

GRCB05



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 4408

July 11, 2005

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

Dear Ms. Monzeglio,

Please find attached results of analytical data and boring logs for TP-9 through TP-13 requested by NMED. These piezometers are located at the river terrace.

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

Sheet: 1 OF 5
 Bore Point: River Terrace
 Water Elevation: 7.0'
 Boring No.: TP-9

Precision Engineering, Inc.
 P.O. Box 422
 Las Cruces, NM 88004
 505-523-7674

File #: 05-038
 Site: Bloomfield
 Giant Refining
 Elevation: EXISTING
 Date: 4/5/2005

Log of Test Borings

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	MATERIAL CHARACTERISTICS (MOISTURE, CONDITION, COLOR, ETC.)	%M	LL	PI	CLASS.
	0.0-7.5		///**/// ///**/// ///**/// ///**/// ///**/// <u>2.5</u> ///**/// ///**/// ///**/// ///**/// <u>5.0</u> ///**/// ///**/// ///**///		Clay, Slightly Sandy, Very Fine, Brown, Moist, Gravel, Cobbles				
	7.0		///**/// ///**///	<u>7.5</u>	Water				
	7.5-10.0		***** ***** ***** ***** *****	<u>10.0</u>	Sand, Very Fine, Grey, Water Bearing				
	10.0			<u>15.0</u>	TD Set 2" Well @ 10.0' 5' of Screen, 6' of Riser Top of Sand 3.1' Top of Bentonite 1.5'				
				<u>20.0</u>					

SIZE & TYPE OF BORING: 4 1/4" ID HOLLOW STEMMED AUGER

LOGGED BY: KMM

Sheet: 2 OF 5
 Bore Point: River Terrace
 Water Elevation: 4'2"
 Boring No.: TP-10

Precision Engineering, Inc.
 P.O. Box 422
 Las Cruces, NM 88004
 505-523-7674

File #: 05-038
 Site: Bloomfield
 Giant Refining
 Elevation: EXISTING
 Date: 4/5/2005

Log of Test Borings

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	MATERIAL CHARACTERISTICS (MOISTURE, CONDITION, COLOR, ETC.)	%M	LL	PI	CLASS.
	0.0-2.0		*-----* *-----* *-----*		Silt, Sandy, Very Fine, Brown, Gravel, Cobbles Moist				
	2.0-8.5		***_*** ***_*** ***_*** ***_*** ***_***	2.5	Sand, Very Fine to Fine, Silty, Brown, Gravel, Cobbles, Damp				
			_ ***_*** ***_*** ***_*** ***_*** ***_*** ***_*** ***_***	5.0 7.5	Water /				
	8.5			10.0 15.0 20.0	TD Set 2" Well @ 8.5' 5' of Screen, 5' of Riser Top of Sand 2.5' Top of Bentonite 1.5'				

SIZE & TYPE OF BORING: 4 1/4" ID HOLLOW STEMMED AUGER

LOGGED BY: KMM

Sheet: 3 OF 5
 Bore Point: River Terrace
 Water Elevation: 5.3'
 Boring No.: TP-11

Precision Engineering, Inc.
 P.O. Box 422
 Las Cruces, NM 88004
 505-523-7674

File #: 05-038
 Site: Bloomfield
 Giant Refining
 Elevation: EXISTING
 Date: 4/5/2005

Log of Test Borings

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	MATERIAL CHARACTERISTICS (MOISTURE, CONDITION, COLOR, ETC.)	%M	LL	PI	CLASS.
	0.0-2.0		/////// /////// ///////		Clay, Brown, Moist, Gravel, Cobbles				
	2.0-3.5		***//*** ***//*** ***//***	<u>2.5</u>	Sand, Clayey, Brown, Moist, Gravel, Cobbles				
	3.5-5.0		***_*** ***_*** ***_***	<u>5.0</u>	Sand, Silty, Brown, Damp, Gravel, Cobbles				
	5.0-9.5		*****		Sand, Fine to Coarse, Tan, Damp, Wet				
	5.3'		***** ***** ***** ***** ***** *****	<u>7.5</u>	Water				
	9.5			<u>10.0</u>	TD				
				<u>15.0</u>	Set 2" Well @ 9.5' 5' of Screen, 5' of Riser Top of Sand 3.5' Top of Bentonite 1.4'				
				<u>20.0</u>					

SIZE & TYPE OF BORING: 4 1/4" ID HOLLOW STEMMED AUGER

LOGGED BY: KMM

Sheet: 4 OF 5
 Bore Point: RiverTerrace
 Water Elevation: 7.5'
 Boring No.: TP-12

Precision Engineering, Inc.
 P.O. Box 422
 Las Cruces, NM 88004
 505-523-7674

File #: 05-038
 Site: Bloomfield
 Giant Refining
 Elevation: EXISTING
 Date: 4/5/2005

Log of Test Borings

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	MATERIAL CHARACTERISTICS (MOISTURE, CONDITION, COLOR, ETC.)	%M	LL	PI	CLASS.
	0.0-3.0		***_*** ***_*** ***_*** ***_*** ***_***	<u>2.5</u>	<u>Sand</u> , Very Fine to Fine, Slightly Silty, Brown, Gravel, Cobbles, Moist				
	3.0-4.5		////**// ////**// ////**//		<u>Clay</u> , Sandy, Very Fine, Brown, Some Gravel/ Cobbles, Moist				
	4.5-9.0		***//*** ***//*** ***//*** ***//*** ***//*** ***//*** ***//***	<u>5.0</u> <u>7.5</u>	<u>Sand</u> , Very Fine to Fine, Clayey, Brown, Moist, Some Gravel				
	9.0-13.0		***** ***** ***** ***** ***** ***** ***** ***** ***** *****	<u>10.0</u>	Water <u>Sand</u> , Fine to Coarse, Tan, Water Bearing				
	13.0			<u>15.0</u> <u>20.0</u>	TD Set 2" Well @ 12.0' 5' of Screen, 8' of Riser Top of Sand 5'2" Top of Bentonite 4'2"				
SIZE & TYPE OF BORING: 4 1/4" ID HOLLOW STEMMED AUGER						LOGGED BY: KMM			

Sheet: 5 OF 5

Bore Point: River Terrace

Water Elevation: 6.0'

Boring No.: TP-13

Precision Engineering, Inc.

P.O. Box 422

Las Cruces, NM 88004

505-523-7674

File #: 05-038

Site: Bloomfield

Giant Refining

Elevation: EXISTING

Date: 4/5/2005

Log of Test Borings

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	MATERIAL CHARACTERISTICS (MOISTURE, CONDITION, COLOR, ETC.)	%M	LL	PI	CLASS.
	0.0-1.5		*-----*		Silt, Sandy, Very Fine to Fine, Brown, Moist, Gravel, Cobbles				
	1.5-8.5		***//*** ***//*** ***//*** ***//*** ***//*** ***//*** ***//*** ***//*** ***//*** ***//***	<u>2.5</u> <u>5.0</u>	Sand, Very Fine, Clayey, Brown, Moist, Gravel, Cobbles				
	6.0		***//*** ***//*** ***//*** ***//***	<u>7.5</u>	Water Level 6.0'				
	8.5-14.0		///////// ///////// ///////// ///////// ///////// ///////// ///////// ///////// ///////// ///////// ///////// ///////// ///////// ///////// /////////	<u>10.0</u>	Clay, Grey/Black, Moist, No Hydrocarbon Odor				
	14.0			<u>15.0</u>	TD Set 2" Well @ 14.5' 10' of Screen, 5' of Riser Top of Sand 2.5' Top of Bentonite 1.5'				
				<u>20.0</u>					
SIZE & TYPE OF BORING: 4 1/4" ID HOLLOW STEMMED AUGER					LOGGED BY: KMM				

COVER LETTER

April 19, 2005

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

RE: River Terrace Investigation TP9-TP13

Order No.: 0504087

Dear Cindy Hurtado:

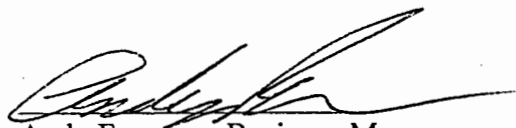
Hall Environmental Analysis Laboratory received 5 samples on 4/8/2005 for the analyses presented in the following report.

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: 19-Apr-05

CLIENT: San Juan Refining

Client Sample ID: TP-9

Lab Order: 0504087

Collection Date: 4/7/2005 2:00:00 PM

Project: River Terrace Investigation TP9-TP13

Lab ID: 0504087-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/13/2005 8:22:05 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/13/2005 8:22:05 AM
Surr: DNOP	113	58-140		%REC	1	4/13/2005 8:22:05 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	0.67	0.050		mg/L	1	4/8/2005 11:26:46 PM
Surr: BFB	103	78.3-120		%REC	1	4/8/2005 11:26:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	4/8/2005 11:26:46 PM
Benzene	3.3	0.50		µg/L	1	4/8/2005 11:26:46 PM
Toluene	5.0	0.50		µg/L	1	4/8/2005 11:26:46 PM
Ethylbenzene	7.0	0.50		µg/L	1	4/8/2005 11:26:46 PM
Xylenes, Total	22	0.50		µg/L	1	4/8/2005 11:26:46 PM
Surr: 4-Bromofluorobenzene	116	83.3-121		%REC	1	4/8/2005 11:26:46 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 19-Apr-05

CLIENT: San Juan Refining
Lab Order: 0504087
Project: River Terrace Investigation TP9-TP13
Lab ID: 0504087-02

Client Sample ID: TP-10
Collection Date: 4/7/2005 2:20:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/13/2005 9:22:37 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/13/2005 9:22:37 AM
Surr: DNOP	90.4	58-140		%REC	1	4/13/2005 9:22:37 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/8/2005 11:56:47 PM
Surr: BFB	101	78.3-120		%REC	1	4/8/2005 11:56:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	4/11/2005 1:01:27 PM
Benzene	ND	0.50		µg/L	1	4/11/2005 1:01:27 PM
Toluene	ND	0.50		µg/L	1	4/11/2005 1:01:27 PM
Ethylbenzene	ND	0.50		µg/L	1	4/11/2005 1:01:27 PM
Xylenes, Total	0.56	0.50		µg/L	1	4/11/2005 1:01:27 PM
Surr: 4-Bromofluorobenzene	98.6	83.3-121		%REC	1	4/11/2005 1:01:27 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: 19-Apr-05

CLIENT: San Juan Refining

Client Sample ID: TP-11

Lab Order: 0504087

Collection Date: 4/7/2005 1:00:00 PM

Project: River Terrace Investigation TP9-TP13

Lab ID: 0504087-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/13/2005 9:52:33 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/13/2005 9:52:33 AM
Surr: DNOP	124	58-140		%REC	1	4/13/2005 9:52:33 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	0.082	0.050		mg/L	1	4/9/2005 12:26:49 AM
Surr: BFB	101	78.3-120		%REC	1	4/9/2005 12:26:49 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	4/9/2005 12:26:49 AM
Benzene	1.5	0.50		µg/L	1	4/9/2005 12:26:49 AM
Toluene	1.6	0.50		µg/L	1	4/9/2005 12:26:49 AM
Ethylbenzene	ND	0.50		µg/L	1	4/9/2005 12:26:49 AM
Xylenes, Total	2.7	0.50		µg/L	1	4/9/2005 12:26:49 AM
Surr: 4-Bromofluorobenzene	103	83.3-121		%REC	1	4/9/2005 12:26:49 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: 19-Apr-05

CLIENT: San Juan Refining
 Lab Order: 0504087
 Project: River Terrace Investigation TP9-TP13
 Lab ID: 0504087-04

Client Sample ID: TP-12
 Collection Date: 4/7/2005 1:20:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/13/2005 10:22:31 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/13/2005 10:22:31 AM
Surr: DNOP	112	58-140		%REC	1	4/13/2005 10:22:31 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/9/2005 12:56:46 AM
Surr: BFB	99.2	78.3-120		%REC	1	4/9/2005 12:56:46 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	4/9/2005 12:56:46 AM
Benzene	0.75	0.50		µg/L	1	4/9/2005 12:56:46 AM
Toluene	0.80	0.50		µg/L	1	4/9/2005 12:56:46 AM
Ethylbenzene	ND	0.50		µg/L	1	4/9/2005 12:56:46 AM
Xylenes, Total	1.0	0.50		µg/L	1	4/9/2005 12:56:46 AM
Surr: 4-Bromofluorobenzene	103	83.3-121		%REC	1	4/9/2005 12:56:46 AM

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

Hall Environmental Analysis Laboratory

Date: 19-Apr-05

CLIENT: San Juan Refining

Client Sample ID: TP-13

Lab Order: 0504087

Collection Date: 4/7/2005 2:45:00 PM

Project: River Terrace Investigation TP9-TP13

Lab ID: 0504087-05

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/13/2005 10:52:24 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/13/2005 10:52:24 AM
Surr: DNOP	128	58-140		%REC	1	4/13/2005 10:52:24 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/9/2005 1:26:44 AM
Surr: BFB	102	78.3-120		%REC	1	4/9/2005 1:26:44 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	4/9/2005 1:26:44 AM
Benzene	2.3	0.50		µg/L	1	4/9/2005 1:26:44 AM
Toluene	2.2	0.50		µg/L	1	4/9/2005 1:26:44 AM
Ethylbenzene	0.55	0.50		µg/L	1	4/9/2005 1:26:44 AM
Xylenes, Total	3.6	0.50		µg/L	1	4/9/2005 1:26:44 AM
Surr: 4-Bromofluorobenzene	101	83.3-121		%REC	1	4/9/2005 1:26:44 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: 19-Apr-05

CLIENT: San Juan Refining
 Work Order: 0504087
 Project: River Terrace Investigation TP9-TP13

QC SUMMARY REPORT
 Method Blank

Sample ID	Batch ID	Test Code	Units	Analysis Date	Prep Date						
MB-7741	7741	SW8015	mg/L	4/13/2005 5:23:14 AM	4/11/2005						
Client ID:		Run ID:	FID(17A) 2_050412A	SeqNo:	351425						
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	1.079	0	1	0	108	58	140	0			
Sample ID	Batch ID	Test Code	Units	Analysis Date	Prep Date						
Reagent Blank 5m	R15047	SW8015	mg/L	4/8/2005 8:25:08 AM							
Client ID:		Run ID:	PIDFID_050408A	SeqNo:	350502						
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	19.39	0	20	0	96.9	78.3	120	0			
Sample ID	Batch ID	Test Code	Units	Analysis Date	Prep Date						
Reagent Blank 5m	R15061	SW8015	mg/L	4/11/2005 9:28:42 AM							
Client ID:		Run ID:	PIDFID_050411A	SeqNo:	350886						
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	18.94	0	20	0	94.7	78.3	120	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: 0504087
Project: River Terrace Investigation TP9-TP13

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R15047	Test Code: SW8021	Units: µg/L	Analysis Date	4/8/2005 8:25:08 AM	Prep Date					
Client ID:			Run ID: PIDFID_050408A			SeqNo: 350499						
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	19.22	0	20	0	96.1	83.3	121	0				

Sample ID	Reagent Blank 5m	Batch ID: R15061	Test Code: SW8021	Units: µg/L	Analysis Date	4/11/2005 9:28:42 AM	Prep Date					
Client ID:			Run ID: PIDFID_050411A			SeqNo: 350885						
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	19.9	0	20	0	99.5	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

Hall Environmental Analysis Laboratory

Date: 19-Apr-05

CLIENT: San Juan Refining
 Work Order: 0504087
 Project: River Terrace Investigation TP9-TP13

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0504087-02a ms	Batch ID:	R15047	Test Code:	SW8015	Units:	mg/L	Analysis Date	4/9/2005 2:56:36 AM	Prep Date	
Client ID:	TP-10	Run ID:	PIDFID_050408A	SeqNo:	350590						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5284	0.05	0.5	0.0158	103	82.6	114	0			
Surr: BFB	24.25	0	25	0	97.0	78.3	120	0			

Sample ID	0504087-02a msd	Batch ID:	R15047	Test Code:	SW8015	Units:	mg/L	Analysis Date	4/9/2005 3:26:38 AM	Prep Date	
Client ID:	TP-10	Run ID:	PIDFID_050408A	SeqNo:	350593						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4692	0.05	0.5	0.0158	90.7	82.6	114	0.5284	11.9	15	
Surr: BFB	23.55	0	25	0	94.2	78.3	120	24.25	2.95	0	

Sample ID	0504087-01a ms	Batch ID:	R15047	Test Code:	SW8021	Units:	µg/L	Analysis Date	4/9/2005 1:56:44 AM	Prep Date	
Client ID:	TP-9	Run ID:	PIDFID_050408A	SeqNo:	350560						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	28.94	2.5	40	0	72.3	64.5	133	0			
Benzene	24.18	0.5	20	3.293	104	88.7	114	0			
Toluene	25.66	0.5	20	4.956	104	89.3	112	0			
Ethylbenzene	27.64	0.5	20	7.037	103	88.6	113	0			
Xylenes, Total	85.02	0.5	60	22.34	104	89.4	112	0			
Surr: 4-Bromofluorobenzene	25.41	0	24	0	106	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

8/12

CLIENT: San Juan Refining
Work Order: 0504087
Project: River Terrace Investigation TP9-TP13

QC SUMMARY REPORT
 Sample Matrix Spike Duplicate

Sample ID	0504087-01a msd	Batch ID:	R15047	Test Code:	SW8021	Units:	µg/L	Analysis Date	4/9/2005 2:26:39 AM	Prep Date	
Client ID:	TP-9	Run ID:	PIDFID_050408A	SeqNo:	350570						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	28.3	2.5	40	0	70.7	64.5	133	28.94	2.25	28	
Benzene	23.47	0.5	20	3.293	101	88.7	114	24.18	3.00	27	
Toluene	25.25	0.5	20	4.956	101	89.3	112	25.66	1.61	19	
Ethylbenzene	27.72	0.5	20	7.037	103	88.6	113	27.64	0.284	10	
Xylenes, Total	82.62	0.5	60	22.34	100	89.4	112	85.02	2.86	13	
Surr: 4-Bromofluorobenzene	24.62	0	24	0	103	83.3	121	25.41	3.15	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: 19-Apr-05

CLIENT: San Juan Refining
 Work Order: 0504087
 Project: River Terrace Investigation TP9-TP13

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-7741	Batch ID: 7741	Test Code: SW8015	Units: mg/L	Analysis Date	4/13/2005 5:53:08 AM	Prep Date	4/11/2005				
Client ID:			Run ID: FID(17A) 2_050412A		SeqNo:	351426						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		6.687	1	5	0	134	81.2	149	0			

Sample ID	LCSD-7741	Batch ID: 7741	Test Code: SW8015	Units: mg/L	Analysis Date	4/13/2005 5:12:01 PM	Prep Date	4/11/2005				
Client ID:			Run ID: FID(17A) 2_050412A		SeqNo:	351565						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		5.592	1	5	0	112	81.2	149	6.687	17.8	23	

Sample ID	GRO lcs 2.5ug	Batch ID: R15047	Test Code: SW8015	Units: mg/L	Analysis Date	4/9/2005 3:56:36 AM	Prep Date					
Client ID:			Run ID: PIDFID_050408A		SeqNo:	350595						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.4986	0.05	0.5	0	99.7	82.6	114	0			

Sample ID	GRO lcs 2.5ug	Batch ID: R15061	Test Code: SW8015	Units: mg/L	Analysis Date	4/12/2005 1:05:11 AM	Prep Date					
Client ID:			Run ID: PIDFID_050411A		SeqNo:	350892						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.4896	0.05	0.5	0	97.9	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

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CLIENT: San Juan Refining
Work Order: 0504087
Project: River Terrace Investigation TP9-TP13

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID	BTEX Ics 100ng	Batch ID: R15047	Test Code: SW8021	Units: µg/L	Analysis Date	4/8/2005 7:55:35 PM	Prep Date				
Client ID:	Run ID: PIDFID_050408A			SeqNo:	350578						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	36.12	2.5	40	0	90.3	64.5	133	0			
Benzene	19.64	0.5	20	0	98.2	88.7	114	0			
Toluene	19.71	0.5	20	0	98.6	89.3	112	0			
Ethylbenzene	20.82	0.5	20	0	104	88.6	113	0			
Xylenes, Total	58.33	0.5	60	0	97.2	89.4	112	0			

Sample ID	BTEX Ics 100ng	Batch ID: R15061	Test Code: SW8021	Units: µg/L	Analysis Date	4/11/2005 11:04:48 PM	Prep Date				
Client ID:	Run ID: PIDFID_050411A			SeqNo:	350889						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	38.6	2.5	40	0	96.5	64.5	133	0			
Benzene	21.07	0.5	20	0	105	88.7	114	0			
Toluene	20.71	0.5	20	0	104	89.3	112	0			
Ethylbenzene	22.01	0.5	20	0	110	88.6	113	0			
Xylenes, Total	62.29	0.5	60	0	104	89.4	112	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
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Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

4/8/2005

Work Order Number 0504087

Received by GLS

Checklist completed by

Signature [Handwritten Signature] Date 4-8-05

Matrix

Carrier name UPS

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped
- Custody seals intact on sample bottles? Yes No N/A
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Water - VOA vials have zero headspace? No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? Yes No N/A
- Container/Temp Blank temperature? 3° 4° C ± 2 Acceptable
If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

Client: SAN Juan Refining

Address: #50 Rd 4990
Bloomfield, NM
87413

Phone #: 505-632-4161

Fax #: 505-632-3911

QA/QC Package:
Std Level 4

Other: _____

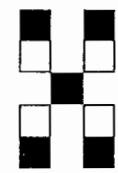
Project Name: River Terrace Investigation
TP9 - TP13

Project #: _____

Project Manager: _____

Sampler: Cindy Hurtado/Angela Folk

Sample Temperature: 3



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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.	BTEX + MTBE + TPH's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles or He (Y or N)	
					HgCl ₂	HNO ₃															
4/07/05	2pm	H ₂ O	TP-9	4-VOA	X		05040876	X		X											
	2:20pm		TP-10	4-VOA	X			X		X											
	1pm		TP-11	4-VOA	X			X		X											
	1:20pm		TP-12	4-VOA	X			X		X											
	2:45pm		TP-13	4-VOA	X			X		X											

Date: 4/07/05 Time: 3:30pm Relinquished By: (Signature) Cindy Hurtado

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

Received By: (Signature) [Signature] 4/8/05 12:55

Received By: (Signature) _____

Remarks: _____