg/L CaCO3	2	12/20/2004
EPA METHOD 8015B: DIESEL RANGE						
						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/13/2004 7:27:15 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	12/13/2004 7:27:15 PM
Surr: DNOP	78.5	58-140		%REC	1	12/13/2004 7:27:15 PM
EPA METHOD 8015B: GASOLINE RANGE						
						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/10/2004 12:50:26 PM
Surr: BFB	101	78.3-120		%REC	1	12/10/2004 12:50:26 PM
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	12/10/2004 12:50:26 PM
Benzene	ND	0.50		µg/L	1	12/10/2004 12:50:26 PM
Toluene	ND	0.50		µg/L	1	12/10/2004 12:50:26 PM
Ethylbenzene	ND	0.50		µg/L	1	12/10/2004 12:50:26 PM
Xylenes, Total	ND	0.50		µg/L	1	12/10/2004 12:50:26 PM
Surr: 4-Bromofluorobenzene	97.7	83.3-121		%REC	1	12/10/2004 12:50:26 PM
EPA METHOD 8270C: SEMIVOLATILES						
						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	12/20/2004
Acenaphthylene	ND	10		µg/L	1	12/20/2004
Aniline	ND	10		µg/L	1	12/20/2004
Anthracene	ND	10		µg/L	1	12/20/2004
Azobenzene	ND	10		µg/L	1	12/20/2004
Benz(a)anthracene	ND	15		µg/L	1	12/20/2004
Benzo(a)pyrene	ND	10		µg/L	1	12/20/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	12/20/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/20/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	12/20/2004
Benzoic acid	ND	50		µg/L	1	12/20/2004
Benzyl alcohol	ND	20		µg/L	1	12/20/2004

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: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: River-Upstream

Lab Order: 0412087

Collection Date: 12/7/2004 11:00:00 AM

Project: River Sampling December 2004

Lab ID: 0412087-01

Matrix: AQUEOUS

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

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: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: River-Upstream

Lab Order: 0412087

Collection Date: 12/7/2004 11:00:00 AM

Project: River Sampling December 2004

Lab ID: 0412087-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/20/2004
Naphthalene	ND	10		µg/L	1	12/20/2004
2-Nitroaniline	ND	50		µg/L	1	12/20/2004
3-Nitroaniline	ND	50		µg/L	1	12/20/2004
4-Nitroaniline	ND	20		µg/L	1	12/20/2004
Nitrobenzene	ND	10		µg/L	1	12/20/2004
2-Nitrophenol	ND	15		µg/L	1	12/20/2004
4-Nitrophenol	ND	50		µg/L	1	12/20/2004
Pentachlorophenol	ND	50		µg/L	1	12/20/2004
Phenanthrene	ND	10		µg/L	1	12/20/2004
Phenol	ND	10		µg/L	1	12/20/2004
Pyrene	ND	15		µg/L	1	12/20/2004
Pyridine	ND	30		µg/L	1	12/20/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/20/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/20/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	12/20/2004
Surr: 2,4,6-Tribromophenol	2.49	16.6-115	S	%REC	1	12/20/2004
Surr: 2-Fluorobiphenyl	83.8	37-95.7		%REC	1	12/20/2004
Surr: 2-Fluorophenol	6.58	9.54-89.8	S	%REC	1	12/20/2004
Surr: 4-Terphenyl-d14	105	47.9-115		%REC	1	12/20/2004
Surr: Nitrobenzene-d5	85.1	38-106		%REC	1	12/20/2004
Surr: Phenol-d6	31.4	10.7-63.4		%REC	1	12/20/2004
EPA 120.1: SPECIFIC CONDUCTANCE						
Specific Conductance	400	0.010		µmhos/cm	1	12/21/2004
EPA METHOD 7470: MERCURY						
Mercury	ND	0.00020		mg/L	1	12/21/2004
EPA METHOD 6010C: DISSOLVED METALS						
Arsenic	ND	0.020		mg/L	1	12/17/2004 9:06:30 AM
Barium	0.068	0.0020		mg/L	1	12/17/2004 9:06:30 AM
Cadmium	ND	0.0020		mg/L	1	12/17/2004 9:06:30 AM
Calcium	43	1.0		mg/L	1	12/17/2004 9:06:30 AM
Chromium	ND	0.0060		mg/L	1	12/17/2004 9:06:30 AM
Copper	ND	0.0060		mg/L	1	12/17/2004 9:06:30 AM
Iron	ND	0.020		mg/L	1	12/17/2004 9:06:30 AM
Lead	ND	0.0050		mg/L	1	12/17/2004 9:06:30 AM
Magnesium	7.6	1.0		mg/L	1	12/17/2004 9:06:30 AM
Manganese	0.011	0.0020		mg/L	1	12/17/2004 9:06:30 AM
Potassium	2.0	1.0		mg/L	1	12/17/2004 9:06:30 AM
Selenium	ND	0.050		mg/L	1	12/17/2004 9:06:30 AM
Silver	ND	0.0050		mg/L	1	12/17/2004 9:06:30 AM
Sodium	29	1.0		mg/L	1	12/17/2004 9:06:30 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: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: River-Upstream

Lab Order: 0412087

Collection Date: 12/7/2004 11:00:00 AM

Project: River Sampling December 2004

Lab ID: 0412087-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	12/17/2004 9:06:30 AM
Zinc	0.024	0.0050		mg/L	1	12/17/2004 9:06:30 AM

EPA 6010C: TOTAL RECOVERABLE METALS

Analyst: NMO

Arsenic	ND	0.020		mg/L	1	12/16/2004 9:31:16 AM
Barium	0.077	0.020		mg/L	1	12/16/2004 9:31:16 AM
Cadmium	ND	0.0020		mg/L	1	12/16/2004 9:31:16 AM
Chromium	ND	0.0060		mg/L	1	12/16/2004 9:31:16 AM
Copper	ND	0.0060		mg/L	1	12/16/2004 9:31:16 AM
Iron	0.19	0.020		mg/L	1	12/16/2004 9:31:16 AM
Lead	ND	0.0050		mg/L	1	12/16/2004 9:31:16 AM
Manganese	0.028	0.0020		mg/L	1	12/16/2004 9:31:16 AM
Selenium	ND	0.050		mg/L	1	12/16/2004 9:31:16 AM
Silver	ND	0.0050		mg/L	1	12/16/2004 9:31:16 AM
Uranium	ND	0.10		mg/L	1	12/16/2004 9:31:16 AM
Zinc	ND	0.050		mg/L	1	12/16/2004 9:31:16 AM

EPA METHOD 160.1: TDS

Analyst: MAP

Total Dissolved Solids	280	50		mg/L	1	12/15/2004
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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: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: N of MW#45

Lab Order: 0412087

Collection Date: 12/7/2004 11:30:00 AM

Project: River Sampling December 2004

Lab ID: 0412087-02

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	12/9/2004 10:48:37 AM
Chloride	4.5	0.10		mg/L	1	12/9/2004 10:48:37 AM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	12/9/2004 10:48:37 AM
Bromide	ND	0.10		mg/L	1	12/9/2004 10:48:37 AM
Nitrogen, Nitrate (As N)	0.16	0.10		mg/L	1	12/9/2004 10:48:37 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	12/9/2004 10:48:37 AM
Sulfate	110	2.5		mg/L	5	12/9/2004 1:59:22 PM
EPA METHOD 310.1: ALKALINITY						
						Analyst: MAP
Alkalinity, Total (As CaCO ₃)	100	4.0		mg/L CaCO ₃	2	12/20/2004
Carbonate	ND	4.0		mg/L CaCO ₃	2	12/20/2004
Bicarbonate	100	4.0		mg/L CaCO ₃	2	12/20/2004
EPA METHOD 8015B: DIESEL RANGE						
						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/13/2004 7:56:52 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	12/13/2004 7:56:52 PM
Surr: DNOP	111	58-140		%REC	1	12/13/2004 7:56:52 PM
EPA METHOD 8015B: GASOLINE RANGE						
						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/10/2004 1:20:08 PM
Surr: BFB	105	78.3-120		%REC	1	12/10/2004 1:20:08 PM
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	12/10/2004 1:20:08 PM
Benzene	ND	0.50		µg/L	1	12/10/2004 1:20:08 PM
Toluene	ND	0.50		µg/L	1	12/10/2004 1:20:08 PM
Ethylbenzene	ND	0.50		µg/L	1	12/10/2004 1:20:08 PM
Xylenes, Total	ND	0.50		µg/L	1	12/10/2004 1:20:08 PM
Surr: 4-Bromofluorobenzene	101	83.3-121		%REC	1	12/10/2004 1:20:08 PM
EPA METHOD 8270C: SEMIVOLATILES						
						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	12/20/2004
Acenaphthylene	ND	10		µg/L	1	12/20/2004
Aniline	ND	10		µg/L	1	12/20/2004
Anthracene	ND	10		µg/L	1	12/20/2004
Azobenzene	ND	10		µg/L	1	12/20/2004
Benz(a)anthracene	ND	15		µg/L	1	12/20/2004
Benzo(a)pyrene	ND	10		µg/L	1	12/20/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	12/20/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/20/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	12/20/2004
Benzoic acid	ND	50		µg/L	1	12/20/2004
Benzyl alcohol	ND	20		µg/L	1	12/20/2004

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: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: N of MW#45

Lab Order: 0412087

Collection Date: 12/7/2004 11:30:00 AM

Project: River Sampling December 2004

Lab ID: 0412087-02

Matrix: AQUEOUS

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

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: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: N of MW#45

Lab Order: 0412087

Collection Date: 12/7/2004 11:30:00 AM

Project: River Sampling December 2004

Lab ID: 0412087-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/20/2004
Naphthalene	ND	10		µg/L	1	12/20/2004
2-Nitroaniline	ND	50		µg/L	1	12/20/2004
3-Nitroaniline	ND	50		µg/L	1	12/20/2004
4-Nitroaniline	ND	20		µg/L	1	12/20/2004
Nitrobenzene	ND	10		µg/L	1	12/20/2004
2-Nitrophenol	ND	15		µg/L	1	12/20/2004
4-Nitrophenol	ND	50		µg/L	1	12/20/2004
Pentachlorophenol	ND	50		µg/L	1	12/20/2004
Phenanthrene	ND	10		µg/L	1	12/20/2004
Phenol	ND	10		µg/L	1	12/20/2004
Pyrene	ND	15		µg/L	1	12/20/2004
Pyridine	ND	30		µg/L	1	12/20/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/20/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/20/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	12/20/2004
Surr: 2,4,6-Tribromophenol	2.41	16.6-115	S	%REC	1	12/20/2004
Surr: 2-Fluorobiphenyl	80.6	37-95.7		%REC	1	12/20/2004
Surr: 2-Fluorophenol	6.48	9.54-89.8	S	%REC	1	12/20/2004
Surr: 4-Terphenyl-d14	91.7	47.9-115		%REC	1	12/20/2004
Surr: Nitrobenzene-d5	86.6	38-106		%REC	1	12/20/2004
Surr: Phenol-d6	32.6	10.7-63.4		%REC	1	12/20/2004
EPA 120.1: SPECIFIC CONDUCTANCE						
Specific Conductance	410	0.010		µmhos/cm	1	12/21/2004
EPA METHOD 7470: MERCURY						
Mercury	ND	0.00020		mg/L	1	12/21/2004
EPA METHOD 6010C: DISSOLVED METALS						
Arsenic	ND	0.020		mg/L	1	12/17/2004 9:09:30 AM
Barium	0.068	0.0020		mg/L	1	12/17/2004 9:09:30 AM
Cadmium	ND	0.0020		mg/L	1	12/17/2004 9:09:30 AM
Calcium	44	1.0		mg/L	1	12/17/2004 9:09:30 AM
Chromium	ND	0.0060		mg/L	1	12/17/2004 9:09:30 AM
Copper	ND	0.0060		mg/L	1	12/17/2004 9:09:30 AM
Iron	0.062	0.020		mg/L	1	12/17/2004 9:09:30 AM
Lead	ND	0.0050		mg/L	1	12/17/2004 9:09:30 AM
Magnesium	7.6	1.0		mg/L	1	12/17/2004 9:09:30 AM
Manganese	0.012	0.0020		mg/L	1	12/17/2004 9:09:30 AM
Potassium	2.0	1.0		mg/L	1	12/17/2004 9:09:30 AM
Selenium	ND	0.050		mg/L	1	12/17/2004 9:09:30 AM
Silver	ND	0.0050		mg/L	1	12/17/2004 9:09:30 AM
Sodium	30	1.0		mg/L	1	12/17/2004 9:09:30 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: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: N of MW#45

Lab Order: 0412087

Collection Date: 12/7/2004 11:30:00 AM

Project: River Sampling December 2004

Lab ID: 0412087-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	12/17/2004 9:09:30 AM
Zinc	0.035	0.0050		mg/L	1	12/17/2004 9:09:30 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	12/16/2004 9:34:14 AM
Barium	0.080	0.020		mg/L	1	12/16/2004 9:34:14 AM
Cadmium	ND	0.0020		mg/L	1	12/16/2004 9:34:14 AM
Chromium	ND	0.0060		mg/L	1	12/16/2004 9:34:14 AM
Copper	ND	0.0060		mg/L	1	12/16/2004 9:34:14 AM
Iron	0.22	0.020		mg/L	1	12/16/2004 9:34:14 AM
Lead	ND	0.0050		mg/L	1	12/16/2004 9:34:14 AM
Manganese	0.033	0.0020		mg/L	1	12/16/2004 9:34:14 AM
Selenium	ND	0.050		mg/L	1	12/16/2004 9:34:14 AM
Silver	ND	0.0050		mg/L	1	12/16/2004 9:34:14 AM
Uranium	ND	0.10		mg/L	1	12/16/2004 9:34:14 AM
Zinc	ND	0.050		mg/L	1	12/16/2004 9:34:14 AM
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	320	50		mg/L	1	12/15/2004

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: 23-Dec-04

CLIENT: San Juan Refining
Lab Order: 0412087
Project: River Sampling December 2004
Lab ID: 0412087-03

Client Sample ID: N of MW#46
Collection Date: 12/7/2004 1:30:00 PM
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	12/9/2004 11:05:23 AM
Chloride	4.6	0.10		mg/L	1	12/9/2004 11:05:23 AM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	12/9/2004 11:05:23 AM
Bromide	ND	0.10		mg/L	1	12/9/2004 11:05:23 AM
Nitrogen, Nitrate (As N)	0.19	0.10		mg/L	1	12/9/2004 11:05:23 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	12/9/2004 11:05:23 AM
Sulfate	110	2.5		mg/L	5	12/9/2004 2:16:10 PM
EPA METHOD 310.1: ALKALINITY						
						Analyst: MAP
Alkalinity, Total (As CaCO ₃)	100	4.0		mg/L CaCO ₃	2	12/20/2004
Carbonate	ND	4.0		mg/L CaCO ₃	2	12/20/2004
Bicarbonate	100	4.0		mg/L CaCO ₃	2	12/20/2004
EPA METHOD 8015B: DIESEL RANGE						
						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/13/2004 8:27:14 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	12/13/2004 8:27:14 PM
Surr: DNOP	85.6	58-140		%REC	1	12/13/2004 8:27:14 PM
EPA METHOD 8015B: GASOLINE RANGE						
						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/10/2004 1:49:49 PM
Surr: BFB	98.7	78.3-120		%REC	1	12/10/2004 1:49:49 PM
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	12/10/2004 1:49:49 PM
Benzene	ND	0.50		µg/L	1	12/10/2004 1:49:49 PM
Toluene	ND	0.50		µg/L	1	12/10/2004 1:49:49 PM
Ethylbenzene	ND	0.50		µg/L	1	12/10/2004 1:49:49 PM
Xylenes, Total	ND	0.50		µg/L	1	12/10/2004 1:49:49 PM
Surr: 4-Bromofluorobenzene	96.6	83.3-121		%REC	1	12/10/2004 1:49:49 PM
EPA METHOD 8270C: SEMIVOLATILES						
						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	12/20/2004
Acenaphthylene	ND	10		µg/L	1	12/20/2004
Aniline	ND	10		µg/L	1	12/20/2004
Anthracene	ND	10		µg/L	1	12/20/2004
Azobenzene	ND	10		µg/L	1	12/20/2004
Benz(a)anthracene	ND	15		µg/L	1	12/20/2004
Benzo(a)pyrene	ND	10		µg/L	1	12/20/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	12/20/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/20/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	12/20/2004
Benzoic acid	ND	50		µg/L	1	12/20/2004
Benzyl alcohol	ND	20		µg/L	1	12/20/2004

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: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: N of MW#46

Lab Order: 0412087

Collection Date: 12/7/2004 1:30:00 PM

Project: River Sampling December 2004

Lab ID: 0412087-03

Matrix: AQUEOUS

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

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: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: N of MW#46

Lab Order: 0412087

Collection Date: 12/7/2004 1:30:00 PM

Project: River Sampling December 2004

Lab ID: 0412087-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/20/2004
Naphthalene	ND	10		µg/L	1	12/20/2004
2-Nitroaniline	ND	50		µg/L	1	12/20/2004
3-Nitroaniline	ND	50		µg/L	1	12/20/2004
4-Nitroaniline	ND	20		µg/L	1	12/20/2004
Nitrobenzene	ND	10		µg/L	1	12/20/2004
2-Nitrophenol	ND	15		µg/L	1	12/20/2004
4-Nitrophenol	ND	50		µg/L	1	12/20/2004
Pentachlorophenol	ND	50		µg/L	1	12/20/2004
Phenanthrene	ND	10		µg/L	1	12/20/2004
Phenol	ND	10		µg/L	1	12/20/2004
Pyrene	ND	15		µg/L	1	12/20/2004
Pyridine	ND	30		µg/L	1	12/20/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/20/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/20/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	12/20/2004
Surr: 2,4,6-Tribromophenol	2.71	16.6-115	S	%REC	1	12/20/2004
Surr: 2-Fluorobiphenyl	82.8	37-95.7		%REC	1	12/20/2004
Surr: 2-Fluorophenol	5.68	9.54-89.8	S	%REC	1	12/20/2004
Surr: 4-Terphenyl-d14	100	47.9-115		%REC	1	12/20/2004
Surr: Nitrobenzene-d5	82.9	38-106		%REC	1	12/20/2004
Surr: Phenol-d6	31.6	10.7-63.4		%REC	1	12/20/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: MAP
Specific Conductance	410	0.010		µmhos/cm	1	12/21/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	12/21/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	12/17/2004 9:12:30 AM
Barium	0.069	0.0020		mg/L	1	12/17/2004 9:12:30 AM
Cadmium	ND	0.0020		mg/L	1	12/17/2004 9:12:30 AM
Calcium	44	1.0		mg/L	1	12/17/2004 9:12:30 AM
Chromium	ND	0.0060		mg/L	1	12/17/2004 9:12:30 AM
Copper	ND	0.0060		mg/L	1	12/17/2004 9:12:30 AM
Iron	ND	0.020		mg/L	1	12/17/2004 9:12:30 AM
Lead	ND	0.0050		mg/L	1	12/17/2004 9:12:30 AM
Magnesium	7.7	1.0		mg/L	1	12/17/2004 9:12:30 AM
Manganese	0.010	0.0020		mg/L	1	12/17/2004 9:12:30 AM
Potassium	2.0	1.0		mg/L	1	12/17/2004 9:12:30 AM
Selenium	ND	0.050		mg/L	1	12/17/2004 9:12:30 AM
Silver	ND	0.0050		mg/L	1	12/17/2004 9:12:30 AM
Sodium	30	1.0		mg/L	1	12/17/2004 9:12:30 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: 23-Dec-04

CLIENT: San Juan Refining **Client Sample ID:** N of MW#46
Lab Order: 0412087 **Collection Date:** 12/7/2004 1:30:00 PM
Project: River Sampling December 2004
Lab ID: 0412087-03 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	12/17/2004 9:12:30 AM
Zinc	0.012	0.0050		mg/L	1	12/17/2004 9:12:30 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	12/16/2004 9:37:15 AM
Barium	0.087	0.020		mg/L	1	12/16/2004 9:37:15 AM
Cadmium	ND	0.0020		mg/L	1	12/16/2004 9:37:15 AM
Chromium	ND	0.0060		mg/L	1	12/16/2004 9:37:15 AM
Copper	ND	0.0060		mg/L	1	12/16/2004 9:37:15 AM
Iron	0.28	0.020		mg/L	1	12/16/2004 9:37:15 AM
Lead	ND	0.0050		mg/L	1	12/16/2004 9:37:15 AM
Manganese	0.046	0.0020		mg/L	1	12/16/2004 9:37:15 AM
Selenium	ND	0.050		mg/L	1	12/16/2004 9:37:15 AM
Silver	ND	0.0050		mg/L	1	12/16/2004 9:37:15 AM
Uranium	ND	0.10		mg/L	1	12/16/2004 9:37:15 AM
Zinc	ND	0.050		mg/L	1	12/16/2004 9:37:15 AM
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	300	50		mg/L	1	12/15/2004

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: 23-Dec-04

CLIENT: San Juan Refining

Client Sample ID: Trip Blank

Lab Order: 0412087

Collection Date:

Project: River Sampling December 2004

Lab ID: 0412087-04

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	12/13/2004 8:56:47 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	12/13/2004 8:56:47 PM
Surr: DNOP	116	58-140		%REC	1	12/13/2004 8:56:47 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/10/2004 2:19:34 PM
Surr: BFB	103	78.3-120		%REC	1	12/10/2004 2:19:34 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	12/10/2004 2:19:34 PM
Benzene	ND	0.50		µg/L	1	12/10/2004 2:19:34 PM
Toluene	ND	0.50		µg/L	1	12/10/2004 2:19:34 PM
Ethylbenzene	ND	0.50		µg/L	1	12/10/2004 2:19:34 PM
Xylenes, Total	ND	0.50		µg/L	1	12/10/2004 2:19:34 PM
Surr: 4-Bromofluorobenzene	97.4	83.3-121		%REC	1	12/10/2004 2:19:34 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: 23-Dec-04

CLIENT: San Juan Refining
Work Order: 0412087
Project: River Sampling December 2004

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R13999	Test Code: E300	Units: mg/L	Analysis Date 12/9/2004 9:58:11 AM	Prep Date					
Client ID:			Run ID: LC_041209A		SeqNo: 325597						
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: R14084	Test Code: E310.1	Units: mg/L CaCO3	Analysis Date 12/20/2004	Prep Date					
Client ID:		Run ID: WC_041220A			SeqNo: 327418						
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									

Sample ID	MB-7054	Batch ID: 7054	Test Code: SW8015	Units: mg/L	Analysis Date	12/13/2004 5:27:20 PM	Prep Date	12/13/2004			
Client ID:			Run ID: FID(17A) 2_041214A		SeqNo:	326266					
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	0.7425	0	1	0	74.3	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

/

CLIENT: San Juan Refining
Work Order: 0412087
Project: River Sampling December 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R14011	Test Code: SW8015	Units: mg/L	Analysis Date	12/10/2004 9:17:35 AM	Prep Date					
Client ID:			Run ID: PIDFID_041210A		SeqNo:	325792						
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		19.63	0	20	0	98.2	78.3	120	0			

Sample ID	Reagent Blank 5m	Batch ID: R14011	Test Code: SW8021	Units: µg/L	Analysis Date	12/10/2004 9:17:35 AM	Prep Date					
Client ID:			Run ID: PIDFID_041210A		SeqNo:	325791						
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		18.85	0	20	0	94.2	83.3	121	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: 0412087
Project: River Sampling December 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	mb-7051	Batch ID:	7051	Test Code:	SW8270C	Units:	µg/L	Analysis Date	12/20/2004	Prep Date	12/13/2004
Client ID:		Run ID:		SeqNo:	327616						
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

CLIENT: San Juan Refining
Work Order: 0412087
Project: River Sampling December 2004

QC SUMMARY REPORT
Method Blank

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

Method Blank

Work Order: 0412087

Project: River Sampling December 2004

[illegible]

Sample ID	MB-7107	Batch ID:	7107	Test Code:	SW7470	Units:	mg/L	Analysis Date	12/21/2004	Prep Date	12/21/2004
Client ID:		Run ID:	MI-LA254_041221B	SeqNo:	327858						

[illegible]

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: 0412087

Project: River Sampling December 2004

Sample ID	MB	Batch ID: R14065	Test Code: SW6010A	Units: mg/L	Analysis Date	12/17/2004 8:07:09 AM	Prep Date				
Client ID:			Run ID: ICP_041217A		SeqNo:	326947					
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	ND	0.002									
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: 0412087
 Project: River Sampling December 2004

Sample ID	MB-7069	Batch ID: 7069	Test Code: SW6010A	Units: mg/L	Analysis Date	12/16/2004 11:30:41 A	Prep Date	12/15/2004			
Client ID:			Run ID:	ICP_041216A	SeqNo:	326705					
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									
Copper	ND	0.006									
Iron	ND	0.05									
Lead	ND	0.005									
Manganese	ND	0.002									
Selenium	ND	0.05									
Silver	ND	0.005									
Uranium	ND	0.1									
Zinc	ND	0.05									

Sample ID	MB-7069	Batch ID: 7069	Test Code: SW6010A	Units: mg/L	Analysis Date	12/16/2004 9:09:29 AM	Prep Date	12/15/2004			
Client ID:			Run ID:	ICP_041216A	SeqNo:	326715					
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									
Copper	ND	0.006									
Iron	ND	0.05									
Manganese	ND	0.002									
Selenium	ND	0.05									
Silver	0.002113	0.005									J
Uranium	ND	0.1									
Zinc	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
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QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0412087

Project: River Sampling December 2004

Sample ID	MB-7069	Batch ID: 7069	Test Code: SW6010A	Units: mg/L	Analysis Date	12/17/2004 4:08:01 PM	Prep Date	12/15/2004
Client ID:		Run ID: ICP_041217B			SeqNo:	327026		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
							%RPD	RPDLimit
Lead		ND		0.005				Qual

Sample ID	MB-7059	Batch ID: 7059	Test Code: E160.1	Units: mg/L	Analysis Date	12/15/2004	Prep Date	12/13/2004
Client ID:		Run ID: WC_041216A			SeqNo:	326800		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
							%RPD	RPDLimit
Total Dissolved Solids		ND		50				Qual

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	8

Date: 23-Dec-04

Hall Environmental Analysis Laboratory

CLIENT: San Juan Refining
Work Order: 0412087
Project: River Sampling December 2004

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0412087-03C DUP	Batch ID: R13999	Test Code: E300	Units: mg/L	Analysis Date	12/9/2004 11:22:11 AM	Prep Date				
Client ID:	N of MW#46		Run ID:	LC_041209A	SeqNo:	325602					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.1815	0.1	0	0	0	0	0	0.1925	5.87	20	
Chloride	4.535	0.1	0	0	0	0	0	4.599	1.39	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)	0.1852	0.1	0	0	0	0	0	0.1876	1.28	20	
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 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: 23-Dec-04

CLIENT: San Juan Refining
Work Order: 0412087
Project: River Sampling December 2004

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0412087-03C MS	Batch ID: R13999	Test Code: E300	Units: mg/L	Analysis Date	12/9/2004 11:39:00 AM	Prep Date				
Client ID:	N of MW#46		Run ID: LC_041209A		SeqNo: 325603						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.7134	0.1	0.5	0.1925	104	80	120	0			
Chloride	9.151	0.1	5	4.599	91.0	80	120	0			
Nitrogen, Nitrite (As N)	0.9836	0.1	1	0	98.4	80	120	0			
Bromide	2.656	0.1	2.5	0	106	80	120	0			
Nitrogen, Nitrate (As N)	2.684	0.1	2.5	0.1876	99.9	80	120	0			
Phosphorus, Orthophosphate (As P)	5.066	0.5	5	0	101	80	120	0			

Sample ID	0412087-03C MSD	Batch ID: R13999	Test Code: E300	Units: mg/L	Analysis Date	12/9/2004 11:55:49 AM	Prep Date				
Client ID:	N of MW#46		Run ID:	LC_041209A	SeqNo:	325604					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.6997	0.1	0.5	0.1925	101	80	120	0.7134	1.94	20	
Chloride	9.099	0.1	5	4.599	90.0	80	120	9.151	0.571	20	
Nitrogen, Nitrite (As N)	0.9877	0.1	1	0	98.8	80	120	0.9836	0.422	20	
Bromide	2.581	0.1	2.5	0	103	80	120	2.656	2.84	20	
Nitrogen, Nitrate (As N)	2.651	0.1	2.5	0.1876	98.5	80	120	2.684	1.25	20	
Phosphorus, Orthophosphate (As P)	4.898	0.5	5	0	98.0	80	120	5.066	3.38	20	

Sample ID	0412087-02a ms	Batch ID: R14011	Test Code: SW8015	Units: mg/L	Analysis Date	12/10/2004 3:48:35 PM	Prep Date				
Client ID:	N of MW#45		Run ID: PIDFID_041210A		SeqNo: 325851						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5188	0.05	0.5	0	104	82.6	114	0			
Surr: BFB	26.14	0	25	0	105	78.3	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

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CLIENT: San Juan Refining
Work Order: 0412087
Project: River Sampling December 2004

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID	0412087-02a msd	Batch ID: R14011	Test Code: SW8015	Units: mg/L	Analysis Date	12/10/2004 4:18:24 PM	Prep Date					
Client ID:	N of MW#45	Run ID:	PIDFID_041210A	SeqNo:	325852							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.4986	0.05	0.5	0	99.7	82.6	114	0.5188	3.97	8.39	
Surr: BFB		26.2	0	25	0	105	78.3	120	26.14	0.210	0	

Sample ID	0412087-01a ms	Batch ID: R14011	Test Code: SW8021	Units: µg/L	Analysis Date	12/10/2004 2:49:15 PM	Prep Date					
Client ID:	River-Upstream	Run ID:	PIDFID_041210A	SeqNo:	325842							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)		34.24	2.5	40	0	85.6	64.5	133	0			
Benzene		22.56	0.5	20	0	113	88.7	114	0			
Toluene		21.41	0.5	20	0	107	89.3	112	0			
Ethylbenzene		20.9	0.5	20	0	104	88.6	113	0			
Kylenes, Total		63.31	0.5	60	0	106	89.4	112	0			
Surr: 4-Bromofluorobenzene		24.22	0	24	0	101	83.3	121	0			

Sample ID	0412087-01a msd	Batch ID: R14011	Test Code: SW8021	Units: µg/L	Analysis Date	12/10/2004 3:18:55 PM	Prep Date					
Client ID: River-Upstream			Run ID: PIDFID_041210A		SeqNo: 325843							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)		34.43	2.5	40	0	86.1	64.5	133	34.24	0.560	28	
benzene		21.44	0.5	20	0	107	88.7	114	22.56	5.11	27	
toluene		20.02	0.5	20	0	100	89.3	112	21.41	6.71	19	
ethylbenzene		18.75	0.5	20	0	93.7	88.6	113	20.9	10.8	15	
xylenes, Total		58.72	0.5	60	0	97.9	89.4	112	63.31	7.53	13	
Surr: 4-Bromofluorobenzene		23.89	0	24	0	99.5	83.3	121	24.22	1.38	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: 23-Dec-04

CLIENT: San Juan Refining
Work Order: 0412087
Project: River Sampling December 2004

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R13999	Test Code: E300	Units: mg/L	Analysis Date 12/9/2004 10:15:00 AM	Prep Date					
Client ID:		Run ID: LC_041209A			SeqNo: 325598						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4557	0.1	0.5	0	91.1	90	110	0			
Chloride	4.656	0.1	5	0	93.1	90	110	0			
Nitrogen, Nitrite (As N)	0.9021	0.1	1	0	90.2	90	110	0			
Bromide	2.554	0.1	2.5	0	102	90	110	0			
Nitrogen, Nitrate (As N)	2.347	0.1	2.5	0	93.9	90	110	0			
Phosphorus, Orthophosphate (As P)	4.676	0.5	5	0	93.5	90	110	0			
Sulfate	9.557	0.5	10	0	95.6	90	110	0			

Sample ID	LCS-7054	Batch ID: 7054	Test Code: SW8015	Units: mg/L	Analysis Date	12/13/2004 6:27:06 PM	Prep Date	12/13/2004			
Client ID:		Run ID:	FID(17A) 2_041214A		SeqNo:	326268					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.292	1	5	0	126	81.2	149	0			

Sample ID	LCSD-7054	Batch ID: 7054	Test Code: SW8015	Units: mg/L	Analysis Date	12/13/2004 6:56:52 PM	Prep Date	12/13/2004			
Client ID:		Run ID:	FID(17A) 2_041214A		SeqNo:	326269					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.433	1	5	0	129	81.2	149	6.292	2.22	23	

Sample ID	GRO std 2.5ug	Batch ID: R14011	Test Code: SW8015	Units: mg/L	Analysis Date 12/10/2004 11:44:26 P	Prep Date					
Client ID:		Run ID: PIDFID_041210A			SeqNo: 325853						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5378	0.05	0.5	0	108	82.6	114	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

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CLIENT: San Juan Refining

Work Order: 0412087

Project: River Sampling December 2004

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX std 100ng	Batch ID: R14011	Test Code: SW8021	Units: µg/L	Analysis Date	12/10/2004 7:16:44 PM	Prep Date				
Client ID:		Run ID:	PIDFID_041210A		SeqNo:	325844					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	41.26	2.5	40	0	103	64.5	133	0			
Benzene	20.85	0.5	20	0	104	88.7	114	0			
Toluene	20.74	0.5	20	0	104	89.3	112	0			
Ethylbenzene	20.01	0.5	20	0	100	88.6	113	0			
Xylenes, Total	60.51	0.5	60	0	101	89.4	112	0			

Sample ID	Ics-7051	Batch ID: 7051	Test Code: SW8270C	Units: µg/L	Analysis Date	12/20/2004	Prep Date	12/13/2004			
Client ID:			Run ID:	ELMO_041220A	SeqNo:	327617					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	88.82	10	100	0	88.8	11	123	0			
4-Chloro-3-methylphenol	184.5	20	200	0	92.3	15.4	119	0			
2-Chlorophenol	170.6	10	200	0	85.3	12.2	122	0			
1,4-Dichlorobenzene	73.24	10	100	0	73.2	16.9	100	0			
2,4-Dinitrotoluene	96.12	10	100	0	96.1	13	138	0			
N-Nitrosodi-n-propylamine	80.12	10	100	0	80.1	9.93	122	0			
4-Nitrophenol	71.12	50	200	0	35.6	-20.5	87.4	0			
Pentachlorophenol	178.6	50	200	0	89.3	-0.355	114	0			
Phenol	99.48	10	200	0	49.7	7.53	73.1	0			
Pyrene	95.36	15	100	0	95.4	12.6	140	0			
1,2,4-Trichlorobenzene	77.7	10	100	0	77.7	17.4	98.7	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
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QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0412087
 Project: River Sampling December 2004

Sample ID	Batch ID: 7051	Test Code: SW8270C	Units: µg/L	Analysis Date		Prep Date					
ICsd-7051		ELMO_041220A		12/20/2004		12/13/2004					
Client ID:		Run ID:		SeqNo:							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	74.96	10	100	0	75.0	11	123	88.82	16.9	30.5	
4-Chloro-3-methylphenol	176	20	200	0	88.0	15.4	119	184.5	4.70	28.6	
2-Chlorophenol	170.7	10	200	0	85.4	12.2	122	170.6	0.0938	107	
1,4-Dichlorobenzene	72.46	10	100	0	72.5	16.9	100	73.24	1.07	62.1	
2,4-Dinitrotoluene	85.12	10	100	0	85.1	13	138	96.12	12.1	14.7	
N-Nitrosodi-n-propylamine	75.04	10	100	0	75.0	9.93	122	80.12	6.55	30.3	
4-Nitrophenol	91.7	50	200	0	45.9	12.5	87.4	71.12	25.3	36.3	
Pentachlorophenol	164.4	50	200	0	82.2	3.55	114	178.6	8.31	49	
Phenol	91.52	10	200	0	45.8	7.53	73.1	99.48	8.34	52.4	
Pyrene	89.96	15	100	0	90.0	12.6	140	95.36	5.83	16.3	
1,2,4-Trichlorobenzene	73.5	10	100	0	73.5	17.4	98.7	77.7	5.56	36.4	

Sample ID	LCS-7107	Batch ID: 7107	Test Code: SW7470	Units: mg/L	Analysis Date 12/21/2004		Prep Date 12/21/2004				
Client ID:			Run ID: MI-LA254_041221B		SeqNo: 327859						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004669	0.0002	0.005	0	93.4	75.2	134	0			

Sample ID	LCSD-7107	Batch ID: 7107	Test Code: SW7470	Units: mg/L	Analysis Date 12/21/2004		Prep Date 12/21/2004				
Client ID:			Run ID: MI-LA254_041221B		SeqNo: 327883						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00461	0.0002	0.005	0	92.2	75.2	134	0.004669	1.27	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: 0412087
 Project: River Sampling December 2004

Sample ID	LCS	Batch ID: R14065	Test Code: SW6010A	Units: mg/L	Analysis Date	12/17/2004 8:09:39 AM	Prep Date				
Client ID:		Run ID:	ICP_041217A		SeqNo:	326948					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4958	0.02	0.5	0	99.2	80	120	0			
Barium	0.4794	0.002	0.5	0	95.9	80	120	0			
Cadmium	0.4785	0.002	0.5	0	95.7	80	120	0			
Calcium	45.66	1	50.5	0	90.4	80	120	0			
Chromium	0.4804	0.006	0.5	0	96.1	80	120	0			
Copper	0.4783	0.006	0.5	0	95.7	80	120	0			
Iron	0.4516	0.02	0.5	0	90.3	80	120	0			
Lead	0.4901	0.005	0.5	0	98.0	80	120	0			
Magnesium	46.92	1	50.5	0	92.9	80	120	0			
Manganese	0.4581	0.002	0.5	0	91.6	80	120	0			
Potassium	48.12	1	55	0	87.5	80	120	0			
Selenium	0.4594	0.05	0.5	0	91.9	80	120	0			
Silver	0.5221	0.005	0.5	0	104	80	120	0			
Sodium	48.3	1	50.5	0	95.6	80	120	0			
Uranium	2.244	0.1	2.5	0	89.8	80	120	0			
Zinc	0.4815	0.005	0.5	0	96.3	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
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QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0412087
 Project: River Sampling December 2004

Sample ID	LCSD	Batch ID: R14065	Test Code: SW6010A	Units: mg/L	Analysis Date	12/17/2004 8:12:49 AM	Prep Date				
Client ID:		Run ID:	ICP_041217A		SeqNo:	326949					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4867	0.02	0.5	0	97.3	80	120	0.4958	1.85	20	
Barium	0.4782	0.002	0.5	0	95.6	80	120	0.4794	0.241	20	
Cadmium	0.4751	0.002	0.5	0	95.0	80	120	0.4785	0.703	20	
Calcium	45.78	1	50.5	0	90.6	80	120	45.66	0.247	20	
Chromium	0.4776	0.006	0.5	0	95.5	80	120	0.4804	0.595	20	
Copper	0.4745	0.006	0.5	0	94.9	80	120	0.4783	0.790	20	
Iron	0.4542	0.02	0.5	0	90.8	80	120	0.4516	0.566	20	
Lead	0.4833	0.005	0.5	0	96.7	80	120	0.4901	1.39	20	
Magnesium	46.5	1	50.5	0	92.1	80	120	46.92	0.899	20	
Manganese	0.4574	0.002	0.5	0	91.5	80	120	0.4581	0.143	20	
Potassium	47.5	1	55	0	86.4	80	120	48.12	1.29	20	
Selenium	0.4593	0.05	0.5	0	91.9	80	120	0.4594	0.0257	20	
Silver	0.5199	0.005	0.5	0	104	80	120	0.5221	0.431	20	
Sodium	47.69	1	50.5	0	94.4	80	120	48.3	1.26	20	
Uranium	2.236	0.1	2.5	0	89.4	80	120	2.244	0.352	20	
Zinc	0.4792	0.005	0.5	0	95.8	80	120	0.4815	0.482	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: 12/8/2004

Work Order Number 0412087 Received by AT

Checklist completed by [Signature] Date 12/13/04

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 _____

COVER LETTER

December 27, 2004

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

RE: River Sampling December 2004

Order No.: 0412103

Dear Cindy Hurtado:

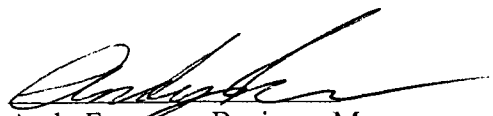
Hall Environmental Analysis Laboratory received 2 samples on 12/9/2004 for the analyses presented in the following report.

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-Dec-04

CLIENT: San Juan Refining

Client Sample ID: River-Downstream

Lab Order: 0412103

Collection Date: 12/7/2004 12:00:00 PM

Project: River Sampling December 2004

Lab ID: 0412103-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.18	0.10		mg/L	1	12/10/2004 1:01:35 PM
Chloride	4.6	0.10		mg/L	1	12/10/2004 1:01:35 PM
Bromide	ND	0.10		mg/L	1	12/13/2004 11:22:59 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	12/10/2004 1:01:35 PM
Sulfate	120	2.5		mg/L	5	12/10/2004 5:47:11 PM
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	12/10/2004 12:44:47 PM
EPA METHOD 310.1: ALKALINITY						Analyst: MAP
Alkalinity, Total (As CaCO3)	98	4.0		mg/L CaCO3	2	12/20/2004
Carbonate	ND	4.0		mg/L CaCO3	2	12/20/2004
Bicarbonate	98	4.0		mg/L CaCO3	2	12/20/2004
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/13/2004 9:26:23 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	12/13/2004 9:26:23 PM
Surr: DNOP	134	58-140		%REC	1	12/13/2004 9:26:23 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/10/2004 6:17:18 PM
Surr: BFB	103	78.3-120		%REC	1	12/10/2004 6:17:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	12/10/2004 6:17:18 PM
Benzene	ND	0.50		µg/L	1	12/10/2004 6:17:18 PM
Toluene	ND	0.50		µg/L	1	12/10/2004 6:17:18 PM
Ethylbenzene	ND	0.50		µg/L	1	12/10/2004 6:17:18 PM
Xylenes, Total	ND	0.50		µg/L	1	12/10/2004 6:17:18 PM
Surr: 4-Bromofluorobenzene	98.1	83.3-121		%REC	1	12/10/2004 6:17:18 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	12/20/2004
Acenaphthylene	ND	10		µg/L	1	12/20/2004
Aniline	ND	10		µg/L	1	12/20/2004
Anthracene	ND	10		µg/L	1	12/20/2004
Azobenzene	ND	10		µg/L	1	12/20/2004
Benz(a)anthracene	ND	15		µg/L	1	12/20/2004
Benzo(a)pyrene	ND	10		µg/L	1	12/20/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	12/20/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/20/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	12/20/2004
Benzoic acid	ND	50		µg/L	1	12/20/2004
Benzyl alcohol	ND	20		µg/L	1	12/20/2004
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/20/2004

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-Dec-04

CLIENT: San Juan Refining

Client Sample ID: River-Downstream

Lab Order: 0412103

Collection Date: 12/7/2004 12:00:00 PM

Project: River Sampling December 2004

Lab ID: 0412103-01

Matrix: AQUEOUS

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

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

Page 2 of 5

Hall Environmental Analysis Laboratory

Date: 27-Dec-04

CLIENT: San Juan Refining

Client Sample ID: River-Downstream

Lab Order: 0412103

Collection Date: 12/7/2004 12:00:00 PM

Project: River Sampling December 2004

Lab ID: 0412103-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Naphthalene	ND	10		µg/L	1	12/20/2004
2-Nitroaniline	ND	50		µg/L	1	12/20/2004
3-Nitroaniline	ND	50		µg/L	1	12/20/2004
4-Nitroaniline	ND	20		µg/L	1	12/20/2004
Nitrobenzene	ND	10		µg/L	1	12/20/2004
2-Nitrophenol	ND	15		µg/L	1	12/20/2004
4-Nitrophenol	ND	50		µg/L	1	12/20/2004
Pentachlorophenol	ND	50		µg/L	1	12/20/2004
Phenanthrene	ND	10		µg/L	1	12/20/2004
Phenol	ND	10		µg/L	1	12/20/2004
Pyrene	ND	15		µg/L	1	12/20/2004
Pyridine	ND	30		µg/L	1	12/20/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/20/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/20/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	12/20/2004
Surr: 2,4,6-Tribromophenol	16.5	16.6-115	S	%REC	1	12/20/2004
Surr: 2-Fluorobiphenyl	74.3	37-95.7		%REC	1	12/20/2004
Surr: 2-Fluorophenol	37.3	9.54-89.8		%REC	1	12/20/2004
Surr: 4-Terphenyl-d14	91.4	47.9-115		%REC	1	12/20/2004
Surr: Nitrobenzene-d5	75.4	38-106		%REC	1	12/20/2004
Surr: Phenol-d6	43.7	10.7-63.4		%REC	1	12/20/2004

EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: MAP

Specific Conductance 440 0.010 µmhos/cm

EPA METHOD 7470: MERCURY

Analyst: CMC

Mercury ND 0.00020 mg/L

EPA METHOD 6010C: DISSOLVED METALS

Analyst: NMO

Arsenic	ND	0.020	mg/L	1	12/17/2004 9:15:32 AM
Barium	0.068	0.0020	mg/L	1	12/17/2004 9:15:32 AM
Cadmium	ND	0.0020	mg/L	1	12/17/2004 9:15:32 AM
Calcium	46	1.0	mg/L	1	12/17/2004 9:15:32 AM
Chromium	ND	0.0060	mg/L	1	12/17/2004 9:15:32 AM
Copper	ND	0.0060	mg/L	1	12/17/2004 9:15:32 AM
Iron	ND	0.020	mg/L	1	12/17/2004 9:15:32 AM
Lead	ND	0.0050	mg/L	1	12/17/2004 9:15:32 AM
Magnesium	7.9	1.0	mg/L	1	12/17/2004 9:15:32 AM
Manganese	0.033	0.0020	mg/L	1	12/17/2004 9:15:32 AM
Potassium	2.0	1.0	mg/L	1	12/17/2004 9:15:32 AM
Selenium	ND	0.050	mg/L	1	12/17/2004 9:15:32 AM
Silver	ND	0.0050	mg/L	1	12/17/2004 9:15:32 AM
Sodium	32	1.0	mg/L	1	12/17/2004 9:15:32 AM
Uranium	ND	0.10	mg/L	1	12/17/2004 9:15:32 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

* - Value exceeds Maximum Contaminant Level

Page 3 of 5

Hall Environmental Analysis Laboratory

Date: 27-Dec-04

CLIENT: San Juan Refining

Client Sample ID: River-Downstream

Lab Order: 0412103

Collection Date: 12/7/2004 12:00:00 PM

Project: River Sampling December 2004

Lab ID: 0412103-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Zinc	0.013	0.0050		mg/L	1	12/17/2004 9:15:32 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	12/16/2004 9:56:33 AM
Barium	0.082	0.020		mg/L	1	12/16/2004 9:56:33 AM
Cadmium	ND	0.0020		mg/L	1	12/16/2004 9:56:33 AM
Chromium	ND	0.0060		mg/L	1	12/16/2004 9:56:33 AM
Copper	ND	0.0060		mg/L	1	12/16/2004 9:56:33 AM
Iron	0.22	0.020		mg/L	1	12/16/2004 9:56:33 AM
Lead	ND	0.0050		mg/L	1	12/16/2004 9:56:33 AM
Manganese	0.061	0.0020		mg/L	1	12/16/2004 9:56:33 AM
Selenium	ND	0.050		mg/L	1	12/16/2004 9:56:33 AM
Silver	ND	0.0050		mg/L	1	12/16/2004 9:56:33 AM
Uranium	ND	0.10		mg/L	1	12/16/2004 9:56:33 AM
Zinc	ND	0.050		mg/L	1	12/16/2004 9:56:33 AM
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	310	50		mg/L	1	12/15/2004

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-Dec-04

CLIENT: San Juan Refining
Lab Order: 0412103
Project: River Sampling December 2004
Lab ID: 0412103-02

Client Sample ID: Trip Blank
Collection Date:
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	12/13/2004 9:56:02 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	12/13/2004 9:56:02 PM
Surr: DNOP	119	58-140		%REC	1	12/13/2004 9:56:02 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/10/2004 6:47:01 PM
Surr: BFB	104	78.3-120		%REC	1	12/10/2004 6:47:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	12/10/2004 6:47:01 PM
Benzene	ND	0.50		µg/L	1	12/10/2004 6:47:01 PM
Toluene	ND	0.50		µg/L	1	12/10/2004 6:47:01 PM
Ethylbenzene	ND	0.50		µg/L	1	12/10/2004 6:47:01 PM
Xylenes, Total	ND	0.50		µg/L	1	12/10/2004 6:47:01 PM
Surr: 4-Bromofluorobenzene	98.8	83.3-121		%REC	1	12/10/2004 6:47:01 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-Dec-04

CLIENT: San Juan Refining
Work Order: 0412103
Project: River Sampling December 2004

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R14012	Test Code: E300	Units: mg/L	Analysis Date 12/10/2004 12:11:13 P	Prep Date						
Client ID:		Run ID: LC_041210A			SeqNo: 325811							
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									
Bromide		ND	0.1									
Phosphorus, Orthophosphate (As P)		ND	0.5									
Sulfate		ND	0.5									
Nitrate (As N)+Nitrite (As N)		ND	0.1									

Sample ID	MBLK	Batch ID: R14012	Test Code: E300	Units: mg/L	Analysis Date	12/10/2004 6:54:25 PM	Prep Date					
Client ID:		Run ID: LC_041210A			SeqNo:	325835						
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								
Bromide		ND		0.1								
Phosphorus, Orthophosphate (As P)		ND		0.5								
Sulfate		ND		0.5								
Nitrate (As N)+Nitrite (As N)		ND		0.1								

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

/

CLIENT: San Juan Refining
Work Order: 0412103
Project: River Sampling December 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	MBLK	Batch ID: R14035	Test Code: E300	Units: mg/L	Analysis Date	12/13/2004 10:49:21 A	Prep Date					
Client ID:			Run ID: LC_041213A		SeqNo:	326327						
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									
Bromide		ND	0.1									
Phosphorus, Orthophosphate (As P)		ND	0.5									
Sulfate		ND	0.5									
Nitrate (As N)+Nitrite (As N)		ND	0.1									

Sample ID	MBLK	Batch ID: R14084	Test Code: E310.1	Units: mg/L CaCO3	Analysis Date	12/20/2004	Prep Date					
Client ID:			Run ID: WC_041220A		SeqNo:	327418						
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									

Sample ID	MB-7054	Batch ID: 7054	Test Code: SW8015	Units: mg/L	Analysis Date	12/13/2004 5:27:20 PM	Prep Date	12/13/2004				
Client ID:			Run ID: FID(17A) 2_041214A		SeqNo: 326266							
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		0.7425	0	1	0	74.3	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: 0412103
 Project: River Sampling December 2004

Sample ID	Reagent Blank 5m	Batch ID: R14011	Test Code: SW8015	Units: mg/L	Analysis Date 12/10/2004 9:17:35 AM	Prep Date					
Client ID:			Run ID: PIDFID_041210A		SeqNo: 325792						
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	19.63	0	20	0	98.2	78.3	120	0			

Sample ID	Reagent Blank 5m	Batch ID: R14011	Test Code: SW8021	Units: µg/L	Analysis Date 12/10/2004 9:17:35 AM	Prep Date					
Client ID:			Run ID: PIDFID_041210A		SeqNo: 325791						
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	18.85	0	20	0	94.2	83.3	121	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: 0412103
 Project: River Sampling December 2004

Sample ID	mb-7051	Batch ID: 7051	Test Code: SW8270C	Units: µg/L	Analysis Date	12/20/2004	Prep Date	12/13/2004			
Client ID:			Run ID:	ELMO_041220A	SeqNo:	327616					
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: 0412103
 Project: River Sampling December 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

CLIENT: San Juan Refining
Work Order: 0412103
Project: River Sampling December 2004

QC SUMMARY REPORT
Method Blank

Sample ID	MB	Batch ID: R14065	Test Code: SW6010A	Units: mg/L	Analysis Date	12/17/2004 8:07:09 AM	Prep Date				
Client ID:			Run ID: ICP_041217A		SeqNo:	326947					
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	ND	0.002									
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

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CLIENT: San Juan Refining
Work Order: 0412103
Project: River Sampling December 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-7069	Batch ID: 7069	Test Code: SW6010A	Units: mg/L	Analysis Date	12/16/2004 11:30:41 A	Prep Date	12/15/2004				
Client ID:			Run ID: ICP_041216A		SeqNo:	326705						
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									
Copper		ND	0.006									
Iron		ND	0.05									
Lead		ND	0.005									
Manganese		ND	0.002									
Selenium		ND	0.05									
Silver		ND	0.005									
Uranium		ND	0.1									
Zinc		ND	0.05									

Sample ID	MB-7069	Batch ID: 7069	Test Code: SW6010A	Units: mg/L	Analysis Date	12/16/2004 9:09:29 AM	Prep Date	12/15/2004				
Client ID:			Run ID: ICP_041216A		SeqNo:	326715						
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									
Copper		ND	0.006									
Iron		ND	0.05									
Manganese		ND	0.002									
Selenium		ND	0.05									
Silver		0.002113	0.005									J
Uranium		ND	0.1									
Zinc		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

CLIENT: San Juan Refining
Work Order: 0412103
Project: River Sampling December 2004

QC SUMMARY REPORT
Method Blank

Sample ID	MB-7069	Batch ID: 7069	Test Code: SW6010A	Units: mg/L	Analysis Date	12/17/2004 4:08:01 PM	Prep Date	12/15/2004				
Client ID:		Run ID:	ICP_041217B		SeqNo:	327026						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		ND		0.005								
Sample ID	MB-7059	Batch ID: 7059	Test Code: E160.1	Units: mg/L	Analysis Date	12/15/2004	Prep Date	12/13/2004				
Client ID:		Run ID:	WC_041216A		SeqNo:	326800						
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
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

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Hall Environmental Analysis Laboratory

Date: 27-Dec-04

CLIENT: San Juan Refining

Work Order: 0412103

Project: River Sampling December 2004

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0412103-01C dup	Batch ID	7059	Test Code	E160.1	Units	mg/L	Analysis Date	12/15/2004	Prep Date	12/13/2004
Client ID	River-Downstrea	Run ID			WC_041216A			SeqNo	326813		
Analyte		Result		PQL	50	SPK value	0	SPK Ref Val	0	%REC	0
			308					RPD Ref Val	305	%RPD	0.979
								HighLimit	0	RPDLimit	20
								LowLimit	0		

Total Dissolved Solids

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-Dec-04

CLIENT: San Juan Refining
Work Order: 0412103
Project: River Sampling December 2004

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0412103-01C ms	Batch ID: 7059	Test Code: E160.1	Units: mg/L	Analysis Date 12/15/2004		Prep Date 12/13/2004					
Client ID:	River-Downstrea		Run ID: WC_041216A		SeqNo: 326814							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids		1290	50	1000	305	98.5	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

Date: 27-Dec-04

CLIENT: San Juan Refining

Work Order: 0412103

Project: River Sampling December 2004

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R14012	Test Code: E300	Units: mg/L		Analysis Date	12/10/2004 12:27:58 P	Prep Date			
Client ID:		Run ID:	LC_041210A			SeqNo:	325812				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4732	0.1	0.5	0	94.6	90	110	0			
Chloride	4.635	0.1	5	0	92.7	90	110	0			
Bromide	2.147	0.1	2.5	0	85.9	90	110	0			
Phosphorus, Orthophosphate (As P)	4.79	0.5	5	0	95.8	90	110	0			S
Sulfate	9.623	0.5	10	0	96.2	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.266	0.1	3.5	0	93.3	90	110	0			

Sample ID	LCS	Batch ID: R14035	Test Code: E300	Units: mg/L	Analysis Date	12/13/2004 11:06:10 A	Prep Date				
Client ID:		Run ID:	LC_041213A		SeqNo:	326328					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.8197	0.1	0.5	0	164	90	110	0			S
Chloride	4.876	0.1	5	0	97.5	90	110	0			
Bromide	2.338	0.1	2.5	0	93.5	90	110	0			
Phosphorus, Orthophosphate (As P)	4.799	0.5	5	0	96.0	90	110	0			
Sulfate	9.978	0.5	10	0	99.8	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.44	0.1	3.5	0	98.3	90	110	0			

Sample ID	LCS-7054	Batch ID: 7054	Test Code: SW8015	Units: mg/L	Analysis Date	12/13/2004 6:27:06 PM	Prep Date	12/13/2004			
Client ID:			Run ID: FID(17A) 2_041214A		SeqNo: 326268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.292	1	5	0	126	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

/

CLIENT: San Juan Refining

Work Order: 0412103

Project: River Sampling December 2004

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID	LCSD-7054	Batch ID: 7054	Test Code: SW8015	Units: mg/L	Analysis Date	12/13/2004 6:56:52 PM	Prep Date	12/13/2004				
Client ID:			Run ID: FID(17A) 2_041214A		SeqNo:	326269						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		6.433	1	5	0	129	81.2	149	6.292	2.22	23	

Sample ID	GRO std 2.5ug	Batch ID: R14011	Test Code: SW8015	Units: mg/L	Analysis Date	12/10/2004 11:44:26 P	Prep Date					
Client ID:			Run ID: PIDFID_041210A		SeqNo: 325853							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.5378	0.05	0.5	0	108	82.6	114	0			

Sample ID	BTEX std 100ng	Batch ID: R14011	Test Code: SW8021	Units: µg/L	Analysis Date	12/10/2004 7:16:44 PM	Prep Date					
Client ID:			Run ID: PIDFID_041210A		SeqNo: 325844							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)		41.26	2.5	40	0	103	64.5	133	0			
Benzene		20.85	0.5	20	0	104	88.7	114	0			
Toluene		20.74	0.5	20	0	104	89.3	112	0			
Ethylbenzene		20.01	0.5	20	0	100	88.6	113	0			
Xylenes, Total		60.51	0.5	60	0	101	89.4	112	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: 0412103

Project: River Sampling December 2004

Sample ID	Ics-7051	Batch ID: 7051	Test Code: SW8270C	Units: µg/L	Analysis Date	12/20/2004	Prep Date	12/13/2004			
Client ID:			Run ID:	ELMO_041220A	SeqNo:	327617					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	88.82	10	100	0	88.8	11	123	0			
4-Chloro-3-methylphenol	184.5	20	200	0	92.3	15.4	119	0			
2-Chlorophenol	170.6	10	200	0	85.3	12.2	122	0			
1,4-Dichlorobenzene	73.24	10	100	0	73.2	16.9	100	0			
2,4-Dinitrotoluene	96.12	10	100	0	96.1	13	138	0			
N-Nitrosodi-n-propylamine	80.12	10	100	0	80.1	9.93	122	0			
4-Nitrophenol	71.12	50	200	0	35.6	-20.5	87.4	0			
Pentachlorophenol	178.6	50	200	0	89.3	-0.355	114	0			
Phenol	99.48	10	200	0	49.7	7.53	73.1	0			
Pyrene	95.36	15	100	0	95.4	12.6	140	0			
1,2,4-Trichlorobenzene	77.7	10	100	0	77.7	17.4	98.7	0			

Sample ID	Icsd-7051	Batch ID: 7051	Test Code: SW8270C	Units: µg/L	Analysis Date	12/20/2004	Prep Date	12/13/2004			
Client ID:			Run ID:	ELMO_041220A	SeqNo:	327618					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	74.96	10	100	0	75.0	11	123	88.82	16.9	30.5	
4-Chloro-3-methylphenol	176	20	200	0	88.0	15.4	119	184.5	4.70	28.6	
2-Chlorophenol	170.7	10	200	0	85.4	12.2	122	170.6	0.0938	107	
1,4-Dichlorobenzene	72.46	10	100	0	72.5	16.9	100	73.24	1.07	62.1	
2,4-Dinitrotoluene	85.12	10	100	0	85.1	13	138	96.12	12.1	14.7	
N-Nitrosodi-n-propylamine	75.04	10	100	0	75.0	9.93	122	80.12	6.55	30.3	
4-Nitrophenol	91.7	50	200	0	45.9	12.5	87.4	71.12	25.3	36.3	
Pentachlorophenol	164.4	50	200	0	82.2	3.55	114	178.6	8.31	49	
Phenol	91.52	10	200	0	45.8	7.53	73.1	99.48	8.34	52.4	
Pyrene	89.96	15	100	0	90.0	12.6	140	95.36	5.83	16.3	
2,2,4-Trichlorobenzene	73.5	10	100	0	73.5	17.4	98.7	77.7	5.56	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

CLIENT: San Juan Refining
Work Order: 0412103
Project: River Sampling December 2004

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID	LCS-7107	Batch ID: 7107	Test Code: SW7470	Units: mg/L	Analysis Date	12/21/2004	Prep Date	12/21/2004				
Client ID:			Run ID: MI-LA254_041221B		SeqNo:	327859						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.004669	0.0002	0.005	0	93.4	75.2	134	0			

Sample ID	LCSD-7107	Batch ID: 7107	Test Code: SW7470	Units: mg/L	Analysis Date	12/21/2004	Prep Date	12/21/2004				
Client ID:			Run ID: MI-LA254_041221B		SeqNo:	327883						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00461	0.0002	0.005	0	92.2	75.2	134	0.004669	1.27	0	

Sample ID	LCS	Batch ID: R14065	Test Code: SW6010A	Units: mg/L	Analysis Date	12/17/2004 8:09:39 AM	Prep Date					
Client ID:			Run ID: ICP_041217A		SeqNo:	326948						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	0.4958	0.02	0.5	0	99.2	80	120	0				
Barium	0.4794	0.002	0.5	0	95.9	80	120	0				
Cadmium	0.4785	0.002	0.5	0	95.7	80	120	0				
Calcium	45.66	1	50.5	0	90.4	80	120	0				
Chromium	0.4804	0.006	0.5	0	96.1	80	120	0				
Copper	0.4783	0.006	0.5	0	95.7	80	120	0				
Iron	0.4516	0.02	0.5	0	90.3	80	120	0				
Lead	0.4901	0.005	0.5	0	98.0	80	120	0				
Magnesium	46.92	1	50.5	0	92.9	80	120	0				
Manganese	0.4581	0.002	0.5	0	91.6	80	120	0				
Potassium	48.12	1	55	0	87.5	80	120	0				
Selenium	0.4594	0.05	0.5	0	91.9	80	120	0				
Silver	0.5221	0.005	0.5	0	104	80	120	0				
Sodium	48.3	1	50.5	0	95.6	80	120	0				
Uranium	2.244	0.1	2.5	0	89.8	80	120	0				
Zinc	0.4815	0.005	0.5	0	96.3	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: 0412103
 Project: River Sampling December 2004

Sample ID	LCSD	Batch ID: R14065	Test Code: SW6010A	Units: mg/L	Analysis Date	12/17/2004 8:12:49 AM	Prep Date				
Client ID:		Run ID:	ICP_041217A		SeqNo:	326949					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4867	0.02	0.5	0	97.3	80	120	0.4958	1.85	20	
Barium	0.4782	0.002	0.5	0	95.6	80	120	0.4794	0.241	20	
Cadmium	0.4751	0.002	0.5	0	95.0	80	120	0.4785	0.703	20	
Calcium	45.78	1	50.5	0	90.6	80	120	45.66	0.247	20	
Chromium	0.4776	0.006	0.5	0	95.5	80	120	0.4804	0.595	20	
Copper	0.4745	0.006	0.5	0	94.9	80	120	0.4783	0.790	20	
Iron	0.4542	0.02	0.5	0	90.8	80	120	0.4516	0.566	20	
Lead	0.4833	0.005	0.5	0	96.7	80	120	0.4901	1.39	20	
Magnesium	46.5	1	50.5	0	92.1	80	120	46.92	0.899	20	
Manganese	0.4574	0.002	0.5	0	91.5	80	120	0.4581	0.143	20	
Potassium	47.5	1	55	0	86.4	80	120	48.12	1.29	20	
Selenium	0.4593	0.05	0.5	0	91.9	80	120	0.4594	0.0257	20	
Silver	0.5199	0.005	0.5	0	104	80	120	0.5221	0.431	20	
Sodium	47.69	1	50.5	0	94.4	80	120	48.3	1.26	20	
Uranium	2.236	0.1	2.5	0	89.4	80	120	2.244	0.352	20	
Zinc	0.4792	0.005	0.5	0	95.8	80	120	0.4815	0.482	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:

12/9/2004

Work Order Number 0412103

Received by AT

Checklist completed by:

Signature

Date

12/9/04

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?	4°	4° C ± 2 Acceptable		If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____



REFINING COMPANY

CERTIFIED MAIL # 7099 3220 0010 2242 4863

January 11, 2005

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, New Mexico 87505

Re: Giant Bloomfield Refinery – OCD Conditional Approval of North Boundary
Barrier Corrective Action Plan

Dear Mr. Price:

Giant received the December 17, 2004 letter from the New Mexico Oil Conservation Division (OCD) stating OCD's conditional approval of the November 17, 2004 Corrective Action Plan (CAP) submitted by Giant for the Bloomfield facility. The purpose of this letter is to provide OCD with the anticipated starting date of the barrier construction and to respond to several of the conditions stated in OCD's letter.

Giant has entered into a contract with Remedial Construction Services, L.P. (RECON) to construct the north boundary barrier. RECON, based in Houston, Texas, is a contractor that specializes in the construction of barrier walls for environmental applications. RECON is tentatively scheduled to mobilize to the Bloomfield refinery the week of January 17, 2005, with barrier excavation activities expected to begin the following week. Construction is anticipated to be completed by the end of March 2005. Giant's environmental consultant (Malcolm Pirnie) will provide a senior geotechnical engineer and a full-time resident engineer to oversee and document the barrier construction activities. The barrier type will be a soil-bentonite slurry wall with permeability less than or equal to 1×10^{-7} cm/sec and a minimum thickness of 30 inches.

Response to OCD Conditions of Approval

The following responses correspond to the conditions in OCD's December 17, 2004 approval letter.

1. Condition accepted by Giant.

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

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

2. Giant initially planned to key the barrier wall 5 feet into the Nacimient Formation. However, discussions with a local excavation contractor with experience at the site revealed that achieving a 5-foot key depth using conventional excavation equipment is improbable without using rock-sawing and impact-hammer techniques. Further, hydraulic conductivity testing of samples taken from the Nacimient Formation along the barrier alignment indicates the formation is essentially impervious to water migration in its upper one-foot interval (soil boring SB2-1004, permeability of 6×10^{-7} cm/sec at a depth of 12.0 to 12.5 feet below ground surface (bgs); soil boring SB5-1004, permeability of 1.2×10^{-9} cm/sec at 9.5 to 10.5 bgs). Refer to the November 11, 2004 investigation report by Precision Engineering (Appendix A of CAP) for the testing results. An annotated test results summary table is included with this letter (Attachment A).

Based on the conditions noted above, the construction specifications for the barrier state the following requirements to minimize the potential underflow of fluids: The slurry wall shall be constructed with a minimum key-in depth of 3 feet into the Nacimient Formation or until refusal is met, whichever is less in depth. Refusal shall be defined as 3 passes for a horizontal distance of 5 feet with less than 0.2 feet of total penetration. Passes shall be made utilizing 90 percent of the manufacturer's maximum-rated down pressure and breakout power of the excavator. The excavator shall have a minimum rated gross power of 140 horsepower.

Flow net analyses are typically used to model seepage through earthen embankments (e.g., dams) and beneath impervious barriers (e.g. sheet pile and clay-material walls) where porous media flow conditions exist under appreciable hydraulic head. Since the proposed soil-bentonite wall will have a permeability less than or equal to 1×10^{-7} cm/sec, and the Nacimient Formation into which it will be keyed is less permeable, any seepage, if it occurs, will not be through porous media exhibiting Darcy's Law behavior. As such, it is Giant's opinion that a flow net analysis is not technically applicable in this case and will not add technical benefit towards understanding seepage potential.

Giant believes that seepage beneath the wall will be insignificant for these reasons:

- A) The groundwater seeps that have been observed and documented at the river bluff indicate that fluid movement is restricted to the sand and gravel deposits (Jackson Lake Terrace) at the interface of the Nacimient Formation. No seepage has been observed from within the Nacimient Formation. This observation is consistent with Precision Engineering's conclusion that the Formation does not contain or transmit water. (Appendix A of CAP).
- B) Groundwater levels measured in piezometers installed along the proposed barrier alignment show there is generally one foot of water or less on the top of the Nacimient Formation. This is an inappreciable amount of hydrostatic head.

C) The quantity of flow migrating from the facility to the river bluff in the Jackson Lake Terrace gravels (across the entire proposed slurry wall alignment - over 2,600 feet in length) has been estimated (using the Darcy equation) to be less than 20 gallons per minute. This estimate assumes a saturated thickness of 2 feet on top of the Nacimientto Formation (greater than measured), a uniform gradient, and a moderate Jackson Lake Terrace permeability. This relatively low quantity of flow is consistent with the observed "isolated seeps" at the river bluff. As such, the amount of water anticipated to accumulate against the barrier is low.

D) It appears the flow in the gravels at the interface of the Nacimientto Formation is controlled by the surface topography of the Formation and is not a uniform flow through the Terrace Gravels. Therefore, fluids that exist at the interface tend to migrate to low elevations in the top of the Nacimientto Formation and move along depressional troughs. These depressions will be targeted for fluids collection points that will be used to control hydrostatic head against the barrier. It is unlikely that water will accumulate along the full length of the barrier.

G) The hydrostatic head against the barrier at the collection points, even in a worst-case scenario (i.e., no fluid collection system), cannot exceed approximately 4 to 5 feet due to the hydraulic relief drain that exists beneath the Hammond Ditch. This small hydraulic head would not be sufficient to cause seepage beneath the wall through the Nacimientto Formation and would not likely cause seepage through the soil-bentonite barrier, even with its' higher permeability.

3. The barrier type will be a soil-bentonite slurry wall with permeability less than or equal to 1×10^{-7} cm/sec and a minimum thickness of 30 inches. The construction specifications require the soil-bentonite backfill mix design to be approved by Malcolm Pirnie. The specifications also require industry-standard quality control testing by the contractor during construction and verification permeability testing by an independent third-party laboratory.
4. As-built drawings and photo documentation are included in the construction procedures and will be provided to OCD as requested. Daily logs will be kept by the full-time on-site resident engineer.
5. Weekly progress reports and photos will be provided as requested.
6. Giant anticipates installing the fluid collection points in the second quarter of 2005 after construction of the barrier is complete. The contour of the Nacimientto Formation along the barrier alignment will be surveyed during construction to aid in locating collection points. A fluid collection system design will be submitted to OCD for approval prior to installation of the collection points.
7. A senior geotechnical engineer and a full-time resident engineer from Malcolm Pirnie will oversee and document the barrier construction activities. Due to the character of the Jackson Lake Terrace soils, a slurry trench excavation method will be used. As such, collection of representative soil samples from the trench at

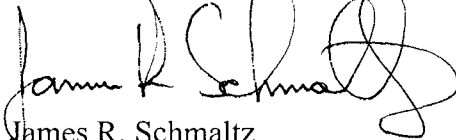
prospective collection system locations is not technically possible. If these soil samples are necessary, Giant proposes they be obtained separately after barrier construction.

8. RECON will prepare a detailed construction activity schedule and Giant will provide a copy to OCD prior to start of construction. The schedule will be reviewed weekly during construction progress meetings and revisions will be made as necessary. Schedule changes will be communicated to OCD on a weekly basis.
9. Giant anticipates developing a monitoring plan concurrent with the collection system design. Conceptually, the plan will be based on monitoring hydraulic conditions on both sides of the barrier at locations where fluid accumulation is anticipated. The monitoring plan will be submitted to OCD for approval.

If you have any questions in this matter, please contact me at 505-632-4171.

Sincerely,

GIANT REFINING COMPANY



James R. Schmaltz
Environmental Manager

Cc: Denny Foust - OCD Aztec Office
Hope Monzeglio - NMED Hazardous Waste Bureau
Bob Wilkinson - EPA
Ed Riege
Chad King

Release North of MW#45 Progress Report

Weekly Progress

On 9/29/2004 Giant-Bloomfield was directed to take an additional river water sample 100 yards downstream of any draw area and include this sample point in future sampling events. This river sample was taken on 9/30/2004 and sent to Hall Environmental labs for analysis. The sample came back "Non-Detect" for BTEX and TPH (results are attached). This sampling point will be included in the "Monitoring and Contingency Plan". Giant continues to monitor all the draws along the property boundaries.

Giant continues to work with Malcom Pirnie on the Engineering and Design of a cut system.

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:

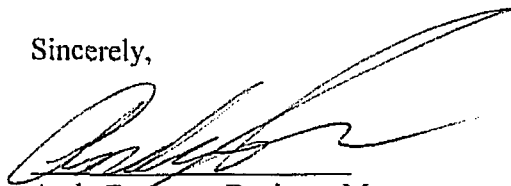
Hall Environmental Analysis Laboratory received 1 sample on 10/1/2004 for the analyses presented in the following report.

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

CLIENT: San Juan Refining
 Work Order: 0410010
 Project: River Downstream

QC SUMMARY REPORT
 Method Blank

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:		Run 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:			Run 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:			Run 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									

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-Oct-04

CLIENT: San Juan Refining
 Work Order: 0410010
 Project: River Downstream

QC SUMMARY REPORT
 Laboratory Control Spike - generic

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:			Run ID: PIDFID_041001A		SeqNo:	309532					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	30.97	2.5	40	0	77.4	54.9	142	0			
Benzene	21	0.5	20	0	105	81.3	121	0			
Toluene	21	0.5	20	0	105	84.9	118	0			
Ethylbenzene	21.34	0.5	20	0	107	53.8	149	0			
Xylenes, Total	64.81	0.5	60	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:			Run ID: PIDFID_041001A		SeqNo: 309533						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	28.94	2.5	40	0	72.3	54.9	142	30.97	6.79	28	
Benzene	19.22	0.5	20	0	96.1	81.3	121	21	8.87	27	
Toluene	19.69	0.5	20	0	98.5	84.9	118	21	6.41	19	
Ethylbenzene	18.92	0.5	20	0	94.6	53.8	149	21.34	12.0	15	
Xylenes, Total	57.34	0.5	60	0	95.6	83.1	122	64.81	12.2	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

Sample Receipt Checklist

Client Name SJR

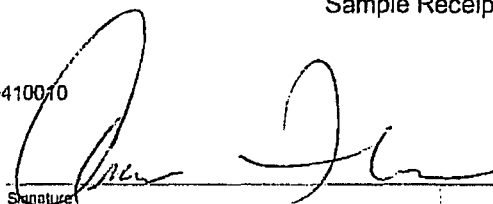
Date and Time Received:

10/1/2004

Work Order Number 0410070

Received by AT

Checklist completed by

 10/1/04

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?

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**

Other:

Accreditation Applied:

NELAC ☐ USACE ☐

SAN JUAN Refining

#50 Cr 4990

Bloom field, NM

37413

SDS-632-4161

505-632-3911

Sample I.D. No.

9-30-00

940A

H₂O

river-Down
Stream

4F-VDA

X

041000-1

Date: 9-30-88

Time: 1010

A

Relinquished By: (Signature)
under

Acquainted By: (Signature)
Wendy Hu

Received By: (Signature)

Received By: (Signature)

Time:

Relinquished By: [Signature]

Received By: [Signature]

10

1630

Rush ASAP

ANALYSIS REQUEST

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

Remarks:

Price, Wayne

From: Randy Schmaltz [rschmaltz@giant.com]
Sent: Wednesday, September 29, 2004 3:09 PM
To: 'Wayne Price'
Subject: River Samples



HALL1829_000.pdf

Wayne, here's is the electronic copy of the second set of river samples taken on 9/7/04. The cover page indicates that Hall received 4 samples. The extra sample is a trip blank that is used for quality control. I will follow this up by mailing you the hard copies from both sampling events.

<<HALL1829_000.pdf>>

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For more information please visit <http://www.messagelabs.com/email>

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:

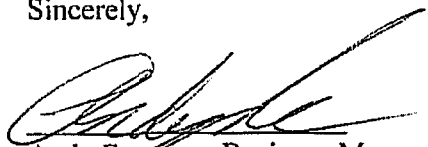
Hall Environmental Analysis Laboratory received 4 samples on 9/8/2004 for the analyses presented in the following report.

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
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

Client Sample ID: River Upstream

Lab Order: 0409062

Collection Date: 9/7/2004 10:50:00 AM

Project: River Sampling Sept 2004

Lab ID: 0409062-01

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						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 9:36:29 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

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
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 CaCO ₃)	100	4.0		mg/L CaCO ₃	2	9/13/2004
Carbonate	ND	4.0		mg/L CaCO ₃	2	9/13/2004
Bicarbonate	100	4.0		mg/L CaCO ₃	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
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
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
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: 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						Analyst: NMO
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						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: 0409062-03

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
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
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
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
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						
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 9:42:25 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

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
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

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

* - Value exceeds Maximum Contaminant Level 14 / 32

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Work Order: 0409062
 Project: River Sampling Sept 2004

QC SUMMARY REPORT
 Method Blank

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
 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	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:			Run ID:	ELMO_040920A	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									
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: 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
Isophorane	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

CLIENT: San Juan Refining
Work Order: 0409062
Project: River Sampling Sept 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-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: 305227						
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			
Mercury	0.00008115	0.0002									J

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	Batch ID: R13125	Test Code: SW6010A	Units: mg/L	Analysis Date	9/15/2004 9:03:00 AM	Prep Date				
Client ID:		Run ID:	ICP_040915A		SeqNo:	305865					
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									
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									
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:		Run ID: ICP_040917A			SeqNo: 305647						
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
 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-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
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

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	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance		306	0.01	0	0	0	0	0	310	1.30	20	

Quantifiers: 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
 Sample Matrix Spike

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
 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: 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	PQL	SPK value	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-6468	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	PQL	SPK value	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	LCSD-6468	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
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

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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				
Client ID:		Run ID:	PIDFID_040914A		SeqNo:	305321					
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				
Client ID:		Run ID:	ELMO_040920A		SeqNo:	307410					
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					
Client ID:		Run ID: MI-LA254_040914A			SeqNo: 305228						
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			

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-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	0	96.6	80	120	0			
Barium	0.46	0.002	0.5	0	0	92.0	80	120	0			
Cadmium	0.4677	0.002	0.5	0	0	93.5	80	120	0			
Calcium	49.83	1	50.5	0	0	98.7	80	120	0			
Chromium	0.4686	0.006	0.5	0	0	93.3	80	120	0			
Copper	0.4514	0.006	0.5	0	0	90.3	80	120	0			
Iron	0.536	0.02	0.5	0.005769	0	106	80	120	0			
Lead	0.4658	0.005	0.5	0	0	93.2	80	120	0			
Magnesium	50.81	1	50.5	0	0	101	80	120	0			
Manganese	0.485	0.002	0.5	0	0	97.0	80	120	0			
Potassium	51.14	1	55	0	0	93.0	80	120	0			
Selenium	0.4649	0.05	0.5	0	0	93.0	80	120	0			
Silver	0.5026	0.005	0.5	0	0	101	80	120	0			
Sodium	47.79	1	50.5	0.03782	0	94.6	80	120	0			
Uranium	ND	0.1	5	0	0	0	80	120	0			S
Zinc	0.4678	0.005	0.5	0	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

CLIENT: San Juan Refining
Work Order: 0409062
Project: River Sampling Sept 2004

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

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
 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: 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	
			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
 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-6492	Batch ID: 6492	Test Code: SW6010A	Unlis: 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	0.008	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-6482	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
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: 0409062
Project: River Sampling Sept 2004

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

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	%REC	LowLimit	HighLimit	RPD Ref Val
Silver		0.4968	0.005	0.5	99.4	80	120	0.498
								%RPD
								0.251
								RPDLimit
								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	%REC	LowLimit	HighLimit	RPD Ref Val
Total Dissolved Solids		991	50	1000	99.1	80	120	0
								%RPD
								RPDLimit
								Qual

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:

9/8/2004

Work Order Number 0409062

Received by AT

Checklist completed by

Signature

Date

9/13/04

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?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

Remarks:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Accreditation Applied:

NEIAC ☐ USAGE ☐

Other:

Project Name: River Sampling - September 2004

Project #:

Project Manager:

Sampler: Cindy Hurtado
Sample Temperature: 10

Sample Temperature:

Sampler: Cindy Hurtado
Sample Temperature: 50

Number/Volume	HEAL No.
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HEAL No.

Preservative	HgCl ₂ HNO ₃
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2-VOA	Y			040902-3
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2-VbA-	X			
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	X	PW025-1.
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	X	1-175nd
	X	

1-1204	1-175-0	1-175-1	1-175-2	1-175-3	1-175-4	1-175-5	1-175-6	1-175-7	1-175-8	1-175-9	1-175-10	1-175-11	1-175-12	1-175-13	1-175-14	1-175-15	1-175-16	1-175-17	1-175-18	1-175-19	1-175-20	1-175-21	1-175-22	1-175-23	1-175-24	1-175-25	1-175-26	1-175-27	1-175-28	1-175-29	1-175-30	1-175-31	1-175-32	1-175-33	1-175-34	1-175-35	1-175-36	1-175-37	1-175-38	1-175-39	1-175-40	1-175-41	1-175-42	1-175-43	1-175-44	1-175-45	1-175-46	1-175-47	1-175-48	1-175-49	1-175-50	1-175-51	1-175-52	1-175-53	1-175-54	1-175-55	1-175-56	1-175-57	1-175-58	1-175-59	1-175-60	1-175-61	1-175-62	1-175-63	1-175-64	1-175-65	1-175-66	1-175-67	1-175-68	1-175-69	1-175-70	1-175-71	1-175-72	1-175-73	1-175-74	1-175-75	1-175-76	1-175-77	1-175-78	1-175-79	1-175-80	1-175-81	1-175-82	1-175-83	1-175-84	1-175-85	1-175-86	1-175-87	1-175-88	1-175-89	1-175-90	1-175-91	1-175-92	1-175-93	1-175-94	1-175-95	1-175-96	1-175-97	1-175-98	1-175-99	1-175-100	1-175-101	1-175-102	1-175-103	1-175-104	1-175-105	1-175-106	1-175-107	1-175-108	1-175-109	1-175-110	1-175-111	1-175-112	1-175-113	1-175-114	1-175-115	1-175-116	1-175-117	1-175-118	1-175-119	1-175-120	1-175-121	1-175-122	1-175-123	1-175-124	1-175-125	1-175-126	1-175-127	1-175-128	1-175-129	1-175-130	1-175-131	1-175-132	1-175-133	1-175-134	1-175-135	1-175-136	1-175-137	1-175-138	1-175-139	1-175-140	1-175-141	1-175-142	1-175-143	1-175-144	1-175-145	1-175-146	1-175-147	1-175-148	1-175-149	1-175-150	1-175-151	1-175-152	1-175-153	1-175-154	1-175-155	1-175-156	1-175-157	1-175-158	1-175-159	1-175-160	1-175-161	1-175-162	1-175-163	1-175-164	1-175-165	1-175-166	1-175-167	1-175-168	1-175-169	1-175-170	1-175-171	1-175-172	1-175-173	1-175-174	1-175-175	1-175-176	1-175-177	1-175-178	1-175-179	1-175-180	1-175-181	1-175-182	1-175-183	1-175-184	1-175-185	1-175-186	1-175-187	1-175-188	1-175-189	1-175-190	1-175-191	1-175-192	1-175-193	1-175-194	1-175-195	1-175-196	1-175-197	1-175-198	1-175-199	1-175-200	1-175-201	1-175-202	1-175-203	1-175-204	1-175-205	1-175-206	1-175-207	1-175-208	1-175-209	1-175-210	1-175-211	1-175-212	1-175-213	1-175-214	1-175-215	1-175-216	1-175-217	1-175-218	1-175-219	1-175-220	1-175-221	1-175-222	1-175-223	1-175-224	1-175-225	1-175-226	1-175-227	1-175-228	1-175-229	1-175-230	1-175-231	1-175-232	1-175-233	1-175-234	1-175-235	1-175-236	1-175-237	1-175-238	1-175-239	1-175-240	1-175-241	1-175-242	1-175-243	1-175-244	1-175-245	1-175-246	1-175-247	1-175-248	1-175-249	1-175-250	1-175-251	1-175-252	1-175-253	1-175-254	1-175-255	1-175-256	1-175-257	1-175-258	1-175-259	1-175-260	1-175-261	1-175-262	1-175-263	1-175-264	1-175-265	1-175-266	1-175-267	1-175-268	1-175-269	1-175-270	1-175-271	1-175-272	1-175-273	1-175-274	1-175-275	1-175-276	1-175-277	1-175-278
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[illegible]

1-200	Ans.
1-100	

	1-20	7 Mar
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Received By: (Signature)	9/8/04
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Received By: (Signature)

Time: Relinquished By: (Signature)

Relinquished By: (Signature) / /

Received By: (Signature)	9/8/11
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Time: Relinquished By: (Signature)

Relinquished By: (Signature)

Received By: (Signature)

Remarks:

ANALYSIS REQUEST

[illegible]

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 5136

November 5, 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 is the hardcopy of the analysis of samples taken from October 7, 2004.

River samples were pulled again on November 3, 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

COVER LETTER

October 21, 2004

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

RE: River Sampling October 2004

Order No.: 0410074

Dear Cindy Hurtado:

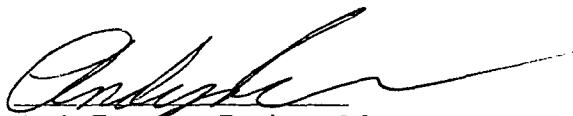
Hall Environmental Analysis Laboratory received 5 samples on 10/8/2004 for the analyses presented in the following report.

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: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-01

Client Sample ID: River N of MW#46
Collection Date: 10/7/2004 10:50:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.19	0.10		mg/L	1	10/9/2004 7:06:19 AM
Chloride	4.4	0.10		mg/L	1	10/9/2004 7:06:19 AM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	10/9/2004 7:06:19 AM
Bromide	ND	0.10		mg/L	1	10/9/2004 7:06:19 AM
Nitrogen, Nitrate (As N)	0.13	0.10		mg/L	1	10/9/2004 7:06:19 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	10/9/2004 7:06:19 AM
Sulfate	90	2.5		mg/L	5	10/12/2004 2:59:22 PM
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO ₃)	110	4.0		mg/L CaCO ₃	2	10/12/2004
Carbonate	ND	4.0		mg/L CaCO ₃	2	10/12/2004
Bicarbonate	110	4.0		mg/L CaCO ₃	2	10/12/2004
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/14/2004 11:50:04 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/14/2004 11:50:04 PM
Surr: DNOP	103	58-140		%REC	1	10/14/2004 11:50:04 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/11/2004 6:42:53 PM
Surr: BFB	96.7	74-118		%REC	1	10/11/2004 6:42:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	10/11/2004 6:42:53 PM
Benzene	ND	0.50		µg/L	1	10/11/2004 6:42:53 PM
Toluene	ND	0.50		µg/L	1	10/11/2004 6:42:53 PM
Ethylbenzene	ND	0.50		µg/L	1	10/11/2004 6:42:53 PM
Xylenes, Total	ND	0.50		µg/L	1	10/11/2004 6:42:53 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	1	10/11/2004 6:42:53 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: GAB
Acenaphthene	ND	33		µg/L	1	10/13/2004
Acenaphthylene	ND	33		µg/L	1	10/13/2004
Aniline	ND	33		µg/L	1	10/13/2004
Anthracene	ND	33		µg/L	1	10/13/2004
Azobenzene	ND	33		µg/L	1	10/13/2004
Benz(a)anthracene	ND	50		µg/L	1	10/13/2004
Benzo(a)pyrene	ND	33		µg/L	1	10/13/2004
Benzo(b)fluoranthene	ND	33		µg/L	1	10/13/2004
Benzo(g,h,i)perylene	ND	33		µg/L	1	10/13/2004
Benzo(k)fluoranthene	ND	33		µg/L	1	10/13/2004
Benzoic acid	ND	170		µg/L	1	10/13/2004
Benzyl alcohol	ND	67		µg/L	1	10/13/2004

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: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-01

Client Sample ID: River N of MW#46
Collection Date: 10/7/2004 10:50:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethoxy)methane	ND	33		µg/L	1	10/13/2004
Bis(2-chloroethyl)ether	ND	50		µg/L	1	10/13/2004
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	10/13/2004
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	10/13/2004
4-Bromophenyl phenyl ether	ND	33		µg/L	1	10/13/2004
Butyl benzyl phthalate	ND	50		µg/L	1	10/13/2004
Carbazole	ND	33		µg/L	1	10/13/2004
4-Chloro-3-methylphenol	ND	67		µg/L	1	10/13/2004
4-Chloroaniline	ND	67		µg/L	1	10/13/2004
2-Chloronaphthalene	ND	33		µg/L	1	10/13/2004
2-Chlorophenol	ND	33		µg/L	1	10/13/2004
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	10/13/2004
Chrysene	ND	50		µg/L	1	10/13/2004
Di-n-butyl phthalate	ND	33		µg/L	1	10/13/2004
Di-n-octyl phthalate	ND	50		µg/L	1	10/13/2004
Dibenz(a,h)anthracene	ND	33		µg/L	1	10/13/2004
Dibenzofuran	ND	33		µg/L	1	10/13/2004
1,2-Dichlorobenzene	ND	33		µg/L	1	10/13/2004
1,3-Dichlorobenzene	ND	33		µg/L	1	10/13/2004
1,4-Dichlorobenzene	ND	33		µg/L	1	10/13/2004
3,3'-Dichlorobenzidine	ND	50		µg/L	1	10/13/2004
Diethyl phthalate	ND	33		µg/L	1	10/13/2004
Dimethyl phthalate	ND	33		µg/L	1	10/13/2004
2,4-Dichlorophenol	ND	33		µg/L	1	10/13/2004
2,4-Dimethylphenol	ND	33		µg/L	1	10/13/2004
4,6-Dinitro-2-methylphenol	ND	170		µg/L	1	10/13/2004
2,4-Dinitrophenol	ND	170		µg/L	1	10/13/2004
2,4-Dinitrotoluene	ND	33		µg/L	1	10/13/2004
2,6-Dinitrotoluene	ND	33		µg/L	1	10/13/2004
Fluoranthene	ND	33		µg/L	1	10/13/2004
Fluorene	ND	33		µg/L	1	10/13/2004
Hexachlorobenzene	ND	33		µg/L	1	10/13/2004
Hexachlorobutadiene	ND	33		µg/L	1	10/13/2004
Hexachlorocyclopentadiene	ND	33		µg/L	1	10/13/2004
Hexachloroethane	ND	33		µg/L	1	10/13/2004
Indeno(1,2,3-cd)pyrene	ND	33		µg/L	1	10/13/2004
Isophorone	ND	33		µg/L	1	10/13/2004
2-Methylnaphthalene	ND	33		µg/L	1	10/13/2004
2-Methylphenol	ND	50		µg/L	1	10/13/2004
3+4-Methylphenol	ND	33		µg/L	1	10/13/2004
N-Nitrosodi-n-propylamine	ND	33		µg/L	1	10/13/2004
N-Nitrosodimethylamine	ND	33		µg/L	1	10/13/2004

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: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-01

Client Sample ID: River N of MW#46
Collection Date: 10/7/2004 10:50:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
N-Nitrosodiphenylamine	ND	33		µg/L	1	10/13/2004
Naphthalene	ND	33		µg/L	1	10/13/2004
2-Nitroaniline	ND	170		µg/L	1	10/13/2004
3-Nitroaniline	ND	170		µg/L	1	10/13/2004
4-Nitroaniline	ND	67		µg/L	1	10/13/2004
Nitrobenzene	ND	33		µg/L	1	10/13/2004
2-Nitrophenol	ND	50		µg/L	1	10/13/2004
4-Nitrophenol	ND	170		µg/L	1	10/13/2004
Pentachlorophenol	ND	170		µg/L	1	10/13/2004
Phenanthrene	ND	33		µg/L	1	10/13/2004
Phenol	ND	33		µg/L	1	10/13/2004
Pyrene	ND	50		µg/L	1	10/13/2004
Pyridine	ND	100		µg/L	1	10/13/2004
1,2,4-Trichlorobenzene	ND	33		µg/L	1	10/13/2004
2,4,5-Trichlorophenol	ND	33		µg/L	1	10/13/2004
2,4,6-Trichlorophenol	ND	50		µg/L	1	10/13/2004
Surr: 2,4,6-Tribromophenol	66.6	16.6-116		%REC	1	10/13/2004
Surr: 2-Fluorobiphenyl	101	37-110		%REC	1	10/13/2004
Surr: 2-Fluorophenol	82.0	9.54-126		%REC	1	10/13/2004
Surr: 4-Terphenyl-d14	87.1	47.9-143		%REC	1	10/13/2004
Surr: Nitrobenzene-d5	105	38-106		%REC	1	10/13/2004
Surr: Phenol-d6	69.5	10.7-102		%REC	1	10/13/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	370	0.010		µmhos/cm	1	10/11/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	10/14/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	10/11/2004 12:42:28 PM
Barium	0.063	0.0020		mg/L	1	10/11/2004 12:42:28 PM
Cadmium	ND	0.0020		mg/L	1	10/11/2004 12:42:28 PM
Calcium	46	1.0		mg/L	1	10/11/2004 12:42:28 PM
Chromium	ND	0.0060		mg/L	1	10/11/2004 12:42:28 PM
Iron	0.36	0.020		mg/L	1	10/11/2004 12:42:28 PM
Lead	ND	0.0050		mg/L	1	10/11/2004 12:42:28 PM
Magnesium	8.1	1.0		mg/L	1	10/11/2004 12:42:28 PM
Manganese	0.0084	0.0020		mg/L	1	10/11/2004 12:42:28 PM
Potassium	2.2	1.0		mg/L	1	10/11/2004 12:42:28 PM
Selenium	ND	0.050		mg/L	1	10/11/2004 12:42:28 PM
Silver	ND	0.0050		mg/L	1	10/11/2004 12:42:28 PM
Sodium	31	1.0		mg/L	1	10/11/2004 12:42:28 PM
Uranium	ND	0.10		mg/L	1	10/13/2004 8:30:28 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: 21-Oct-04

CLIENT: San Juan Refining

Client Sample ID: River N of MW#46

Lab Order: 0410074

Collection Date: 10/7/2004 10:50:00 AM

Project: River Sampling October 2004

Lab ID: 0410074-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	10/15/2004 12:42:22 PM
Barium	0.074	0.020		mg/L	1	10/15/2004 12:42:22 PM
Cadmium	ND	0.0020		mg/L	1	10/15/2004 12:42:22 PM
Chromium	ND	0.0060		mg/L	1	10/15/2004 12:42:22 PM
Lead	ND	0.0050		mg/L	1	10/15/2004 12:42:22 PM
Selenium	ND	0.050		mg/L	1	10/15/2004 12:42:22 PM
Silver	ND	0.0050		mg/L	1	10/15/2004 12:42:22 PM
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	300	50		mg/L	1	10/13/2004

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: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-02

Client Sample ID: River N of MW #45
Collection Date: 10/7/2004 11:15:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						
						Analyst: MAP
Fluoride	0.21	0.10		mg/L	1	10/9/2004 7:23:07 AM
Chloride	4.2	0.10		mg/L	1	10/9/2004 7:23:07 AM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	10/9/2004 7:23:07 AM
Bromide	ND	0.10		mg/L	1	10/9/2004 7:23:07 AM
Nitrogen, Nitrate (As N)	0.13	0.10		mg/L	1	10/9/2004 7:23:07 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	10/9/2004 7:23:07 AM
Sulfate	88	2.5		mg/L	5	10/12/2004 3:16:10 PM
EPA METHOD 310.1: ALKALINITY						
						Analyst: CMC
Alkalinity, Total (As CaCO ₃)	100	4.0		mg/L CaCO ₃	2	10/12/2004
Carbonate	ND	4.0		mg/L CaCO ₃	2	10/12/2004
Bicarbonate	100	4.0		mg/L CaCO ₃	2	10/12/2004
EPA METHOD 8015B: DIESEL RANGE						
						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/15/2004 12:19:21 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/15/2004 12:19:21 AM
Surr: DNOP	107	58-140		%REC	1	10/15/2004 12:19:21 AM
EPA METHOD 8015B: GASOLINE RANGE						
						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/11/2004 7:12:45 PM
Surr: BFB	92.9	74-118		%REC	1	10/11/2004 7:12:45 PM
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	10/11/2004 7:12:45 PM
Benzene	ND	0.50		µg/L	1	10/11/2004 7:12:45 PM
Toluene	ND	0.50		µg/L	1	10/11/2004 7:12:45 PM
Ethylbenzene	ND	0.50		µg/L	1	10/11/2004 7:12:45 PM
Xylenes, Total	ND	0.50		µg/L	1	10/11/2004 7:12:45 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	1	10/11/2004 7:12:45 PM
EPA METHOD 8270C: SEMIVOLATILES						
						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	10/13/2004
Acenaphthylene	ND	10		µg/L	1	10/13/2004
Aniline	ND	10		µg/L	1	10/13/2004
Anthracene	ND	10		µg/L	1	10/13/2004
Azobenzene	ND	10		µg/L	1	10/13/2004
Benz(a)anthracene	ND	15		µg/L	1	10/13/2004
Benzo(a)pyrene	ND	10		µg/L	1	10/13/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	10/13/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/13/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	10/13/2004
Benzoic acid	ND	50		µg/L	1	10/13/2004
Benzyl alcohol	ND	20		µg/L	1	10/13/2004

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: 21-Oct-04

CLIENT: San Juan Refining

Client Sample ID: River N of MW #45

Lab Order: 0410074

Collection Date: 10/7/2004 11:15:00 AM

Project: River Sampling October 2004

Lab ID: 0410074-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/13/2004
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/13/2004
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/13/2004
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/13/2004
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/13/2004
Butyl benzyl phthalate	ND	15		µg/L	1	10/13/2004
Carbazole	ND	10		µg/L	1	10/13/2004
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/13/2004
4-Chloroaniline	ND	20		µg/L	1	10/13/2004
2-Chloronaphthalene	ND	10		µg/L	1	10/13/2004
2-Chlorophenol	ND	10		µg/L	1	10/13/2004
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/13/2004
Chrysene	ND	15		µg/L	1	10/13/2004
Di-n-butyl phthalate	ND	10		µg/L	1	10/13/2004
Di-n-octyl phthalate	ND	15		µg/L	1	10/13/2004
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/13/2004
Dibenzofuran	ND	10		µg/L	1	10/13/2004
1,2-Dichlorobenzene	ND	10		µg/L	1	10/13/2004
1,3-Dichlorobenzene	ND	10		µg/L	1	10/13/2004
1,4-Dichlorobenzene	ND	10		µg/L	1	10/13/2004
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/13/2004
Diethyl phthalate	ND	10		µg/L	1	10/13/2004
Dimethyl phthalate	ND	10		µg/L	1	10/13/2004
2,4-Dichlorophenol	ND	10		µg/L	1	10/13/2004
2,4-Dimethylphenol	ND	10		µg/L	1	10/13/2004
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/13/2004
2,4-Dinitrophenol	ND	50		µg/L	1	10/13/2004
2,4-Dinitrotoluene	ND	10		µg/L	1	10/13/2004
2,6-Dinitrotoluene	ND	10		µg/L	1	10/13/2004
Fluoranthene	ND	10		µg/L	1	10/13/2004
Fluorene	ND	10		µg/L	1	10/13/2004
Hexachlorobenzene	ND	10		µg/L	1	10/13/2004
Hexachlorobutadiene	ND	10		µg/L	1	10/13/2004
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/13/2004
Hexachloroethane	ND	10		µg/L	1	10/13/2004
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/13/2004
Isophorone	ND	10		µg/L	1	10/13/2004
2-Methylnaphthalene	ND	10		µg/L	1	10/13/2004
2-Methylphenol	ND	15		µg/L	1	10/13/2004
3+4-Methylphenol	ND	10		µg/L	1	10/13/2004
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/13/2004
N-Nitrosodimethylamine	ND	10		µg/L	1	10/13/2004

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: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-02

Client Sample ID: River N of MW #45
Collection Date: 10/7/2004 11:15:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/13/2004
Naphthalene	ND	10		µg/L	1	10/13/2004
2-Nitroaniline	ND	50		µg/L	1	10/13/2004
3-Nitroaniline	ND	50		µg/L	1	10/13/2004
4-Nitroaniline	ND	20		µg/L	1	10/13/2004
Nitrobenzene	ND	10		µg/L	1	10/13/2004
2-Nitrophenol	ND	15		µg/L	1	10/13/2004
4-Nitrophenol	ND	50		µg/L	1	10/13/2004
Pentachlorophenol	ND	50		µg/L	1	10/13/2004
Phenanthrene	ND	10		µg/L	1	10/13/2004
Phenol	ND	10		µg/L	1	10/13/2004
Pyrene	ND	15		µg/L	1	10/13/2004
Pyridine	ND	30		µg/L	1	10/13/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/13/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/13/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/13/2004
Surr: 2,4,6-Tribromophenol	93.8	16.6-116		%REC	1	10/13/2004
Surr: 2-Fluorobiphenyl	91.8	37-110		%REC	1	10/13/2004
Surr: 2-Fluorophenol	76.7	9.54-126		%REC	1	10/13/2004
Surr: 4-Terphenyl-d14	84.8	47.9-143		%REC	1	10/13/2004
Surr: Nitrobenzene-d5	92.2	38-106		%REC	1	10/13/2004
Surr: Phenol-d6	53.3	10.7-102		%REC	1	10/13/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	360	0.010		µmhos/cm	1	10/11/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	10/14/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	10/11/2004 12:45:03 PM
Barium	0.063	0.0020		mg/L	1	10/11/2004 12:45:03 PM
Cadmium	ND	0.0020		mg/L	1	10/11/2004 12:45:03 PM
Calcium	44	1.0		mg/L	1	10/11/2004 12:45:03 PM
Chromium	ND	0.0060		mg/L	1	10/11/2004 12:45:03 PM
Iron	0.11	0.020		mg/L	1	10/11/2004 12:45:03 PM
Lead	ND	0.0050		mg/L	1	10/11/2004 12:45:03 PM
Magnesium	7.8	1.0		mg/L	1	10/11/2004 12:45:03 PM
Manganese	0.0074	0.0020		mg/L	1	10/11/2004 12:45:03 PM
Potassium	2.1	1.0		mg/L	1	10/11/2004 12:45:03 PM
Selenium	ND	0.050		mg/L	1	10/11/2004 12:45:03 PM
Silver	ND	0.0050		mg/L	1	10/11/2004 12:45:03 PM
Sodium	28	1.0		mg/L	1	10/11/2004 12:45:03 PM
Uranium	ND	0.10		mg/L	1	10/13/2004 8:32:16 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: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-02

Client Sample ID: River N of MW #45
Collection Date: 10/7/2004 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	10/15/2004 12:52:05 PM
Barium	0.072	0.020		mg/L	1	10/15/2004 12:52:05 PM
Cadmium	ND	0.0020		mg/L	1	10/15/2004 12:52:05 PM
Chromium	ND	0.0060		mg/L	1	10/15/2004 12:52:05 PM
Lead	ND	0.0050		mg/L	1	10/15/2004 12:52:05 PM
Selenium	ND	0.050		mg/L	1	10/15/2004 12:52:05 PM
Silver	ND	0.0050		mg/L	1	10/15/2004 12:52:05 PM
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	260	50		mg/L	1	10/13/2004

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: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-03

Client Sample ID: River Upstream
Collection Date: 10/7/2004 11:45:00 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	10/9/2004 7:39:55 AM
Chloride	4.3	0.10		mg/L	1	10/9/2004 7:39:55 AM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	10/9/2004 7:39:55 AM
Bromide	ND	0.10		mg/L	1	10/9/2004 7:39:55 AM
Nitrogen, Nitrate (As N)	0.16	0.10		mg/L	1	10/9/2004 7:39:55 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	10/9/2004 7:39:55 AM
Sulfate	86	2.5		mg/L	5	10/12/2004 3:32:59 PM
EPA METHOD 310.1: ALKALINITY						
						Analyst: CMC
Alkalinity, Total (As CaCO ₃)	110	4.0		mg/L CaCO ₃	2	10/12/2004
Carbonate	ND	4.0		mg/L CaCO ₃	2	10/12/2004
Bicarbonate	110	4.0		mg/L CaCO ₃	2	10/12/2004
EPA METHOD 8015B: DIESEL RANGE						
						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/15/2004 12:48:40 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/15/2004 12:48:40 AM
Surr: DNOP	102	58-140		%REC	1	10/15/2004 12:48:40 AM
EPA METHOD 8015B: GASOLINE RANGE						
						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/11/2004 7:42:41 PM
Surr: BFB	92.1	74-118		%REC	1	10/11/2004 7:42:41 PM
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	10/11/2004 7:42:41 PM
Benzene	ND	0.50		µg/L	1	10/11/2004 7:42:41 PM
Toluene	ND	0.50		µg/L	1	10/11/2004 7:42:41 PM
Ethylbenzene	ND	0.50		µg/L	1	10/11/2004 7:42:41 PM
Xylenes, Total	ND	0.50		µg/L	1	10/11/2004 7:42:41 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	1	10/11/2004 7:42:41 PM
EPA METHOD 8270C: SEMIVOLATILES						
						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	10/13/2004
Acenaphthylene	ND	10		µg/L	1	10/13/2004
Aniline	ND	10		µg/L	1	10/13/2004
Anthracene	ND	10		µg/L	1	10/13/2004
Azobenzene	ND	10		µg/L	1	10/13/2004
Benz(a)anthracene	ND	15		µg/L	1	10/13/2004
Benzo(a)pyrene	ND	10		µg/L	1	10/13/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	10/13/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/13/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	10/13/2004
Benzoic acid	ND	50		µg/L	1	10/13/2004
Benzyl alcohol	ND	20		µg/L	1	10/13/2004

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: 21-Oct-04

CLIENT: San Juan Refining
 Lab Order: 0410074
 Project: River Sampling October 2004
 Lab ID: 0410074-03

Client Sample ID: River Upstream
 Collection Date: 10/7/2004 11:45:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/13/2004
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/13/2004
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/13/2004
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/13/2004
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/13/2004
Butyl benzyl phthalate	ND	15		µg/L	1	10/13/2004
Carbazole	ND	10		µg/L	1	10/13/2004
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/13/2004
4-Chloroaniline	ND	20		µg/L	1	10/13/2004
2-Chloronaphthalene	ND	10		µg/L	1	10/13/2004
2-Chlorophenol	ND	10		µg/L	1	10/13/2004
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/13/2004
Chrysene	ND	15		µg/L	1	10/13/2004
Di-n-butyl phthalate	ND	10		µg/L	1	10/13/2004
Di-n-octyl phthalate	ND	15		µg/L	1	10/13/2004
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/13/2004
Dibenzofuran	ND	10		µg/L	1	10/13/2004
1,2-Dichlorobenzene	ND	10		µg/L	1	10/13/2004
1,3-Dichlorobenzene	ND	10		µg/L	1	10/13/2004
1,4-Dichlorobenzene	ND	10		µg/L	1	10/13/2004
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/13/2004
Diethyl phthalate	ND	10		µg/L	1	10/13/2004
Dimethyl phthalate	ND	10		µg/L	1	10/13/2004
2,4-Dichlorophenol	ND	10		µg/L	1	10/13/2004
2,4-Dimethylphenol	ND	10		µg/L	1	10/13/2004
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/13/2004
2,4-Dinitrophenol	ND	50		µg/L	1	10/13/2004
2,4-Dinitrotoluene	ND	10		µg/L	1	10/13/2004
2,6-Dinitrotoluene	ND	10		µg/L	1	10/13/2004
Fluoranthene	ND	10		µg/L	1	10/13/2004
Fluorene	ND	10		µg/L	1	10/13/2004
Hexachlorobenzene	ND	10		µg/L	1	10/13/2004
Hexachlorobutadiene	ND	10		µg/L	1	10/13/2004
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/13/2004
Hexachloroethane	ND	10		µg/L	1	10/13/2004
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/13/2004
Isophorone	ND	10		µg/L	1	10/13/2004
2-Methylnaphthalene	ND	10		µg/L	1	10/13/2004
2-Methylphenol	ND	15		µg/L	1	10/13/2004
3+4-Methylphenol	ND	10		µg/L	1	10/13/2004
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/13/2004
N-Nitrosodimethylamine	ND	10		µg/L	1	10/13/2004

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: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-03

Client Sample ID: River Upstream
Collection Date: 10/7/2004 11:45:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/13/2004
Naphthalene	ND	10		µg/L	1	10/13/2004
2-Nitroaniline	ND	50		µg/L	1	10/13/2004
3-Nitroaniline	ND	50		µg/L	1	10/13/2004
4-Nitroaniline	ND	20		µg/L	1	10/13/2004
Nitrobenzene	ND	10		µg/L	1	10/13/2004
2-Nitrophenol	ND	15		µg/L	1	10/13/2004
4-Nitrophenol	ND	50		µg/L	1	10/13/2004
Pentachlorophenol	ND	50		µg/L	1	10/13/2004
Phenanthrene	ND	10		µg/L	1	10/13/2004
Phenol	ND	10		µg/L	1	10/13/2004
Pyrene	ND	15		µg/L	1	10/13/2004
Pyridine	ND	30		µg/L	1	10/13/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/13/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/13/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/13/2004
Surr: 2,4,6-Tribromophenol	79.5	16.6-116		%REC	1	10/13/2004
Surr: 2-Fluorobiphenyl	77.7	37-110		%REC	1	10/13/2004
Surr: 2-Fluorophenol	66.9	9.54-126		%REC	1	10/13/2004
Surr: 4-Terphenyl-d14	83.4	47.9-143		%REC	1	10/13/2004
Surr: Nitrobenzene-d5	76.6	38-106		%REC	1	10/13/2004
Surr: Phenol-d6	45.6	10.7-102		%REC	1	10/13/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	360	0.010		µmhos/cm	1	10/11/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	10/14/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	10/11/2004 12:47:29 PM
Barium	0.065	0.0020		mg/L	1	10/11/2004 12:47:29 PM
Cadmium	ND	0.0020		mg/L	1	10/11/2004 12:47:29 PM
Calcium	45	1.0		mg/L	1	10/11/2004 12:47:29 PM
Chromium	ND	0.0060		mg/L	1	10/11/2004 12:47:29 PM
Iron	0.058	0.020		mg/L	1	10/11/2004 12:47:29 PM
Lead	ND	0.0050		mg/L	1	10/11/2004 12:47:29 PM
Magnesium	8.1	1.0		mg/L	1	10/11/2004 12:47:29 PM
Manganese	0.0081	0.0020		mg/L	1	10/11/2004 12:47:29 PM
Potassium	2.2	1.0		mg/L	1	10/11/2004 12:47:29 PM
Selenium	ND	0.050		mg/L	1	10/11/2004 12:47:29 PM
Silver	ND	0.0050		mg/L	1	10/11/2004 12:47:29 PM
Sodium	28	1.0		mg/L	1	10/11/2004 12:47:29 PM
Uranium	ND	0.10		mg/L	1	10/13/2004 8:34:46 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: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-03

Client Sample ID: River Upstream
Collection Date: 10/7/2004 11:45:00 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	10/15/2004 12:54:35 PM
Barium	0.083	0.020		mg/L	1	10/15/2004 12:54:35 PM
Cadmium	ND	0.0020		mg/L	1	10/15/2004 12:54:35 PM
Chromium	ND	0.0060		mg/L	1	10/15/2004 12:54:35 PM
Lead	ND	0.0050		mg/L	1	10/15/2004 12:54:35 PM
Selenium	ND	0.050		mg/L	1	10/15/2004 12:54:35 PM
Silver	ND	0.0050		mg/L	1	10/15/2004 12:54:35 PM
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	260	50		mg/L	1	10/13/2004

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 12 / 38

Hall Environmental Analysis Laboratory

Date: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-04

Client Sample ID: River Downstream
Collection Date: 10/7/2004 2:00:00 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	10/15/2004 1:18:01 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/15/2004 1:18:01 AM
Surr: DNOP	101	58-140		%REC	1	10/15/2004 1:18:01 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/11/2004 8:12:33 PM
Surr: BFB	83.8	74-118		%REC	1	10/11/2004 8:12:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	10/11/2004 8:12:33 PM
Benzene	ND	0.50		µg/L	1	10/11/2004 8:12:33 PM
Toluene	ND	0.50		µg/L	1	10/11/2004 8:12:33 PM
Ethylbenzene	ND	0.50		µg/L	1	10/11/2004 8:12:33 PM
Xylenes, Total	ND	0.50		µg/L	1	10/11/2004 8:12:33 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	1	10/11/2004 8:12:33 PM

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

Hall Environmental Analysis Laboratory

Date: 21-Oct-04

CLIENT: San Juan Refining
Lab Order: 0410074
Project: River Sampling October 2004
Lab ID: 0410074-05

Client Sample ID: Trip Blank

Collection Date:

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	10/15/2004 1:47:17 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/15/2004 1:47:17 AM
Surr: DNOP	97.7	58-140		%REC	1	10/15/2004 1:47:17 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/11/2004 8:42:25 PM
Surr: BFB	89.3	74-118		%REC	1	10/11/2004 8:42:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	10/11/2004 8:42:25 PM
Benzene	ND	0.50		µg/L	1	10/11/2004 8:42:25 PM
Toluene	ND	0.50		µg/L	1	10/11/2004 8:42:25 PM
Ethylbenzene	ND	0.50		µg/L	1	10/11/2004 8:42:25 PM
Xylenes, Total	ND	0.50		µg/L	1	10/11/2004 8:42:25 PM
Surr: 4-Bromofluorobenzene	102	74-118		%REC	1	10/11/2004 8:42:25 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: 21-Oct-04

CLIENT: San Juan Refining
Work Order: 0410074
Project: River Sampling October 2004

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R13415	Test Code: E300	Units: mg/L	Analysis Date 10/8/2004 7:20:13 PM	Prep Date					
Client ID:			Run ID: LC_041008A		SeqNo: 311896						
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: R13415	Test Code: E300	Units: mg/L	Analysis Date 10/9/2004 2:03:42 AM	Prep Date					
Client ID:			Run ID: LC_041008A		SeqNo: 311920						
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

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QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
Work Order: 0410074
Project: River Sampling October 2004

Sample ID	MBLK	Batch ID: R13434	Test Code: E300	Units: mg/L	Analysis Date	10/12/2004 10:38:21 A	Prep Date				
Client ID:			Run ID: LC_041012B		SeqNo: 312344						
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: R13434	Test Code: E300	Units: mg/L	Analysis Date	10/12/2004 5:47:23 PM	Prep Date				
Client ID:			Run ID: LC_041012B		SeqNo:	312369					
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-6643	Batch ID: 6643	Test Code: SW8015	Units: mg/L	Analysis Date	10/14/2004 10:21:11 P	Prep Date	10/11/2004			
Client ID:			Run ID: FID(17A) 2_041014A		SeqNo: 313184						
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	1.18	0	1	0	118	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
2

CLIENT: San Juan Refining
Work Order: 0410074
Project: River Sampling October 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R13423	Test Code: SW8015	Units: mg/L	Analysis Date	10/11/2004 8:07:25 AM	Prep Date					
Client ID:			Run ID: PIDFID_041011A		SeqNo:	312120						
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		20.16	0	20	0	101	74	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R13423	Test Code: SW8021	Units: µg/L	Analysis Date	10/11/2004 11:14:04 A	Prep Date					
Client ID:			Run ID: PIDFID_041011A		SeqNo:	312119						
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		19.46	0	20	0	97.3	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: 0410074
Project: River Sampling October 2004

Sample ID	mb-6641	Batch ID: 6641	Test Code: SW8270A	Units: µg/L	Analysis Date	10/13/2004	Prep Date	10/11/2004			
Client ID:			Run ID: ELMO_041013A		SeqNo:	312856					
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
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S - Spike Recovery outside accepted recovery limits
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B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0410074
 Project: River Sampling October 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

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 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: 0410074

Project: River Sampling October 2004

4-Nitrophenol	ND	50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
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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
6

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0410074
 Project: River Sampling October 2004

Sample ID	MB	Batch ID: R13421	Test Code: SW6010A	Units: mg/L	Analysis Date	10/11/2004 12:27:00 P	Prep Date				
Client ID:		Run ID:	ICP_041011B		SeqNo:	312088					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.01097	0.02									J
Barium	ND	0.002									
Cadmium	ND	0.002									
Calcium	0.0195	1									J
Chromium	ND	0.006									
Iron	ND	0.02									
Lead	ND	0.005									
Magnesium	0.01813	1									J
Manganese	ND	0.002									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	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: 0410074
 Project: River Sampling October 2004

Sample ID	MB	Batch ID: R13438	Test Code: SW6010A	Units: mg/L	Analysis Date	10/13/2004 8:21:59 AM	Prep Date				
Client ID:		Run ID:	ICP_041013A		SeqNo:	312481					
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	0.2726	1									J
Chromium	ND	0.006									
Iron	ND	0.02									
Lead	ND	0.005									
Magnesium	0.2592	1									J
Manganese	0.0006082	0.002									J
Potassium	0.254	1									J
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	0.2849	1									J
Uranium	ND	0.1									

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

CLIENT: San Juan Refining
Work Order: 0410074
Project: River Sampling October 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	MBLK	Batch ID: R13438	Test Code: SW6010A	Units: mg/L	Analysis Date	10/13/2004 8:28:38 AM	Prep Date				
Client ID:		Run ID: ICP_041013A			SeqNo:	312484					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									J
Barium	0.001298	0.002									J
Cadmium	0.001618	0.002									J
Calcium	0.1722	1									J
Chromium	0.001698	0.006									J
Iron	ND	0.02									J
Lead	0.001803	0.005									J
Magnesium	0.1529	1									J
Manganese	0.00155	0.002									J
Potassium	0.1605	1									J
Selenium	ND	0.05									J
Silver	0.001751	0.005									J
Sodium	0.185	1									J
Uranium	0.01742	0.1									J

Sample ID	MB-6659	Batch ID: 6659	Test Code: SW6010A	Units: mg/L	Analysis Date	10/15/2004 12:18:05 P	Prep Date	10/14/2004			
Client ID:			Run ID: ICP_041015B		SeqNo:	313388					
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									
Silver	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
 9

Method Blank

CLIENT: San Juan Refining

Work Order: 0410074

Project: River Sampling October 2004

Sample ID MB-6653

Batch ID: 6653

Test Code: E160.1

Units: mg/L

Analysis Date 10/13/2004

Prep Date 10/13/2004

Client ID:

Run ID: WC_041013C

Result

POL

SPK value

SPK Ref Val

%REC

[illegible]

%RPD

Qual

Total Dissolved Solids

22

50

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: 21-Oct-04

CLIENT: San Juan Refining
 Work Order: 0410074
 Project: River Sampling October 2004

QC SUMMARY REPORT
 Sample Duplicate

Sample ID	0410074-03D DUP	Batch ID: 6659	Test Code: SW6010A	Units: mg/L	Analysis Date	10/15/2004 12:56:50 P	Prep Date	10/14/2004			
Client ID:	River Upstream	Run ID:	ICP_041015B		SeqNo:	313401					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02	0	0	0	0	0	0	0	30	
Barium	0.08257	0.02	0	0	0	0	0	0.08347	1.08	30	
Cadmium	ND	0.002	0	0	0	0	0	0	0	30	
Chromium	ND	0.006	0	0	0	0	0	0	0	30	
Lead	0.00256	0.005	0	0	0	0	0	0.004505	0	30	J
Selenium	0.01179	0.05	0	0	0	0	0	0	0	30	J
Silver	ND	0.005	0	0	0	0	0	0	0	30	

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

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Hall Environmental Analysis Laboratory

Date: 21-Oct-04

CLIENT: San Juan Refining

Work Order: 0410074

Project: River Sampling October 2004

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0410074-03a ms	Batch ID: R13423	Test Code: SW8015	Units: mg/L	Analysis Date	10/11/2004 10:12:02 P	Prep Date				
Client ID:	River Upstream	Run ID:	PIDFID_041011A		SeqNo:	312130					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4896	0.05	0.5	0	97.9	80.3	116	0			
Surr: BFB	24.65	0	25	0	98.6	74	118	0			

Sample ID	0410074-03a msd	Batch ID: R13423	Test Code: SW8015	Units: mg/L	Analysis Date	10/11/2004 10:41:59 P	Prep Date				
Client ID:	River Upstream	Run ID:	PIDFID_041011A	SeqNo:	312185						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4972	0.05	0.5	0	99.4	80.3	116	0.4896	1.54	8.39	
Surr: BFB	24.68	0	25	0	98.7	74	118	24.65	0.110	0	

Sample ID	0410074-02a.ms	Batch ID: R13423	Test Code: SW8021	Units: µg/L	Analysis Date	10/11/2004 9:12:20 PM	Prep Date				
Client ID:	River N of MW #4	Run ID:	PIDFID_041011A	SeqNo:	312221						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	34.34	2.5	40	0	85.9	65	132	0			
Benzene	19.04	0.5	20	0	95.2	77	122	0			
Toluene	19.79	0.5	20	0	99.0	81	115	0			
Ethylbenzene	19.25	0.5	20	0	96.2	84	117	0			
Xylenes, Total	58.4	0.5	60	0	97.3	84	116	0			
Surr: 4-Bromofluorobenzene	23.87	0	24	0	99.5	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

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QC SUMMARY REPORT

Sample Matrix Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0410074
 Project: River Sampling October 2004

Sample ID	0410074-02a msd	Batch ID: R13423	Test Code: SW8021	Units: µg/L	Analysis Date	10/11/2004 9:42:13 PM	Prep Date				
Client ID:	River N of MW #4	Run ID:	PIDFID_041011A	SeqNo:	312222						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	32.24	2.5	40	0	80.6	65	132	34.34	6.30	28	
Benzene	19.23	0.5	20	0	96.2	77	122	19.04	1.02	27	
Toluene	19.84	0.5	20	0	99.2	81	115	19.79	0.242	19	
Ethylbenzene	19.62	0.5	20	0	98.1	84	117	19.25	1.93	10	
Xylenes, Total	59.49	0.5	60	0	99.1	84	116	58.4	1.84	13	
Surr: 4-Bromofluorobenzene	23.82	0	24	0	99.3	74	118	23.87	0.215	0	

Sample ID	0410074-03D MS	Batch ID: 6659	Test Code: SW6010A	Units: mg/L	Analysis Date	10/15/2004 12:59:06 P	Prep Date	10/14/2004			
Client ID:	River Upstream	Run ID:	ICP_041015B		SeqNo:	313402					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4842	0.02	0.5	0	96.8	75	125	0			
Barium	0.5437	0.02	0.5	0.08347	92.0	75	125	0			
Cadmium	0.4641	0.002	0.5	0	92.8	75	125	0			
Chromium	0.464	0.006	0.5	0	92.8	75	125	0			
Lead	0.4711	0.005	0.5	0.004505	93.3	75	125	0			
Selenium	0.4685	0.05	0.5	0	93.7	75	125	0			
Silver	0.4983	0.005	0.5	0	99.7	75	125	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: 0410074
 Project: River Sampling October 2004

Sample ID	0410074-03D MSD	Batch ID: 6659	Test Code: SW6010A	Units: mg/L	Analysis Date	10/15/2004 1:01:26 PM	Prep Date	10/14/2004			
Client ID:	River Upstream	Run ID:	ICP_041015B		SeqNo:	313403					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4981	0.02	0.5	0	99.6	75	125	0.4842	2.83	20	
Barium	0.5527	0.02	0.5	0.08347	93.8	75	125	0.5437	1.64	20	
Cadmium	0.4755	0.002	0.5	0	95.1	75	125	0.4641	2.42	20	
Chromium	0.4749	0.006	0.5	0	95.0	75	125	0.464	2.30	20	
Lead	0.4843	0.005	0.5	0.004505	96.0	75	125	0.4711	2.76	20	
Selenium	0.4818	0.05	0.5	0	96.4	75	125	0.4685	2.79	20	
Silver	0.5088	0.005	0.5	0	102	75	125	0.4983	2.09	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: 21-Oct-04

CLIENT: San Juan Refining

Work Order: 0410074

Project: River Sampling October 2004

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R13415	Test Code: E300	Units: mg/L	Analysis Date	10/8/2004 7:37:02 PM	Prep Date				
Client ID:		Run ID:	LC_041008A		SeqNo:	311897					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.455	0.1	0.5	0	91.0	90	110	0			
Chloride	4.769	0.1	5	0	95.4	90	110	0			
Nitrogen, Nitrite (As N)	0.9029	0.1	1	0	90.3	90	110	0			
Bromide	2.436	0.1	2.5	0	97.5	90	110	0			
Nitrogen, Nitrate (As N)	2.387	0.1	2.5	0	95.5	90	110	0			
Phosphorus, Orthophosphate (As P)	4.766	0.5	5	0	95.3	90	110	0			
Sulfate	9.567	0.5	10	0	95.7	90	110	0			

Sample ID	LCS	Batch ID: R13415	Test Code: E300	Units: mg/L	Analysis Date	10/9/2004 2:20:30 AM	Prep Date				
Client ID:		Run ID:	LC_041008A		SeqNo:	311921					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4837	0.1	0.5	0	96.7	90	110	0			
Chloride	4.888	0.1	5	0	97.8	90	110	0			
Nitrogen, Nitrite (As N)	0.9225	0.1	1	0	92.3	90	110	0			
Bromide	2.354	0.1	2.5	0	94.2	90	110	0			
Nitrogen, Nitrate (As N)	2.41	0.1	2.5	0	96.4	90	110	0			
Phosphorus, Orthophosphate (As P)	4.786	0.5	5	0	95.7	90	110	0			
Sulfate	9.67	0.5	10	0	96.7	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

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QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0410074
Project: River Sampling October 2004

Sample ID	LCS	Batch ID: R13434	Test Code: E300	Units: mg/L	Analysis Date	10/12/2004 10:55:08 A	Prep Date				
Client ID:		Run ID:	LC_041012B		SeqNo:	312345					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4509	0.1	0.5	0	90.2	90	110	0			
Chloride	4.648	0.1	5	0	93.0	90	110	0			
Nitrogen, Nitrite (As N)	0.9318	0.1	1	0	93.2	90	110	0			
Bromide	2.28	0.1	2.5	0	91.2	90	110	0			
Nitrogen, Nitrate (As N)	2.358	0.1	2.5	0	94.3	90	110	0			
Phosphorus, Orthophosphate (As P)	4.73	0.5	5	0	94.6	90	110	0			
Sulfate	9.265	0.5	10	0	92.7	90	110	0			

Sample ID	LCS	Batch ID: R13434	Test Code: E300	Units: mg/L	Analysis Date	10/12/2004 6:04:11 PM	Prep Date				
Client ID:		Run ID:	LC_041012B		SeqNo:	312370					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4787	0.1	0.5	0	95.7	90	110	0			
Chloride	4.545	0.1	5	0	90.9	90	110	0			
Nitrogen, Nitrite (As N)	0.8907	0.1	1	0	89.1	90	110	0			S
Bromide	2.277	0.1	2.5	0	91.1	90	110	0			
Nitrogen, Nitrate (As N)	2.371	0.1	2.5	0	94.8	90	110	0			
Phosphorus, Orthophosphate (As P)	4.603	0.5	5	0	92.1	90	110	0			
Sulfate	9.231	0.5	10	0	92.3	90	110	0			

Sample ID	LCS-6643	Batch ID: 6643	Test Code: SW8015	Units: mg/L	Analysis Date		10/14/2004 10:50:41 P	Prep Date	10/11/2004		
Client ID:		Run ID: FID(17A) 2_041014A			SeqNo:		313185				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.253	1	5	0	125	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

CLIENT: San Juan Refining

Work Order: 0410074

Project: River Sampling October 2004

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID LCSD-6643 Batch ID: 6643 Test Code: SW8015 Units: mg/L Analysis Date 10/14/2004 11:20:45 P Prep Date 10/11/2004
Client ID: Run ID: FID(17A)_2_041014A SeqNo: 313186

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.597	1	5	0	112	81.2	149	6.253	11.1	23	

Sample ID GRO std 2.5ug Batch ID: R13423 Test Code: SW8015 Units: mg/L Analysis Date 10/12/2004 12:11:26 A Prep Date
Client ID: Run ID: PIDFID_041011A SeqNo: 312186

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4688	0.05	0.5	0	93.8	80.3	116	0			

Sample ID BTEX Ics 100ng Batch ID: R13423 Test Code: SW8021 Units: µg/L Analysis Date 10/11/2004 5:13:14 PM Prep Date
Client ID: Run ID: PIDFID_041011A SeqNo: 312223

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	36.75	2.5	40	0	91.9	54.9	142	0			
Benzene	18.73	0.5	20	0	93.6	81.3	121	0			
Toluene	19.7	0.5	20	0	98.5	84.9	118	0			
Ethylbenzene	19.41	0.5	20	0	97.1	53.8	149	0			
Xylenes, Total	59.22	0.5	60	0	98.7	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

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0410074
 Project: River Sampling October 2004

Sample ID	Ics-6641	Batch ID: 6641	Test Code: SW8270A	Units: µg/L	Analysis Date	10/13/2004	Prep Date	10/11/2004			
Client ID:			Run ID:	ELMO_041013A	SeqNo:	312857					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	96.9	10	100	0	96.9	11	123	0			
4-Chloro-3-methylphenol	231.8	20	200	0	116	15.4	119	0			
2-Chlorophenol	216.8	10	200	0	108	12.2	122	0			
1,4-Dichlorobenzene	91.32	10	100	0	91.3	16.9	100	0			
2,4-Dinitrotoluene	108.3	10	100	0	108	13	138	0			
N-Nitrosodi-n-propylamine	92.44	10	100	0	92.4	9.93	122	0			
4-Nitrophenol	223.3	50	200	0	112	20.5	118	0			
Pentachlorophenol	214.9	50	200	0	107	-0.355	114	0			
Phenol	213.1	10	200	0	107	7.53	126	0			
Pyrene	104.4	15	100	0	104	12.6	140	0			
1,2,4-Trichlorobenzene	100.3	10	100	0	100	17.4	101	0			

Sample ID	LCS-6661	Batch ID: 6661	Test Code: SW7470	Units: mg/L	Analysis Date	10/14/2004	Prep Date	10/14/2004				
Client ID:			Run ID: MI-LA254_041014A		SeqNo:	312981						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.004776	0.0002	0.005	0	95.5	75.2	134	0			

Sample ID	LCSD-6661	Batch ID: 6661	Test Code: SW7470	Units: mg/L	Analysis Date	10/14/2004	Prep Date	10/14/2004				
Client ID:			Run ID: MI-LA254_041014A		SeqNo:	312996						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.005189	0.0002	0.005	0	104	75.2	134	0.004776	8.29	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: 0410074
Project: River Sampling October 2004

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R13421	Test Code: SW6010A	Units: mg/L	Analysis Date	10/11/2004 12:29:26 P	Prep Date				
Client ID:		Run ID:	ICP_041011B		SeqNo:	312089					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4537	0.02	0.5	0.01097	88.5	80	120	0			
Barium	0.4564	0.002	0.5	0	91.3	80	120	0			
Cadmium	0.4579	0.002	0.5	0	91.6	80	120	0			
Calcium	49.43	1	50.5	0.0195	97.8	80	120	0			
Chromium	0.4605	0.006	0.5	0	92.1	80	120	0			
Iron	0.4607	0.02	0.5	0	92.1	80	120	0			
Lead	0.4567	0.005	0.5	0	91.3	80	120	0			
Magnesium	50.61	1	50.5	0.01813	100	80	120	0			
Manganese	0.4447	0.002	0.5	0	88.9	80	120	0			
Potassium	52.03	1	55	0	94.6	80	120	0			
Selenium	0.4254	0.05	0.5	0	85.1	80	120	0			
Silver	0.5116	0.005	0.5	0	102	80	120	0			
Sodium	48.86	1	50.5	0	96.8	80	120	0			

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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: 0410074
 Project: River Sampling October 2004

Sample ID	LCSD	Batch ID: R13421	Test Code: SW6010A	Units: mg/L	Analysis Date	10/11/2004 12:31:50 P	Prep Date				
Client ID:		Run ID:	ICP_041011B		SeqNo:	312090					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4628	0.02	0.5	0.01097	90.4	80	120	0.4537	2.00	20	
Barium	0.4678	0.002	0.5	0	93.6	80	120	0.4564	2.48	20	
Cadmium	0.4729	0.002	0.5	0	94.6	80	120	0.4579	3.22	20	
Calcium	49.98	1	50.5	0.0195	98.9	80	120	49.43	1.11	20	
Chromium	0.4745	0.006	0.5	0	94.9	80	120	0.4605	2.99	20	
Iron	0.4656	0.02	0.5	0	93.1	80	120	0.4607	1.07	20	
Lead	0.4849	0.005	0.5	0	97.0	80	120	0.4567	6.00	20	
Magnesium	50.87	1	50.5	0.01813	101	80	120	50.61	0.499	20	
Manganese	0.4548	0.002	0.5	0	91.0	80	120	0.4447	2.24	20	
Potassium	52.33	1	55	0	95.2	80	120	52.03	0.582	20	
Selenium	0.4517	0.05	0.5	0	90.3	80	120	0.4254	6.00	20	
Silver	0.5102	0.005	0.5	0	102	80	120	0.5116	0.272	20	
Sodium	48.96	1	50.5	0	96.9	80	120	48.86	0.201	20	

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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: 0410074
 Project: River Sampling October 2004

Sample ID	LCS U	Batch ID: R13438	Test Code: SW6010A	Units: mg/L	Analysis Date	10/13/2004 8:24:25 AM	Prep Date				
Client ID:		Run ID:	ICP_041013A		SeqNo:	312482					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5031	0.02	0.5	0	101	80	120	0			
Barium	0.4833	0.002	0.5	0	96.7	80	120	0			
Cadmium	0.5002	0.002	0.5	0	100	80	120	0			
Calcium	49.1	1	50.5	0	97.2	80	120	0			
Chromium	0.4881	0.006	0.5	0	97.6	80	120	0			
Iron	0.4887	0.02	0.5	0	97.7	80	120	0			
Lead	0.5016	0.005	0.5	0	100	80	120	0			
Magnesium	49.79	1	50.5	0	98.6	80	120	0			
Manganese	0.4756	0.002	0.5	0	95.1	80	120	0			
Potassium	50.32	1	55	0	91.5	80	120	0			
Selenium	0.498	0.05	0.5	0	99.6	80	120	0			
Silver	0.5806	0.005	0.5	0	116	80	120	0			
Sodium	55.79	1	50.5	0	110	80	120	0			
Uranium	4.624	0.1	5	0	92.5	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: 0410074
 Project: River Sampling October 2004

Sample ID	LCSD U	Batch ID: R13438	Test Code: SW6010A	Units: mg/L	Analysis Date	10/13/2004 8:26:12 AM	Prep Date				
Client ID:		Run ID:	ICP_041013A		SeqNo:	312483					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5393	0.02	0.5	0	108	80	120	0.5031	6.95	20	
Barium	0.5192	0.002	0.5	0	104	80	120	0.4833	7.16	20	
Cadmium	0.534	0.002	0.5	0	107	80	120	0.5002	6.54	20	
Calcium	50.62	1	50.5	0	100	80	120	49.1	3.06	20	
Chromium	0.5223	0.006	0.5	0	104	80	120	0.4881	6.77	20	
Iron	0.523	0.02	0.5	0	105	80	120	0.4887	6.79	20	
Lead	0.5386	0.005	0.5	0	108	80	120	0.5016	7.12	20	
Magnesium	51.33	1	50.5	0	102	80	120	49.79	3.03	20	
Manganese	0.5106	0.002	0.5	0	102	80	120	0.4756	7.10	20	
Potassium	52.16	1	55	0	94.8	80	120	50.32	3.60	20	
Selenium	0.5187	0.05	0.5	0	104	80	120	0.498	4.07	20	
Silver	0.5691	0.005	0.5	0	114	80	120	0.5806	2.01	20	
Sodium	57.46	1	50.5	0	114	80	120	55.79	2.95	20	
Uranium	4.726	0.1	5	0	94.5	80	120	4.624	2.17	20	

Sample ID	LCS-6659	Batch ID: 6659	Test Code: SW6010A	Units: mg/L	Analysis Date	10/15/2004 12:20:32 P	Prep Date	10/14/2004			
Client ID:		Run ID: ICP_041015B	SeqNo: 313389								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4804	0.02	0.5	0	96.1	80	120	0			
Barium	0.4729	0.02	0.5	0	94.6	80	120	0			
Cadmium	0.4594	0.002	0.5	0	91.9	80	120	0			
Chromium	0.462	0.006	0.5	0	92.4	80	120	0			
Lead	0.4652	0.005	0.5	0	93.0	80	120	0			
Selenium	0.4535	0.05	0.5	0	90.7	80	120	0			
Silver	0.5018	0.005	0.5	0	100	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: 0410074
Project: River Sampling October 2004

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

Sample ID		LCSD-6659		Batch ID: 6659		Test Code: SW6010A		Units: mg/L		Analysis Date		10/15/2004 12:22:07 P		Prep Date		10/14/2004	
Client ID:						Run ID:		ICP_041015B		SeqNo:		313390					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual						
Arsenic	0.4927	0.02	0.5	0	98.5	80	120	0.4804	2.53	20							
Barium	0.4782	0.02	0.5	0	95.6	80	120	0.4729	1.11	20							
Cadmium	0.4763	0.002	0.5	0	95.3	80	120	0.4594	3.61	20							
Chromium	0.4803	0.006	0.5	0	96.1	80	120	0.462	3.89	20							
Lead	0.485	0.005	0.5	0	97.0	80	120	0.4652	4.18	20							
Selenium	0.4745	0.05	0.5	0	94.9	80	120	0.4535	4.52	20							
Silver	0.511	0.005	0.5	0	102	80	120	0.5018	1.82	20							

Sample ID	LCS-6653	Batch ID: 6653	Test Code: E160.1	Units: mg/L	Analysis Date	10/13/2004	Prep Date	10/13/2004			
Client ID:			Run ID: WC_041013C		SeqNo:	313517					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	1016	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:

10/8/2004

Work Order Number 0410074

Received by AT

Checklist completed by

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?

4°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: River Not MW #46 1 ltr. Amber broken Upon

Receipt + 1 x 40 ml
River Downstream not marked on CEC for TPH
confirmed w/ C. Huttocks 4/10/04 in all - 10/11/04

Corrective Action

Poured off 1 ltr. HDPE into 1 ltr. Amber

AT 10/8/04

HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.3976
www.hallenviroental.com

Accreditation Applied:

NELAC  USACE 

Other:

Client: SAN Tuan Refining	Project Name: River Sampling -
---------------------------	--------------------------------

October-2004

Address: # 52 1001000	Project #:
-----------------------	------------

Bloomfield, NM

07413

Project Manager:

Phone #:	505-632-4161	Sampler:	Cindy Hurtado / Randy Schmalzer
Fax #:	505-632-3911	Sample Temperature:	42

Sample Temperature:

Phone #: 505-632-4161

Fax #: 505-632-3911

[illegible]

Date:	Time:
-------	-------

Delivered By: Signature

Received by: Signature

608/21

Date: _____ Time: _____

Relinquished By: (Signature)

Received By: (Signature)

15016

ANALYSIS REQUEST

Parameter	Unit	Result	Remarks
BTEX + MTBE + TMBs (8021)	mg/L	X	
BTEX + MTBE + TPH (Gasoline Only)	mg/L		
TPH Method 8015B (Gas/Diesel)	mg/L	X	
TPH (Method 418.1)	mg/L		
EDB (Method 504.1)	mg/L		
EDC (Method 8021)	mg/L		
8310 (PNA or PAH)	mg/L		
RCRA 8 Metals	mg/L	X	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	mg/L		
8081 Pesticides / PCB's (8082)	mg/L		
8260B (VOA)	mg/L		
8270 (Semi-VOA)	mg/L		
WRCC-Dissolved Metals	mg/L	X	
NO ₃ Backup	mg/L	X	
Gen Chem Anions/Cations	mg/L	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.hallenvirginmental.com

Accreditation Applied:

USACE

Other:

Project Name: River Sampling — October 2004

Project #:

Project Manager:

Sample: Cindy Hurtado/Randy Schmaltz
Sample Temperature: 4th

Sample Temperature:

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative			HEAL No.
					H ₂ Cl ₂	HNO ₃		
07-04	1145A	H ₂ O	River - Upstream	2-VolA	X			04/6874-3
/	/	/	/	2-VolA	X			
/	/	/	/	1-500ml		X		
/	/	/	/	1-125ml		X		
/	/	/	/	1-125ml			H ₂ SO ₄	
/	/	/	/	1-liter				
/	/	/	/	1-liter				Amber

Date: 07-04	Time: 2:00pm	Relinquished By: (Signature) <i>mdw Hurtado</i>	Remarks: 10/809
Date:	Time:	Relinquished By: (Signature)	Remarks: 1526

ANALYSIS REQUEST

[illegible]

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

Accreditation Applied: ☐ NELAC ☐ USACE ☐

Other:

Project Name: River Sampling -
October - 2004

Project #:

Project Manager:

Sampler: Cindy Hurtado / Randy

Sample Temperature:

Number/Volume	Preservative	HEAL No.
---------------	--------------	----------

$$\text{Cl}_2 \mid \text{HNO}_3$$
$$\text{H}_2\text{Cl}_2 \quad \text{HNO}_3$$

HEAL No.

04/0574-4

5

River-Downstream

True Black

100704	2-Pr
--------	------

Date:	Time:
-------	-------

Relinquished By: (Signature)

10400	23072
-------	-------

Indy Hu
Delmarvichod Bu: (Signature)

Remarks:

12/8/21

Remarks:

1525

ANALYSIS REQUEST

[illegible]

Remarks:



RECEIVED

JUL 28 2004

OIL CONSERVATION
DIVISION

July 27, 2004

Mr. Dave Cobrain
New Mexico Environmental Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East
Bldg 1
Santa Fe, NM 87505

Mr. William C. Olson
New Mexico Oil
Conservation Division
Environmental Bureau
220 South St. Francis Dr.
Santa Fe, NM 87505

Mr. Wayne Price
New Mexico Oil
Conservation Division
Environmental Bureau
1220 South St. Francis Dr.
Santa Fe, NM 87505

RE: Giant Refining Company, Bloomfield Refinery
EPA ID# NMD089416416
HWB-GRCB-01 001

Dear Gentlemen,

This letter is notification that you requested. Giant Refinery – Bloomfield will be collecting semi-annual groundwater samples starting the week of August 16, 2004.

Please note that if any representatives from the NMED Hazardous Waste Bureau or New Mexico Oil Conservation Division would like to participate, Giant requires all incoming personnel to undergo safety orientation training before entering the plant.

If you need additional information, please contact me at (505) 632-4171.

Sincerely,

Randy Schmaltz
Environmental Supervisor
Giant Refining – Bloomfield

Cc: Denny Foust – New Mexico Oil Conservation Division – Aztec
Ed Riege – Environmental Superintendent – Giant Refining

PHONE

505-632-8013

FAX

505-632-3911

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