

GRCB 05



ENTERED



Hope Monzeglio  
New Mexico Environmental Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East  
Bldg 1  
Santa Fe, NM 87505

Certified Mail: 7004 2510 0005 1641 4514

August 4, 2005



**RE: Giant Refining Company, Bloomfield Refinery  
EPA ID# NMD089416416**

Dear Ms. Monzeglio,

Please find attached analytical results for the July 6, 2005 sampling event for wells MW #48 and MW #49 on the river terrace at the Giant Refining facility. Note that the results for well MW #49, located down gradient of the barrier wall, had a detection of benzene at a concentration of 35 ug/L. A BTEX sample was taken out of the San Juan River adjacent to MW #49. The results of that sample were non detect. We will continue to monitor both wells on a monthly basis and evaluate the concentration trends.

Tank #33 and Fresh Water Pond samples were pulled on July 6, 2005. Analytical results are included with this packet. Tank #33 benzene levels were non detect. Fresh Water Pond results were all non detect.

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

Sincerely,

Cindy Hurtado  
Environmental Coordinator  
Giant Refining – Bloomfield

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

COVER LETTER

July 29, 2005

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

RE: River Terrace - 7/05

Order No.: 0507047

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 4 samples on 7/7/2005 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

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

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

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager



# Hall Environmental Analysis Laboratory

Date: 29-Jul-05

CLIENT: San Juan Refining  
 Lab Order: 0507047  
 Project: River Terrace - 7/05  
 Lab ID: 0507047-01

Client Sample ID: MW #49  
 Collection Date: 7/6/2005 11:00:00 AM  
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	7/12/2005 6:02:54 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	7/12/2005 6:02:54 AM
Surr: DNOP	134	58-140		%REC	1	7/12/2005 6:02:54 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	0.33	0.050		mg/L	1	7/19/2005 2:03:08 PM
Surr: BFB	109	78.3-120		%REC	1	7/19/2005 2:03:08 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	7/19/2005 2:03:08 PM
Benzene	35	0.50		µg/L	1	7/19/2005 2:03:08 PM
Toluene	ND	0.50		µg/L	1	7/19/2005 2:03:08 PM
Ethylbenzene	3.8	0.50		µg/L	1	7/19/2005 2:03:08 PM
Xylenes, Total	5.1	0.50		µg/L	1	7/19/2005 2:03:08 PM
Surr: 4-Bromofluorobenzene	111	83.3-121		%REC	1	7/19/2005 2:03:08 PM
<b>EPA METHOD 8310: PAHS</b>						Analyst: JMP
Naphthalene	ND	2.5		µg/L	1	7/20/2005 3:12:42 PM
1-Methylnaphthalene	ND	2.5		µg/L	1	7/20/2005 3:12:42 PM
2-Methylnaphthalene	ND	2.5		µg/L	1	7/20/2005 3:12:42 PM
Acenaphthylene	ND	2.5		µg/L	1	7/20/2005 3:12:42 PM
Acenaphthene	ND	2.5		µg/L	1	7/20/2005 3:12:42 PM
Fluorene	ND	0.80		µg/L	1	7/20/2005 3:12:42 PM
Phenanthrene	ND	0.60		µg/L	1	7/20/2005 3:12:42 PM
Anthracene	ND	0.60		µg/L	1	7/20/2005 3:12:42 PM
Fluoranthene	ND	0.30		µg/L	1	7/20/2005 3:12:42 PM
Pyrene	ND	0.30		µg/L	1	7/20/2005 3:12:42 PM
Benz(a)anthracene	ND	0.020		µg/L	1	7/20/2005 3:12:42 PM
Chrysene	ND	0.20		µg/L	1	7/20/2005 3:12:42 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	7/20/2005 3:12:42 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	7/20/2005 3:12:42 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	7/20/2005 3:12:42 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	7/20/2005 3:12:42 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	7/20/2005 3:12:42 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	7/20/2005 3:12:42 PM
Surr: Benzo(e)pyrene	87.4	54-102		%REC	1	7/20/2005 3:12:42 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: 29-Jul-05

CLIENT: San Juan Refining  
Lab Order: 0507047  
Project: River Terrace - 7/05  
Lab ID: 0507047-02

Client Sample ID: River near MW #49  
Collection Date: 7/6/2005 11:10:00 AM  
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	7/20/2005 11:26:24 AM
Benzene	ND	0.50		µg/L	1	7/20/2005 11:26:24 AM
Toluene	ND	0.50		µg/L	1	7/20/2005 11:26:24 AM
Ethylbenzene	ND	0.50		µg/L	1	7/20/2005 11:26:24 AM
Xylenes, Total	ND	0.50		µg/L	1	7/20/2005 11:26:24 AM
Surr: 4-Bromofluorobenzene	96.2	83.3-121		%REC	1	7/20/2005 11:26:24 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: 29-Jul-05

CLIENT: San Juan Refining  
 Lab Order: 0507047  
 Project: River Terrace - 7/05  
 Lab ID: 0507047-03

Client Sample ID: MW #48  
 Collection Date: 7/6/2005 10:00:00 AM  
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	6.5	1.0		mg/L	1	7/12/2005 6:35:59 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	7/12/2005 6:35:59 AM
Surr: DNOP	137	58-140		%REC	1	7/12/2005 6:35:59 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	26	2.0		mg/L	40	7/19/2005 4:09:37 PM
Surr: BFB	111	78.3-120		%REC	40	7/19/2005 4:09:37 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	40	7/19/2005 4:09:37 PM
Benzene	730	20		µg/L	40	7/19/2005 4:09:37 PM
Toluene	ND	20		µg/L	40	7/19/2005 4:09:37 PM
Ethylbenzene	2000	20		µg/L	40	7/19/2005 4:09:37 PM
Xylenes, Total	11000	100		µg/L	200	7/20/2005 11:57:20 AM
Surr: 4-Bromofluorobenzene	112	83.3-121		%REC	40	7/19/2005 4:09:37 PM
<b>EPA METHOD 8310: PAHS</b>						Analyst: JMP
Naphthalene	410	13		µg/L	5	7/28/2005 5:58:30 AM
1-Methylnaphthalene	97	2.5		µg/L	1	7/20/2005 4:00:40 PM
2-Methylnaphthalene	120	2.5		µg/L	1	7/20/2005 4:00:40 PM
Acenaphthylene	ND	2.5		µg/L	1	7/20/2005 4:00:40 PM
Acenaphthene	ND	2.5		µg/L	1	7/20/2005 4:00:40 PM
Fluorene	0.87	0.80		µg/L	1	7/20/2005 4:00:40 PM
Phenanthrene	2.5	0.60		µg/L	1	7/20/2005 4:00:40 PM
Anthracene	ND	0.60		µg/L	1	7/20/2005 4:00:40 PM
Fluoranthene	ND	0.30		µg/L	1	7/20/2005 4:00:40 PM
Pyrene	ND	0.30		µg/L	1	7/20/2005 4:00:40 PM
Benz(a)anthracene	ND	0.020		µg/L	1	7/20/2005 4:00:40 PM
Chrysene	ND	0.20		µg/L	1	7/20/2005 4:00:40 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	7/20/2005 4:00:40 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	7/20/2005 4:00:40 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	7/20/2005 4:00:40 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	7/20/2005 4:00:40 PM
Benzo(g,h,i)perylene	0.16	0.030		µg/L	1	7/20/2005 4:00:40 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	7/20/2005 4:00:40 PM
Surr: Benzo(e)pyrene	90.1	54-102		%REC	1	7/20/2005 4:00:40 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: 29-Jul-05

CLIENT: San Juan Refining  
 Lab Order: 0507047  
 Project: River Terrace - 7/05  
 Lab ID: 0507047-04

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	7/19/2005 4:41:39 PM
Surr: BFB	95.1	78.3-120		%REC	1	7/19/2005 4:41:39 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	7/19/2005 4:41:39 PM
Benzene	ND	0.50		µg/L	1	7/19/2005 4:41:39 PM
Toluene	ND	0.50		µg/L	1	7/19/2005 4:41:39 PM
Ethylbenzene	ND	0.50		µg/L	1	7/19/2005 4:41:39 PM
Xylenes, Total	ND	0.50		µg/L	1	7/19/2005 4:41:39 PM
Surr: 4-Bromofluorobenzene	99.8	83.3-121		%REC	1	7/19/2005 4:41:39 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: 29-Jul-05

CLIENT: San Juan Refining  
 Work Order: 0507047  
 Project: River Terrace - 7/05

**QC SUMMARY REPORT**  
 Method Blank

Sample ID	MB-8317	Batch ID:	8317	Test Code:	SW8015	Units:	mg/L	Analysis Date	7/12/2005 4:23:35 AM	Prep Date	7/11/2005	
Client ID:		Run ID:	FID(17A) 2_050711A	SeqNo:	379148							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		ND	1									
Motor Oil Range Organics (MRO)		ND	5									
Surr: DNOP		1.127	0	1	0	113	58	140	0			

Sample ID	Reagent Blank	Batch ID:	R16034	Test Code:	SW8015	Units:	mg/L	Analysis Date	7/19/2005 9:21:22 AM	Prep Date		
Client ID:		Run ID:	PIDFID_050719A	SeqNo:	381013							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.0116	0.05									J
Surr: BFB		18.73	0	20	0	93.6	78.3	120	0			

Sample ID	Reagent Blank	Batch ID:	R16047	Test Code:	SW8015	Units:	mg/L	Analysis Date	7/20/2005 9:18:20 AM	Prep Date		
Client ID:		Run ID:	PIDFID_050720A	SeqNo:	381413							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.014	0.05									J
Surr: BFB		19.3	0	20	0	96.5	78.3	120	0			

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

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CLIENT: San Juan Refining  
 Work Order: 0507047  
 Project: River Terrace - 7/05

**QC SUMMARY REPORT**

Method Blank

Sample ID	Reagent Blank	Batch ID: R16034	Test Code: SW8021	Units: µg/L	Analysis Date 7/19/2005 9:21:22 AM	Prep Date					
Client ID:			Run ID: PIDFID_050719A			SeqNo: 380900					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	18.86	0	20	0	94.3	83.3	121	0			

Sample ID	Reagent Blank	Batch ID: R16047	Test Code: SW8021	Units: µg/L	Analysis Date 7/20/2005 9:18:20 AM	Prep Date					
Client ID:			Run ID: PIDFID_050720A			SeqNo: 381328					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.53	0	20	0	97.7	83.3	121	0			

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**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:** 0507047  
**Project:** River Terrace - 7/05

## QC SUMMARY REPORT

Method Blank

Sample ID **MB-8318**      Batch ID: **8318**      Test Code: **SW8310**      Units: **µg/L**      Analysis Date **7/20/2005 10:26:02 AM**      Prep Date **7/11/2005**  
 Client ID:      Run ID: **HUGO\_050719A**      SeqNo: **382145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	2.5									
1-Methylnaphthalene	ND	2.5									
2-Methylnaphthalene	ND	2.5									
Acenaphthylene	ND	2.5									
Acenaphthene	ND	2.5									
Fluorene	ND	0.8									
Phenanthrene	ND	0.6									
Anthracene	ND	0.6									
Fluoranthene	ND	0.3									
Pyrene	ND	0.3									
Benz(a)anthracene	ND	0.02									
Chrysene	ND	0.2									
Benzo(b)fluoranthene	ND	0.05									
Benzo(k)fluoranthene	ND	0.02									
Benzo(a)pyrene	ND	0.02									
Dibenz(a,h)anthracene	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	7.6	0	10	0	76.0	54	102	0			

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

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 29-Jul-05

CLIENT: San Juan Refining  
 Work Order: 0507047  
 Project: River Terrace - 7/05

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	Batch ID	Test Code	Units	Analysis Date	Prep Date						
0507047-01a ms	R16034	SW8015	mg/L	7/19/2005 2:34:33 PM							
Client ID: MW #49		Run ID: PIDFID_050719A		SeqNo: 381025							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.7948	0.05	0.5	0.327	93.6	82.6	114	0			
Surr: BFB	26.95	0	25	0	108	78.3	120	0			

Sample ID	Batch ID	Test Code	Units	Analysis Date	Prep Date						
0507047-01a msd	R16034	SW8015	mg/L	7/19/2005 3:06:18 PM							
Client ID: MW #49		Run ID: PIDFID_050719A		SeqNo: 381027							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.7952	0.05	0.5	0.327	93.6	82.6	114	0.7948	0.0503	8.39	
Surr: BFB	26.69	0	25	0	107	78.3	120	26.95	0.979	0	

Sample ID	Batch ID	Test Code	Units	Analysis Date	Prep Date						
0507047-01a ms	R16034	SW8021	µg/L	7/19/2005 2:34:33 PM							
Client ID: MW #49		Run ID: PIDFID_050719A		SeqNo: 380908							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	44.39	0.5	8	35.48	111	88.7	114	0			
Toluene	33.33	0.5	34	0.29	97.2	89.3	112	0			
Ethylbenzene	15.83	0.5	12	3.776	100	88.6	113	0			
Xylenes, Total	37.28	0.5	34	5.131	94.6	89.4	112	0			
Surr: 4-Bromofluorobenzene	25.75	0	25	0	103	83.3	121	0			

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

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**CLIENT:** San Juan Refining  
**Work Order:** 0507047  
**Project:** River Terrace - 7/05

**QC SUMMARY REPORT**  
 Sample Matrix Spike Duplicate

Sample ID: 0507047-01a msd    Batch ID: R16034    Test Code: SW8021    Units: µg/L    Analysis Date: 7/19/2005 3:06:18 PM    Prep Date:  
 Client ID: MW #49    Run ID: PIDFID\_050719A    SeqNo: 380909

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.83	0.5	8	35.48	79.4	88.7	114	44.39	5.93	27	S
Toluene	33.04	0.5	34	0.29	96.3	89.3	112	33.33	0.879	19	
Ethylbenzene	15.32	0.5	12	3.776	96.2	88.6	113	15.83	3.29	10	
Xylenes, Total	37.48	0.5	34	5.131	95.2	89.4	112	37.28	0.549	13	
Surr: 4-Bromofluorobenzene	25.98	0	25	0	104	83.3	121	25.75	0.895	0	

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**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: 29-Jul-05

CLIENT: San Juan Refining  
 Work Order: 0507047  
 Project: River Terrace - 7/05

**QC SUMMARY REPORT**  
 Laboratory Control Spike - generic

Sample ID	LCS-8317	Batch ID:	8317	Test Code:	SW8015	Units:	mg/L	Analysis Date	7/12/2005 4:56:42 AM	Prep Date	7/11/2005			
Client ID:		Run ID:	FID(17A) 2_050711A	SeqNo:	379149									
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		5.736		1	5	0		115	81.2	149	0			

Sample ID	LCSD-8317	Batch ID:	8317	Test Code:	SW8015	Units:	mg/L	Analysis Date	7/12/2005 5:29:47 AM	Prep Date	7/11/2005			
Client ID:		Run ID:	FID(17A) 2_050711A	SeqNo:	379150									
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		6.942		1	5	0		139	81.2	149	5.736	19.0	23	

Sample ID	LCSD-8317	Batch ID:	8317	Test Code:	SW8015	Units:	mg/L	Analysis Date	7/20/2005 7:58:28 AM	Prep Date	7/11/2005			
Client ID:		Run ID:	FID(17A) 2_050719A	SeqNo:	381026									
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		10.94		1	10	0		109	81.2	149	5.736	62.4	23	R

Sample ID	GRO Ics 2.5ug	Batch ID:	R16034	Test Code:	SW8015	Units:	mg/L	Analysis Date	7/20/2005 1:02:35 AM	Prep Date				
Client ID:		Run ID:	PIDFID_050719A	SeqNo:	381015									
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.4292		0.05	0.5	0.0116		83.5	82.6	114	0			

Sample ID	GRO Ics 2.5ug	Batch ID:	R16047	Test Code:	SW8015	Units:	mg/L	Analysis Date	7/21/2005 2:57:29 AM	Prep Date				
Client ID:		Run ID:	PIDFID_050720A	SeqNo:	381592									
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.456		0.05	0.5	0.014		88.4	82.6	114	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

10/14

**CLIENT:** San Juan Refining  
**Work Order:** 0507047  
**Project:** River Terrace - 7/05

**QC SUMMARY REPORT**  
 Laboratory Control Spike Duplicate

Sample ID	GRO lcsd 2.5ug	Batch ID: R16047	Test Code: SW8015	Units: mg/L	Analysis Date	7/21/2005 3:27:42 AM	Prep Date					
Client ID:			Run ID: PIDFID_050720A		SeqNo:	381593						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	0.4874	0.05	0.5	0.014	94.7	82.6	114	0.456	6.66	8.39		

Sample ID	BTEX lcs 100ng	Batch ID: R16034	Test Code: SW8021	Units: µg/L	Analysis Date	7/20/2005 2:03:39 AM	Prep Date					
Client ID:			Run ID: PIDFID_050719A		SeqNo:	380901						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Methyl tert-butyl ether (MTBE)	23.56	2.5	40	0	58.9	64.5	133	0			S	
Benzene	20.04	0.5	20	0	100	88.7	114	0				
Toluene	19.49	0.5	20	0	97.4	89.3	112	0				
Ethylbenzene	19.32	0.5	20	0	96.6	88.6	113	0				
Xylenes, Total	39.2	0.5	60	0	65.3	89.4	112	0			S	

Sample ID	BTEX lcs 100ng	Batch ID: R16047	Test Code: SW8021	Units: µg/L	Analysis Date	7/20/2005 9:52:32 PM	Prep Date					
Client ID:			Run ID: PIDFID_050720A		SeqNo:	381330						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Methyl tert-butyl ether (MTBE)	26.36	2.5	20	0	132	64.5	133	0				
Benzene	20.03	0.5	20	0	100	88.7	114	0				
Toluene	19.28	0.5	20	0	96.4	89.3	112	0				
Ethylbenzene	19.56	0.5	20	0	97.8	88.6	113	0				
Xylenes, Total	39.49	0.5	40	0	98.7	89.4	112	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

11/14

CLIENT: San Juan Refining  
 Work Order: 0507047  
 Project: River Terrace - 7/05

**QC SUMMARY REPORT**  
 Laboratory Control Spike - generic

Sample ID	Batch ID	Test Code	Units	Analysis Date	Prep Date						
LCS-8318	8318	SW8310	µg/L	7/20/2005 1:36:45 PM	7/11/2005						
Client ID:	Run ID:	SeqNo:									
	HUGO_050719A	382149									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	25.93	2.5	40	0	64.8	34.8	97.4	0			
1-Methylnaphthalene	26.49	2.5	40.1	0	66.1	34.7	100	0			
2-Methylnaphthalene	25.69	2.5	40	0	64.2	35	98.1	0			
Acenaphthylene	28.76	2.5	40.1	0	71.7	48.3	95.1	0			
Acenaphthene	27.51	2.5	40	0	68.8	45	95	0			
Fluorene	2.8	0.8	4.01	0	69.8	46.8	93.4	0			
Phenanthrene	1.5	0.6	2.01	0	74.6	48.7	104	0			
Anthracene	1.51	0.6	2.01	0	75.1	47.5	102	0			
Fluoranthene	3.26	0.3	4.01	0	81.3	46.3	108	0			
Pyrene	3.01	0.3	4.01	0	75.1	43.8	109	0			
Benz(a)anthracene	0.33	0.02	0.401	0	82.3	40.3	115	0			
Chrysene	1.61	0.2	2.01	0	80.1	42.6	107	0			
Benzo(b)fluoranthene	0.36	0.05	0.501	0	71.9	48.6	107	0			
Benzo(k)fluoranthene	0.2	0.02	0.25	0	80.0	23.3	136	0			
Benzo(a)pyrene	0.18	0.02	0.251	0	71.7	33.4	117	0			
Dibenz(a,h)anthracene	0.42	0.04	0.501	0	83.8	27.3	139	0			
Benzo(g,h,i)perylene	0.38	0.03	0.5	0	76.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.798	0.08	1.002	0	79.6	39.9	125	0			

12/14

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:** 0507047  
**Project:** River Terrace - 7/05

**QC SUMMARY REPORT**  
 Laboratory Control Spike Duplicate

Sample ID **LCSD-8318**      Batch ID: **8318**      Test Code: **SW8310**      Units: **µg/L**      Analysis Date **7/20/2005 2:24:43 PM**      Prep Date **7/11/2005**  
 Client ID:      Run ID: **HUGO\_050719A**      SeqNo: **382155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	29.45	2.5	40	0	73.6	34.8	97.4	25.93	12.7	32.1	
1-Methylnaphthalene	28.7	2.5	40.1	0	71.6	34.7	100	26.49	8.01	32.7	
2-Methylnaphthalene	28.1	2.5	40	0	70.3	35	98.1	25.69	8.96	34	
Acenaphthylene	30.25	2.5	40.1	0	75.4	48.3	95.1	28.76	5.03	38.8	
Acenaphthene	29.16	2.5	40	0	72.9	45	95	27.51	5.82	38.6	
Fluorene	2.9	0.8	4.01	0	72.3	46.8	93.4	2.8	3.51	39.3	
Phenanthrene	1.6	0.6	2.01	0	79.6	48.7	104	1.5	6.45	25	
Anthracene	1.59	0.6	2.01	0	79.1	47.5	102	1.51	5.16	23.9	
Fluoranthene	3.32	0.3	4.01	0	82.8	46.3	108	3.26	1.82	15.7	
Pyrene	3.05	0.3	4.01	0	76.1	43.8	109	3.01	1.32	15.3	
Benz(a)anthracene	0.32	0.02	0.401	0	79.8	40.3	115	0.33	3.08	119	
Chrysene	1.51	0.2	2.01	0	75.1	42.6	107	1.61	6.41	16.6	
Benzo(b)fluoranthene	0.36	0.05	0.501	0	71.9	48.6	107	0.36	0	21.7	
Benzo(k)fluoranthene	0.21	0.02	0.25	0	84.0	23.3	136	0.2	4.88	19.4	
Benzo(a)pyrene	0.2	0.02	0.251	0	79.7	33.4	117	0.18	10.5	16.7	
Dibenz(a,h)anthracene	0.43	0.04	0.501	0	85.8	27.3	139	0.42	2.35	17.3	
Benzo(g,h,i)perylene	0.39	0.03	0.5	0	78.0	38.2	117	0.38	2.60	118	
Indeno(1,2,3-cd)pyrene	0.814	0.08	1.002	0	81.2	39.9	125	0.798	1.99	17.7	

13/14

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

Work Order Number 0507047

Received by AT

Checklist completed by Bonnyales 7/7/05  
Signature Date

Matrix Carrier name UPS

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

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

COMMENTS:

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Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

Corrective Action \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



COVER LETTER

July 20, 2005

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

RE: TK #33 Effluent

Order No.: 0507046

Dear Cindy Hurtado:


Hall Environmental Analysis Laboratory received 2 samples on 7/7/2005 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

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

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

Sincerely,

  
Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager



# Hall Environmental Analysis Laboratory

Date: 20-Jul-05

CLIENT: San Juan Refining  
 Project: TK #33 Effluent

Lab Order: 0507046

Lab ID: 0507046-01

Collection Date: 7/6/2005 11:30:00 AM

Client Sample ID: TK #33

Matrix: AQUEOUS

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

Analyst: NSB

Benzene	ND	0.50		µg/L	1	7/19/2005 1:00:36 PM
Toluene	ND	0.50		µg/L	1	7/19/2005 1:00:36 PM
Ethylbenzene	ND	0.50		µg/L	1	7/19/2005 1:00:36 PM
Xylenes, Total	ND	0.50		µg/L	1	7/19/2005 1:00:36 PM
Surr: 4-Bromofluorobenzene	102	83.3-121		%REC	1	7/19/2005 1:00:36 PM

Lab ID: 0507046-02

Collection Date: 7/6/2005 11:35:00 AM

Client Sample ID: Fresh Water Pond

Matrix: AQUEOUS

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

Analyst: NSB

Benzene	ND	0.50		µg/L	1	7/19/2005 1:31:41 PM
Toluene	ND	0.50		µg/L	1	7/19/2005 1:31:41 PM
Ethylbenzene	ND	0.50		µg/L	1	7/19/2005 1:31:41 PM
Xylenes, Total	ND	0.50		µg/L	1	7/19/2005 1:31:41 PM
Surr: 4-Bromofluorobenzene	97.5	83.3-121		%REC	1	7/19/2005 1:31:41 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: 20-Jul-05

CLIENT: San Juan Refining  
 Work Order: 0507046  
 Project: TK #33 Effluent

QC SUMMARY REPORT  
 Method Blank

Sample ID	Reagent Blank	Batch ID: R16034	Test Code: SW8021	Units: µg/L	Analysis Date 7/19/2005 9:21:22 AM	Prep Date						
Client ID:			Run ID: PIDFID_050719A			SeqNo: 380900						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	ND	0.5										
Toluene	ND	0.5										
Ethylbenzene	ND	0.5										
Xylenes, Total	ND	0.5										
Surr: 4-Bromofluorobenzene	18.86	0	20	0	94.3	83.3	121	0				

2 / 4

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

Hall Environmental Analysis Laboratory

Date: 20-Jul-05

CLIENT: San Juan Refining  
 Work Order: 0507046  
 Project: TK #33 Effluent

**QC SUMMARY REPORT**  
 Laboratory Control Spike - generic

Sample ID	BTEX Ics 100ng	Batch ID: R16034	Test Code: SW8021	Units: µg/L	Analysis Date	7/20/2005 2:03:39 AM	Prep Date					
Client ID:	Run ID: PIDFID_050719A			SeqNo:	380901							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	20.04	0.5	20	0	100	88.7	114	0				
Toluene	19.49	0.5	20	0	97.4	89.3	112	0				
Ethylbenzene	19.32	0.5	20	0	96.6	88.6	113	0				
Xylenes, Total	39.2	0.5	60	0	65.3	89.4	112	0			S	

3 / 4

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

# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

Work Order Number 0507046

Received by AT

Checklist completed by *ABonaples* 7/7/05  
Signature Date

Matrix \_\_\_\_\_ Carrier name UPS

- |   |   |   |   |                                      |
|---|---|---|---|--------------------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                                     | Not Present <input type="checkbox"/>            |                                      |
| Custody seals intact on shipping container/cooler?      | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>                                     | Not Present <input checked="" type="checkbox"/> | Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>                                     | N/A <input checked="" type="checkbox"/>         |                                      |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                                     |   |                                      |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                                     |   |                                      |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                                     |   |                                      |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                                     |   |                                      |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                                     |   |                                      |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                                     |   |                                      |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                                     |   |                                      |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/>                         | No <input type="checkbox"/>                     |                                      |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>                                     | N/A <input checked="" type="checkbox"/>         |                                      |
| Container/Temp Blank temperature?                       | <b>10°</b>                                      | <i>4° C ± 2 Acceptable</i><br>If given sufficient time to cool. |   |                                      |

COMMENTS:

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Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Corrective Action \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_