

GW - 1

MONITORING REPORTS

DATE:

2004

Section 18.0 Chemical Analytical Reports

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COVER LETTER

March 12, 2004

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

RE: 1st Half 2004 Semi-Annual Monitor Wells

Order No.: 0403060

Dear Cindy Hurtado:

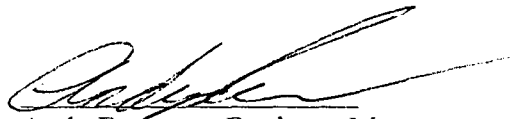
Hall Environmental Analysis Laboratory received 9 samples on 3/5/2004 for the analyses presented in the following report.

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: 12-Mar-04

CLIENT: San Juan Refining
Project: 1st Half 2004 Semi-Annual Monitor Wells

Lab Order: 0403060

Lab ID: 0403060-01

Collection Date: 3/4/2004 8:00:00 AM

Client Sample ID: MW #20

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	95000	2500		µg/L	1000	3/10/2004 7:04:03 PM
Benzene	21000	100		µg/L	200	3/9/2004 7:43:04 PM
Toluene	1200	100		µg/L	200	3/9/2004 7:43:04 PM
Ethylbenzene	100	100		µg/L	200	3/9/2004 7:43:04 PM
Xylenes, Total	500	100		µg/L	200	3/9/2004 7:43:04 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	200	3/9/2004 7:43:04 PM

Lab ID: 0403060-02

Collection Date: 3/4/2004 8:20:00 AM

Client Sample ID: P-#6

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	26000	500		µg/L	200	3/9/2004 8:13:19 PM
Benzene	13000	100		µg/L	200	3/9/2004 8:13:19 PM
Toluene	620	100		µg/L	200	3/9/2004 8:13:19 PM
Ethylbenzene	9100	100		µg/L	200	3/9/2004 8:13:19 PM
Xylenes, Total	31000	100		µg/L	200	3/9/2004 8:13:19 PM
Surr: 4-Bromofluorobenzene	132	74-118	S	%REC	200	3/9/2004 8:13:19 PM

Lab ID: 0403060-03

Collection Date: 3/4/2004 9:10:00 AM

Client Sample ID: P-#4

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	3/9/2004 9:44:03 PM
Benzene	4500	50		µg/L	100	3/9/2004 9:44:03 PM
Toluene	300	50		µg/L	100	3/9/2004 9:44:03 PM
Ethylbenzene	3600	50		µg/L	100	3/9/2004 9:44:03 PM
Xylenes, Total	15000	50		µg/L	100	3/9/2004 9:44:03 PM
Surr: 4-Bromofluorobenzene	106	74-118		%REC	100	3/9/2004 9:44:03 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: 12-Mar-04

CLIENT: San Juan Refining
Project: 1st Half 2004 Semi-Annual Monitor Wells

Lab Order: 0403060

Lab ID: 0403060-04

Collection Date: 3/4/2004 9:30:00 AM

Client Sample ID: P-#5

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	3/9/2004 10:14:16 PM
Benzene	1200	50		µg/L	100	3/9/2004 10:14:16 PM
Toluene	ND	50		µg/L	100	3/9/2004 10:14:16 PM
Ethylbenzene	2000	50		µg/L	100	3/9/2004 10:14:16 PM
Xylenes, Total	12000	50		µg/L	100	3/9/2004 10:14:16 PM
Surr: 4-Bromofluorobenzene	106	74-118		%REC	100	3/9/2004 10:14:16 PM

Lab ID: 0403060-05

Collection Date: 3/4/2004 9:45:00 AM

Client Sample ID: Outfall #2

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	3/9/2004 10:44:27 PM
Benzene	ND	0.50		µg/L	1	3/9/2004 10:44:27 PM
Toluene	ND	0.50		µg/L	1	3/9/2004 10:44:27 PM
Ethylbenzene	ND	0.50		µg/L	1	3/9/2004 10:44:27 PM
Xylenes, Total	ND	0.50		µg/L	1	3/9/2004 10:44:27 PM
Surr: 4-Bromofluorobenzene	93.1	74-118		%REC	1	3/9/2004 10:44:27 PM

Lab ID: 0403060-06

Collection Date: 3/4/2004 10:00:00 AM

Client Sample ID: Outfall #3

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	3/10/2004 12:14:54 AM
Benzene	ND	0.50		µg/L	1	3/10/2004 12:14:54 AM
Toluene	ND	0.50		µg/L	1	3/10/2004 12:14:54 AM
Ethylbenzene	ND	0.50		µg/L	1	3/10/2004 12:14:54 AM
Xylenes, Total	ND	0.50		µg/L	1	3/10/2004 12:14:54 AM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	1	3/10/2004 12:14:54 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: 12-Mar-04

CLIENT: San Juan Refining
Project: 1st Half 2004 Semi-Annual Monitor Wells

Lab Order: 0403060

Lab ID: 0403060-07

Collection Date: 3/3/2004 10:30:00 AM

Client Sample ID: MW #45

Matrix: PRODUCT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	ND	4300		mg/Kg	800	3/10/2004 9:34:57 PM
Benzene	1000	860		mg/Kg	800	3/10/2004 9:34:57 PM
Toluene	ND	860		mg/Kg	800	3/10/2004 9:34:57 PM
Ethylbenzene	7500	860		mg/Kg	800	3/10/2004 9:34:57 PM
Xylenes, Total	28000	860		mg/Kg	800	3/10/2004 9:34:57 PM
Surr: 4-Bromofluorobenzene	108	74-118		%REC	800	3/10/2004 9:34:57 PM

Lab ID: 0403060-08

Collection Date: 3/3/2004 9:30:00 AM

Client Sample ID: MW #13

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	20	2.5		µg/L	1	3/10/2004 2:00:32 PM
Benzene	ND	0.50		µg/L	1	3/10/2004 2:00:32 PM
Toluene	ND	0.50		µg/L	1	3/10/2004 2:00:32 PM
Ethylbenzene	ND	0.50		µg/L	1	3/10/2004 2:00:32 PM
Xylenes, Total	ND	0.50		µg/L	1	3/10/2004 2:00:32 PM
Surr: 4-Bromofluorobenzene	100	74-118		%REC	1	3/10/2004 2:00:32 PM

Lab ID: 0403060-09

Collection Date: 3/3/2004 11:10:00 AM

Client Sample ID: MW #47

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	3/10/2004 1:15:03 AM
Benzene	560	50		µg/L	100	3/10/2004 1:15:03 AM
Toluene	ND	50		µg/L	100	3/10/2004 1:15:03 AM
Ethylbenzene	900	50		µg/L	100	3/10/2004 1:15:03 AM
Xylenes, Total	7900	50		µg/L	100	3/10/2004 1:15:03 AM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	100	3/10/2004 1:15:03 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: 12-Mar-04

CLIENT: San Juan Refining
Work Order: 0403060
Project: 1st Half 2004 Semi-Annual Monitor Wells

QC SUMMARY REPORT

Method Blank

Sample ID	MB-5353	Batch ID: 5353	Test Code: SW8021	Units: mg/Kg	Analysis Date	3/10/2004 9:04:50 PM	Prep Date	3/8/2004			
Client ID:		Run ID: PIDFID_040310A			SeqNo: 258002						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	6.3									
Benzene	ND	1.3									
Toluene	ND	1.3									
Ethylbenzene	ND	1.3									
Xylenes, Total	ND	1.3									
Surr: 4-Bromofluorobenzene	49.84	0	50	0	99.7	74	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R11247	Test Code: SW8021	Units: µg/L	Analysis Date 3/9/2004 8:36:01 AM	Prep Date					
Client ID:			Run ID: PIDFID_040309A		SeqNo: 257587						
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	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	19.47	0	20	0	97.4	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

Method Blank

CLIENT: San Juan Refining

Work Order: 0403060

Project: 1st Half 2004 Semi-Annual Monitor Wells

Sample ID	Reagent Blank 5m	Batch ID: R11259	Test Code: SW8021	Units: µg/L	Analysis Date	3/10/2004 9:55:35 AM	Prep Date				
Client ID:		Run ID:	PIDFID_040310A		SeqNo:	257853					
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	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	20.44	0	20	0	102	74	118	0			

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

Hall Environmental Analysis Laboratory

Date: 12-Mar-04

CLIENT: San Juan Refining

Work Order: 0403060

Project: 1st Half 2004 Semi-Annual Monitor Wells

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0403060-05aMS	Batch ID: R11247	Test Code: SW8021	Units: µg/L	Analysis Date	3/9/2004 11:14:35 PM	Prep Date				
Client ID:	Outfall #2		Run ID: PIDFID_040309A		SeqNo: 257740						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	39.99	2.5	40	0	100	65	132	0			
Benzene	20.68	0.50	20	0	103	77	122	0			
Toluene	20.28	0.50	20	0	101	81	115	0			
Ethylbenzene	19.88	0.50	20	0	99.4	84	117	0			
Xylenes, Total	59.89	0.50	60	0.2246	99.4	84	116	0			

Sample ID	0403060-05aMSD	Batch ID: R11247	Test Code: SW8021	Units: µg/L	Analysis Date	3/9/2004 11:44:43 PM	Prep Date				
Client ID:	Outfall #2	Run ID:	PIDFID_040309A	SeqNo:	257743						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	39.97	2.5	40	0	99.9	65	132	39.99	0.0495	28	
Benzene	20.68	0.50	20	0	103	77	122	20.68	0.00290	27	
Toluene	19.88	0.50	20	0	99.4	81	115	20.28	1.97	19	
Ethylbenzene	19.63	0.50	20	0	98.2	84	117	19.88	1.24	10	
Xylenes, Total	58.26	0.50	60	0.2246	96.7	84	116	59.89	2.76	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: 12-Mar-04

CLIENT: San Juan Refining

Work Order: 0403060

Project: 1st Half 2004 Semi-Annual Monitor Wells

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX STD 100ng	Batch ID: 5353	Test Code: SW8021	Units: mg/Kg	Analysis Date	3/10/2004 11:35:13 PM	Prep Date				
Client ID:			Run ID: PIDFID_040310A		SeqNo: 258006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	94.68	6.3	100	0	94.7	65	132	0			
Benzene	50.74	1.3	50	0	101	77	122	0			
Toluene	49.66	1.3	50	0	99.3	81	115	0			
Ethylbenzene	49.23	1.3	50	0	98.5	84	117	0			
Xylenes, Total	147.5	1.3	150	0	98.3	84	116	0			

Sample ID	BTEX STD 100ng	Batch ID: R11247	Test Code: SW8021	Units: µg/L	Analysis Date	3/9/2004 7:12:46 PM	Prep Date				
Client ID:			Run ID: PIDFID_040309A		SeqNo: 257604						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	45.29	2.5	40	0	113	54.9	142	0			
Benzene	20.48	0.50	20	0	102	81.3	121	0			
Toluene	20.1	0.50	20	0	100	84.9	118	0			
Ethylbenzene	19.67	0.50	20	0	98.4	53.8	149	0			
Xylenes, Total	58.7	0.50	60	0	97.8	83.1	122	0			

Sample ID	BTEX STD 100ng	Batch ID: R11259	Test Code: SW8021	Units: µg/L	Analysis Date	3/10/2004 8:34:41 PM	Prep Date				
Client ID:			Run ID: PIDFID_040310A		SeqNo: 258001						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	43.96	2.5	40	0	110	54.9	142	0			
Benzene	21.17	0.50	20	0	106	81.3	121	0			
Toluene	21.12	0.50	20	0	106	84.9	118	0			
Ethylbenzene	20.74	0.50	20	0	104	53.8	149	0			
Xylenes, Total	64.09	0.50	60	0	107	83.1	122	0			

Qualifiers:

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

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

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

3/5/2004

Work Order Number 0403060

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?

6°

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

Date: 4/4/04	Time: 1030Am	Relinquished By: (Signature) <i>Wendy Tuttle</i>	Received By: (Signature) <i>John Doe</i>
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345-3975 Fax 505.345.4107
www.hallenviromental.com

Address: #50 CR 4990	Project #:
Bloomfield, NM	
87413	Project Manager:

Phone #: 505-632-4161	Sampler: <i>Andy Hurtado</i>
Fax #: 505-632-3911	Samples Cold?: <i>6</i> ☐ Yes ☐ No

Date: 04	Time: 1030 AM	Relinquished By: (Signature) <i>Emily J. W. Ado</i>	Received By: (Signature) <i>James J. W. Ado</i>
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

[illegible]

Remarks:

COVER LETTER

March 12, 2004

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

RE: 1st Half 2004 Semi-Annual Monitor Wells

Order No.: 0403040

Dear Cindy Hurtado:

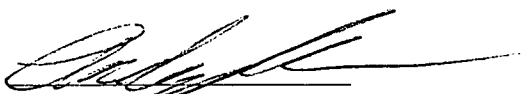
Hall Environmental Analysis Laboratory received 7 samples on 3/3/2004 for the analyses presented in the following report.

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: 12-Mar-04

CLIENT: San Juan Refining
Project: 1st Half 2004 Semi-Annual Monitor Wells

Lab Order: 0403040

Lab ID: 0403040-01

Collection Date: 3/2/2004 1:40:00 PM

Client Sample ID: MW#1

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	3/8/2004 7:03:05 PM
Benzene	ND	0.50		µg/L	1	3/8/2004 7:03:05 PM
Toluene	ND	0.50		µg/L	1	3/8/2004 7:03:05 PM
Ethylbenzene	ND	0.50		µg/L	1	3/8/2004 7:03:05 PM
Xylenes, Total	ND	0.50		µg/L	1	3/8/2004 7:03:05 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	1	3/8/2004 7:03:05 PM

Lab ID: 0403040-02

Collection Date: 3/2/2004 1:15:00 PM

Client Sample ID: MW#12

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	3/8/2004 7:33:22 PM
Benzene	ND	0.50		µg/L	1	3/8/2004 7:33:22 PM
Toluene	ND	0.50		µg/L	1	3/8/2004 7:33:22 PM
Ethylbenzene	ND	0.50		µg/L	1	3/8/2004 7:33:22 PM
Xylenes, Total	ND	0.50		µg/L	1	3/8/2004 7:33:22 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	1	3/8/2004 7:33:22 PM

Lab ID: 0403040-03

Collection Date: 3/2/2004 8:40:00 AM

Client Sample ID: MW#32

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	3/8/2004 8:03:33 PM
Benzene	ND	0.50		µg/L	1	3/8/2004 8:03:33 PM
Toluene	ND	0.50		µg/L	1	3/8/2004 8:03:33 PM
Ethylbenzene	ND	0.50		µg/L	1	3/8/2004 8:03:33 PM
Xylenes, Total	ND	0.50		µg/L	1	3/8/2004 8:03:33 PM
Surr: 4-Bromofluorobenzene	104	74-118		%REC	1	3/8/2004 8:03:33 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: 12-Mar-04

CLIENT: San Juan Refining
Project: 1st Half 2004 Semi-Annual Monitor Wells

Lab Order: 0403040

Lab ID: 0403040-04

Collection Date: 3/2/2004 9:15:00 AM

Client Sample ID: MW#33

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	3/8/2004 9:33:58 PM
Benzene	ND	0.50		µg/L	1	3/8/2004 9:33:58 PM
Toluene	ND	0.50		µg/L	1	3/8/2004 9:33:58 PM
Ethylbenzene	ND	0.50		µg/L	1	3/8/2004 9:33:58 PM
Xylenes, Total	ND	0.50		µg/L	1	3/8/2004 9:33:58 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	1	3/8/2004 9:33:58 PM

Lab ID: 0403040-05

Collection Date: 3/2/2004 10:45:00 AM

Client Sample ID: MW#35

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	11	2.5		µg/L	1	3/9/2004 10:36:36 AM
Benzene	0.59	0.50		µg/L	1	3/9/2004 10:36:36 AM
Toluene	ND	0.50		µg/L	1	3/9/2004 10:36:36 AM
Ethylbenzene	ND	0.50		µg/L	1	3/9/2004 10:36:36 AM
Xylenes, Total	3.3	0.50		µg/L	1	3/9/2004 10:36:36 AM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	1	3/9/2004 10:36:36 AM

Lab ID: 0403040-06

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

Client Sample ID: MW#37

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	3.8	2.5		µg/L	1	3/8/2004 10:33:58 PM
Benzene	ND	0.50		µg/L	1	3/8/2004 10:33:58 PM
Toluene	ND	0.50		µg/L	1	3/8/2004 10:33:58 PM
Ethylbenzene	ND	0.50		µg/L	1	3/8/2004 10:33:58 PM
Xylenes, Total	0.59	0.50		µg/L	1	3/8/2004 10:33:58 PM
Surr: 4-Bromofluorobenzene	102	74-118		%REC	1	3/8/2004 10:33:58 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 2 / 6

Page 2 of 3

Hall Environmental Analysis Laboratory

Date: 12-Mar-04

CLIENT: San Juan Refining
Project: 1st Half 2004 Semi-Annual Monitor Wells

Lab Order: 0403040

Lab ID: 0403040-07

Collection Date: 3/2/2004 12:35:00 PM

Client Sample ID: MW#38

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	15	2.5		µg/L	1	3/8/2004 11:04:01 PM
Benzene	ND	0.50		µg/L	1	3/8/2004 11:04:01 PM
Toluene	ND	0.50		µg/L	1	3/8/2004 11:04:01 PM
Ethylbenzene	ND	0.50		µg/L	1	3/8/2004 11:04:01 PM
Xylenes, Total	1.4	0.50		µg/L	1	3/8/2004 11:04:01 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	1	3/8/2004 11:04:01 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: 12-Mar-04

CLIENT: San Juan Refining
 Work Order: 0403040
 Project: 1st Half 2004 Semi-Annual Monitor Wells

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R11237	Test Code: SW8021	Units: µg/L	Analysis Date 3/8/2004 7:49:46 AM	Prep Date					
Client ID:			Run ID: PIDFID_040308B		SeqNo: 257279						
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	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	20.53	0	20	0	103	74	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R11247	Test Code: SW8021	Units: µg/L	Analysis Date 3/9/2004 8:36:01 AM	Prep Date					
Client ID:		Run ID: PIDFID_040309A			SeqNo: 257587						
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	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	19.47	0	20	0	97.4	74	118	0			

Qualifiers:

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

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

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Date: 12-Mar-04

CLIENT: San Juan Refining

Work Order: 0403040

Project: 1st Half 2004 Semi-Annual Monitor Wells

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX STD 100ng	Batch ID: R11237	Test Code: SW8021	Units: µg/L	Analysis Date	3/8/2004 8:50:24 AM	Prep Date				
Client ID:		Run ID:	PIDFID_040308B		SeqNo:	257298					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	41.78	2.5	40	0	104	54.9	142	0			
Benzene	21.43	0.50	20	0	107	81.3	121	0			
Toluene	20.35	0.50	20	0	102	84.9	118	0			
Ethylbenzene	20.23	0.50	20	0	101	53.8	149	0			
Xylenes, Total	60.37	0.50	60	0	101	83.1	122	0			

Sample ID	BTEX STD 100ng	Batch ID: R11247	Test Code: SW8021	Units: µg/L	Analysis Date	3/9/2004 7:12:46 PM	Prep Date				
Client ID:		Run ID:	PIDFID_040309A		SeqNo:	257604					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	45.29	2.5	40	0	113	54.9	142	0			
Benzene	20.48	0.50	20	0	102	81.3	121	0			
Toluene	20.1	0.50	20	0	100	84.9	118	0			
Ethylbenzene	19.67	0.50	20	0	98.4	53.8	149	0			
Xylenes, Total	58.7	0.50	60	0	97.8	83.1	122	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

Work Order Number 0403040

Received by AMG

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 ☐

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 _____

Accreditation Applied
NELAC USACE

Other:

Project Name: 1st Half 2004
Semi-Annual Monitor Wells

Address: #50 Rd 4990

Bloomfield, NM
87413

Phone #: 505-632-461

Fax #: 305-632-3911

Date	Time	Matrix	Sample I.D. No.
------	------	--------	-----------------

Matrix

Sample I.D. No.

02/04	140pm	H ₂ O	MW #1
-------	-------	------------------	-------

140 pm

$$\text{H}_2\text{O}$$

MW#1

115pm

7

MW #12

840 Am

MW#32

915A	10/15
------	-------



MW # 3
 MW # 3

1095A	11/1/22
-------	---------

MIN #3

11.8M	1735p
-------	-------

mw #3

Date:	Time:	Relinquished By: (Signature)
-------	-------	------------------------------

Time:

By: (Signature)

Time: 2:30 pm

elijah

By: [Signature]

Received By: (Signature)

Received By: (Signature)

Remarks:

8/25/15

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

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

ANALYSIS REQUEST

[illegible]

Remarks:

COVER LETTER

August 19, 2004

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

RE: Fuel Fingerprinting

Order No.: 0408137

Dear Cindy Hurtado:

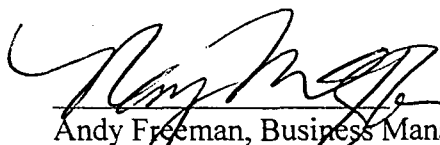
Hall Environmental Analysis Laboratory received 4 samples on 8/17/2004 for the analyses presented in the following report.

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: 19-Aug-04

CLIENT: San Juan Refining
Lab Order: 0408137
Project: Fuel Fingerprinting
Lab ID: 0408137-01

Client Sample ID: Draw N of MW 45
Collection Date: 8/16/2004 8:45:00 AM

Matrix: PRODUCT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DRO BY 8015B						Analyst: JMP
Diesel Range Organics (DRO)	79	5.0		wt%	10	8/17/2004 11:47:12 PM
Motor Oil Range Organics (MRO)	ND	50		wt%	10	8/17/2004 11:47:12 PM
Surr: DNOP	0	74-125	S	%REC	10	8/17/2004 11:47:12 PM
GRO BY 8015B						Analyst: NSB
Gasoline Range Organics (GRO)	9.3	0.047		wt%	1	8/18/2004 9:05:32 AM
Surr: BFB	89.7	74.5-122		%REC	1	8/18/2004 9:05:32 AM

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 1 / 7

Hall Environmental Analysis Laboratory

Date: 19-Aug-04

CLIENT: San Juan Refining
Lab Order: 0408137
Project: Fuel Fingerprinting
Lab ID: 0408137-02

Client Sample ID: MW #45
Collection Date: 8/16/2004 9:10:00 AM
Matrix: PRODUCT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: JMP
DRO BY 8015B						
Diesel Range Organics (DRO)	72	4.7		wt%	10	8/18/2004 12:17:19 AM
Motor Oil Range Organics (MRO)	ND	47		wt%	10	8/18/2004 12:17:19 AM
Surr: DNOP	0	74-125	S	%REC	10	8/18/2004 12:17:19 AM
						Analyst: NSB
GRO BY 8015B						
Gasoline Range Organics (GRO)	30	0.041		wt%	1	8/18/2004 9:35:55 AM
Surr: BFB	100	74.5-122		%REC	1	8/18/2004 9:35:55 AM

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 / 7

Hall Environmental Analysis Laboratory

Date: 19-Aug-04

CLIENT: San Juan Refining

Client Sample ID: MW #47

Lab Order: 0408137

Collection Date: 8/16/2004 9:35:00 AM

Project: Fuel Fingerprinting

Lab ID: 0408137-03

Matrix: PRODUCT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DRO BY 8015B						Analyst: JMP
Diesel Range Organics (DRO)	10	4.9		wt%	10	8/18/2004 12:47:32 AM
Motor Oil Range Organics (MRO)	ND	49		wt%	10	8/18/2004 12:47:32 AM
Surr: DNOP	0	74-125	S	%REC	10	8/18/2004 12:47:32 AM
GRO BY 8015B						Analyst: NSB
Gasoline Range Organics (GRO)	84	0.051		wt%	1	8/18/2004 10:36:32 AM
Surr: BFB	100	74.5-122		%REC	1	8/18/2004 10:36:32 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 3 / 7

Hall Environmental Analysis Laboratory

Date: 19-Aug-04

CLIENT: San Juan Refining
Lab Order: 0408137
Project: Fuel Fingerprinting
Lab ID: 0408137-04

Client Sample ID: #2 SW Outfall
Collection Date: 8/16/2004 9:55:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: JMP
DRO BY 8015B						
Diesel Range Organics (DRO)	ND	0.50		wt%	1	8/18/2004 9:54:07 AM
Motor Oil Range Organics (MRO)	ND	5.0		wt%	1	8/18/2004 9:54:07 AM
Surr: DNOP	116	74-125		%REC	1	8/18/2004 9:54:07 AM
						Analyst: NSB
EPA METHOD 8015B: GASOLINE RANGE						
Gasoline Range Organics (GRO)	2.4	0.25		mg/L	5	8/18/2004 1:12:17 PM
Surr: BFB	101	74-118		%REC	5	8/18/2004 1:12:17 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 4 / 7

Hall Environmental Analysis Laboratory

Date: 19-Aug-04

CLIENT: San Juan Refining
Work Order: 0408137
Project: Fuel Fingerprinting

QC SUMMARY REPORT

Method Blank

Sample ID	MB-6332	Batch ID: 6332	Test Code: SW8015	Units: wt%	Analysis Date	8/17/2004 9:44:18 PM	Prep Date	8/17/2004			
Client ID:			Run ID: FID(17A) 2_040817A		SeqNo: 297452						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	0.5									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	0.09745	0	0.1	0	97.5	74	125	0			

Sample ID MB-6344	Batch ID: 6344	Test Code: SW8015	Units: wt%	Analysis Date 8/18/2004 12:10:16 PM	Prep Date 8/17/2004						
Client ID:	Run ID: PIDFID_040818A	SeqNo: 297569									
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	3661	0	4000	0	91.5	74.5	122	0			

Sample ID	Reagent Blank 5m	Batch ID: R12814	Test Code: SW8015	Units: mg/L	Analysis Date	8/18/2004 7:59:44 AM	Prep Date				
Client ID:			Run ID: PIDFID_040818A		SeqNo:	297566					
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	19.46	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

Hall Environmental Analysis Laboratory

Date: 19-Aug-04

CLIENT: San Juan Refining
 Work Order: 0408137
 Project: Fuel Fingerprinting

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCSD-6332	Batch ID: 6332	Test Code: SW8015	Units: wt%	Analysis Date 8/17/2004 10:15:15 PM		Prep Date 8/17/2004				
Client ID:			Run ID: FID(17A) 2_040817A		SeqNo: 297453						
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		0.4919	0.1	0.5	98.4	78	121	0			

Sample ID	LCSD-6332	Batch ID: 6332	Test Code: SW8015	Units: wt%	Analysis Date 8/17/2004 11:17:00 PM		Prep Date 8/17/2004				
Client ID:			Run ID: FID(17A) 2_040817A		SeqNo: 297454						
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		0.4992	0.1	0.5	99.8	78	121	0.4919	1.47	15	

Sample ID	GRO std 2.0ug	Batch ID: 6344	Test Code: SW8015	Units: wt%	Analysis Date 8/18/2004 8:29:58 AM		Prep Date				
Client ID:			Run ID: PIDFID_040818A		SeqNo: 297575						
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		82.2	0.05	80	103	80.3	116	0			

Sample ID	GRO std 2.0ug	Batch ID: R12814	Test Code: SW8015	Units: mg/L	Analysis Date 8/19/2004 3:52:54 AM		Prep Date				
Client ID:			Run ID: PIDFID_040818A		SeqNo: 297584						
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.4102	0.05	0.4	103	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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

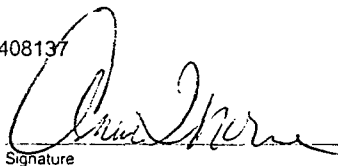
Date and Time Received:

8/17/2004

Work Order Number 0408137

Received by AT

Checklist completed by



Date

8/17/04

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 _____

US: 24 TAT

COVER LETTER

August 27, 2004

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

RE: 2004 Annual Monitoring Wells

Order No.: 0408140

Dear Cindy Hurtado:

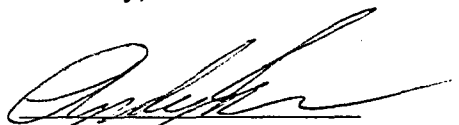
Hall Environmental Analysis Laboratory received 2 samples on 8/17/2004 for the analyses presented in the following report.

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-Aug-04

CLIENT: San Juan Refining
Lab Order: 0408140
Project: 2004 Annual Monitoring Wells
Lab ID: 0408140-01

Client Sample ID: MW #11
Collection Date: 8/16/2004 1:30:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						
Fluoride	0.41	0.10		mg/L	1	Analyst: MAP 8/17/2004 4:06:06 PM
Chloride	97	1.0		mg/L	10	8/18/2004 12:31:23 PM
Bromide	0.97	0.10		mg/L	1	8/17/2004 4:06:06 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/17/2004 4:06:06 PM
Sulfate	13	0.50		mg/L	1	8/17/2004 4:06:06 PM
Nitrate (As N)+Nitrite (As N)	ND	0.10		mg/L	1	8/17/2004 4:06:06 PM
EPA METHOD 310.1: ALKALINITY						
Alkalinity, Total (As CaCO ₃)	390	4.0		mg/L CaCO ₃	2	Analyst: MAP 8/24/2004
Carbonate	40	4.0		mg/L CaCO ₃	2	8/24/2004
Bicarbonate	350	4.0		mg/L CaCO ₃	2	8/24/2004
EPA METHOD 8021B: VOLATILES						
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	40	Analyst: NSB 8/23/2004 11:46:57 AM
Benzene	1700	20		µg/L	40	8/23/2004 11:46:57 AM
Toluene	ND	20		µg/L	40	8/23/2004 11:46:57 AM
Ethylbenzene	64	20		µg/L	40	8/23/2004 11:46:57 AM
Xylenes, Total	150	20		µg/L	40	8/23/2004 11:46:57 AM
Surr: 4-Bromofluorobenzene	100	74-118		%REC	40	8/23/2004 11:46:57 AM
TOTAL CARBON DIOXIDE CALCULATION						
Total Carbon Dioxide	330	1.0		mg CO ₂ /L	1	Analyst: IC 8/24/2004
EPA 120.1: SPECIFIC CONDUCTANCE						
Specific Conductance	2100	0.010		µmhos/cm	1	Analyst: MAP 8/24/2004
EPA METHOD 7470: MERCURY						
Mercury	ND	0.00020		mg/L	1	Analyst: CMC 8/18/2004
EPA METHOD 6010C: DISSOLVED METALS						
Arsenic	ND	0.020		mg/L	1	Analyst: IC 8/17/2004 3:13:22 PM
Barium	0.47	0.0020		mg/L	1	8/17/2004 3:13:22 PM
Cadmium	ND	0.0020		mg/L	1	8/17/2004 3:13:22 PM
Calcium	100	1.0		mg/L	1	8/20/2004 11:00:16 AM
Chromium	ND	0.0060		mg/L	1	8/17/2004 3:13:22 PM
Copper	0.021	0.0060		mg/L	1	8/17/2004 3:13:22 PM
Iron	6.9	0.020		mg/L	1	8/17/2004 3:13:22 PM
Lead	0.022	0.0050		mg/L	1	8/17/2004 3:13:22 PM
Magnesium	23	1.0		mg/L	1	8/20/2004 11:00:16 AM
Manganese	1.7	0.0020		mg/L	1	8/17/2004 3:13:22 PM
Potassium	1.5	1.0		mg/L	1	8/20/2004 11:00:16 AM
Selenium	ND	0.050		mg/L	1	8/17/2004 3:13:22 PM
Silver	ND	0.0050		mg/L	1	8/17/2004 3:13:22 PM
Sodium	390	10		mg/L	10	8/20/2004 11:08:46 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: 27-Aug-04

CLIENT: San Juan Refining
Lab Order: 0408140
Project: 2004 Annual Monitoring Wells
Lab ID: 0408140-01

Client Sample ID: MW #11
Collection Date: 8/16/2004 1:30:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	8/17/2004 3:13:22 PM
Zinc	0.063	0.0050		mg/L	1	8/17/2004 3:13:22 PM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/26/2004 9:24:15 AM
Barium	0.54	0.020		mg/L	1	8/26/2004 9:24:15 AM
Cadmium	ND	0.0020		mg/L	1	8/26/2004 9:24:15 AM
Chromium	ND	0.0060		mg/L	1	8/26/2004 9:24:15 AM
Lead	0.027	0.0050		mg/L	1	8/26/2004 9:24:15 AM
Selenium	ND	0.050		mg/L	1	8/26/2004 9:24:15 AM
Silver	ND	0.0050		mg/L	1	8/26/2004 9:24:15 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	8.56	0.010		pH units	1	8/24/2004
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	1500	50		mg/L	1	8/25/2004

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-Aug-04

CLIENT: San Juan Refining
Lab Order: 0408140
Project: 2004 Annual Monitoring Wells
Lab ID: 0408140-02

Client Sample ID: MW #12
Collection Date: 8/16/2004 12:40:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						
						Analyst: MAP
Fluoride	0.52	0.10		mg/L	1	8/17/2004 4:22:54 PM
Chloride	130	2.5		mg/L	25	8/18/2004 12:48:11 PM
Bromide	0.78	0.10		mg/L	1	8/17/2004 4:22:54 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/17/2004 4:22:54 PM
Sulfate	680	13		mg/L	25	8/18/2004 12:48:11 PM
Nitrate (As N)+Nitrite (As N)	ND	0.10		mg/L	1	8/17/2004 4:22:54 PM
EPA METHOD 310.1: ALKALINITY						
						Analyst: MAP
Alkalinity, Total (As CaCO ₃)	1100	4.0		mg/L CaCO ₃	2	8/24/2004
Carbonate	ND	4.0		mg/L CaCO ₃	2	8/24/2004
Bicarbonate	1100	4.0		mg/L CaCO ₃	2	8/24/2004
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	8/23/2004 12:17:15 PM
Benzene	ND	0.50		µg/L	1	8/23/2004 12:17:15 PM
Toluene	ND	0.50		µg/L	1	8/23/2004 12:17:15 PM
Ethylbenzene	ND	0.50		µg/L	1	8/23/2004 12:17:15 PM
Xylenes, Total	0.94	0.50		µg/L	1	8/23/2004 12:17:15 PM
Surr: 4-Bromofluorobenzene	102	74-118		%REC	1	8/23/2004 12:17:15 PM
TOTAL CARBON DIOXIDE CALCULATION						
						Analyst: IC
Total Carbon Dioxide	970	1.0		mg CO ₂ /L	1	8/24/2004
EPA 120.1: SPECIFIC CONDUCTANCE						
						Analyst: MAP
Specific Conductance	1900	0.010		µmhos/cm	1	8/24/2004
EPA METHOD 7470: MERCURY						
						Analyst: CMC
Mercury	0.00052	0.00020		mg/L	1	8/18/2004
EPA METHOD 6010C: DISSOLVED METALS						
						Analyst: IC
Arsenic	ND	0.020		mg/L	1	8/17/2004 3:17:43 PM
Barium	0.060	0.0020		mg/L	1	8/17/2004 3:17:43 PM
Cadmium	ND	0.0020		mg/L	1	8/17/2004 3:17:43 PM
Calcium	130	1.0		mg/L	1	8/17/2004 3:17:43 PM
Chromium	ND	0.0060		mg/L	1	8/17/2004 3:17:43 PM
Copper	ND	0.0060		mg/L	1	8/17/2004 3:17:43 PM
Iron	0.044	0.020		mg/L	1	8/17/2004 3:17:43 PM
Lead	ND	0.0050		mg/L	1	8/17/2004 3:17:43 PM
Magnesium	31	1.0		mg/L	1	8/17/2004 3:17:43 PM
Manganese	0.55	0.0020		mg/L	1	8/17/2004 3:17:43 PM
Potassium	1.5	1.0		mg/L	1	8/17/2004 3:17:43 PM
Selenium	ND	0.050		mg/L	1	8/17/2004 3:17:43 PM
Silver	ND	0.0050		mg/L	1	8/17/2004 3:17:43 PM
Sodium	320	1.0		mg/L	1	8/17/2004 3:17:43 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: 27-Aug-04

CLIENT: San Juan Refining
Lab Order: 0408140
Project: 2004 Annual Monitoring Wells
Lab ID: 0408140-02

Client Sample ID: MW #12
Collection Date: 8/16/2004 12:40:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	8/17/2004 3:17:43 PM
Zinc	0.035	0.0050		mg/L	1	8/17/2004 3:17:43 PM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/26/2004 9:28:34 AM
Barium	0.19	0.020		mg/L	1	8/26/2004 9:28:34 AM
Cadmium	0.0030	0.0020		mg/L	1	8/26/2004 9:28:34 AM
Chromium	0.11	0.0060		mg/L	1	8/26/2004 9:28:34 AM
Lead	0.18	0.0050		mg/L	1	8/26/2004 9:28:34 AM
Selenium	ND	0.050		mg/L	1	8/26/2004 9:28:34 AM
Silver	ND	0.0050		mg/L	1	8/26/2004 9:28:34 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	8.17	0.010		pH units	1	8/24/2004
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	1600	50		mg/L	1	8/25/2004

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-Aug-04

CLIENT: San Juan Refining

Work Order: 0408140

Project: 2004 Annual Monitoring Wells

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R12798	Test Code: E300	Units: mg/L	Analysis Date 8/17/2004 11:20:38 AM	Prep Date					
Client ID:		Run ID: LC_040817A			SeqNo: 297220						
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: R12816	Test Code: E300	Units: mg/L	Analysis Date 8/18/2004 10:50:35 AM	Prep Date					
Client ID:		Run ID: LC_040818A			SeqNo: 297633						
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: 0408140
 Project: 2004 Annual Monitoring Wells

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R12816	Test Code: E300	Units: mg/L	Analysis Date 8/18/2004 5:46:07 PM	Prep Date					
Client ID:		Run ID: LC_040818A			SeqNo: 297647						
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: R12869	Test Code: E310.1	Units: mg/L CaCO3	Analysis Date 8/24/2004	Prep Date					
Client ID:		Run ID: WC_040824A			SeqNo: 299026						
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	Reagent Blank 5m	Batch ID: R12859	Test Code: SW8021	Units: µg/L	Analysis Date 8/23/2004 8:01:48 AM	Prep Date					
Client ID:		Run ID: PIDFID_040823A			SeqNo: 298631						
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	21.97	0	20	0	110	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

CLIENT: San Juan Refining
 Work Order: 0408140
 Project: 2004 Annual Monitoring Wells

QC SUMMARY REPORT

Method Blank

Sample ID	MB-6341	Batch ID: 6341	Test Code: SW7470	Units: mg/L	Analysis Date	8/18/2004	Prep Date	8/18/2004				
Client ID:			Run ID: MI-LA254_040818A		SeqNo:	297502						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		ND	0.0002									

Sample ID	MB	Batch ID: R12802	Test Code: SW6010A	Units: mg/L	Analysis Date	8/17/2004 2:27:19 PM	Prep Date					
Client ID:			Run ID: ICP_040817C		SeqNo:	297397						
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		0.01275	0.02									J
Lead		ND	0.005									
Magnesium		0.02637	1									J
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: 0408140
 Project: 2004 Annual Monitoring Wells

Sample ID	MB #1	Batch ID: R12802	Test Code: SW6010A	Units: mg/L	Analysis Date	8/17/2004 4:29:59 PM	Prep Date					
Client ID:		Run ID: ICP_040817C			SeqNo:	297410						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron		0.01236										J
Lead		0.001631										J
Manganese		ND										

Sample ID	MB	Batch ID: R12840	Test Code: SW6010A	Units: mg/L	Analysis Date 8/20/2004 10:51:36 AM	Prep Date					
Client ID:		Run ID: ICP_040820B			SeqNo: 298090						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	0.01828	1									J
Iron	0.01479	0.02									J
Lead	ND	0.005									
Magnesium	0.02933	1									J
Manganese	ND	0.002									
Potassium	ND	1									
Sodium	0.01843	1									J

Sample ID MB-6369	Batch ID: 6369	Test Code: SW6010A	Units: mg/L	Analysis Date 8/26/2004 9:10:03 AM	Prep Date 8/24/2004						
Client ID:		Run ID: ICP_040826A		SeqNo: 299548							
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 S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: San Juan Refining

Work Order: 0408140

Project: 2004 Annual Monitoring Wells

QC SUMMARY REPORT

Method Blank

Sample ID	MB-6365	Batch ID	6365	Test Code	E160.1	Units	mg/L	Analysis Date	8/25/2004	Prep Date	8/23/2004
Client ID:		Run ID:	WC_040825A					SeqNo:	299155		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit
Total Dissolved Solids		ND									

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-Aug-04

QC SUMMARY REPORT

Sample Duplicate

CLIENT: San Juan Refining
Work Order: 0408140
Project: 2004 Annual Monitoring Wells

Sample ID	0408140-01E DUP	Batch ID: R12869	Test Code: E310.1	Units: mg/L CaCO3	Analysis Date	8/24/2004	Prep Date				
Client ID: MW #11			Run ID: WC_040824A		SeqNo: 299030						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	376	4	0	0	0	0	0	390	3.66	15	
Carbonate	40	4	0	0	0	0	0	40	0	15	
Bicarbonate	336	4	0	0	0	0	0	350	4.08	15	

Sample ID	0408140-01E DUP	Batch ID: R12878	Test Code:	Units: mg CO2/L	Analysis Date	8/24/2004	Prep Date				
Client ID:	MW #11		Run ID:	WC_040824D	SeqNo:	299313					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Carbon Dioxide	315	1	0	0	0	0	0	328	4.04	20	

Sample ID	0408140-01B DUP	Batch ID: R12870	Test Code: E120.1	Units: µmhos/cm	Analysis Date	8/24/2004	Prep Date				
Client ID:	MW #11		Run ID: WC_040824C		SeqNo:	299062					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	2130	0.01	0	0	0	0	0	2110	0.943	20	

Sample ID	0408140-01C DUP	Batch ID: 6341	Test Code: SW7470	Units: mg/L	Analysis Date	8/18/2004	Prep Date	8/18/2004			
Client ID:	MW #11		Run ID: MI-LA254_040818A		SeqNo:	297505					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0001029	0.0002	0	0	0	0	0	0.0001091	0	20	J

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-Aug-04

CLIENT: San Juan Refining

Work Order: 0408140

Project: 2004 Annual Monitoring Wells

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0408140-02a ms	Batch ID: R12859	Test Code: SW8021	Units: µg/L	Analysis Date	8/23/2004 10:55:20 PM	Prep Date				
Client ID:	MW #12		Run ID: PIDFID_040823A		SeqNo: 298732						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	44.85	2.5	40	0	112	65	132	0			
Benzene	20.95	0.5	20	0	105	77	122	0			
Toluene	22.06	0.5	20	0	110	81	115	0			
Ethylbenzene	21.43	0.5	20	0	107	84	117	0			
Xylenes, Total	65.36	0.5	60	0.935	107	84	116	0			
Surr: 4-Bromofluorobenzene	25.28	0	24	0	105	74	118	0			

Sample ID	0408140-02a msd	Batch ID: R12859	Test Code: SW8021	Units: µg/L	Analysis Date	8/23/2004 11:25:42 PM	Prep Date				
Client ID:	MW #12		Run ID: PIDFID_040823A		SeqNo: 298733						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	44.76	2.5	40	0	112	65	132	44.85	0.200	28	
Benzene	21.25	0.5	20	0	106	77	122	20.95	1.46	27	
Toluene	22.22	0.5	20	0	111	81	115	22.06	0.729	19	
Ethylbenzene	22.1	0.5	20	0	110	84	117	21.43	3.06	10	
Xylenes, Total	65.78	0.5	60	0.935	108	84	116	65.36	0.643	13	
Surr: 4-Bromofluorobenzene	25.68	0	24	0	107	74	118	25.28	1.58	0	

Sample ID	0408140-01C MS	Batch ID: 6341	Test Code: SW7470	Units: mg/L	Analysis Date	8/18/2004	Prep Date	8/18/2004			
Client ID:	MW #11		Run ID: MI-LA254_040818A		SeqNo:	297506					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005107	0.0002	0.005	0.0001091	100	75.2	134	0			

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 limits

B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining

Work Order: 0408140

Project: 2004 Annual Monitoring Wells

QC SUMMARY REPORT

Sample Matrix Spike Duplicate

Sample ID	0408140-01C MSD	Batch ID: 6341	Test Code: SW7470		Units: mg/L		Analysis Date 8/18/2004		Prep Date 8/18/2004		
Client ID:	MW #11		Run ID:	MI-LA254_040818A		SeqNo: 297507					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005217	0.0002	0.005	0.0001091	102	75.2	134	0.005107	2.12	20	

Sample ID	0408140-01D MS	Batch ID: R12840	Test Code: SW6010A	Units: mg/L	Analysis Date	8/20/2004 11:11:42 AM	Prep Date				
Client ID:	MW #11		Run ID: ICP_040820B		SeqNo:	298096					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	0408140-01D MSD	Batch ID: R12840	Test Code: SW6010A	Units: mg/L	Analysis Date	8/20/2004 11:15:57 AM	Prep Date				
Client ID:	MW #11		Run ID: ICP_040820B		SeqNo:	298097					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	149.3	1	50.5	102.2	93.3	75	125	148.5	0.590	20	
Magnesium	71	1	50.5	22.74	95.6	75	125	70.71	0.406	20	
Potassium	53.18	1	55	1.53	93.9	75	125	52.87	0.594	20	
Sodium	403.7	1	50.5	361.6	83.3	75	125	400.7	0.739	20	

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

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 27-Aug-04

CLIENT: San Juan Refining

Work Order: 0408140

Project: 2004 Annual Monitoring Wells

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R12798	Test Code: E300	Units: mg/L	Analysis Date	8/17/2004 11:37:26 AM	Prep Date				
Client ID:		Run ID:	LC_040817A		SeqNo:	297221					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4514	0.1	0.5	0	90.3	90	110	0			
Chloride	4.764	0.1	5	0	95.3	90	110	0			
Bromide	2.3	0.1	2.5	0	92.0	90	110	0			
Phosphorus, Orthophosphate (As P)	4.613	0.5	5	0	92.3	90	110	0			
Sulfate	9.728	0.5	10	0	97.3	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.281	0.1	3.5	0	93.7	90	110	0			

Sample ID	LCS	Batch ID: R12816	Test Code: E300	Units: mg/L	Analysis Date	8/18/2004 11:07:23 AM	Prep Date				
Client ID:		Run ID:	LC_040818A		SeqNo:	297634					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4545	0.1	0.5	0	90.9	90	110	0			
Chloride	4.881	0.1	5	0	97.6	90	110	0			
Bromide	2.268	0.1	2.5	0	90.7	90	110	0			
Phosphorus, Orthophosphate (As P)	4.518	0.5	5	0	90.4	90	110	0			
Sulfate	9.728	0.5	10	0	97.3	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.321	0.1	3.5	0	94.9	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

CLIENT: San Juan Refining

Work Order: 0408140

Project: 2004 Annual Monitoring Wells

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R12816	Test Code: E300	Units: mg/L	Analysis Date	8/18/2004 6:02:55 PM	Prep Date					
Client ID:		Run ID:	LC_040818A		SeqNo:	297648						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		0.4618	0.1	0.5	0	92.4	90	110	0			
Chloride		4.838	0.1	5	0	96.8	90	110	0			
Bromide		2.319	0.1	2.5	0	92.8	90	110	0			
Phosphorus, Orthophosphate (As P)		4.716	0.5	5	0	94.3	90	110	0			
Sulfate		9.835	0.5	10	0	98.4	90	110	0			
Nitrate (As N)+Nitrite (As N)		3.342	0.1	3.5	0	95.5	90	110	0			

Sample ID	BTEX std 100ng	Batch ID: R12859	Test Code: SW8021	Units: µg/L	Analysis Date	8/24/2004 3:27:49 AM	Prep Date				
Client ID:		Run ID:	PIDFID_040823A		SeqNo:	298734					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	43.89	2.5	40	0	110	54.9	142	0			
Benzene	20.74	0.5	20	0	104	81.3	121	0			
Toluene	21.66	0.5	20	0	108	84.9	118	0			
Ethylbenzene	21.14	0.5	20	0	106	53.8	149	0			
Xylenes, Total	65.02	0.5	60	0	108	83.1	122	0			

Sample ID	LCS-6341	Batch ID: 6341	Test Code: SW7470	Units: mg/L	Analysis Date	8/18/2004	Prep Date	8/18/2004				
Client ID:		Run ID:	MI-LA254_040818A		SeqNo:	297503						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.005076	0.0002	0.005	0	102	75.2	134	0			

Sample ID	LCSD-6341	Batch ID: 6341	Test Code: SW7470	Units: mg/L	Analysis Date	8/18/2004	Prep Date	8/18/2004				
Client ID:		Run ID:	MI-LA254_040818A		SeqNo:	297509						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.004979	0.0002	0.005	0	99.6	75.2	134	0.005076	1.94	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: 0408140

Project: 2004 Annual Monitoring Wells

Sample ID	LCS	Batch ID: R12802	Test Code: SW6010A	Units: mg/L	Analysis Date	8/17/2004 2:33:11 PM	Prep Date				
Client ID:		Run ID: ICP_040817C			SeqNo:	297398					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5286	0.02	0.5	0	106	80	120	0			
Barium	0.5256	0.002	0.5	0	105	80	120	0			
Cadmium	0.5262	0.002	0.5	0	105	80	120	0			
Chromium	0.52	0.006	0.5	0	104	80	120	0			
Copper	0.5254	0.006	0.5	0	105	80	120	0			
Iron	0.4858	0.02	0.5	0.01275	94.6	80	120	0			
Lead	0.5324	0.005	0.5	0	106	80	120	0			
Manganese	0.5112	0.002	0.5	0	102	80	120	0			
Selenium	0.5473	0.05	0.5	0	109	80	120	0			
Silver	0.5312	0.005	0.5	0	106	80	120	0			
Uranium	5.021	0.1	5	0	100	80	120	0			
Zinc	0.5311	0.005	0.5	0	106	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:

Work Order Number 0408140

Received by AMG

Checklist completed by

Bonzales 08/17/04
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 ☐	
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 _____

Accreditation Applied
NELAC ☐ USACE ☐

Other:

Project Name: Annual Monitoring Wells

Project #:

Project Manager:

Sampler: Indy Hurtado/Daniel Hurtado

Sample Temperature:

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HNO ₃	
Aug 04	1:30 PM	H ₂ O	MW #11	2 VOA	X		0408140
				1-125ml		X	
				1-500ml		X	
				1-125ml			H ₂ SO ₄
				1-250ml			
				1-500ml			
				2 VOA	X		2
Aug 04	1:40 PM	H ₂ O	MW #12	1-125ml		X	
				1-500ml		X	
				1-125ml			H ₂ SO ₄
				1-250ml			
				1-500ml			

Received By: (Signature)

Relinquished By: (Signature)

Received By: (Signature)

1347

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel. 505.345.3975 Fax 505.345.4107

www.hallenvironmental.com

ANALYSIS REQUEST

[illegible]

Remarks:

COVER LETTER

September 01, 2004

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

RE: Annual Monitoring Wells 2004

Order No.: 0408168

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 5 samples on 8/19/2004 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



Fall Environmental Analysis Laboratory

Date: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408168
Project: Annual Monitoring Wells 2004
Lab ID: 0408168-01

Client Sample ID: MW #13
Collection Date: 8/18/2004 9:32:00 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	8/19/2004 4:10:49 PM
Chloride	330	2.0		mg/L	20	8/20/2004 1:53:26 PM
Nitrogen, Nitrite (As N)	1.6	0.10		mg/L	1	8/19/2004 4:10:49 PM
Bromide	4.3	0.10		mg/L	1	8/19/2004 4:10:49 PM
Nitrogen, Nitrate (As N)	6.6	0.10		mg/L	1	8/19/2004 4:10:49 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/19/2004 4:10:49 PM
Sulfate	950	10		mg/L	20	8/20/2004 1:53:26 PM
EPA METHOD 310.1: ALKALINITY						Analyst: MAP
Alkalinity, Total (As CaCO ₃)	950	2.0		mg/L CaCO ₃	1	8/26/2004
Carbonate	ND	2.0		mg/L CaCO ₃	1	8/26/2004
Bicarbonate	950	2.0		mg/L CaCO ₃	1	8/26/2004
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	27	2.5		µg/L	1	8/23/2004 6:52:36 PM
Benzene	ND	0.50		µg/L	1	8/23/2004 6:52:36 PM
Toluene	ND	0.50		µg/L	1	8/23/2004 6:52:36 PM
Ethylbenzene	ND	0.50		µg/L	1	8/23/2004 6:52:36 PM
Xylenes, Total	ND	0.50		µg/L	1	8/23/2004 6:52:36 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	1	8/23/2004 6:52:36 PM
TOTAL CARBON DIOXIDE CALCULATION						Analyst: MAP
Total Carbon Dioxide	860	1.0		mg CO ₂ /L	1	8/26/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	3400	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	8/20/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/31/2004 9:04:29 AM
Barium	0.022	0.0020		mg/L	1	8/31/2004 9:04:29 AM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 9:04:29 AM
Calcium	210	10		mg/L	10	8/31/2004 12:33:17 PM
Chromium	ND	0.0060		mg/L	1	8/31/2004 9:04:29 AM
Copper	ND	0.0060		mg/L	1	8/31/2004 9:04:29 AM
Iron	0.046	0.020		mg/L	1	8/31/2004 9:04:29 AM
Lead	ND	0.0050		mg/L	1	8/31/2004 9:04:29 AM
Magnesium	80	1.0		mg/L	1	8/31/2004 9:04:29 AM
Manganese	0.58	0.0020		mg/L	1	8/31/2004 9:04:29 AM
Potassium	3.6	1.0		mg/L	1	8/31/2004 9:04:29 AM
Selenium	ND	0.050		mg/L	1	8/31/2004 9:04:29 AM
Silver	ND	0.0050		mg/L	1	8/31/2004 9:04:29 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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408168
Project: Annual Monitoring Wells 2004
Lab ID: 0408168-01

Client Sample ID: MW #13
Collection Date: 8/18/2004 9:32:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Sodium	610	10		mg/L	10	8/31/2004 12:33:17 PM
Uranium	ND	0.10		mg/L	1	8/31/2004 9:04:29 AM
Zinc	0.021	0.0050		mg/L	1	8/31/2004 9:04:29 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/26/2004 10:00:58 AM
Barium	0.028	0.020		mg/L	1	8/26/2004 10:00:58 AM
Cadmium	ND	0.0020		mg/L	1	8/26/2004 10:00:58 AM
Chromium	0.085	0.0060		mg/L	1	8/26/2004 10:00:58 AM
Lead	ND	0.0050		mg/L	1	8/26/2004 10:00:58 AM
Selenium	ND	0.050		mg/L	1	8/26/2004 10:00:58 AM
Silver	ND	0.0050		mg/L	1	8/26/2004 10:00:58 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	8.02	0.010		pH units	1	8/26/2004
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	2800	50		mg/L	1	8/25/2004

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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408168
Project: Annual Monitoring Wells 2004
Lab ID: 0408168-02

Client Sample ID: MW #27
Collection Date: 8/18/2004 1:05:00 PM
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	8/19/2004 4:27:37 PM
Chloride	290	1.0		mg/L	10	8/20/2004 2:10:13 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/19/2004 4:27:37 PM
Bromide	3.1	0.10		mg/L	1	8/19/2004 4:27:37 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	8/19/2004 4:27:37 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/19/2004 4:27:37 PM
Sulfate	120	5.0		mg/L	10	8/20/2004 2:10:13 PM
EPA METHOD 310.1: ALKALINITY						Analyst: MAP
Alkalinity, Total (As CaCO ₃)	970	2.0		mg/L CaCO ₃	1	8/26/2004
Carbonate	ND	2.0		mg/L CaCO ₃	1	8/26/2004
Bicarbonate	970	2.0		mg/L CaCO ₃	1	8/26/2004
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	13		µg/L	5	8/24/2004 12:19:28 PM
Benzene	ND	2.5		µg/L	5	8/24/2004 12:19:28 PM
Toluene	ND	2.5		µg/L	5	8/24/2004 12:19:28 PM
Ethylbenzene	ND	2.5		µg/L	5	8/24/2004 12:19:28 PM
Xylenes, Total	ND	2.5		µg/L	5	8/24/2004 12:19:28 PM
Surr: 4-Bromofluorobenzene	104	74-118		%REC	5	8/24/2004 12:19:28 PM
TOTAL CARBON DIOXIDE CALCULATION						Analyst: MAP
Total Carbon Dioxide	890	1.0		mg CO ₂ /L	1	8/26/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	2400	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	8/20/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/31/2004 9:08:46 AM
Barium	0.083	0.0020		mg/L	1	8/31/2004 9:08:46 AM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 9:08:46 AM
Calcium	170	1.0		mg/L	1	8/31/2004 9:08:46 AM
Chromium	ND	0.0060		mg/L	1	8/31/2004 9:08:46 AM
Copper	ND	0.0060		mg/L	1	8/31/2004 9:08:46 AM
Iron	0.15	0.020		mg/L	1	8/31/2004 9:08:46 AM
Lead	ND	0.0050		mg/L	1	8/31/2004 9:08:46 AM
Magnesium	26	1.0		mg/L	1	8/31/2004 9:08:46 AM
Manganese	0.94	0.0020		mg/L	1	8/31/2004 9:08:46 AM
Potassium	2.6	1.0		mg/L	1	8/31/2004 9:08:46 AM
Selenium	ND	0.050		mg/L	1	8/31/2004 9:08:46 AM
Silver	ND	0.0050		mg/L	1	8/31/2004 9:08:46 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 3 / 28

Hall Environmental Analysis Laboratory

Date: 01-Sep-04

CLIENT: San Juan Refining

Client Sample ID: MW #27

Lab Order: 0408168

Collection Date: 8/18/2004 1:05:00 PM

Project: Annual Monitoring Wells 2004

Lab ID: 0408168-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Sodium	390	10		mg/L	10	8/31/2004 12:36:11 PM
Uranium	ND	0.10		mg/L	1	8/31/2004 9:08:46 AM
Zinc	0.011	0.0050		mg/L	1	8/31/2004 9:08:46 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/26/2004 10:05:12 AM
Barium	0.13	0.020		mg/L	1	8/26/2004 10:05:12 AM
Cadmium	ND	0.0020		mg/L	1	8/26/2004 10:05:12 AM
Chromium	0.019	0.0060		mg/L	1	8/26/2004 10:05:12 AM
Lead	ND	0.0050		mg/L	1	8/26/2004 10:05:12 AM
Selenium	ND	0.050		mg/L	1	8/26/2004 10:05:12 AM
Silver	ND	0.0050		mg/L	1	8/26/2004 10:05:12 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	7.72	0.010		pH units	1	8/26/2004
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	1700	50		mg/L	1	8/25/2004

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 4 / 28

Hall Environmental Analysis Laboratory

Date: 01-Sep-04

CLIENT: San Juan Refining

Client Sample ID: MW #36

Lab Order: 0408168

Collection Date: 8/17/2004 1:30:00 PM

Project: Annual Monitoring Wells 2004

Lab ID: 0408168-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						
						Analyst: MAP
Fluoride	0.40	0.10		mg/L	1	8/19/2004 5:34:44 PM
Chloride	100	1.0		mg/L	10	8/20/2004 3:00:35 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/19/2004 5:34:44 PM
Bromide	1.0	0.10		mg/L	1	8/19/2004 5:34:44 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	8/19/2004 5:34:44 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/19/2004 5:34:44 PM
Sulfate	16	0.50		mg/L	1	8/19/2004 5:34:44 PM
EPA METHOD 310.1: ALKALINITY						
						Analyst: MAP
Alkalinity, Total (As CaCO ₃)	970	2.0		mg/L CaCO ₃	1	8/26/2004
Carbonate	ND	2.0		mg/L CaCO ₃	1	8/26/2004
Bicarbonate	970	2.0		mg/L CaCO ₃	1	8/26/2004
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	8.5	2.5		µg/L	1	8/24/2004 1:19:59 PM
Benzene	0.93	0.50		µg/L	1	8/24/2004 1:19:59 PM
Toluene	ND	0.50		µg/L	1	8/24/2004 1:19:59 PM
Ethylbenzene	ND	0.50		µg/L	1	8/24/2004 1:19:59 PM
Xylenes, Total	4.0	0.50		µg/L	1	8/24/2004 1:19:59 PM
Surr: 4-Bromofluorobenzene	114	74-118		%REC	1	8/24/2004 1:19:59 PM
TOTAL CARBON DIOXIDE CALCULATION						
						Analyst: MAP
Total Carbon Dioxide	880	1.0		mg CO ₂ /L	1	8/26/2004
EPA 120.1: SPECIFIC CONDUCTANCE						
						Analyst: CMC
Specific Conductance	1700	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY						
						Analyst: CMC
Mercury	0.00031	0.00020		mg/L	1	8/20/2004
EPA METHOD 6010C: DISSOLVED METALS						
						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/31/2004 9:12:59 AM
Barium	0.59	0.0020		mg/L	1	8/31/2004 9:12:59 AM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 9:12:59 AM
Calcium	150	1.0		mg/L	1	8/31/2004 9:12:59 AM
Chromium	ND	0.0060		mg/L	1	8/31/2004 9:12:59 AM
Copper	ND	0.0060		mg/L	1	8/31/2004 9:12:59 AM
Iron	3.1	0.020		mg/L	1	8/31/2004 9:12:59 AM
Lead	ND	0.0050		mg/L	1	8/31/2004 9:12:59 AM
Magnesium	30	1.0		mg/L	1	8/31/2004 9:12:59 AM
Manganese	4.1	0.0020		mg/L	1	8/31/2004 9:12:59 AM
Potassium	7.2	1.0		mg/L	1	8/31/2004 9:12:59 AM
Selenium	ND	0.050		mg/L	1	8/31/2004 9:12:59 AM
Silver	ND	0.0050		mg/L	1	8/31/2004 9:12:59 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: 01-Sep-04

CLIENT: San Juan Refining

Client Sample ID: MW #36

Lab Order: 0408168

Collection Date: 8/17/2004 1:30:00 PM

Project: Annual Monitoring Wells 2004

Lab ID: 0408168-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Sodium	180	1.0		mg/L	1	8/31/2004 9:12:59 AM
Uranium	ND	0.10		mg/L	1	8/31/2004 9:12:59 AM
Zinc	0.018	0.0050		mg/L	1	8/31/2004 9:12:59 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/26/2004 10:09:30 AM
Barium	2.6	0.20		mg/L	10	8/26/2004 11:24:31 AM
Cadmium	ND	0.0020		mg/L	1	8/26/2004 10:09:30 AM
Chromium	0.025	0.0060		mg/L	1	8/26/2004 10:09:30 AM
Lead	0.0072	0.0050		mg/L	1	8/26/2004 10:09:30 AM
Selenium	ND	0.050		mg/L	1	8/26/2004 10:09:30 AM
Silver	ND	0.0050		mg/L	1	8/26/2004 10:09:30 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	7.80	0.010		pH units	1	8/26/2004
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	1200	50		mg/L	1	8/25/2004

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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408168
Project: Annual Monitoring Wells 2004
Lab ID: 0408168-04

Client Sample ID: MW #32
Collection Date: 8/17/2004 1:50:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.24	0.10		mg/L	1	8/19/2004 6:58:47 PM
Chloride	650	2.0		mg/L	20	8/20/2004 3:17:18 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/19/2004 6:58:47 PM
Bromide	2.9	0.10		mg/L	1	8/19/2004 6:58:47 PM
Nitrogen, Nitrate (As N)	5.0	0.10		mg/L	1	8/19/2004 6:58:47 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/19/2004 6:58:47 PM
Sulfate	580	10		mg/L	20	8/20/2004 3:17:18 PM
EPA METHOD 310.1: ALKALINITY						Analyst: MAP
Alkalinity, Total (As CaCO ₃)	310	2.0		mg/L CaCO ₃	1	8/26/2004
Carbonate	ND	2.0		mg/L CaCO ₃	1	8/26/2004
Bicarbonate	310	2.0		mg/L CaCO ₃	1	8/26/2004
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	8/23/2004 9:24:36 PM
Benzene	ND	0.50		µg/L	1	8/23/2004 9:24:36 PM
Toluene	ND	0.50		µg/L	1	8/23/2004 9:24:36 PM
Ethylbenzene	ND	0.50		µg/L	1	8/23/2004 9:24:36 PM
Xylenes, Total	ND	0.50		µg/L	1	8/23/2004 9:24:36 PM
Surr: 4-Bromofluorobenzene	104	74-118		%REC	1	8/23/2004 9:24:36 PM
TOTAL CARBON DIOXIDE CALCULATION						Analyst: MAP
Total Carbon Dioxide	280	1.0		mg CO ₂ /L	1	8/26/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	3300	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	8/20/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/31/2004 9:16:16 AM
Barium	0.022	0.0020		mg/L	1	8/31/2004 9:16:16 AM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 9:16:16 AM
Calcium	170	1.0		mg/L	1	8/31/2004 9:16:16 AM
Chromium	ND	0.0060		mg/L	1	8/31/2004 9:16:16 AM
Copper	ND	0.0060		mg/L	1	8/31/2004 9:16:16 AM
Iron	0.056	0.020		mg/L	1	8/31/2004 9:16:16 AM
Lead	ND	0.0050		mg/L	1	8/31/2004 9:16:16 AM
Magnesium	26	1.0		mg/L	1	8/31/2004 9:16:16 AM
Manganese	ND	0.0020		mg/L	1	8/31/2004 9:16:16 AM
Potassium	2.7	1.0		mg/L	1	8/31/2004 9:16:16 AM
Selenium	ND	0.050		mg/L	1	8/31/2004 9:16:16 AM
Silver	ND	0.0050		mg/L	1	8/31/2004 9:16:16 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 7 / 28

Hall Environmental Analysis Laboratory

Date: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408168
Project: Annual Monitoring Wells 2004
Lab ID: 0408168-04

Client Sample ID: MW #32
Collection Date: 8/17/2004 1:50:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Sodium	550	10		mg/L	10	8/31/2004 12:39:05 PM
Uranium	ND	0.10		mg/L	1	8/31/2004 9:16:16 AM
Zinc	0.019	0.0050		mg/L	1	8/31/2004 9:16:16 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/26/2004 10:13:48 AM
Barium	0.049	0.020		mg/L	1	8/26/2004 10:13:48 AM
Cadmium	ND	0.0020		mg/L	1	8/26/2004 10:13:48 AM
Chromium	ND	0.0060		mg/L	1	8/26/2004 10:13:48 AM
Lead	ND	0.0050		mg/L	1	8/26/2004 10:13:48 AM
Selenium	ND	0.050		mg/L	1	8/26/2004 10:13:48 AM
Silver	ND	0.0050		mg/L	1	8/26/2004 10:13:48 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	7.84	0.010		pH units	1	8/26/2004
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	2400	50		mg/L	1	8/25/2004

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 8 / 28

Hall Environmental Analysis Laboratory

Date: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408168
Project: Annual Monitoring Wells 2004
Lab ID: 0408168-05

Client Sample ID: MW #33
Collection Date: 8/17/2004 2:15:00 PM
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	8/19/2004 7:15:36 PM
Chloride	550	2.5		mg/L	25	8/20/2004 3:34:07 PM
Bromide	3.2	0.10		mg/L	1	8/19/2004 7:15:36 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/19/2004 7:15:36 PM
Sulfate	1600	13		mg/L	25	8/20/2004 3:34:07 PM
Nitrate (As N)+Nitrite (As N)	25	0.50		mg/L	5	8/24/2004 7:50:37 PM
EPA METHOD 310.1: ALKALINITY						Analyst: MAP
Alkalinity, Total (As CaCO3)	150	2.0		mg/L CaCO3	1	8/26/2004
Carbonate	ND	2.0		mg/L CaCO3	1	8/26/2004
Bicarbonate	150	2.0		mg/L CaCO3	1	8/26/2004
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	8/23/2004 9:54:48 PM
Benzene	ND	0.50		µg/L	1	8/23/2004 9:54:48 PM
Toluene	ND	0.50		µg/L	1	8/23/2004 9:54:48 PM
Ethylbenzene	ND	0.50		µg/L	1	8/23/2004 9:54:48 PM
Xylenes, Total	ND	0.50		µg/L	1	8/23/2004 9:54:48 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	1	8/23/2004 9:54:48 PM
TOTAL CARBON DIOXIDE CALCULATION						Analyst: MAP
Total Carbon Dioxide	140	1.0		mg CO2/L	1	8/26/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	4400	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	0.00069	0.00020		mg/L	1	8/20/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/31/2004 9:20:34 AM
Barium	0.020	0.0020		mg/L	1	8/31/2004 9:20:34 AM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 9:20:34 AM
Calcium	350	10		mg/L	10	8/31/2004 3:09:25 PM
Chromium	ND	0.0060		mg/L	1	8/31/2004 9:20:34 AM
Copper	0.0062	0.0060		mg/L	1	8/31/2004 9:20:34 AM
Iron	0.11	0.020		mg/L	1	8/31/2004 2:38:40 PM
Lead	ND	0.0050		mg/L	1	8/31/2004 9:20:34 AM
Magnesium	54	1.0		mg/L	1	8/31/2004 9:20:34 AM
Manganese	0.013	0.0020		mg/L	1	8/31/2004 9:20:34 AM
Potassium	5.3	1.0		mg/L	1	8/31/2004 9:20:34 AM
Selenium	ND	0.050		mg/L	1	8/31/2004 9:20:34 AM
Silver	ND	0.0050		mg/L	1	8/31/2004 9:20:34 AM
Sodium	670	10		mg/L	10	8/31/2004 3:09:25 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 9 / 28

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 01-Sep-04

CLIENT: San Juan Refining

Client Sample ID: MW #33

Lab Order: 0408168

Collection Date: 8/17/2004 2:15:00 PM

Project: Annual Monitoring Wells 2004

Lab ID: 0408168-05

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	8/31/2004 9:20:34 AM
Zinc	0.031	0.0050		mg/L	1	8/31/2004 9:20:34 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/26/2004 10:27:30 AM
Barium	0.038	0.020		mg/L	1	8/26/2004 10:27:30 AM
Cadmium	ND	0.0020		mg/L	1	8/26/2004 10:27:30 AM
Chromium	ND	0.0060		mg/L	1	8/26/2004 10:27:30 AM
Lead	0.0067	0.0050		mg/L	1	8/26/2004 10:27:30 AM
Selenium	ND	0.050		mg/L	1	8/26/2004 10:27:30 AM
Silver	ND	0.0050		mg/L	1	8/26/2004 10:27:30 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	7.78	0.010		pH units	1	8/26/2004
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	3700	50		mg/L	1	8/25/2004

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level 10/28

Page 10 of 10

Hall Environmental Analysis Laboratory

Date: 01-Sep-04

CLIENT: San Juan Refining
Work Order: 0408168
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R12828	Test Code: E300	Units: mg/L	Analysis Date	8/19/2004 11:34:57 AM	Prep Date
Client ID:		Run ID: LC_040819A	SPK value	SPK Ref Val	SeqNo: 297905	HighLimit	RPD Ref Val
Analyte	Result	PQL	%REC	LowLimit	HighLimit	%RPD	RPDLimit
Fluoride	ND	0.1					Qual
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					
Nitrate (As N)+Nitrite (As N)	ND	0.1					

Sample ID	MBLK	Batch ID: R12828	Test Code: E300	Units: mg/L	Analysis Date	8/19/2004 6:25:10 PM	Prep Date
Client ID:		Run ID: LC_040819A	SPK value	SPK Ref Val	SeqNo: 297929	HighLimit	RPD Ref Val
Analyte	Result	PQL	%REC	LowLimit	HighLimit	%RPD	RPDLimit
Fluoride	ND	0.1					Qual
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					
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: 0408168
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	MBLK	Batch ID: R12848	Test Code: E300	Units: mg/L	Analysis Date 8/20/2004 11:36:03 AM	Prep Date
Client ID:		Run ID: LC_040820A	SPK value	SPK Ref Val	SeqNo: 298287	
Analyte	Result	PQL	%REC	LowLimit	HighLimit	RPD Ref Val
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				
Nitrate (As N)+Nitrite (As N)	ND	0.1				

Sample ID	MBLK	Batch ID: R12848	Test Code: E300	Units: mg/L	Analysis Date 8/20/2004 6:22:07 PM	Prep Date
Client ID:		Run ID: LC_040820A	SPK value	SPK Ref Val	SeqNo: 298308	
Analyte	Result	PQL	%REC	LowLimit	HighLimit	RPD Ref Val
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				
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

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0408168
 Project: Annual Monitoring Wells 2004

Sample ID	MBLK	Batch ID: R12867	Test Code: E300	Units: mg/L	Analysis Date	8/24/2004 10:33:38 AM	Prep Date				
Client ID:		Run ID:	LC_040824A		SeqNo:	298902					
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									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID	MBLK	Batch ID: R12921	Test Code: E310.1	Units: mg/L CaCO3	Analysis Date 8/26/2004	Prep Date					
Client ID:		Run ID: WC_040826D	SeqNo: 300227								
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	Reagent Blank 5m	Batch ID: R12859	Test Code: SW8021	Units: µg/L	Analysis Date 8/23/2004 8:01:48 AM	Prep Date					
Client ID:		Run ID: PIDFID_040823A	SeqNo: 298631								
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	21.97	0	20	0	110	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

CLIENT: San Juan Refining
Work Order: 0408168
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R12868	Test Code: SW8021	Units: µg/L	Analysis Date	8/24/2004 9:14:46 AM	Prep Date				
Client ID:			Run ID: PIDFID_040824A		SeqNo:	298954					
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	21.2	0	20	0	106	74	118	0			

Sample ID	MB-6359	Batch ID: 6359	Test Code: SW7470	Units: mg/L	Analysis Date	8/20/2004	Prep Date	8/20/2004			
Client ID:			Run ID: MI-LA254_040820B		SeqNo:	298062					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

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: 0408168
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	MB	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 8:07:01 AM	Prep Date				
Client ID:		Run ID:	ICP_040831A		SeqNo:	300881					
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									

Sample ID	MB-6369	Batch ID: 6369	Test Code: SW6010A	Units: mg/L	Analysis Date 8/26/2004 9:10:03 AM	Prep Date 8/24/2004					
Client ID:			Run ID: ICP_040826A		SeqNo: 299548						
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: 0408168
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT Method Blank

Sample ID MB-6365	Batch ID: 6365	Test Code: E160.1	Units: mg/L	Analysis Date 8/25/2004	Prep Date 8/23/2004
Client ID:		Run ID: WC_040825A		SeqNo: 299155	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids	ND		50		
Sample ID MB-6378	Batch ID: 6378	Test Code: E160.1	Units: mg/L	Analysis Date 8/25/2004	Prep Date 8/25/2004
Client ID:		Run ID: WC_040825E		SeqNo: 300595	
Analyte	Result	PQL	SPK value	%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: 01-Sep-04

CLIENT: San Juan Refining

Work Order: 0408168

Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0408168-02B DUP	Batch ID: R12828	Test Code: E300	Units: mg/L	Analysis Date 8/19/2004 4:44:21 PM	Prep Date					
Client ID:	MW #27	Run ID:	LC_040819A	SeqNo:	297923						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.2084	0.1	0	0	0	0	0	0.2046	1.87	20	
Nitrogen, Nitrite (As N)	ND	0.1	0	0	0	0	0	0	0	20	
Bromide	3.154	0.1	0	0	0	0	0	3.086	2.21	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	

Sample ID	0408168-01E DUP	Batch ID: R12921	Test Code: E310.1	Units: mg/L CaCO3	Analysis Date 8/26/2004	Prep Date					
Client ID: MW #13			Run ID: WC_040826D		SeqNo: 300228						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	964	2	0	0	0	0	0	954	1.04	15	
Carbonate	ND	2	0	0	0	0	0	0	0	15	
Bicarbonate	964	2	0	0	0	0	0	954	1.04	15	

Sample ID	0408168-01E DUP	Batch ID: R12922	Test Code:	Units: mg CO2/L	Analysis Date	8/26/2004	Prep Date				
Client ID:	MW #13	Run ID:	WC_040826E	SeqNo:	300235						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Carbon Dioxide	866	1	0	0	0	0	0	858	0.928	20	

Sample ID	0408168-01B DUP	Batch ID: R12879	Test Code: E120.1	Units: µmhos/cm	Analysis Date	8/25/2004	Prep Date				
Client ID:	MW #13	Run ID:	WC_040825B	SeqNo:	299292						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	3560	0.01	0	0	0	0	0	3380	5.19	20	

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

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QC SUMMARY REPORT

Sample Duplicate

CLIENT: San Juan Refining
Work Order: 0408168
Project: Annual Monitoring Wells 2004

Sample ID	0408168-05D DUP	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 9:32:17 AM	Prep Date				
Client ID:	MW #33		Run ID: ICP_040831A		SeqNo:	300902					
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	0.00644	0	20	
Barium	0.02024	0.002	0	0	0	0	0	0.01964	3.01	20	
Cadmium	ND	0.002	0	0	0	0	0	0	0	20	
Chromium	ND	0.006	0	0	0	0	0	0	0	20	
Copper	0.006323	0.006	0	0	0	0	0	0.00616	2.61	20	
Lead	0.001335	0.005	0	0	0	0	0	0	0	20	J
Magnesium	54.07	1	0	0	0	0	0	53.97	0.180	20	
Manganese	0.01301	0.002	0	0	0	0	0	0.01314	1.04	20	
Potassium	5.387	1	0	0	0	0	0	5.283	1.94	20	
Selenium	ND	0.05	0	0	0	0	0	0	0	20	
Silver	ND	0.005	0	0	0	0	0	0	0	20	
Uranium	0.01159	0.1	0	0	0	0	0	0.01128	0	20	J
Zinc	0.03097	0.005	0	0	0	0	0	0.03084	0.412	20	

Sample ID	0408168-05D DUP	Batch ID: R12964	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 2:55:56 PM	Prep Date				
Client ID:	MW #33		Run ID: ICP_040831F		SeqNo:	301163					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.09766	0.02	0	0	0	0	0	0.1102	12.1	20	

Sample ID	0408168-05D DUP	Batch ID: R12964	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 3:06:33 PM	Prep Date				
Client ID:	MW #33		Run ID: ICP_040831F		SeqNo:	301165					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	347.5	10	0	0	0	0	0	346.6	0.263	20	
Sodium	670.9	10	0	0	0	0	0	671	0.0148	20	

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

CLIENT: San Juan Refining
Work Order: 0408168
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT

Sample Duplicate

Sample ID 0408168-05C DUP		Batch ID: 6369		Test Code: SW6010A		Units: mg/L		Analysis Date 8/26/2004 11:05:52 AM		Prep Date 8/24/2004	
Client ID: MW #33		Run ID: ICP_040826A		SeqNo: 299571							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0133	0.02	0	0	0	0	0	0.01795	0	30	J
Barium	0.04052	0.02	0	0	0	0	0	0.03776	7.04	30	
Cadmium	0.0007903	0.002	0	0	0	0	0	0.0007771	0	30	J
Chromium	0.001891	0.006	0	0	0	0	0	0.002497	0	30	J
Lead	0.007308	0.005	0	0	0	0	0	0.006746	7.99	30	
Selenium	ND	0.05	0	0	0	0	0	0	0	30	
Silver	ND	0.005	0	0	0	0	0	0	0	30	

Sample ID 0408168-01B DUP		Batch ID: R12924	Test Code: E150.1		Units: pH units		Analysis Date 8/26/2004		Prep Date		
Client ID: MW #13			Run ID: WC_040826F	SeqNo: 300242							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.03	0.01	0	0	0	0	0	0	0		

Sample ID 0408168-05B dup		Batch ID: 6365	Test Code: E160.1		Units: mg/L		Analysis Date 8/25/2004		Prep Date 8/23/2004		
Client ID: MW #33			Run ID: WC_040825A	SeqNo: 299167							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	3693	1.5	0	0	0	0	0	3693	0	20	

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

Hall Environmental Analysis Laboratory

Date: 03-Sep-04

CLIENT: San Juan Refining

Work Order: 0408168

Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R12828	Test Code: E300	Units: mg/L	Analysis Date	8/19/2004 11:51:46 AM	Prep Date				
Client ID:		Run ID:	LC_040819A		SeqNo:	297906					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4515	0.1	0.5	0	90.3	90	110	0			
Chloride	4.828	0.1	5	0	96.6	90	110	0			
Nitrogen, Nitrite (As N)	0.9201	0.1	1	0	92.0	90	110	0			
Bromide	2.339	0.1	2.5	0	93.5	90	110	0			
Nitrogen, Nitrate (As N)	2.378	0.1	2.5	0	95.1	90	110	0			
Phosphorus, Orthophosphate (As P)	4.533	0.5	5	0	90.7	90	110	0			
Sulfate	9.677	0.5	10	0	96.8	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.298	0.1	3.5	0	94.2	90	110	0			

Sample ID	LCS	Batch ID: R12828	Test Code: E300	Units: mg/L	Analysis Date	8/19/2004 6:41:58 PM	Prep Date				
Client ID:		Run ID: LC_040819A			SeqNo: 297930						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4622	0.1	0.5	0	92.4	90	110	0			
Chloride	4.856	0.1	5	0	97.1	90	110	0			
Nitrogen, Nitrite (As N)	0.922	0.1	1	0	92.2	90	110	0			
Bromide	2.364	0.1	2.5	0	94.6	90	110	0			
Nitrogen, Nitrate (As N)	2.395	0.1	2.5	0	95.8	90	110	0			
Phosphorus, Orthophosphate (As P)	4.786	0.5	5	0	95.7	90	110	0			
Sulfate	9.811	0.5	10	0	98.1	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.317	0.1	3.5	0	94.8	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: 0408168
 Project: Annual Monitoring Wells 2004

Sample ID	LCS	Batch ID: R12848	Test Code: E300	Units: mg/L	Analysis Date	8/20/2004 11:52:52 AM	Prep Date				
Client ID:		Run ID: LC_040820A			SeqNo: 298288						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4527	0.1	0.5	0	90.5	90	110	0			
Chloride	4.862	0.1	5	0	97.2	90	110	0			
Nitrogen, Nitrite (As N)	0.9548	0.1	1	0	95.5	90	110	0			
Bromide	2.278	0.1	2.5	0	91.1	90	110	0			
Nitrogen, Nitrate (As N)	2.368	0.1	2.5	0	94.7	90	110	0			
Phosphorus, Orthophosphate (As P)	4.505	0.5	5	0	90.1	90	110	0			
Sulfate	9.669	0.5	10	0	96.7	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.323	0.1	3.5	0	94.9	90	110	0			

Sample ID	LCS	Batch ID: R12848	Test Code: E300	Units: mg/L	Analysis Date	8/20/2004 6:38:56 PM	Prep Date				
Client ID:		Run ID:	LC_040820A		SeqNo:	298309					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4668	0.1	0.5	0	93.4	90	110	0			
Chloride	4.906	0.1	5	0	98.1	90	110	0			
Nitrogen, Nitrite (As N)	0.9447	0.1	1	0	94.5	90	110	0			
Bromide	2.318	0.1	2.5	0	92.7	90	110	0			
Nitrogen, Nitrate (As N)	2.388	0.1	2.5	0	95.5	90	110	0			
Phosphorus, Orthophosphate (As P)	4.651	0.5	5	0	93.0	90	110	0			
Sulfate	9.78	0.5	10	0	97.8	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.333	0.1	3.5	0	95.2	90	110	0			

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

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0408168
 Project: Annual Monitoring Wells 2004

Sample ID	LCS	Batch ID: R12867	Test Code: E300	Units: mg/L	Analysis Date 8/24/2004 10:50:27 AM	Prep Date					
Client ID:		Run ID: LC_040824A			SeqNo: 298903						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4652	0.1	0.5	0	93.0	90	110	0			
Chloride	4.87	0.1	5	0	97.4	90	110	0			
Nitrogen, Nitrite (As N)	0.9544	0.1	1	0	95.4	90	110	0			
Bromide	2.336	0.1	2.5	0	93.4	90	110	0			
Nitrogen, Nitrate (As N)	2.442	0.1	2.5	0	97.7	90	110	0			
Phosphorus, Orthophosphate (As P)	4.52	0.5	5	0	90.4	90	110	0			
Sulfate	9.807	0.5	10	0	98.1	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.396	0.1	3.5	0	97.0	90	110	0			

Sample ID	BTEX std 100ng	Batch ID: R12859	Test Code: SW8021	Units: µg/L	Analysis Date 8/24/2004 3:27:49 AM	Prep Date					
Client ID:		Run ID: PIDFID_040823A			SeqNo: 298734						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	43.89	2.5	40	0	110	54.9	142	0			
Benzene	20.74	0.5	20	0	104	81.3	121	0			
Toluene	21.66	0.5	20	0	108	84.9	118	0			
Ethylbenzene	21.14	0.5	20	0	106	53.8	149	0			
Xylenes, Total	65.02	0.5	60	0	108	83.1	122	0			
Surr: 4-Bromofluorobenzene	24.21	0	24	0	101	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

CLIENT: San Juan Refining

Work Order: 0408168

Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX std 100ng	Batch ID: R12868	Test Code: SW8021	Units: µg/L	Analysis Date 8/25/2004 6:27:36 AM	Prep Date					
Client ID:		Run ID:	PIDFID_040824A		SeqNo: 298965						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	40.43	2.5	40	0	101	54.9	142	0			
Benzene	19.41	0.5	20	0	97.0	81.3	121	0			
Toluene	20.39	0.5	20	0	102	84.9	118	0			
Ethylbenzene	19.7	0.5	20	0	98.5	53.8	149	0			
Xylenes, Total	59.65	0.5	60	0	99.4	83.1	122	0			
Surr: 4-Bromofluorobenzene	24.66	0	24	0	103	74	118	0			

Sample ID	LCS-6359	Batch ID: 6359	Test Code: SW7470	Units: mg/L	Analysis Date 8/20/2004	Prep Date 8/20/2004					
Client ID:		Run ID: MI-LA254_040820B			SeqNo: 298063						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005405	0.0002	0.005	0	108	75.2	134	0			

Sample ID	LCSD-6359	Batch ID: 6359	Test Code: SW7470	Units: mg/L	Analysis Date 8/20/2004	Prep Date 8/20/2004					
Client ID:		Run ID: MI-LA254_040820B			SeqNo: 298085						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005314	0.0002	0.005	0	106	75.2	134	0.005405	1.70	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: 0408168

Project: Annual Monitoring Wells 2004

Sample ID	LCS	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 8:09:53 AM	Prep Date				
Client ID:		Run ID: ICP_040831A			SeqNo: 300882						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5275	0.02	0.5	0	106	80	120	0			
Barium	0.4933	0.002	0.5	0	98.7	80	120	0			
Cadmium	0.5008	0.002	0.5	0	100	80	120	0			
Calcium	51.9	1	50.5	0	103	80	120	0			
Chromium	0.5034	0.006	0.5	0	101	80	120	0			
Copper	0.4792	0.006	0.5	0	95.8	80	120	0			
Iron	0.4916	0.02	0.5	0	98.3	80	120	0			
Lead	0.5042	0.005	0.5	0	101	80	120	0			
Magnesium	51.94	1	50.5	0	103	80	120	0			
Manganese	0.4953	0.002	0.5	0	99.1	80	120	0			
Potassium	51.7	1	55	0	94.0	80	120	0			
Selenium	0.499	0.05	0.5	0	99.8	80	120	0			
Silver	0.4891	0.005	0.5	0	97.8	80	120	0			
Sodium	48.15	1	50.5	0	95.4	80	120	0			
Zinc	0.5249	0.005	0.5	0	105	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: 0408168
 Project: Annual Monitoring Wells 2004

Sample ID	LCSD	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 8:13:06 AM	Prep Date				
Client ID:		Run ID: ICP_040831A	SeqNo: 300883								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5242	0.02	0.5	0	105	80	120	0.5275	0.624	20	
Barium	0.4853	0.002	0.5	0	97.1	80	120	0.4933	1.64	20	
Cadmium	0.4917	0.002	0.5	0	98.3	80	120	0.5008	1.82	20	
Calcium	52.47	1	50.5	0	104	80	120	51.9	1.10	20	
Chromium	0.4947	0.006	0.5	0	98.9	80	120	0.5034	1.74	20	
Copper	0.4688	0.006	0.5	0	93.8	80	120	0.4792	2.20	20	
Iron	0.4933	0.02	0.5	0	98.7	80	120	0.4916	0.333	20	
Lead	0.4948	0.005	0.5	0	99.0	80	120	0.5042	1.88	20	
Magnesium	52.4	1	50.5	0	104	80	120	51.94	0.866	20	
Manganese	0.4855	0.002	0.5	0	97.1	80	120	0.4953	1.98	20	
Potassium	52.05	1	55	0	94.6	80	120	51.7	0.679	20	
Selenium	0.4963	0.05	0.5	0	99.3	80	120	0.499	0.557	20	
Silver	0.4801	0.005	0.5	0	96.0	80	120	0.4891	1.84	20	
Sodium	48.52	1	50.5	0	96.1	80	120	48.15	0.759	20	
Zinc	0.5181	0.005	0.5	0	104	80	120	0.5249	1.32	20	

Sample ID	LCS U5	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 12:27:30 PM	Prep Date				
Client ID:		Run ID: ICP_040831A	SeqNo: 300932								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	4.933	0.1	5	0	98.7	80	120	0			

Sample ID	LCSD U 5	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 12:30:22 PM	Prep Date				
Client ID:		Run ID: ICP_040831A	SeqNo: 300933								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	5.011	0.1	5	0	100	80	120	4.933	1.57	20	

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

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0408168
Project: Annual Monitoring Wells 2004

Sample ID	LCS-6369	Batch ID: 6369	Test Code: SW6010A	Units: mg/L	Analysis Date	8/26/2004 9:12:34 AM	Prep Date	8/24/2004			
Client ID:			Run ID:	ICP_040826A	SeqNo:	299549					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5777	0.02	0.5	0	116	80	120	0			
Barium	0.5069	0.02	0.5	0	101	80	120	0			
Cadmium	0.5343	0.002	0.5	0	107	80	120	0			
Chromium	0.5052	0.006	0.5	0	101	80	120	0			
Lead	0.5242	0.005	0.5	0	105	80	120	0			
Selenium	0.6003	0.05	0.5	0	120	80	120	0			S
Silver	0.5215	0.005	0.5	0	104	80	120	0			

Sample ID	LCSD-6369	Batch ID: 6369	Test Code: SW6010A	Units: mg/L	Analysis Date	8/26/2004 9:15:33 AM	Prep Date	8/24/2004			
Client ID:			Run ID: ICP_040826A		SeqNo: 299550						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5728	0.02	0.5	0	115	80	120	0.5777	0.858	20	
Barium	0.5069	0.02	0.5	0	101	80	120	0.5069	0.00132	20	
Cadmium	0.5349	0.002	0.5	0	107	80	120	0.5343	0.119	20	
Chromium	0.5081	0.006	0.5	0	102	80	120	0.5052	0.556	20	
Lead	0.5288	0.005	0.5	0	106	80	120	0.5242	0.863	20	
Selenium	0.6026	0.05	0.5	0	121	80	120	0.6003	0.384	20	S
Silver	0.5227	0.005	0.5	0	105	80	120	0.5215	0.239	20	

Sample ID	LCS-6365	Batch ID: 6365	Test Code: E160.1	Units: mg/L	Analysis Date	8/25/2004	Prep Date	8/23/2004			
Client ID:			Run ID: WC_040825A		SeqNo:	299156					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	1003	50	1000	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

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0408168
 Project: Annual Monitoring Wells 2004

Sample ID LCS-6378 Batch ID: 6378 Test Code: E160.1 Units: mg/L Analysis Date 8/25/2004 Prep Date 8/25/2004
 Client ID: Run ID: WC_040825E SeqNo: 300596
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
 Total Dissolved Solids 1074 50 1000 0 107 80 120 0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits 8

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

8/19/2004

Work Order Number 0408168

Received by AMG

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 _____

CHAIN-OF-CUSTODY RECORD

Client: San Juan Refining

Address: #50 CR 4990
Bloomfield, NM 87413

Phone #: 505-632-4161

Fax #: 505-632-3911

Date Time Matrix Sample I.D. No.

18 Aug 04 930 AM H₂O MW #13

1-125

1-500

1-125

1-250

1-500

1-125

1-250

1-500

18 Aug 04 1059 AM H₂O MW #27

1-125

1-500

Accreditation Applied
NELAC ☐ USACE ☐

Other:

Project Name: Annual Monitoring
wells 2004

Project #:

Project Manager:

Sampler: Cindy Hurtado / Daniel
Sample Temperature: 4.0

Number/Volume

2-VOA

1-125

1-500

1-125

1-250

1-500

1-125

1-250

1-500

18 Aug 04 930 AM H₂O MW #13

1-125

1-500

ANALYSIS REQUEST

BTEX + MTBE + TPH (Gasoline Only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

EDC (Method 8021)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO₂, NO₃, PO₄, SO₄)

8081 Pesticides / PCB's (8082)

8260B (VOA) Cations

8270 (Semi-VOA)

Metals - Dissolved

Carbon Dioxide

EC, pH, TDS, Alk

Air Bubbles or Headspace (Y or N)

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

Remarks:

Relinquished By: (Signature)
Cindy Hurtado

Received By: (Signature)
Cindy Hurtado

Date: 8-18-04 Time: 2354

Date: 8-19-04 Time: 1037

COVER LETTER

September 01, 2004

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

RE: Annual Monitoring Wells 2004

Order No.: 0408193

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 8 samples on 8/20/2004 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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-01

Client Sample ID: P4
Collection Date: 8/18/2004 3:10:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						
						Analyst: MAP
Fluoride	0.29	0.10		mg/L	1	8/21/2004 12:15:05 AM
Chloride	77	0.50		mg/L	5	8/23/2004 2:36:18 PM
Bromide	0.77	0.10		mg/L	1	8/21/2004 12:15:05 AM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/21/2004 12:15:05 AM
Sulfate	4.9	0.50		mg/L	1	8/21/2004 12:15:05 AM
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	8/24/2004 8:07:26 PM
EPA METHOD 310.1: ALKALINITY						
						Analyst: CMC
Alkalinity, Total (As CaCO ₃)	1500	2.0		mg/L CaCO ₃	1	8/27/2004
Carbonate	ND	2.0		mg/L CaCO ₃	1	8/27/2004
Bicarbonate	1500	2.0		mg/L CaCO ₃	1	8/27/2004
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	8/30/2004 6:46:37 PM
Benzene	4100	50		µg/L	100	8/30/2004 6:46:37 PM
Toluene	ND	50		µg/L	100	8/30/2004 6:46:37 PM
Ethylbenzene	3300	50		µg/L	100	8/30/2004 6:46:37 PM
Xylenes, Total	12000	50		µg/L	100	8/30/2004 6:46:37 PM
Surr: 4-Bromofluorobenzene	102	74-118		%REC	100	8/30/2004 6:46:37 PM
TOTAL CARBON DIOXIDE CALCULATION						
						Analyst: CMC
Total Carbon Dioxide	1300	1.0		mg CO ₂ /L	1	8/27/2004
EPA 120.1: SPECIFIC CONDUCTANCE						
						Analyst: CMC
Specific Conductance	2300	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY						
						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	8/26/2004
EPA METHOD 6010C: DISSOLVED METALS						
						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/31/2004 9:50:55 AM
Barium	0.43	0.0020		mg/L	1	8/31/2004 9:50:55 AM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 9:50:55 AM
Calcium	84	1.0		mg/L	1	8/31/2004 9:50:55 AM
Chromium	ND	0.0060		mg/L	1	8/31/2004 9:50:55 AM
Copper	ND	0.0060		mg/L	1	8/31/2004 9:50:55 AM
Iron	0.067	0.020		mg/L	1	8/31/2004 9:50:55 AM
Lead	ND	0.0050		mg/L	1	8/31/2004 9:50:55 AM
Magnesium	19	1.0		mg/L	1	8/31/2004 9:50:55 AM
Manganese	0.021	0.0020		mg/L	1	8/31/2004 9:50:55 AM
Potassium	4.0	1.0		mg/L	1	8/31/2004 9:50:55 AM
Selenium	ND	0.050		mg/L	1	8/31/2004 9:50:55 AM
Silver	ND	0.0050		mg/L	1	8/31/2004 9:50:55 AM
Sodium	510	10		mg/L	10	8/31/2004 1:03:45 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

Hall Environmental Analysis Laboratory

Date: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-01

Client Sample ID: P4
Collection Date: 8/18/2004 3:10:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	8/31/2004 9:50:55 AM
Zinc	0.016	0.0050		mg/L	1	8/31/2004 9:50:55 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	9/1/2004 8:40:58 AM
Barium	0.58	0.020		mg/L	1	9/1/2004 8:40:58 AM
Cadmium	ND	0.0020		mg/L	1	9/1/2004 8:40:58 AM
Chromium	ND	0.0060		mg/L	1	9/1/2004 8:40:58 AM
Lead	0.0082	0.0050		mg/L	1	9/1/2004 8:40:58 AM
Selenium	ND	0.050		mg/L	1	9/1/2004 8:40:58 AM
Silver	ND	0.0050		mg/L	1	9/1/2004 8:40:58 AM
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	1700	50		mg/L	1	8/25/2004

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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-02

Client Sample ID: P5
Collection Date: 8/18/2004 3:35:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS Analyst: MAP						
Fluoride	0.29	0.10		mg/L	1	8/21/2004 12:31:54 AM
Chloride	100	1.0		mg/L	10	8/23/2004 2:53:06 PM
Bromide	0.94	0.10		mg/L	1	8/21/2004 12:31:54 AM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/21/2004 12:31:54 AM
Sulfate	6.5	0.50		mg/L	1	8/21/2004 12:31:54 AM
Nitrate (As N)+Nitrite (As N)	0.74	0.50		mg/L	5	8/24/2004 8:24:14 PM
EPA METHOD 310.1: ALKALINITY Analyst: CMC						
Alkalinity, Total (As CaCO3)	1200	2.0		mg/L CaCO3	1	8/27/2004
Carbonate	ND	2.0		mg/L CaCO3	1	8/27/2004
Bicarbonate	1200	2.0		mg/L CaCO3	1	8/27/2004
EPA METHOD 8021B: VOLATILES Analyst: NSB						
Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	8/30/2004 7:16:59 PM
Benzene	1000	50		µg/L	100	8/30/2004 7:16:59 PM
Toluene	ND	50		µg/L	100	8/30/2004 7:16:59 PM
Ethylbenzene	1600	50		µg/L	100	8/30/2004 7:16:59 PM
Xylenes, Total	5800	50		µg/L	100	8/30/2004 7:16:59 PM
Surr. 4-Bromofluorobenzene	104	74-118		%REC	100	8/30/2004 7:16:59 PM
TOTAL CARBON DIOXIDE CALCULATION Analyst: CMC						
Total Carbon Dioxide	1000	1.0		mg CO2/L	1	8/27/2004
EPA 120.1: SPECIFIC CONDUCTANCE Analyst: CMC						
Specific Conductance	2000	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY Analyst: CMC						
Mercury	ND	0.00020		mg/L	1	8/26/2004
EPA METHOD 6010C: DISSOLVED METALS Analyst: NMO						
Arsenic	ND	0.020		mg/L	1	8/31/2004 9:55:08 AM
Barium	0.42	0.0020		mg/L	1	8/31/2004 9:55:08 AM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 9:55:08 AM
Calcium	150	1.0		mg/L	1	8/31/2004 9:55:08 AM
Chromium	ND	0.0060		mg/L	1	8/31/2004 9:55:08 AM
Copper	ND	0.0060		mg/L	1	8/31/2004 9:55:08 AM
Iron	1.0	0.020		mg/L	1	8/31/2004 9:55:08 AM
Lead	ND	0.0050		mg/L	1	8/31/2004 9:55:08 AM
Magnesium	31	1.0		mg/L	1	8/31/2004 9:55:08 AM
Manganese	0.26	0.0020		mg/L	1	8/31/2004 9:55:08 AM
Potassium	3.7	1.0		mg/L	1	8/31/2004 9:55:08 AM
Selenium	ND	0.050		mg/L	1	8/31/2004 9:55:08 AM
Silver	ND	0.0050		mg/L	1	8/31/2004 9:55:08 AM
Sodium	330	10		mg/L	10	8/31/2004 1:06:33 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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-02

Client Sample ID: P5
Collection Date: 8/18/2004 3:35:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	8/31/2004 9:55:08 AM
Zinc	0.029	0.0050		mg/L	1	8/31/2004 9:55:08 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	9/1/2004 8:45:11 AM
Barium	0.52	0.020		mg/L	1	9/1/2004 8:45:11 AM
Cadmium	ND	0.0020		mg/L	1	9/1/2004 8:45:11 AM
Chromium	ND	0.0060		mg/L	1	9/1/2004 8:45:11 AM
Lead	0.011	0.0050		mg/L	1	9/1/2004 8:45:11 AM
Selenium	ND	0.050		mg/L	1	9/1/2004 8:45:11 AM
Silver	ND	0.0050		mg/L	1	9/1/2004 8:45:11 AM
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	1400	50		mg/L	1	8/25/2004

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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-03

Client Sample ID: MW#31
Collection Date: 8/19/2004 10:40:00 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	8/21/2004 1:22:20 AM
Chloride	370	2.0		mg/L	20	8/23/2004 4:00:19 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/21/2004 1:22:20 AM
Bromide	7.2	0.10		mg/L	1	8/21/2004 1:22:20 AM
Nitrogen, Nitrate (As N)	0.14	0.10		mg/L	1	8/21/2004 1:22:20 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/21/2004 1:22:20 AM
Sulfate	750	10		mg/L	20	8/23/2004 4:00:19 PM
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO ₃)	1100	2.0		mg/L CaCO ₃	1	8/27/2004
Carbonate	ND	2.0		mg/L CaCO ₃	1	8/27/2004
Bicarbonate	1100	2.0		mg/L CaCO ₃	1	8/27/2004
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	8/30/2004 7:47:22 PM
Benzene	3700	50		µg/L	100	8/30/2004 7:47:22 PM
Toluene	400	50		µg/L	100	8/30/2004 7:47:22 PM
Ethylbenzene	320	50		µg/L	100	8/30/2004 7:47:22 PM
Xylenes, Total	1200	50		µg/L	100	8/30/2004 7:47:22 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	100	8/30/2004 7:47:22 PM
TOTAL CARBON DIOXIDE CALCULATION						Analyst: CMC
Total Carbon Dioxide	980	1.0		mg CO ₂ /L	1	8/27/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	3700	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	0.00022	0.00020		mg/L	1	8/26/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/31/2004 9:59:24 AM
Barium	0.35	0.0020		mg/L	1	8/31/2004 9:59:24 AM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 9:59:24 AM
Calcium	220	10		mg/L	10	8/31/2004 1:08:36 PM
Chromium	ND	0.0060		mg/L	1	8/31/2004 9:59:24 AM
Copper	ND	0.0060		mg/L	1	8/31/2004 9:59:24 AM
Iron	0.46	0.020		mg/L	1	8/31/2004 9:59:24 AM
Lead	ND	0.0050		mg/L	1	8/31/2004 9:59:24 AM
Magnesium	67	1.0		mg/L	1	8/31/2004 9:59:24 AM
Manganese	0.58	0.0020		mg/L	1	8/31/2004 9:59:24 AM
Potassium	4.8	1.0		mg/L	1	8/31/2004 9:59:24 AM
Selenium	ND	0.050		mg/L	1	8/31/2004 9:59:24 AM
Silver	ND	0.0050		mg/L	1	8/31/2004 9:59:24 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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-03

Client Sample ID: MW#31
Collection Date: 8/19/2004 10:40:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Sodium	640	10		mg/L	10	8/31/2004 1:08:36 PM
Uranium	ND	0.10		mg/L	1	8/31/2004 9:59:24 AM
Zinc	0.019	0.0050		mg/L	1	8/31/2004 9:59:24 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	9/1/2004 8:49:26 AM
Barium	0.35	0.020		mg/L	1	9/1/2004 8:49:26 AM
Cadmium	ND	0.0020		mg/L	1	9/1/2004 8:49:26 AM
Chromium	0.0088	0.0060		mg/L	1	9/1/2004 8:49:26 AM
Lead	ND	0.0050		mg/L	1	9/1/2004 8:49:26 AM
Selenium	ND	0.050		mg/L	1	9/1/2004 8:49:26 AM
Silver	ND	0.0050		mg/L	1	9/1/2004 8:49:26 AM
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	2800	50		mg/L	1	8/25/2004

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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-04

Client Sample ID: MW#8
Collection Date: 8/19/2004 2:50:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.64	0.10		mg/L	1	8/21/2004 1:39:09 AM
Chloride	250	2.0		mg/L	20	8/23/2004 4:33:52 PM
Bromide	1.2	0.10		mg/L	1	8/21/2004 1:39:09 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/21/2004 1:39:09 AM
Sulfate	920	10		mg/L	20	8/23/2004 4:33:52 PM
Nitrate (As N)+Nitrite (As N)	24	0.50		mg/L	5	8/27/2004 11:20:57 AM
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO ₃)	230	2.0		mg/L CaCO ₃	1	8/27/2004
Carbonate	ND	2.0		mg/L CaCO ₃	1	8/27/2004
Bicarbonate	230	2.0		mg/L CaCO ₃	1	8/27/2004
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	8/30/2004 8:18:04 PM
Benzene	ND	0.50		µg/L	1	8/30/2004 8:18:04 PM
Toluene	ND	0.50		µg/L	1	8/30/2004 8:18:04 PM
Ethylbenzene	ND	0.50		µg/L	1	8/30/2004 8:18:04 PM
Xylenes, Total	ND	0.50		µg/L	1	8/30/2004 8:18:04 PM
Surr: 4-Bromofluorobenzene	102	74-118		%REC	1	8/30/2004 8:18:04 PM
TOTAL CARBON DIOXIDE CALCULATION						Analyst: CMC
Total Carbon Dioxide	210	1.0		mg CO ₂ /L	1	8/27/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	2600	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	8/26/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/31/2004 10:03:40 AM
Barium	0.021	0.0020		mg/L	1	8/31/2004 10:03:40 AM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 10:03:40 AM
Calcium	210	10		mg/L	10	8/31/2004 1:12:43 PM
Chromium	ND	0.0060		mg/L	1	8/31/2004 10:03:40 AM
Copper	ND	0.0060		mg/L	1	8/31/2004 10:03:40 AM
Iron	0.059	0.020		mg/L	1	8/31/2004 10:03:40 AM
Lead	ND	0.0050		mg/L	1	8/31/2004 10:03:40 AM
Magnesium	35	1.0		mg/L	1	8/31/2004 10:03:40 AM
Manganese	0.57	0.0020		mg/L	1	8/31/2004 10:03:40 AM
Potassium	3.0	1.0		mg/L	1	8/31/2004 10:03:40 AM
Selenium	ND	0.050		mg/L	1	8/31/2004 10:03:40 AM
Silver	ND	0.0050		mg/L	1	8/31/2004 10:03:40 AM
Sodium	360	10		mg/L	10	8/31/2004 1:12:43 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

Hall Environmental Analysis Laboratory

Date: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-04

Client Sample ID: MW#8
Collection Date: 8/19/2004 2:50:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	8/31/2004 10:03:40 AM
Zinc	0.022	0.0050		mg/L	1	8/31/2004 10:03:40 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	9/1/2004 9:06:22 AM
Barium	0.071	0.020		mg/L	1	9/1/2004 9:06:22 AM
Cadmium	ND	0.0020		mg/L	1	9/1/2004 9:06:22 AM
Chromium	1.9	0.030		mg/L	5	9/1/2004 2:13:06 PM
Lead	ND	0.0050		mg/L	1	9/1/2004 9:06:22 AM
Selenium	ND	0.050		mg/L	1	9/1/2004 9:06:22 AM
Silver	ND	0.0050		mg/L	1	9/1/2004 9:06:22 AM
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	2100	50		mg/L	1	8/25/2004

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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-05

Client Sample ID: MW#26
Collection Date: 8/19/2004 8:45:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						
						Analyst: MAP
Fluoride	0.29	0.10		mg/L	1	8/21/2004 12:48:43 AM
Chloride	230	1.0		mg/L	10	8/24/2004 11:23:59 AM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/21/2004 12:48:43 AM
Bromide	4.2	0.10		mg/L	1	8/21/2004 12:48:43 AM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	8/21/2004 12:48:43 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/21/2004 12:48:43 AM
Sulfate	ND	0.50		mg/L	1	8/21/2004 12:48:43 AM
EPA METHOD 310.1: ALKALINITY						
						Analyst: CMC
Alkalinity, Total (As CaCO ₃)	1000	2.0		mg/L CaCO ₃	1	8/27/2004
Carbonate	ND	2.0		mg/L CaCO ₃	1	8/27/2004
Bicarbonate	1000	2.0		mg/L CaCO ₃	1	8/27/2004
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	130		µg/L	50	8/30/2004 8:48:21 PM
Benzene	740	25		µg/L	50	8/30/2004 8:48:21 PM
Toluene	ND	25		µg/L	50	8/30/2004 8:48:21 PM
Ethylbenzene	460	25		µg/L	50	8/30/2004 8:48:21 PM
Xylenes, Total	190	25		µg/L	50	8/30/2004 8:48:21 PM
Surr: 4-Bromofluorobenzene	96.9	74-118		%REC	50	8/30/2004 8:48:21 PM
TOTAL CARBON DIOXIDE CALCULATION						
						Analyst: CMC
Total Carbon Dioxide	910	1.0		mg CO ₂ /L	1	8/27/2004
EPA 120.1: SPECIFIC CONDUCTANCE						
						Analyst: CMC
Specific Conductance	2200	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY						
						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	8/26/2004
EPA METHOD 6010C: DISSOLVED METALS						
						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/31/2004 10:07:55 AM
Barium	1.8	0.020		mg/L	10	8/31/2004 1:10:42 PM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 10:07:55 AM
Calcium	75	1.0		mg/L	1	8/31/2004 10:07:55 AM
Chromium	ND	0.0060		mg/L	1	8/31/2004 10:07:55 AM
Copper	ND	0.0060		mg/L	1	8/31/2004 10:07:55 AM
Iron	5.1	0.020		mg/L	1	8/31/2004 10:07:55 AM
Lead	0.0056	0.0050		mg/L	1	8/31/2004 10:07:55 AM
Magnesium	27	1.0		mg/L	1	8/31/2004 10:07:55 AM
Manganese	2.0	0.0020		mg/L	1	8/31/2004 10:07:55 AM
Potassium	2.6	1.0		mg/L	1	8/31/2004 10:07:55 AM
Selenium	ND	0.050		mg/L	1	8/31/2004 10:07:55 AM
Silver	ND	0.0050		mg/L	1	8/31/2004 10:07:55 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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-05

Client Sample ID: MW#26
Collection Date: 8/19/2004 8:45:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Sodium	440	10		mg/L	10	8/31/2004 1:10:42 PM
Uranium	ND	0.10		mg/L	1	8/31/2004 10:07:55 AM
Zinc	0.013	0.0050		mg/L	1	8/31/2004 10:07:55 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	9/1/2004 9:18:04 AM
Barium	2.0	0.20		mg/L	10	9/1/2004 9:40:53 AM
Cadmium	ND	0.0020		mg/L	1	9/1/2004 9:18:04 AM
Chromium	ND	0.0060		mg/L	1	9/1/2004 9:18:04 AM
Lead	ND	0.0050		mg/L	1	9/1/2004 9:18:04 AM
Selenium	ND	0.050		mg/L	1	9/1/2004 9:18:04 AM
Silver	ND	0.0050		mg/L	1	9/1/2004 9:18:04 AM
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	1600	50		mg/L	1	8/25/2004

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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-06

Client Sample ID: MW#29
Collection Date: 8/19/2004 11:20:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.31	0.10		mg/L	1	8/21/2004 1:05:31 AM
Chloride	35	0.10		mg/L	1	8/21/2004 1:05:31 AM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/21/2004 1:05:31 AM
Bromide	ND	0.10		mg/L	1	8/21/2004 1:05:31 AM
Nitrogen, Nitrate (As N)	0.60	0.10		mg/L	1	8/21/2004 1:05:31 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/21/2004 1:05:31 AM
Sulfate	150	2.5		mg/L	5	8/23/2004 3:43:30 PM
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO ₃)	240	2.0		mg/L CaCO ₃	1	8/27/2004
Carbonate	ND	2.0		mg/L CaCO ₃	1	8/27/2004
Bicarbonate	240	2.0		mg/L CaCO ₃	1	8/27/2004
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	2.6	2.5		µg/L	1	8/30/2004 9:18:41 PM
Benzene	ND	0.50		µg/L	1	8/30/2004 9:18:41 PM
Toluene	ND	0.50		µg/L	1	8/30/2004 9:18:41 PM
Ethylbenzene	ND	0.50		µg/L	1	8/30/2004 9:18:41 PM
Xylenes, Total	ND	0.50		µg/L	1	8/30/2004 9:18:41 PM
Surr: 4-Bromofluorobenzene	99.3	74-118		%REC	1	8/30/2004 9:18:41 PM
TOTAL CARBON DIOXIDE CALCULATION						Analyst: CMC
Total Carbon Dioxide	210	1.0		mg CO ₂ /L	1	8/27/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	760	0.010		µmhos/cm	1	8/25/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	8/26/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	8/31/2004 12:10:33 PM
Barium	0.025	0.0020		mg/L	1	8/31/2004 12:10:33 PM
Cadmium	ND	0.0020		mg/L	1	8/31/2004 12:10:33 PM
Calcium	55	1.0		mg/L	1	8/31/2004 12:10:33 PM
Chromium	ND	0.0060		mg/L	1	8/31/2004 12:10:33 PM
Copper	ND	0.0060		mg/L	1	8/31/2004 12:10:33 PM
Iron	ND	0.020		mg/L	1	8/31/2004 12:10:33 PM
Lead	ND	0.0050		mg/L	1	8/31/2004 12:10:33 PM
Magnesium	15	1.0		mg/L	1	8/31/2004 12:10:33 PM
Manganese	0.82	0.0020		mg/L	1	8/31/2004 12:10:33 PM
Potassium	2.7	1.0		mg/L	1	8/31/2004 12:10:33 PM
Selenium	ND	0.050		mg/L	1	8/31/2004 12:10:33 PM
Silver	ND	0.0050		mg/L	1	8/31/2004 12:10:33 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: 01-Sep-04

CLIENT: San Juan Refining
Lab Order: 0408193
Project: Annual Monitoring Wells 2004
Lab ID: 0408193-06

Client Sample ID: MW#29
Collection Date: 8/19/2004 11:20:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Sodium	100	1.0		mg/L	1	8/31/2004 12:10:33 PM
Uranium	ND	0.10		mg/L	1	8/31/2004 12:10:33 PM
Zinc	0.017	0.0050		mg/L	1	8/31/2004 12:10:33 PM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	9/1/2004 9:22:23 AM
Barium	0.039	0.020		mg/L	1	9/1/2004 9:22:23 AM
Cadmium	ND	0.0020		mg/L	1	9/1/2004 9:22:23 AM
Chromium	ND	0.0060		mg/L	1	9/1/2004 9:22:23 AM
Lead	ND	0.0050		mg/L	1	9/1/2004 9:22:23 AM
Selenium	ND	0.050		mg/L	1	9/1/2004 9:22:23 AM
Silver	ND	0.0050		mg/L	1	9/1/2004 9:22:23 AM
EPA METHOD 160.1: TDS						Analyst: JEB
Total Dissolved Solids	550	50		mg/L	1	8/25/2004

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: 02-Sep-04

CLIENT: San Juan Refining

Client Sample ID: MW#25

Lab Order: 0408193

Collection Date: 8/19/2004 1:50:00 PM

Project: Annual Monitoring Wells 2004

Lab ID: 0408193-07

Matrix: PRODUCT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DRO BY 8015B						Analyst: JMP
Diesel Range Organics (DRO)	77	5.0		wt%	10	8/31/2004 3:39:14 PM
Motor Oil Range Organics (MRO)	ND	50		wt%	10	8/31/2004 3:39:14 PM
Surr: DNOP	129	74-125	S	%REC	10	8/31/2004 3:39:14 PM
GRO BY 8015B						Analyst: NSB
Gasoline Range Organics (GRO)	6.2	0.048		wt%	1	8/31/2004 10:57:44 PM
Surr: BFB	87.7	74.5-122		%REC	1	8/31/2004 10:57:44 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: 01-Sep-04

CLIENT: San Juan Refining

Client Sample ID: Trip Blank

Lab Order: 0408193

Collection Date:

Project: Annual Monitoring Wells 2004

Lab ID: 0408193-08

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/30/2004 9:49:11 PM
Surr: BFB	80.1	74-118		%REC	1	8/30/2004 9:49:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	8/30/2004 9:49:11 PM
Benzene	ND	0.50		µg/L	1	8/30/2004 9:49:11 PM
Toluene	ND	0.50		µg/L	1	8/30/2004 9:49:11 PM
Ethylbenzene	ND	0.50		µg/L	1	8/30/2004 9:49:11 PM
Xylenes, Total	ND	0.50		µg/L	1	8/30/2004 9:49:11 PM
Surr: 4-Bromofluorobenzene	99.6	74-118		%REC	1	8/30/2004 9:49:11 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: 01-Sep-04

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0408193

Project: Annual Monitoring Wells 2004

Sample ID	MBLK	Batch ID: R12848	Test Code: E300	Units: mg/L	Analysis Date	8/20/2004 11:36:03 AM	Prep Date				
Client ID:			Run ID: LC_040820A		SeqNo:	298287					
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									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID	MBLK	Batch ID: R12848	Test Code: E300	Units: mg/L	Analysis Date	8/20/2004 6:22:07 PM	Prep Date				
Client ID:		Run ID: LC_040820A			SeqNo: 298308						
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									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

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

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0408193

Project: Annual Monitoring Wells 2004

Sample ID	MBLK	Batch ID: R12860	Test Code: E300	Units: mg/L	Analysis Date	8/23/2004 2:02:40 PM	Prep Date				
Client ID:			Run ID: LC_040823A		SeqNo: 298660						
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									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID	MBLK	Batch ID: R12867	Test Code: E300	Units: mg/L	Analysis Date	8/24/2004 10:33:38 AM	Prep Date				
Client ID:			Run ID: LC_040824A		SeqNo: 298902						
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									
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: 0408193
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	MBLK	Batch ID: R12925	Test Code: E300	Units: mg/L	Analysis Date	8/26/2004 10:07:20 AM	Prep Date				
Client ID:			Run ID: LC_040826A		SeqNo:	300274					
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									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID	MBLK	Batch ID: R12931	Test Code: E300	Units: mg/L	Analysis Date	8/27/2004 9:56:59 AM	Prep Date				
Client ID:			Run ID: LC_040827B		SeqNo:	300412					
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									
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

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0408193
 Project: Annual Monitoring Wells 2004

Sample ID	MB-6399	Batch ID: 6399	Test Code: SW8015	Units: wt%	Analysis Date	8/30/2004 11:10:26 PM	Prep Date	8/30/2004			
Client ID:			Run ID: FID(17A) 2_040830A		SeqNo: 300851						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	0.5									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	0.07759	0	0.1	0	77.6	74	125	0			

Sample ID	Reagent Blank 5m	Batch ID: R12944	Test Code: SW8015	Units: mg/L	Analysis Date	8/30/2004 9:12:21 AM	Prep Date				
Client ID:			Run ID: PIDFID_040830A		SeqNo:	300660					
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	17.99	0	20	0	90.0	74	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R12961	Test Code: SW8015	Units: mg/L	Analysis Date	8/31/2004 8:27:03 AM	Prep Date				
Client ID:			Run ID: PIDFID_040831A		SeqNo:	301135					
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	16.72	0	20	0	83.6	74	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R12944	Test Code: SW8021	Units: µg/L	Analysis Date	8/30/2004 9:12:21 AM	Prep Date				
Client ID:			Run ID: PIDFID_040830A		SeqNo:	300659					
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	20.8	0	20	0	104	74	118	0			

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

CLIENT: San Juan Refining
Work Order: 0408193
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R12961	Test Code: SW8021	Units: µg/L	Analysis Date	8/31/2004 8:27:03 AM	Prep Date					
Client ID:			Run ID: PIDFID_040831A		SeqNo:	301134						
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		20.41	0	20	0	102	74	118	0			

Sample ID	MB-6386	Batch ID: 6386	Test Code: SW7470	Units: mg/L	Analysis Date	8/26/2004	Prep Date	8/26/2004				
Client ID:			Run ID: MI-LA254_040826A		SeqNo:	299615						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		ND	0.0002									

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: 0408193
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT

Method Blank

Sample ID	MB	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 8:07:01 AM	Prep Date				
Client ID:		Run ID: ICP_040831A			SeqNo:	300881					
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									

Sample ID	MB-6387	Batch ID: 6387	Test Code: SW6010A	Units: mg/L	Analysis Date 8/31/2004 3:41:57 PM	Prep Date 8/27/2004					
Client ID:			Run ID: ICP_040831G		SeqNo: 301334						
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: 0408193
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-6378	Batch ID:	6378	Test Code:	E160.1	Units:	mg/L	Analysis Date	8/25/2004	Prep Date	8/25/2004
Client ID:		Run ID:	WC_040825E					SeqNo:	300595		
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: 01-Sep-04

CLIENT: San Juan Refining
Work Order: 0408193
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0408193-01B DUP	Batch ID: R12918	Test Code: E310.1	Units: mg/L CaCO3	Analysis Date 8/27/2004	Prep Date					
Client ID:	P4		Run ID: WC_040827E		SeqNo: 300192						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	1454	2	0	0	0	0	0	1462	0.549	15	
Carbonate	ND	2	0	0	0	0	0	0	0	15	
Bicarbonate	1454	2	0	0	0	0	0	1462	0.549	15	

Sample ID	0408193-01E DUP	Batch ID: R12919	Test Code:	Units: mg CO2/L	Analysis Date 8/27/2004	Prep Date					
Client ID:	P4		Run ID: WC_040827F		SeqNo: 300199						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Carbon Dioxide	1293	1	0	0	0	0	0	1302	0.694	20	

Sample ID	0408193-02C DUP	Batch ID: 6386	Test Code: SW7470	Units: mg/L	Analysis Date	8/26/2004	Prep Date	8/26/2004			
Client ID:	P5		Run ID:	MI-LA254_040826A	SeqNo:	299631					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002	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

QC SUMMARY REPORT

Sample Duplicate

CLIENT: San Juan Refining

Work Order: 0408193

Project: Annual Monitoring Wells 2004

Sample ID	0408193-06B DUP	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 12:13:46 PM	Prep Date				
Client ID:	MW#29		Run ID: ICP_040831A		SeqNo: 300928						
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	20	
Barium	0.02514	0.002	0	0	0	0	0	0.02529	0.570	20	
Cadmium	ND	0.002	0	0	0	0	0	0	0	20	
Calcium	54.77	1	0	0	0	0	0	55.16	0.711	20	
Chromium	ND	0.006	0	0	0	0	0	0.00105	0	20	
Copper	ND	0.006	0	0	0	0	0	0	0	20	
Iron	0.008128	0.02	0	0	0	0	0	0.01576	0	20	J
Lead	ND	0.005	0	0	0	0	0	0.001701	0	20	
Magnesium	14.47	1	0	0	0	0	0	14.58	0.790	20	
Manganese	0.8168	0.002	0	0	0	0	0	0.8245	0.937	20	
Potassium	2.625	1	0	0	0	0	0	2.676	1.94	20	
Selenium	ND	0.05	0	0	0	0	0	0	0	20	
Silver	ND	0.005	0	0	0	0	0	0	0	20	
Sodium	104.3	1	0	0	0	0	0	104.4	0.0404	20	
Uranium	ND	0.1	0	0	0	0	0	0	0	20	
Zinc	0.01589	0.005	0	0	0	0	0	0.01669	4.97	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: 01-Sep-04

CLIENT: San Juan Refining

Work Order: 0408193

Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0408193-04a ms	Batch ID: R12944	Test Code: SW8021	Units: µg/L	Analysis Date	8/30/2004 10:19:32 PM	Prep Date				
Client ID:	MW#8	Run ID:	PIDFID_040830A	SeqNo:	300706						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	40.14	2.5	40	0	100	65	132	0			
Benzene	20.84	0.5	20	0	104	77	122	0			
Toluene	21.33	0.5	20	0	107	81	115	0			
Ethylbenzene	21.21	0.5	20	0	106	84	117	0			
Xylenes, Total	64.81	0.5	60	0	108	84	116	0			
Surr: 4-Bromofluorobenzene	24.11	0	24	0	100	74	118	0			

Sample ID	0408193-04a msd	Batch ID: R12944	Test Code: SW8021	Units: µg/L	Analysis Date	8/30/2004 10:49:40 PM	Prep Date				
Client ID:	MW#8	Run ID:	PIDFID_040830A	SeqNo:	300712						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	37.05	2.5	40	0	92.6	65	132	40.14	7.98	28	
Benzene	19.97	0.5	20	0	99.9	77	122	20.84	4.23	27	
Toluene	20.2	0.5	20	0	101	81	115	21.33	5.47	19	
Ethylbenzene	20.53	0.5	20	0	103	84	117	21.21	3.24	10	
Xylenes, Total	62.83	0.5	60	0	105	84	116	64.81	3.10	13	
Surr: 4-Bromofluorobenzene	23.68	0	24	0	98.7	74	118	24.11	1.77	0	

Sample ID	0408193-02C MS	Batch ID: 6386	Test Code: SW7470	Units: mg/L	Analysis Date 8/26/2004		Prep Date 8/26/2004				
Client ID:	P5	Run ID:	MI-LA254_040826A		SeqNo: 299632						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005319	0.0002	0.005	0	106	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

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QC SUMMARY REPORT

Sample Matrix Spike Duplicate

CLIENT: San Juan Refining

Work Order: 0408193

Project: Annual Monitoring Wells 2004

Sample ID	0408193-02C MSD	Batch ID: 6386	Test Code: SW7470	Units: mg/L	Analysis Date	8/26/2004	Prep Date	8/26/2004			
Client ID:	P5		Run ID:	MI-LA254_040826A	SeqNo:	299633					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00536	0.0002	0.005	0	107	75	125	0.005319	0.773	20	

Sample ID	0408193-06B MS	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 12:16:57 PM	Prep Date				
Client ID:	MW#29		Run ID: ICP_040831A		SeqNo:	300929					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	0.5243	0.02	0.5	0	105	75	125	0			
Barium	0.4868	0.002	0.5	0.02529	92.3	75	125	0			
Cadmium	0.4845	0.002	0.5	0	96.9	75	125	0			
Calcium	99.56	1	50.5	55.16	87.9	75	125	0			
Chromium	0.4659	0.006	0.5	0.00105	93.0	75	125	0			
Copper	0.4842	0.006	0.5	0	96.8	75	125	0			
Iron	0.4602	0.02	0.5	0.01576	88.9	75	125	0			
Lead	0.4595	0.005	0.5	0.001701	91.6	75	125	0			
Magnesium	62.87	1	50.5	14.58	95.6	75	125	0			
Manganese	1.252	0.002	0.5	0.8245	85.5	75	125	0			
Potassium	52.89	1	55	2.676	91.3	75	125	0			
Selenium	0.5268	0.05	0.5	0	105	75	125	0			
Silver	0.4738	0.005	0.5	0	94.8	75	125	0			
Sodium	147.9	1	50.5	104.4	86.2	75	125	0			
Uranium	4.467	0.1	5	0	89.3	75	125	0			
Zinc	0.4839	0.005	0.5	0.01669	93.4	75	125	0			

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

QC SUMMARY REPORT

Sample Matrix Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0408193
 Project: Annual Monitoring Wells 2004

Sample ID	0408193-06B MSD	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date 8/31/2004 12:23:59 PM			Prep Date			
Client ID: MW#29			Run ID: ICP_040831A		SeqNo: 300931						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5072	0.02	0.5	0	101	75	125	0.5243	3.32	20	
Barium	0.4866	0.002	0.5	0.02529	92.3	75	125	0.4868	0.0449	20	
Cadmium	0.4865	0.002	0.5	0	97.3	75	125	0.4845	0.401	20	
Calcium	99.79	1	50.5	55.16	88.4	75	125	99.56	0.225	20	
Chromium	0.4684	0.006	0.5	0.00105	93.5	75	125	0.4659	0.543	20	
Copper	0.4844	0.006	0.5	0	96.9	75	125	0.4842	0.0423	20	
Iron	0.4949	0.02	0.5	0.01576	95.8	75	125	0.4602	7.26	20	
Lead	0.4628	0.005	0.5	0.001701	92.2	75	125	0.4595	0.710	20	
Magnesium	63.55	1	50.5	14.58	97.0	75	125	62.87	1.07	20	
Manganese	1.24	0.002	0.5	0.8245	83.0	75	125	1.252	1.02	20	
Potassium	53.79	1	55	2.676	92.9	75	125	52.89	1.69	20	
Selenium	0.5226	0.05	0.5	0	105	75	125	0.5268	0.801	20	
Silver	0.4791	0.005	0.5	0	95.8	75	125	0.4738	1.11	20	
Sodium	147.9	1	50.5	104.4	86.2	75	125	147.9	0.0202	20	
Uranium	4.47	0.1	5	0	89.4	75	125	4.467	0.0688	20	
Zinc	0.4852	0.005	0.5	0.01669	93.7	75	125	0.4839	0.268	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: 02-Sep-04

CLIENT: San Juan Refining

Work Order: 0408193

Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R12848	Test Code: E300	Units: mg/L	Analysis Date	8/20/2004 11:52:52 AM	Prep Date				
Client ID:		Run ID:	LC_040820A		SeqNo:	298288					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4527	0.1	0.5	0	90.5	90	110	0			
Chloride	4.862	0.1	5	0	97.2	90	110	0			
Nitrogen, Nitrite (As N)	0.9548	0.1	1	0	95.5	90	110	0			
Bromide	2.278	0.1	2.5	0	91.1	90	110	0			
Nitrogen, Nitrate (As N)	2.368	0.1	2.5	0	94.7	90	110	0			
Phosphorus, Orthophosphate (As P)	4.505	0.5	5	0	90.1	90	110	0			
Sulfate	9.669	0.5	10	0	96.7	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.323	0.1	3.5	0	94.9	90	110	0			

Sample ID	LCS	Batch ID: R12848	Test Code: E300	Units: mg/L	Analysis Date	8/20/2004 6:38:56 PM	Prep Date				
Client ID:		Run ID:	LC_040820A		SeqNo:	298309					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4668	0.1	0.5	0	93.4	90	110	0			
Chloride	4.906	0.1	5	0	98.1	90	110	0			
Nitrogen, Nitrite (As N)	0.9447	0.1	1	0	94.5	90	110	0			
Bromide	2.318	0.1	2.5	0	92.7	90	110	0			
Nitrogen, Nitrate (As N)	2.388	0.1	2.5	0	95.5	90	110	0			
Phosphorus, Orthophosphate (As P)	4.651	0.5	5	0	93.0	90	110	0			
Sulfate	9.78	0.5	10	0	97.8	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.333	0.1	3.5	0	95.2	90	110	0			

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

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0408193
Project: Annual Monitoring Wells 2004

Sample ID	LCS	Batch ID: R12860	Test Code: E300	Units: mg/L	Analysis Date	8/23/2004 2:19:30 PM	Prep Date				
Client ID:		Run ID: LC_040823A			SeqNo: 298661						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4987	0.1	0.5	0	99.7	90	110	0			
Chloride	4.893	0.1	5	0	97.9	90	110	0			
Nitrogen, Nitrite (As N)	0.9585	0.1	1	0	95.8	90	110	0			
Bromide	2.366	0.1	2.5	0	94.6	90	110	0			
Nitrogen, Nitrate (As N)	2.439	0.1	2.5	0	97.6	90	110	0			
Phosphorus, Orthophosphate (As P)	4.654	0.5	5	0	93.1	90	110	0			
Sulfate	9.865	0.5	10	0	98.7	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.398	0.1	3.5	0	97.1	90	110	0			

Sample ID	LCS	Batch ID: R12867	Test Code: E300	Units: mg/L	Analysis Date	8/24/2004 10:50:27 AM	Prep Date				
Client ID:		Run ID:	LC_040824A		SeqNo:	298903					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4652	0.1	0.5	0	93.0	90	110	0			
Chloride	4.87	0.1	5	0	97.4	90	110	0			
Nitrogen, Nitrite (As N)	0.9544	0.1	1	0	95.4	90	110	0			
Bromide	2.336	0.1	2.5	0	93.4	90	110	0			
Nitrogen, Nitrate (As N)	2.442	0.1	2.5	0	97.7	90	110	0			
Phosphorus, Orthophosphate (As P)	4.52	0.5	5	0	90.4	90	110	0			
Sulfate	9.807	0.5	10	0	98.1	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.396	0.1	3.5	0	97.0	90	110	0			

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

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0408193
 Project: Annual Monitoring Wells 2004

Sample ID	LCS	Batch ID: R12925	Test Code: E300	Units: mg/L	Analysis Date	8/26/2004 10:24:07 AM	Prep Date				
Client ID:		Run ID:	LC_040826A		SeqNo:	300275					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4628	0.1	0.5	0	92.6	90	110	0			
Chloride	5.088	0.1	5	0	102	90	110	0			
Nitrogen, Nitrite (As N)	1.016	0.1	1	0	102	90	110	0			
Bromide	2.396	0.1	2.5	0	95.8	90	110	0			
Nitrogen, Nitrate (As N)	2.484	0.1	2.5	0	99.4	90	110	0			
Phosphorus, Orthophosphate (As P)	4.79	0.5	5	0	95.8	90	110	0			
Sulfate	10.16	0.5	10	0	102	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.501	0.1	3.5	0	100	90	110	0			

Sample ID	LCS	Batch ID: R12931	Test Code: E300	Units: mg/L	Analysis Date	8/27/2004 10:13:42 AM	Prep Date				
Client ID:		Run ID: LC_040827B			SeqNo: 300413						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4781	0.1	0.5	0	95.6	90	110	0			
Chloride	5.131	0.1	5	0	103	90	110	0			
Nitrogen, Nitrite (As N)	0.9832	0.1	1	0	98.3	90	110	0			
Bromide	2.487	0.1	2.5	0	99.5	90	110	0			
Nitrogen, Nitrate (As N)	2.559	0.1	2.5	0	102	90	110	0			
Phosphorus, Orthophosphate (As P)	4.831	0.5	5	0	96.6	90	110	0			
Sulfate	10.33	0.5	10	0	103	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.542	0.1	3.5	0	101	90	110	0			

Sample ID	LCS-6399	Batch ID: 6399	Test Code: SW8015	Units: wt%	Analysis Date	8/30/2004 10:09:18 PM	Prep Date	8/30/2004			
Client ID:		Run ID:	FID(17A) 2_040830A		SeqNo:	300849					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	0.473	0.01	0.5	0	94.6	78	121	0			
Surr: DNOP	0.0382	0	0.05	0	76.4	74	125	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				3					

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: 0408193
 Project: Annual Monitoring Wells 2004

Sample ID	LCSD-6399	Batch ID: 6399	Test Code: SW8015	Units: wt%	Analysis Date	8/31/2004 3:08:13 PM	Prep Date	8/30/2004			
Client ID:		Run ID:	FID(17A) 2_040831A	SeqNo:	301436						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	0.3739	0.2	0.5	0	74.8	78	121	0.473	23.4	15	SR
Surr: DNOP	0.03129	0	0.05	0	62.6	74	125	0.0382	19.9	0	S

Sample ID	GRO std 2.5ug	Batch ID: R12961	Test Code: SW8015	Units: wt%	Analysis Date	9/1/2004 12:28:28 AM	Prep Date				
Client ID:		Run ID:	PIDFID_040831A		SeqNo:	301319					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	92.04	0.05	100	0	92.0	80.3	116	0			
Surr: BFB	4420	0	5000	0	88.4	74.5	122	0			

Sample ID	GRO std 2.5ug	Batch ID: R12961	Test Code: SW8015	Units: mg/L	Analysis Date	9/1/2004 4:00:01 AM	Prep Date				
Client ID:		Run ID:	PIDFID_040831A		SeqNo:	301332					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.462	0.05	0.5	0	92.4	80.3	116	0			
Surr: BFB	21.51	0	20	0	108	74	118	0			

Sample ID	BTEX std 100ng	Batch ID: R12944	Test Code: SW8021	Units: µg/L	Analysis Date	8/30/2004 6:16:14 PM	Prep Date				
Client ID:		Run ID:	PIDFID_040830A	SeqNo:	300714						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	36.34	2.5	40	0	90.8	54.9	142	0			
	20.15	0.5	20	0	101	81.3	121	0			
	20.34	0.5	20	0	102	84.9	118	0			
	20.41	0.5	20	0	102	53.8	149	0			
	60.72	0.5	60	0	101	83.1	122	0			
Surr: 4-Bromofluorobenzene	23.81	0	24	0	99.2	74	118	0			

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

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0408193
 Project: Annual Monitoring Wells 2004

Sample ID	BTEX std	100ng	Batch ID: R12961	Test Code: SW8021	Units: µg/L	Analysis Date	8/31/2004 8:26:01 PM	Prep Date			
Client ID:			Run ID: PIDFID_040831A			SeqNo: 301216					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	37.08	2.5	40	0	92.7	54.9	142	0			
Benzene	20.92	0.5	20	0	105	81.3	121	0			
Toluene	21.42	0.5	20	0	107	84.9	118	0			
Ethylbenzene	21.33	0.5	20	0	107	53.8	149	0			
Xylenes, Total	63.47	0.5	60	0	106	83.1	122	0			
Surr: 4-Bromofluorobenzene	24.45	0	24	0	102	74	118	0			

Sample ID	LCS-6386	Batch ID: 6386	Test Code: SW7470	Units: mg/L	Analysis Date	8/26/2004	Prep Date	8/26/2004			
Client ID:			Run ID: MI-LA254_040826A		SeqNo: 299616						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005053	0.0002	0.005	0	101	80	120	0			

Sample ID	LCSD-6386	Batch ID: 6386	Test Code: SW7470	Units: mg/L	Analysis Date	8/26/2004	Prep Date	8/26/2004			
Client ID:			Run ID: MI-LA254_040826A		SeqNo: 299629						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005041	0.0002	0.005	0	101	80	120	0.005053	0.232	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:

0408193

Project:

Annual Monitoring Wells 2004

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 8:09:53 AM	Prep Date				
Client ID:		Run ID:	ICP_040831A		SeqNo:	300882					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5275	0.02	0.5	0	106	80	120	0			
Barium	0.4933	0.002	0.5	0	98.7	80	120	0			
Cadmium	0.5008	0.002	0.5	0	100	80	120	0			
Calcium	51.9	1	50.5	0	103	80	120	0			
Chromium	0.5034	0.006	0.5	0	101	80	120	0			
Copper	0.4792	0.006	0.5	0	95.8	80	120	0			
Iron	0.4916	0.02	0.5	0	98.3	80	120	0			
Lead	0.5042	0.005	0.5	0	101	80	120	0			
Magnesium	51.94	1	50.5	0	103	80	120	0			
Manganese	0.4953	0.002	0.5	0	99.1	80	120	0			
Potassium	51.7	1	55	0	94.0	80	120	0			
Selenium	0.499	0.05	0.5	0	99.8	80	120	0			
Silver	0.4891	0.005	0.5	0	97.8	80	120	0			
Sodium	48.15	1	50.5	0	95.4	80	120	0			
Zinc	0.5249	0.005	0.5	0	105	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: 0408193
 Project: Annual Monitoring Wells 2004

Sample ID	LCSD	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 8:13:06 AM	Prep Date				
Client ID:		Run ID: ICP_040831A	SeqNo: 300883								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5242	0.02	0.5	0	105	80	120	0.5275	0.624	20	
Barium	0.4853	0.002	0.5	0	97.1	80	120	0.4933	1.64	20	
Cadmium	0.4917	0.002	0.5	0	98.3	80	120	0.5008	1.82	20	
Calcium	52.47	1	50.5	0	104	80	120	51.9	1.10	20	
Chromium	0.4947	0.006	0.5	0	98.9	80	120	0.5034	1.74	20	
Copper	0.4688	0.006	0.5	0	93.8	80	120	0.4792	2.20	20	
Iron	0.4933	0.02	0.5	0	98.7	80	120	0.4916	0.333	20	
Lead	0.4948	0.005	0.5	0	99.0	80	120	0.5042	1.88	20	
Magnesium	52.4	1	50.5	0	104	80	120	51.94	0.866	20	
Manganese	0.4855	0.002	0.5	0	97.1	80	120	0.4953	1.98	20	
Potassium	52.05	1	55	0	94.6	80	120	51.7	0.679	20	
Selenium	0.4963	0.05	0.5	0	99.3	80	120	0.499	0.557	20	
Silver	0.4801	0.005	0.5	0	96.0	80	120	0.4891	1.84	20	
Sodium	48.52	1	50.5	0	96.1	80	120	48.15	0.759	20	
Zinc	0.5181	0.005	0.5	0	104	80	120	0.5249	1.32	20	

Sample ID	LCS U5	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 12:27:30 PM	Prep Date				
Client ID:		Run ID: ICP_040831A	SeqNo: 300932								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	4.933	0.1	5	0	98.7	80	120	0			

Sample ID	LCSD U 5	Batch ID: R12949	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 12:30:22 PM	Prep Date				
Client ID:		Run ID: ICP_040831A	SeqNo: 300933								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	5.011	0.1	5	0	100	80	120	4.933	1.57	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

CLIENT: San Juan Refining
Work Order: 0408193
Project: Annual Monitoring Wells 2004

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID	LCS-6387	Batch ID: 6387	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 3:44:51 PM	Prep Date	8/27/2004			
Client ID:		Run ID:	ICP_040831G		SeqNo:	301335					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5171	0.02	0.5	0	103	80	120	0			
Barium	0.4856	0.02	0.5	0	97.1	80	120	0			
Cadmium	0.4881	0.002	0.5	0	97.6	80	120	0			
Chromium	0.4882	0.006	0.5	0	97.6	80	120	0			
Lead	0.4913	0.005	0.5	0	98.3	80	120	0			
Selenium	0.4625	0.05	0.5	0	92.5	80	120	0			
Silver	0.4981	0.005	0.5	0	99.6	80	120	0			

Sample ID	LCSD-6387	Batch ID: 6387	Test Code: SW6010A	Units: mg/L	Analysis Date	8/31/2004 3:48:06 PM	Prep Date	8/27/2004				
Client ID:		Run ID:	ICP_040831G		SeqNo:	301336						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.5436	0.02	0.5	0	109	80	120	0.5171	5.00	20	
Barium		0.5228	0.02	0.5	0	105	80	120	0.4856	7.37	20	
Cadmium		0.5221	0.002	0.5	0	104	80	120	0.4881	6.72	20	
Chromium		0.5232	0.006	0.5	0	105	80	120	0.4882	6.91	20	
Lead		0.524	0.005	0.5	0	105	80	120	0.4913	6.44	20	
Selenium		0.4884	0.05	0.5	0	97.7	80	120	0.4625	5.43	20	
Silver		0.5339	0.005	0.5	0	107	80	120	0.4981	6.94	20	

Sample ID	LCS-6378	Batch ID: 6378	Test Code: E160.1	Units: mg/L	Analysis Date	8/25/2004	Prep Date	8/25/2004				
Client ID:		Run ID:	WC_040825E		SeqNo:	300596						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids		1074	50	1000	0	107	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:

8/20/2004

Work Order Number 0408193

Received by

Checklist completed by

Signature

Date

8/20/04

Matrix

Carrier name

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 ☒		
1 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° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

Accreditation Applied:
NELAC ☐ USACE ☐

USACE  NELAC 

Project Name: Annual Monitoring wells 200f

Project #:

Project Manager:

Sampler: Cindy Hurtado / Daniel Homb
Sample Temperature: 3-3

Sample Temperature:

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HNO ₃	
Aug	3:10 PM	H ₂ O	P4	2-VOA	X		0408143-1
				1-125		X	
				1-500		X	
				1-125		H ₂ SO ₄	
				1-250			
				1-500			
Aug	3:35 PM	H ₂ O	P5	2-VOA	X		-2
				1-125		X	
				1-500		X	
				1-125		H ₂ SO ₄	
				1-250			
				1-500			

Date: 1-9-04	Time: 3:01 pm	Relinquished By: (Signature) Cindy Hunter
Date:	Time:	Relinquished By: (Signature)

Received By: (Signature)

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.34
www.hallenvironmental.com

ANALYSIS REQUEST

[illegible]

Remarks:

Remarks:

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

Accreditation Applied:

Other:

Project Name: Annual Monitoring wells 2004

Project #:

Project Manager:

Sampler: Cindy Hinkley / David

Sample Temperature:

Sample I.D. No.

Number/Volume

HEAL No.

2-VDA

040893-7

7B

8,

Time:

Belijavništvo By: (Signature)

Received By: (Signature) *[Signature]* 11/8/2004

Time:

Relinquished By: (Signature)

Received By: (Signature) 

**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

[illegible]

Remarks:

Water Quality Field Measurements

Table 3

DATE	RW/MW	DEPTH TO LIQUID (ft)	SPH	WELL DEPTH	E.C.	pH	TEMP.	D.O	ORP
Aug-04	MW #1	17.15	0	21.56	927	6.90	63	5.4	-532
Mar-04		17.43	0	21.56	887	7.51	53	NR	NR
Aug-03		17.16	0	21.62	1001	7.41	63	6.5	105
Aug-04	MW #3	36.31	0	36.75	7558	6.96	64	NR	-11
Mar-04		36.33	0	36.75	NR	NR	NR	NR	NR
Aug-03		36.31	0	36.75	7818	6.96	66	NR	57
Aug-04	MW #4	27.96	27.31	30.5	SPH	SPH	SPH	SPH	SPH
Mar-04		27.86	27.24	30.5	SPH	SPH	SPH	SPH	SPH
Aug-03		27.95	27.07	30.5	SPH	SPH	SPH	SPH	SPH
Aug-04	MW #5	0	0	36.92	NS	NS	NS	NS	NS
Mar-04		0	0	36.92	NS	NS	NS	NS	NS
Aug-03		0	0	36.92	NS	NS	NS	NS	NS
Aug-04	MW #6	0	0	47.92	NS	NS	NS	NS	NS
Mar-04		0	0	47.92	NS	NS	NS	NS	NS
Aug-03		0	0	47.92	NS	NS	NS	NS	NS
Aug-04	MW #7	27.79	0	62.61	8693	7.00	63	2.8	84
Mar-04		27.36	0	62.61	NR	NR	NR	NR	NR
Aug-03		27.57	0	62.61	NR	NR	NR	NR	NR
Aug-04	MW #8	32.9	0	35.93	2600	7.02	62	2.9	142
Mar-04		32.77	0	35.93	NR	NR	NR	NR	NR
Aug-03		32.93	0	35.93	2654	6.98	60	7.1	176
Aug-04	MW #11	11.72	0	22.94	2093	6.81	68	13.8	-36
Mar-04		11.32	0	22.94	NR	NR	NR	NR	NR
Aug-03		11.69	0	22.93	2338	6.82	66	5.6	-53
Aug-04	MW #12	12.38	0	14.98	2164	6.85	66	9.3	151
Mar-04		11.95	0	14.98	1464	7.22	49	NR	NR
Aug-03		11.39	0	14.98	5920	7.06	64	5.8	81
Aug-04	MW #13	40.51	0	52.89	3638	6.79	62	5.0	158
Mar-04		40.41	0	52.89	3895	6.96	59	NR	NR
Aug-03		40.23	0	52.9	4573	6.77	64	5.6	86
Aug-04	MW #20	21.44	21.10	27.15	SPH	SPH	SPH	SPH	SPH
Mar-04		21.47	21.05	27.15	1576	7.05	62	NR	NR
Aug-03		21.87	20.99	27.15	SPH	SPH	SPH	SPH	SPH
Aug-04	MW #21	22.27	22.25	30.38	4405	6.81	63	4.0	-43
Mar-04		22.35	22.32	30.38	NR	NR	NR	NR	NR
Aug-03		22.46	22.33	30.38	NR	NR	NR	NR	NR

SPH = Well Contains Separate Phase Hydrocarbon - No Sample

NS = Well is Dry - No Sample

NM = Not Measured - Not a Well

NR = Not Required to Sample

Water Quality Field Measurements

Table 3

DATE	RW/MW	DEPTH TO LIQUID (ft)	SPH	WELL DEPTH	E.C.	pH	TEMP.	D.O	ORP
Aug-03	MW #24	14.93	14.91	15.13	SPH	SPH	SPH	SPH	SPH
Mar-04		0	0	15.13	NS	NS	NS	NS	NS
Aug-03		14.93	14.91	15.13	SPH	SPH	SPH	SPH	SPH
Aug-04	MW #25	33.4	32.77	41.2	SPH	SPH	SPH	SPH	SPH
Mar-04		33.61	32.64	41.2	NR	NR	NR	NR	NR
Aug-03		33.57	32.42	41.2	NR	NR	NR	NR	NR
Aug-04	MW #26	17.39	0	25.11	2422	6.81	65	7.5	-33
Mar-04		17.32	0	25.11	NR	NR	NR	NR	NR
Aug-03		33.57	32.42	41.2	2267	6.65	68	4.9	-69
Aug-04	MW #27	18.70	0	24.42	2474	6.89	65	1.7	-143
Mar-04		18.71	0	24.42	NR	NR	NR	NR	NR
Aug-03		18.50	0	24.42	2776	6.73	65	4.1	-188
Aug-04	MW #29	23.15	0	28.62	850	7.03	62	4.7	115
Mar-04		23.32	0	28.62	NR	NR	NR	NR	NR
Aug-03		23.24	0	28.62	NR	NR	NR	NR	NR
Aug-04	MW #30	33.95	0	40.13	4480	6.90	62	over range	-196
Mar-04		33.96	0	40.13	NR	NR	NR	NR	NR
Aug-03		33.90	0	40.13	NR	NR	NR	NR	NR
Aug-03	MW #31	34.21	0	39.16	3945	7.07	64	3.4	-19
Mar-04		34.13	0	39.16	NR	NR	NR	NR	NR
Aug-03		34.02	0	39.16	NR	NR	NR	NR	NR
Aug-04	MW #32	24.93	0	27.51	3576	6.88	62	5.6	79
Mar-04		24.98	0	27.51	4898	6.71	58	NR	NR
Aug-03		24.8	0	27.51	5346	6.87	63	7.4	64
Aug-04	MW #33	22.29	0	25.51	4630	6.81	63	5.6	106
Mar-04		22.38	0	25.51	4950	7.35	57	NR	NR
Aug-03		22.11	0	25.51	4373	6.89	66	5.0	110
Aug-04	MW #34	14.24	0	20.96	2144	6.80	64	1.7	-51
Mar-04		14.5	0	20.96	NR	NR	NR	NR	NR
Aug-03		14.57	0	20.97	2220	6.75	70	4.9	-76
Aug-04	MW #35	22.81	0	26.45	2000	6.81	60	3.6	-63
Mar-04		22.98	0	26.45	2026	6.97	58	NR	NR
Aug-03		23.04	0	26.45	2005	6.72	66	5.4	-95
Aug-04	MW #36	21.30	0	23.26	1880	6.85	68	8.4	-111
Mar-04		21.23	0	23.26	NR	NR	NR	NR	NR
Aug-03		21.44	0	23.26	NR	NR	NR	NR	NR

SPH = Well Contains Separate Phase Hydrocarbon - No Sample

NS = Well is Dry - No Sample

NM = Not Measured - Not a Well

NR = Not Required to Sample

Water Quality Field Measurements

Table 3

DATE	RW/MW	DEPTH TO LIQUID (ft)	SPH	WELL DEPTH	E.C.	pH	TEMP.	D.O	ORP
Aug-04	MW #37	23.99	0	27.58	2085	7.06	62	4.3	-103
Mar-04		22.94	0	27.58	2033	7.29	57	NR	NR
Aug-03		24.11	0	27.58	2061	7.16	68	6.4	-129
Aug-04	MW #38	24.51	0	26.82	2058	6.84	63	12.3	-124
Mar-04		24.32	0	26.82	1967	7.11	55	NR	NR
Aug-03		24.6	0	26.82	1866	6.90	69	4.7	-145
Aug-04	MW #39	24.59	0	38.34	5424	7.51	65	4.7	-162
Mar-04		24.45	0	38.34	NR	NR	NR	NR	NR
Aug-03		NR	NR	NR	NR	NR	NR	NR	NR
Aug-04	MW #40	29.76	28.94	30.07	SPH	SPH	SPH	SPH	SPH
Mar-04		29.95	29.05	30.07	SPH	SPH	SPH	SPH	SPH
Aug-03		29.99	28.85	30.07	SPH	SPH	SPH	SPH	SPH
Aug-04	MW #41	28.34	27.43	31.62	SPH	SPH	SPH	SPH	SPH
Mar-04		28.41	27.3	31.62	SPH	SPH	SPH	SPH	SPH
Aug-03		28.52	27.31	31.62	SPH	SPH	SPH	SPH	SPH
Aug-04	MW #44	33.8	0	50.91	5589	6.90	60	5.3	-52
Mar-04		33.4	0	50.91	NR	NR	NR	NR	NR
Aug-03		33.75	0	50.91	NR	NR	NR	NR	NR
Aug-03	MW #45	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH
Mar-04		15.85	9.32	16.92	SPH	SPH	SPH	SPH	SPH
Aug-03		13.19	9.35	16.92	SPH	SPH	SPH	SPH	SPH
Aug-04	MW #46	0	0	10.39	NS	NS	NS	NS	NS
Mar-04		0	0	10.39	NS	NS	NS	NS	NS
Aug-03		0	0	10.39	NS	NS	NS	NS	NS
Aug-04	MW #47	11.55	10.32	14.28	SPH	SPH	SPH	SPH	SPH
Mar-04		11.79	10.31	14.28	3440	7.01	52	NR	NR
Aug-03		10.58	0	14.39	3848	6.88	69	7.9	-75
Aug-03	P-#4	8.41	0	13.94	2316	6.92	69	8.4	-240
Mar-04		8.29	0	13.94	22398	7.56	46	NR	NR
Aug-03		8.22	0	13.94	2606	7.06	69	0.2	-284
Aug-04	P-#5	9.24	0	14.27	2014	6.93	67	5.4	-124
Mar-04		9.54	0	14.27	2097	7.38	46	NR	NR
Aug-03		10.29	0	14.27	2006	7.16	69	4.5	-104
Aug-04	O/F #2	NM	NM	NM	996	6.88	67	6.3	74
Mar-04		NM	NM	NM	1199	7.23	47	NR	NR
Aug-03		NS	NS	NS	NS	NS	NS	NS	NS

SPH = Well Contains Separate Phase Hydrocarbon - No Sample

NS = Well is Dry - No Sample

NM = Not Measured - Not a Well

NR = Not Required to Sample

Water Quality Field Measurements

Table 3

DATE	RW/MW	DEPTH TO LIQUID (ft)	SPH	WELL DEPTH	E.C.	pH	TEMP.	D.O	ORP
Aug-04	O/F #3	NM	NM	NM	980	6.81	64	9.8	103
Mar-04		NM	NM	NM	1224	7.36	49	NR	NR
Aug-03		NM	NM	NM	904	7.02	63	7.8	194
Aug-04	RW #3	22.74	22.71	34.57	3138	6.82	67	5.5	-47
Mar-04		22.49	22.43	34.57	NR	NR	NR	NR	NR
Aug-03		22.68	0	34.57	NR	NR	NR	NR	NR
Aug-04	RW #14	35.11	2.45	41.94	4422	6.87	62	6.4	-83
Mar-04		36.65	35.21	41.94	NR	NR	NR	NR	NR
Aug-03		35.14	0	41.94	NR	NR	NR	NR	NR
Aug-04	RW #15	34.92	0	43.43	3481	6.83	61	over range	-85
Mar-04		35.93	0	43.43	NR	NR	NR	NR	NR
Aug-03		34.93	0	43.43	NR	NR	NR	NR	NR
Aug-04	RW #16	34.03	0	41.94	3162	6.93	62	8.7	-139
Mar-04		35.04	0	41.94	NR	NR	NR	NR	NR
Aug-03		34.03	0	41.94	NR	NR	NR	NR	NR
Aug-04	RW #17	33.63	33.37	41.89	SPH	SPH	SPH	SPH	SPH
Mar-04		35.55	35.45	41.89	NR	NR	NR	NR	NR
Aug-03		33.34	33.29	41.89	NR	NR	NR	NR	NR

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NM = Not Measured - Not a Well

NR = Not Required to Sample