

GW - 32

**GENERAL
CORRESPONDENCE**

YEAR(S):

1/06 → 10/05

Chavez, Carl J, EMNRD

From: Steve Morris [smorris@giant.com]
Sent: Thursday, January 12, 2006 9:38 AM
To: Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV; Foust, Denny, EMNRD; Ed Riege; Monzeglio, Hope, NMENV; Johnny Sanchez; Steve Morris; Price, Wayne, EMNRD
Subject: Ciniza Weekly Update Week 1/13/05



HALL7199_AL2EP1HALL7290_OAPIS1HALL7297_OAPIS1
121205.pdf (227... 21905.pdf (374 ... 21305.pdf (355 ...

- 1) The NAPIS continues to be run on the west bay. No problems noted.
- 2) Work is continuing on the east bay of the NAPIS and is expected to be complete no later than Tuesday Jan. 17, 2005. Problems with internal mechanical components in the east bay made it necessary to delay putting it back in service.
- 3) Fuhs Const. plans to be on site the week of Jan. 16, 2005 to start clean up of the Aeration Lagoons and Evaporation Ponds as needed.
- 4) Attached are the analytical results received to date.

<<HALL7199_AL2EP1121205.pdf>> <<HALL7290_OAPIS121905.pdf>> <<HALL7297_OAPIS121305.pdf>>

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COVER LETTER

January 04, 2006

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 12/12/2005

Order No.: 0512189

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 12/15/2005 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,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682
ORELAP Lab # NM100001



Hall Environmental Analysis Laboratory

Date: 04-Jan-06

CLIENT: Giant Refining Co
Project: AL-2 to EP-1 Week of 12/12/2005
Lab Order: 0512189

CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable due to sample dilution or matrix interferences.

Hall Environmental Analysis Laboratory

Date: 04-Jan-06

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0512189

Collection Date: 12/13/2005 10:00:00 AM

Project: AL-2 to EP-1 Week of 12/12/2005

Lab ID: 0512189-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	3300	75		mg/L	25	12/21/2005 5:49:02 AM
Motor Oil Range Organics (MRO)	ND	380		mg/L	25	12/21/2005 5:49:02 AM
Surr: DNOP	0	58-140	S	%REC	25	12/21/2005 5:49:02 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	2.5	1.0		mg/L	20	12/22/2005 6:04:10 PM
Surr: BFB	136	79.7-118	S	%REC	20	12/22/2005 6:04:10 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	97	50		µg/L	20	12/22/2005 6:04:10 PM
Benzene	34	20		µg/L	20	12/22/2005 6:04:10 PM
Toluene	120	20		µg/L	20	12/22/2005 6:04:10 PM
Ethylbenzene	33	20		µg/L	20	12/22/2005 6:04:10 PM
Xylenes, Total	290	60		µg/L	20	12/22/2005 6:04:10 PM
Surr: 4-Bromofluorobenzene	115	82.2-119		%REC	20	12/22/2005 6:04:10 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	0.0047	0.00020		mg/L	1	1/3/2006
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Antimony	ND	0.010		mg/L	1	12/27/2005 1:59:36 PM
Arsenic	ND	0.020		mg/L	1	12/27/2005 1:59:36 PM
Beryllium	ND	0.0030		mg/L	1	12/27/2005 1:59:36 PM
Cadmium	ND	0.0020		mg/L	1	12/27/2005 1:59:36 PM
Chromium	0.014	0.0060		mg/L	1	12/27/2005 1:59:36 PM
Copper	0.060	0.0060		mg/L	1	12/27/2005 1:59:36 PM
Lead	0.018	0.0050		mg/L	1	12/27/2005 1:59:36 PM
Nickel	0.031	0.010		mg/L	1	12/27/2005 1:59:36 PM
Selenium	ND	0.050		mg/L	1	12/27/2005 1:59:36 PM
Silver	ND	0.0050		mg/L	1	12/27/2005 1:59:36 PM
Thallium	ND	0.050		mg/L	1	12/27/2005 1:59:36 PM
Zinc	3.8	0.50		mg/L	10	12/27/2005 3:31:49 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: 04-Jan-06

CLIENT: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
 Method Blank

Sample ID: MB-9435	Batch ID: 9435	Test Code: SW8015	Units: mg/L	Analysis Date: 12/20/2005 1:01:49 PM	Prep Date: 12/20/2005
Client ID:	Run ID: FID(17A) 2_051219A	SeqNo: 434124			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND	1			
Motor Oil Range Organics (MRO)	ND	5			
Surr: DNOP	1,202	0	1	0	120 58 140 0

Sample ID: Reagent Blank 5m	Batch ID: R17704	Test Code: SW8015	Units: mg/L	Analysis Date: 12/22/2005 9:00:09 AM	Prep Date:
Client ID:	Run ID: PIDFID_051222A	SeqNo: 435099			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	ND	0.05			
Surr: BFB	21.79	0	20	0	109 79.7 118 0

Sample ID: Reagent Blank 5m	Batch ID: R17704	Test Code: SW8021	Units: µg/L	Analysis Date: 12/22/2005 9:00:09 AM	Prep Date:
Client ID:	Run ID: PIDFID_051222A	SeqNo: 435104			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Methyl tert-butyl ether (MTBE)	ND	2.5			
Benzene	ND	1			
Toluene	ND	1			
Ethylbenzene	ND	1			
Xylenes, Total	ND	3			
Surr: 4-Bromofluorobenzene	20.79	0	20	0	104 82.2 119 0

Sample ID: MB-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:	Run ID: MI-LA254_060103A	SeqNo: 437349			
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 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: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

Sample ID: MB-9422	Batch ID: 9422	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/27/2005 1:35:00 PM	Prep Date: 12/16/2005
Client ID:	Run ID: ICP_051227A	PQL	SPK value	SeqNo: 435745	
Analyte	Result	PQL	SPK Ref Val	LowLimit	HighLimit
Antimony	ND	0.01			
Arsenic	ND	0.02			
Beryllium	ND	0.003			
Cadmium	0.0003774	0.002			
Chromium	ND	0.006			
Copper	ND	0.006			
Lead	ND	0.005			
Nickel	ND	0.01			
Selenium	ND	0.05			
Silver	0.0005253	0.005			
Thallium	ND	0.05			
Zinc	0.004124	0.05			
				%RPD	RPDLimit
					Qual

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

Hall Environmental Analysis Laboratory

Date: 04-Jan-06

CLIENT:

Giant Refining Co

Work Order:

0512189

Project:

AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9435	Batch ID: 9435	Test Code: SW8015	Units: mg/L	Analysis Date: 12/20/2005 1:34:36 PM	Prep Date: 12/20/2005
Client ID:	Run ID:	FID(17A) 2_051219A	SeqNo: 434125		
Analyte	Result	PQL	SPK value	SPK Ref Val	Qual
Diesel Range Organics (DRO)	6.334	1	5	0	
			%REC	LowLimit	HighLimit
			127	81.2	149
				%RPD	RPDLimit
					0
Sample ID: LCSO-9435	Batch ID: 9435	Test Code: SW8015	Units: mg/L	Analysis Date: 12/20/2005 2:07:19 PM	Prep Date: 12/20/2005
Client ID:	Run ID:	FID(17A) 2_051219A	SeqNo: 434161		
Analyte	Result	PQL	SPK value	SPK Ref Val	Qual
Diesel Range Organics (DRO)	6.393	1	5	0	
			%REC	LowLimit	HighLimit
			128	81.2	149
				%RPD	RPDLimit
					0.915
					23
Sample ID: GRO lcs 2.5ug	Batch ID: R17704	Test Code: SW8015	Units: mg/L	Analysis Date: 12/22/2005 10:30:33 A	Prep Date:
Client ID:	Run ID:	PIDFID_051222A	SeqNo: 435100		
Analyte	Result	PQL	SPK value	SPK Ref Val	Qual
Gasoline Range Organics (GRO)	0.5288	0.05	0.5	0	
			%REC	LowLimit	HighLimit
			106	82.6	114
				%RPD	RPDLimit
					0
Sample ID: GRO lcsd 2.5ug	Batch ID: R17704	Test Code: SW8015	Units: mg/L	Analysis Date: 12/22/2005 11:00:45 A	Prep Date:
Client ID:	Run ID:	PIDFID_051222A	SeqNo: 435101		
Analyte	Result	PQL	SPK value	SPK Ref Val	Qual
Gasoline Range Organics (GRO)	0.5524	0.05	0.5	0	
			%REC	LowLimit	HighLimit
			110	82.6	114
				%RPD	RPDLimit
					4.37
					8.39

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

CLIENT: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID: BTEX Ics 100ng	Batch ID: R17704	Test Code: SW8021	Units: µg/L	Analysis Date: 12/22/2005 11:30:58 A	Prep Date:
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435105	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Methyl tert-butyl ether (MTBE)	22.01	2.5	20	0	110 64.5 133 0
Benzene	19.71	1	20	0	98.5 88.5 114 0
Toluene	19.68	1	20	0	98.4 87.2 114 0
Ethylbenzene	20.63	1	20	0	103 88.6 113 0
Xylenes, Total	40.68	3	40	0	102 83.3 114 0

Sample ID: LCS-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:		Run ID: MI-LA254_060103A		SeqNo: 437350	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.004489	0.0002	0.005	0	89.8 80 120 0

Sample ID: LCSD-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:		Run ID: MI-LA254_060103A		SeqNo: 437370	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.004712	0.0002	0.005	0	94.2 80 120 0.004489 4.84 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: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

Sample ID: LCS-9422	Batch ID: 9422	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/27/2005 1:37:28 PM	Prep Date: 12/16/2005						
Client ID:	Run ID:	ICP_051227A		SeqNo: 435746							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4819	0.01	0.5	0	96.4	80	120	0			
Arsenic	0.4754	0.02	0.5	0	95.1	80	120	0			
Beryllium	0.4948	0.003	0.5	0	99.0	80	120	0			
Cadmium	0.4607	0.002	0.5	0.0003774	92.1	80	120	0			
Chromium	0.4754	0.006	0.5	0	95.1	80	120	0			
Copper	0.4801	0.006	0.5	0	96.0	80	120	0			
Lead	0.4618	0.005	0.5	0	92.4	80	120	0			
Nickel	0.4483	0.01	0.5	0	89.7	80	120	0			
Selenium	0.4319	0.05	0.5	0	86.4	80	120	0			
Silver	0.4736	0.005	0.5	0.0005253	94.6	80	120	0			
Thallium	0.4642	0.05	0.5	0	92.8	80	120	0			
Zinc	0.4481	0.05	0.5	0.004124	88.8	80	120	0			

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

CLIENT: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

Sample ID: LCSD-9422		Batch ID: 9422		Test Code: SW6010A		Units: mg/L		Analysis Date: 12/27/2005 1:40:09 PM		Prep Date: 12/16/2005	
Client ID:		Run ID: ICP_051227A		SeqNo: 435747							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4748	0.01	0.5	0	95.0	80	120	0.4819	1.47	20	
Arsenic	0.4802	0.02	0.5	0	96.0	80	120	0.4754	1.01	20	
Beryllium	0.485	0.003	0.5	0	97.0	80	120	0.4948	2.01	20	
Cadmium	0.4589	0.002	0.5	0.0003774	91.7	80	120	0.4607	0.393	20	
Chromium	0.4709	0.006	0.5	0	94.2	80	120	0.4754	0.964	20	
Copper	0.4763	0.006	0.5	0	95.3	80	120	0.4801	0.801	20	
Lead	0.46	0.005	0.5	0	92.0	80	120	0.4618	0.393	20	
Nickel	0.4473	0.01	0.5	0	89.5	80	120	0.4483	0.223	20	
Selenium	0.4401	0.05	0.5	0	88.0	80	120	0.4319	1.89	20	
Silver	0.4707	0.005	0.5	0.0005253	94.0	80	120	0.4736	0.607	20	
Thallium	0.4632	0.05	0.5	0	92.6	80	120	0.4642	0.220	20	
Zinc	0.4437	0.05	0.5	0.004124	87.9	80	120	0.4481	0.997	20	

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

12/15/2005

Work Order Number 0512189

Received by AT

Checklist completed by

Signature

Date

12/15/05

Matrix

Carrier name Client drop-off

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

Container/Temp Blank temperature?

2°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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



ANALYSIS REQUEST

Air Bubbles or Headspace (Y or N)

CHAIN-OF-CUSTODY RECORD					QA/QC Package:		
					Std ☐	Level 4 ☐	Other:
Client: Giant Refining					Project Name: AL-2 to EP-1		
Company: Cintra					Week of: 12-12-2005		
Address: Route 3, Box 7					Project #:		
Gallup, NM 87301					Project Manager:		
					Steve Morris		
Phone #: 505-722-3833					Sampler: Steve Morris		
Fax #: 505-722-0210					Sample Temperature: 2		
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HNO ₃	
12-13-05	10:00 AM	H ₂ O	AL-2 to EP-1				051289-1
Date: 12-14-05	Time: 0900A	Relinquished By: (Signature) <i>[Signature]</i>		Received By: (Signature) <i>[Signature]</i>		12/15/05	
Date:	Time:	Relinquished By: (Signature)		Received By: (Signature)		1325-	



COVER LETTER

January 04, 2006

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 12/12/2005

Order No.: 0512189

Dear Steve Morris:

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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

AZ license # AZ0682
ORELAP Lab # NM100001



Hall Environmental Analysis Laboratory

Date: 04-Jun-06

CLIENT: Giant Refining Co

Project: AL-2 to EP-1 Week of 12/12/2005

Lab Order: 0512189

CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable due to sample dilution or matrix interferences.

Hall Environmental Analysis Laboratory

Date: 04-Jan-06

CLIENT: Giant Refining Co
Lab Order: 0512189
Project: AL-2 to EP-1 Week of 12/12/2005
Lab ID: 0512189-01

Client Sample ID: AL-2 to EP-1
Collection Date: 12/13/2005 10:00:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						
Diesel Range Organics (DRO)	3300	75		mg/L	25	12/21/2005 5:49:02 AM
Motor Oil Range Organics (MRO)	ND	380		mg/L	25	12/21/2005 5:49:02 AM
Surr: DNOP	0	58-140	S	%REC	25	12/21/2005 5:49:02 AM
EPA METHOD 8015B: GASOLINE RANGE						
Gasoline Range Organics (GRO)	2.5	1.0		mg/L	20	12/22/2005 6:04:10 PM
Surr: BFB	136	79.7-118	S	%REC	20	12/22/2005 6:04:10 PM
EPA METHOD 8021B: VOLATILES						
Methyl tert-butyl ether (MTBE)	97	50		µg/L	20	12/22/2005 6:04:10 PM
Benzene	34	20		µg/L	20	12/22/2005 6:04:10 PM
Toluene	120	20		µg/L	20	12/22/2005 6:04:10 PM
Ethylbenzene	33	20		µg/L	20	12/22/2005 6:04:10 PM
Xylenes, Total	290	60		µg/L	20	12/22/2005 6:04:10 PM
Surr: 4-Bromofluorobenzene	115	82.2-119		%REC	20	12/22/2005 6:04:10 PM
EPA METHOD 7470: MERCURY						
Mercury	0.0047	0.00020		mg/L	1	1/3/2006
EPA 6010: TOTAL RECOVERABLE METALS						
Antimony	ND	0.010		mg/L	1	12/27/2005 1:59:36 PM
Arsenic	ND	0.020		mg/L	1	12/27/2005 1:59:36 PM
Beryllium	ND	0.0030		mg/L	1	12/27/2005 1:59:36 PM
Cadmium	ND	0.0020		mg/L	1	12/27/2005 1:59:36 PM
Chromium	0.014	0.0060		mg/L	1	12/27/2005 1:59:36 PM
Copper	0.060	0.0060		mg/L	1	12/27/2005 1:59:36 PM
Lead	0.018	0.0050		mg/L	1	12/27/2005 1:59:36 PM
Nickel	0.031	0.010		mg/L	1	12/27/2005 1:59:36 PM
Selenium	ND	0.050		mg/L	1	12/27/2005 1:59:36 PM
Silver	ND	0.0050		mg/L	1	12/27/2005 1:59:36 PM
Thallium	ND	0.050		mg/L	1	12/27/2005 1:59:36 PM
Zinc	3.8	0.50		mg/L	10	12/27/2005 3:31:49 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: 04-Jan-06

CLIENT: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT

Method Blank

Sample ID: MB-9435	Batch ID: 9435	Test Code: SW8015	Units: mg/L	Analysis Date: 12/20/2005 1:01:49 PM	Prep Date: 12/20/2005						
Client ID:		Run ID: FID(17A) 2_051219A		SeqNo: 434124							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.202	0	1	0	120	58	140	0			

Sample ID: Reagent Blank 5m	Batch ID: R17704	Test Code: SW8015	Units: mg/L	Analysis Date: 12/22/2005 9:00:09 AM	Prep Date:						
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435099							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	21.79	0	20	0	109	79.7	118	0			

Sample ID: Reagent Blank 5m	Batch ID: R17704	Test Code: SW8021	Units: µg/L	Analysis Date: 12/22/2005 9:00:09 AM	Prep Date:						
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435104							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Xylenes, Total	ND	3									
Surr: 4-Bromofluorobenzene	20.79	0	20	0	104	82.2	119	0			

Sample ID: MB-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006						
Client ID:		Run ID: MI-LA254_060103A		SeqNo: 437349							
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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

Sample ID: MB-9422	Batch ID: 9422	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/27/2005 1:35:00 PM	Prep Date: 12/16/2005
Client ID:	Run ID: ICP_051227A	PQL	SPK value	SeqNo: 435745	
Analyte	Result	%REC	LowLimit	HighLimit	RPD Ref Val
Antimony	ND				
Arsenic	ND				
Beryllium	ND				
Cadmium	0.0003774				
Chromium	ND				
Copper	ND				
Lead	ND				
Nickel	ND				
Selenium	ND				
Silver	0.0005253				
Thallium	ND				
Zinc	0.004124				

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: 04-Jan-06

CLIENT:

Giant Refining Co

Work Order:

0512189

Project:

AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

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

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

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

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

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

CLIENT: Giant Refining Co

Work Order: 0512189

Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: BTEX Ics 100ng	Batch ID: R17704	Test Code: SW8021	Units: µg/L	Analysis Date: 12/22/2005 11:30:58 A	Prep Date:
Client ID:	Run ID: PIDFID_051222A	PQL	SPK value	SeqNo: 435105	
Analyte	Result			LowLimit	HighLimit
Methyl tert-butyl ether (MTBE)	22.01	2.5	20	0	133
Benzene	19.71	1	20	0	114
Toluene	19.68	1	20	0	114
Ethylbenzene	20.63	1	20	0	113
Xylenes, Total	40.68	3	40	0	114
				%REC	RPD Ref Val
				110	0
				98.5	0
				98.4	0
				103	0
				102	0
				%RPD	RPDLimit
					Qual

Sample ID: LCS-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:	Run ID: MI-LA254_060103A	PQL	SPK value	SeqNo: 437350	
Analyte	Result			LowLimit	HighLimit
Mercury	0.004489	0.0002	0.005	0	120
				%REC	RPD Ref Val
				89.8	0
				%RPD	RPDLimit
					Qual

Sample ID: LCSD-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:	Run ID: MI-LA254_060103A	PQL	SPK value	SeqNo: 437370	
Analyte	Result			LowLimit	HighLimit
Mercury	0.004712	0.0002	0.005	0	120
				%REC	RPD Ref Val
				94.2	0.004489
				%RPD	RPDLimit
				4.84	0
					Qual

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

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

B - Analyte detected in the associated Method Blank
Z

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co

Work Order: 0512189

Project: AL-2 to EP-1 Week of 12/12/2005

Sample ID: LCS-9422		Batch ID: 9422		Test Code: SW6010A		Units: mg/L		Analysis Date: 12/27/2005 1:37:28 PM		Prep Date: 12/16/2005	
Client ID:		Run ID: ICP_051227A		SeqNo: 435746							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4819	0.01	0.5	0	96.4	80	120	0			
Arsenic	0.4754	0.02	0.5	0	95.1	80	120	0			
Beryllium	0.4948	0.003	0.5	0	99.0	80	120	0			
Cadmium	0.4607	0.002	0.5	0.0003774	92.1	80	120	0			
Chromium	0.4754	0.006	0.5	0	95.1	80	120	0			
Copper	0.4801	0.006	0.5	0	96.0	80	120	0			
Lead	0.4618	0.005	0.5	0	92.4	80	120	0			
Nickel	0.4483	0.01	0.5	0	89.7	80	120	0			
Selenium	0.4319	0.05	0.5	0	86.4	80	120	0			
Silver	0.4736	0.005	0.5	0.0005253	94.6	80	120	0			
Thallium	0.4642	0.05	0.5	0	92.8	80	120	0			
Zinc	0.4481	0.05	0.5	0.004124	88.8	80	120	0			

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

CLIENT: Giant Refining Co
Work Order: 0512189
Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

Sample ID: LCSD-9422	Batch ID: 9422	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/27/2005 1:40:09 PM	Prep Date: 12/16/2005							
Client ID:	Run ID: ICP_051227A	SeqNo: 435747										
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Limit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4748	0.01	0.5	0	95.0	80	120	120	0.4819	1.47	20	
Arsenic	0.4802	0.02	0.5	0	96.0	80	120	120	0.4754	1.01	20	
Beryllium	0.485	0.003	0.5	0	97.0	80	120	120	0.4948	2.01	20	
Cadmium	0.4589	0.002	0.5	0.0003774	91.7	80	120	120	0.4607	0.393	20	
Chromium	0.4709	0.006	0.5	0	94.2	80	120	120	0.4754	0.964	20	
Copper	0.4763	0.006	0.5	0	95.3	80	120	120	0.4801	0.801	20	
Lead	0.46	0.005	0.5	0	92.0	80	120	120	0.4618	0.393	20	
Nickel	0.4473	0.01	0.5	0	89.5	80	120	120	0.4483	0.223	20	
Selenium	0.4401	0.05	0.5	0	88.0	80	120	120	0.4319	1.89	20	
Silver	0.4707	0.005	0.5	0.0005253	94.0	80	120	120	0.4736	0.607	20	
Thallium	0.4632	0.05	0.5	0	92.6	80	120	120	0.4642	0.220	20	
Zinc	0.4437	0.05	0.5	0.004124	87.9	80	120	120	0.4481	0.997	20	

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

12/15/2005

Work Order Number 0512189

Received by AT

Checklist completed by

Signature

Date

12/15/05

Matrix

Carrier name Client drop-off

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

Container/Temp Blank temperature?

2°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

CHAIN-OF-CUSTODY RECORD					QA/QC Package:		
					Std ☐	Level 4 ☐	
					Other:		
Client: Grant Refining					Project Name: AL-2 to EP-1		
Company: Cintra					Week of 12-12-2005		
Address: Route 3, Box 7					Project #:		
Gallup, NM 87301					Project Manager:		
					Steve Morris		
Phone #: 505-722-3833					Sampler: Steve Morris		
Fax #: 505-722-0210					Sample Temperature: 2		
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl ₂ HNO ₃		HEAL No.
12-13-05	10:00 AM	H ₂ O	AL-2 to EP-1				051289-1
Date: 12-14-05	Time: 0900A	Relinquished By: (Signature) [Signature]		Received By: (Signature) [Signature]		12/15/05	
Date:	Time:	Relinquished By: (Signature)		Received By: (Signature)		1325-	



COVER LETTER

January 04, 2006

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 12/12/2005

Order No.: 0512189

Dear Steve Morris:

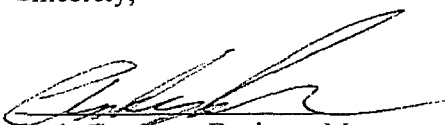
Hall Environmental Analysis Laboratory received 1 sample on 12/15/2005 for the analyses presented in the following report.

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

AZ license # AZ0682
ORELAP Lab # NM100001



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

Hall Environmental Analysis Laboratory

Date: 04-Jun-06

CLIENT: Giant Refining Co

Project: AL-2 to EP-1 Week of 12/12/2005

Lab Order: 0512189

CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable due to sample dilution or matrix interferences.

Hall Environmental Analysis Laboratory

Date: 04-Jan-06

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0512189

Collection Date: 12/13/2005 10:00:00 AM

Project: AL-2 to EP-1 Week of 12/12/2005

Lab ID: 0512189-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE Analyst: SCC						
Diesel Range Organics (DRO)	3300	75		mg/L	25	12/21/2005 5:49:02 AM
Motor Oil Range Organics (MRO)	ND	380		mg/L	25	12/21/2005 5:49:02 AM
Surr: DNOP	0	58-140	S	%REC	25	12/21/2005 5:49:02 AM
EPA METHOD 8015B: GASOLINE RANGE Analyst: NSB						
Gasoline Range Organics (GRO)	2.5	1.0		mg/L	20	12/22/2005 6:04:10 PM
Surr: BFB	136	79.7-118	S	%REC	20	12/22/2005 6:04:10 PM
EPA METHOD 8021B: VOLATILES Analyst: NSB						
Methyl tert-butyl ether (MTBE)	97	50		µg/L	20	12/22/2005 6:04:10 PM
Benzene	34	20		µg/L	20	12/22/2005 6:04:10 PM
Toluene	120	20		µg/L	20	12/22/2005 6:04:10 PM
Ethylbenzene	33	20		µg/L	20	12/22/2005 6:04:10 PM
Xylenes, Total	290	60		µg/L	20	12/22/2005 6:04:10 PM
Surr: 4-Bromofluorobenzene	115	82.2-119		%REC	20	12/22/2005 6:04:10 PM
EPA METHOD 7470: MERCURY Analyst: CMC						
Mercury	0.0047	0.00020		mg/L	1	1/3/2006
EPA 6010: TOTAL RECOVERABLE METALS Analyst: NMO						
Antimony	ND	0.010		mg/L	1	12/27/2005 1:59:36 PM
Arsenic	ND	0.020		mg/L	1	12/27/2005 1:59:36 PM
Beryllium	ND	0.0030		mg/L	1	12/27/2005 1:59:36 PM
Cadmium	ND	0.0020		mg/L	1	12/27/2005 1:59:36 PM
Chromium	0.014	0.0060		mg/L	1	12/27/2005 1:59:36 PM
Copper	0.060	0.0060		mg/L	1	12/27/2005 1:59:36 PM
Lead	0.018	0.0050		mg/L	1	12/27/2005 1:59:36 PM
Nickel	0.031	0.010		mg/L	1	12/27/2005 1:59:36 PM
Selenium	ND	0.050		mg/L	1	12/27/2005 1:59:36 PM
Silver	ND	0.0050		mg/L	1	12/27/2005 1:59:36 PM
Thallium	ND	0.050		mg/L	1	12/27/2005 1:59:36 PM
Zinc	3.8	0.50		mg/L	10	12/27/2005 3:31:49 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: 04-Jan-06

QC SUMMARY REPORT
Method Blank

CLIENT: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

Sample ID: MB-9435	Batch ID: 9435	Test Code: SW8015	Units: mg/L	Analysis Date: 12/20/2005 1:01:49 PM	Prep Date: 12/20/2005
Client ID:		Run ID: FID(17A)_2_051219A		SeqNo: 434124	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND	1			
Motor Oil Range Organics (MRO)	ND	5			
Surr: DNOP	1.202	0	1	0	120 58 140 0

Sample ID: Reagent Blank 5m	Batch ID: R17704	Test Code: SW8015	Units: mg/L	Analysis Date: 12/22/2005 9:00:09 AM	Prep Date:
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435099	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	ND	0.05			
Surr: BFB	21.79	0	20	0	109 79.7 118 0

Sample ID: Reagent Blank 5m	Batch ID: R17704	Test Code: SW8021	Units: µg/L	Analysis Date: 12/22/2005 9:00:09 AM	Prep Date:
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435104	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Methyl tert-butyl ether (MTBE)	ND	2.5			
Benzene	ND	1			
Toluene	ND	1			
Ethylbenzene	ND	1			
Xylenes, Total	ND	3			
Surr: 4-Bromofluorobenzene	20.79	0	20	0	104 82.2 119 0

Sample ID: MB-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:		Run ID: MI-LA254_060103A		SeqNo: 437349	
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 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: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

Sample ID: MB-9422	Batch ID: 9422	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/27/2005 1:35:00 PM	Prep Date: 12/15/2005
Client ID:	Run ID: ICP_051227A	PQL	SPK value	SeqNo: 435745	
Analyte	Result	%REC	LowLimit	HighLimit	RPD Ref Val
Antimony	ND				
Arsenic	ND				
Beryllium	ND				
Cadmium	0.0003774				
Chromium	ND				
Copper	ND				
Lead	ND				
Nickel	ND				
Selenium	ND				
Silver	0.0005253				
Thallium	ND				
Zinc	0.004124				

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: 04-Jan-06

CLIENT: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

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

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

5/9

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

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

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

CLIENT: Giant Refining Co
Work Order: 0512189
Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID: BTEX Ics 100ng	Batch ID: R17704	Test Code: SW8021	Units: µg/L	Analysis Date: 12/22/2005 11:30:58 A	Prep Date:
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435105	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Methyl tert-butyl ether (MTBE)	22.01	2.5	20	0	110 64.5 133 0
Benzene	19.71	1	20	0	98.5 88.5 114 0
Toluene	19.68	1	20	0	98.4 87.2 114 0
Ethylbenzene	20.63	1	20	0	103 88.6 113 0
Xylenes, Total	40.68	3	40	0	102 83.3 114 0

Sample ID: LCS-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:		Run ID: MI-LA254_060103A		SeqNo: 437350	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.004489	0.0002	0.005	0	89.8 80 120 0

Sample ID: LCSD-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:		Run ID: MI-LA254_060103A		SeqNo: 437370	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.004712	0.0002	0.005	0	94.2 80 120 0.004489 4.84 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: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

Sample ID: LCS-9422	Batch ID: 9422	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/27/2005 1:37:28 PM	Prep Date: 12/16/2005						
Client ID:	Run ID: ICP_051227A	SeqNo: 435746									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4819	0.01	0.5	0	96.4	80	120	0			
Arsenic	0.4754	0.02	0.5	0	95.1	80	120	0			
Beryllium	0.4948	0.003	0.5	0	99.0	80	120	0			
Cadmium	0.4607	0.002	0.5	0.0003774	92.1	80	120	0			
Chromium	0.4754	0.006	0.5	0	95.1	80	120	0			
Copper	0.4801	0.006	0.5	0	96.0	80	120	0			
Lead	0.4618	0.005	0.5	0	92.4	80	120	0			
Nickel	0.4483	0.01	0.5	0	89.7	80	120	0			
Selenium	0.4319	0.05	0.5	0	86.4	80	120	0			
Silver	0.4736	0.005	0.5	0.0005253	94.6	80	120	0			
Thallium	0.4642	0.05	0.5	0	92.8	80	120	0			
Zinc	0.4481	0.05	0.5	0.004124	88.8	80	120	0			

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

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

Sample ID: LCSD-9422	Batch ID: 9422	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/27/2005 1:40:09 PM	Prep Date: 12/16/2005						
Client ID:	Run ID: ICP_051227A	SeqNo: 435747									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4748	0.01	0.5	0	95.0	80	120	0.4819	1.47	20	
Arsenic	0.4802	0.02	0.5	0	96.0	80	120	0.4754	1.01	20	
Beryllium	0.485	0.003	0.5	0	97.0	80	120	0.4948	2.01	20	
Cadmium	0.4589	0.002	0.5	0.0003774	91.7	80	120	0.4607	0.393	20	
Chromium	0.4709	0.006	0.5	0	94.2	80	120	0.4754	0.964	20	
Copper	0.4763	0.006	0.5	0	95.3	80	120	0.4801	0.801	20	
Lead	0.46	0.005	0.5	0	92.0	80	120	0.4618	0.393	20	
Nickel	0.4473	0.01	0.5	0	89.5	80	120	0.4483	0.223	20	
Selenium	0.4401	0.05	0.5	0	88.0	80	120	0.4319	1.89	20	
Silver	0.4707	0.005	0.5	0.0005253	94.0	80	120	0.4736	0.607	20	
Thallium	0.4632	0.05	0.5	0	92.6	80	120	0.4642	0.220	20	
Zinc	0.4437	0.05	0.5	0.004124	87.9	80	120	0.4481	0.997	20	

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

12/15/2005

Work Order Number 0512189

Received by AT

Checklist completed by

Signature

Date

12/15/05

Matrix

Carrier name Client drop-off

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

Container/Temp Blank temperature?

2°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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



CHAIN-OF-CUSTODY RECORD					QA/QC Package:		
					Std ☐	Level 4 ☐	
					Other:		
Client: Grant Refining					Project Name: AL-2 to EP-1		
Company: Uniza					Week of 12-12-2005		
Address: Route 3, Box 7					Project #:		
Gallup, NM 87301					Project Manager:		
					Steve Morris		
Phone #: 505-722-3833					Sampler: Steve Morris		
Fax #: 505-722-0210					Sample Temperature: 2		
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl ₂ HNO ₃		HEAL No.
12-13-05	10:00 AM	H ₂ O	AL-2 to EP-1				051289-1
Date: 12-14-05	Time: 0900A	Relinquished By: (Signature) <i>J. Sanchez</i>		Relinquished By: (Signature)		Received By: (Signature) <i>Steve Morris</i> 12/15/05	
Date:	Time:	Relinquished By: (Signature)		Relinquished By: (Signature)		Received By: (Signature) 1325-	

Chavez, Carl J, EMNRD

From: Steve Morris [smorris@giant.com]
Sent: Friday, January 06, 2006 2:05 PM
To: Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV; Foust, Denny, EMNRD; Ed Riege; Monzeglio, Hope, NMENV; Johnny Sanchez; Steve Morris; Price, Wayne, EMNRD
Subject: Ciniza weekly update 1/6/06



HALL7199_AL2EP1
121205.pdf (227...

- 1) Work continues on the east bay of the new API separator.
The east bay is expected to be completed next Tuesday the 10th.
 - 2) Chopper pump installation will commence as soon as the east bay
of the NAPIS is put back in service. (Wednesday the 11th)
 - 3) Analysis for AL-2 to EP-1 dated 12/12/05 is attached.
- <<HALL7199_AL2EP1121205.pdf>>

If you have any questions, please give me a call at 505-722-0258.
Thanks, Steve Morris

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COVER LETTER

January 04, 2006

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 12/12/2005

Order No.: 0512189

Dear Steve Morris:

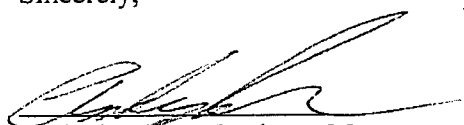
Hall Environmental Analysis Laboratory received 1 sample on 12/15/2005 for the analyses presented in the following report.

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

AZ license # AZ0682
ORELAP Lab # NM100001



Hall Environmental Analysis Laboratory

Date: 04-Jun-06

CLIENT: Giant Refining Co
Project: AL-2 to EP-1 Week of 12/12/2005
Lab Order: 0512189

CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable due to sample dilution or matrix interferences.

Hall Environmental Analysis Laboratory

Date: 04-Jan-06

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0512189

Collection Date: 12/13/2005 10:00:00 AM

Project: AL-2 to EP-1 Week of 12/12/2005

Lab ID: 0512189-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						
						Analyst: SCC
Diesel Range Organics (DRO)	3300	75		mg/L	25	12/21/2005 5:49:02 AM
Motor Oil Range Organics (MRO)	ND	380		mg/L	25	12/21/2005 5:49:02 AM
Surr: DNOP	0	58-140	S	%REC	25	12/21/2005 5:49:02 AM
EPA METHOD 8015B: GASOLINE RANGE						
						Analyst: NSB
Gasoline Range Organics (GRO)	2.5	1.0		mg/L	20	12/22/2005 6:04:10 PM
Surr: BFB	136	79.7-118	S	%REC	20	12/22/2005 6:04:10 PM
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	97	50		µg/L	20	12/22/2005 6:04:10 PM
Benzene	34	20		µg/L	20	12/22/2005 6:04:10 PM
Toluene	120	20		µg/L	20	12/22/2005 6:04:10 PM
Ethylbenzene	33	20		µg/L	20	12/22/2005 6:04:10 PM
Xylenes, Total	290	60		µg/L	20	12/22/2005 6:04:10 PM
Surr: 4-Bromofluorobenzene	115	82.2-119		%REC	20	12/22/2005 6:04:10 PM
EPA METHOD 7470: MERCURY						
						Analyst: CMC
Mercury	0.0047	0.00020		mg/L	1	1/3/2006
EPA 6010: TOTAL RECOVERABLE METALS						
						Analyst: NMO
Antimony	ND	0.010		mg/L	1	12/27/2005 1:59:36 PM
Arsenic	ND	0.020		mg/L	1	12/27/2005 1:59:36 PM
Beryllium	ND	0.0030		mg/L	1	12/27/2005 1:59:36 PM
Cadmium	ND	0.0020		mg/L	1	12/27/2005 1:59:36 PM
Chromium	0.014	0.0060		mg/L	1	12/27/2005 1:59:36 PM
Copper	0.060	0.0060		mg/L	1	12/27/2005 1:59:36 PM
Lead	0.018	0.0050		mg/L	1	12/27/2005 1:59:36 PM
Nickel	0.031	0.010		mg/L	1	12/27/2005 1:59:36 PM
Selenium	ND	0.050		mg/L	1	12/27/2005 1:59:36 PM
Silver	ND	0.0050		mg/L	1	12/27/2005 1:59:36 PM
Thallium	ND	0.050		mg/L	1	12/27/2005 1:59:36 PM
Zinc	3.8	0.50		mg/L	10	12/27/2005 3:31:49 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: 04-Jan-06

CLIENT: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
 Method Blank

Sample ID: MB-9435	Batch ID: 9435	Test Code: SW8015	Units: mg/L	Analysis Date: 12/20/2005 1:01:49 PM	Prep Date: 12/20/2005
Client ID:	Run ID: FID(17A) 2_051219A	SeqNo: 434124			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND	1			
Motor Oil Range Organics (MRO)	ND	5			
Surr: DNOP	1.202	0	1	0	120 58 140 0

Sample ID: Reagent Blank 5m	Batch ID: R17704	Test Code: SW8015	Units: mg/L	Analysis Date: 12/22/2005 9:00:09 AM	Prep Date:
Client ID:	Run ID: PIDFID_051222A	SeqNo: 435099			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	ND	0.05			
Surr: BFB	21.79	0	20	0	109 79.7 118 0

Sample ID: Reagent Blank 5m	Batch ID: R17704	Test Code: SW8021	Units: µg/L	Analysis Date: 12/22/2005 9:00:09 AM	Prep Date:
Client ID:	Run ID: PIDFID_051222A	SeqNo: 435104			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Methyl tert-butyl ether (MTBE)	ND	2.5			
Benzene	ND	1			
Toluene	ND	1			
Ethylbenzene	ND	1			
Xylenes, Total	ND	3			
Surr: 4-Bromofluorobenzene	20.79	0	20	0	104 82.2 119 0

Sample ID: MB-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:	Run ID: MI-LA254_060103A	SeqNo: 437349			
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 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: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

Sample ID: MB-9422	Batch ID: 9422	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/27/2005 1:35:00 PM	Prep Date: 12/16/2005
Client ID:	Run ID: ICP_051227A	PQL	SPK value	SPK Ref Val	SeqNo: 435745
Analyte	Result	%REC	LowLimit	HighLimit	RPD Ref Val
Antimony	ND				
Arsenic	ND				
Beryllium	ND				
Cadmium	0.0003774				
Chromium	ND				
Copper	ND				
Lead	ND				
Nickel	ND				
Selenium	ND				
Silver	0.0005253				
Thallium	ND				
Zinc	0.004124				

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: 04-Jan-06

CLIENT:

Giant Refining Co

Work Order:

0512189

Project:

AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

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

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

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

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

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation 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: Giant Refining Co
 Work Order: 0512189
 Project: AL-2 to EP-1 Week of 12/12/2005

Sample ID: BTEX Ics 100ng	Batch ID: R17704	Test Code: SW8021	Units: µg/L	Analysis Date: 12/22/2005 11:30:58 A	Prep Date:
Client ID:		Run ID: PIDFID_051222A		SeqNo: 435105	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Methyl tert-butyl ether (MTBE)	22.01	2.5	20	0	110 133 0
Benzene	19.71	1	20	0	98.5 114 0
Toluene	19.68	1	20	0	98.4 114 0
Ethylbenzene	20.63	1	20	0	103 113 0
Xylenes, Total	40.68	3	40	0	102 114 0

Sample ID: LCS-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:		Run ID: MI-LA254_060103A		SeqNo: 437350	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.004489	0.0002	0.005	0	89.8 120 0

Sample ID: LCSD-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:		Run ID: MI-LA254_060103A		SeqNo: 437370	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.004712	0.0002	0.005	0	94.2 120 0.004489 4.84 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:

Giant Refining Co

Work Order:

0512189

Project:

AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9422		Batch ID: 9422		Test Code: SW5010A		Units: mg/L		Analysis Date: 12/27/2005 1:37:28 PM		Prep Date: 12/16/2005	
Client ID:		Run ID: ICP_051227A		PQL		SPK value		SeqNo: 435746			
Analyte	Result	SPK value		SPK Ref Val		%REC		LowLimit	HighLimit	RPD Ref Val	RPDLimit
Antimony	0.4819	0.5		0		96.4		80	120	0	
Arsenic	0.4754	0.5		0		95.1		80	120	0	
Beryllium	0.4948	0.5		0		99.0		80	120	0	
Cadmium	0.4607	0.5		0.0003774		92.1		80	120	0	
Chromium	0.4754	0.5		0		95.1		80	120	0	
Copper	0.4801	0.5		0		96.0		80	120	0	
Lead	0.4618	0.5		0		92.4		80	120	0	
Nickel	0.4483	0.5		0		89.7		80	120	0	
Selenium	0.4319	0.5		0		86.4		80	120	0	
Silver	0.4736	0.5		0.0005253		94.6		80	120	0	
Thallium	0.4642	0.5		0		92.8		80	120	0	
Zinc	0.4481	0.5		0.004124		88.8		80	120	0	

Qualifiers:

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

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

B - Analyte detected in the associated Method Blank
 3

CLIENT:

Giant Refining Co

Work Order:

0512189

Project:

AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCSD-9422		Batch ID: 9422		Test Code: SW6010A		Units: mg/L		Analysis Date: 12/27/2005 1:40:09 PM		Prep Date: 12/16/2005		
Client ID:		Run ID: ICP_051227A		SeqNo: 435747								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Limit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4748	0.01	0.5	0	95.0	80	120	0.4819	0.4819	1.47	20	
Arsenic	0.4802	0.02	0.5	0	96.0	80	120	0.4754	0.4754	1.01	20	
Beryllium	0.485	0.003	0.5	0	97.0	80	120	0.4948	0.4948	2.01	20	
Cadmium	0.4589	0.002	0.5	0.0003774	91.7	80	120	0.4607	0.4607	0.393	20	
Chromium	0.4709	0.006	0.5	0	94.2	80	120	0.4754	0.4754	0.964	20	
Copper	0.4763	0.006	0.5	0	95.3	80	120	0.4801	0.4801	0.801	20	
Lead	0.46	0.005	0.5	0	92.0	80	120	0.4618	0.4618	0.393	20	
Nickel	0.4473	0.01	0.5	0	89.5	80	120	0.4483	0.4483	0.223	20	
Selenium	0.4401	0.05	0.5	0	88.0	80	120	0.4319	0.4319	1.89	20	
Silver	0.4707	0.005	0.5	0.0005253	94.0	80	120	0.4736	0.4736	0.607	20	
Thallium	0.4632	0.05	0.5	0	92.6	80	120	0.4642	0.4642	0.220	20	
Zinc	0.4437	0.05	0.5	0.004124	87.9	80	120	0.4481	0.4481	0.997	20	

8 / 9

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 GIANTREFIN

Date and Time Received:

12/15/2005

Work Order Number 0512189

Received by AT

Checklist completed by

Signature

Date

12/15/05

Matrix

Carrier name Client drop-off

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

Container/Temp Blank temperature?

2°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

CHAIN-OF-CUSTODY RECORD					QA/QC Package:		
					Std ☐	Level 4 ☐	
					Other:		
Client: <u>Grant Refining</u>					Project Name: <u>AL-2 to EP-1</u>		
Company: <u>Conoco-Phillips</u>					Week of: <u>12-12-2005</u>		
Address: <u>Route 3, Box 7</u>					Project #:		
<u>Gallop, NM 87301</u>					Project Manager:		
					<u>Steve Morris</u>		
Phone #: <u>505-722-3833</u>					Sampler: <u>Steve Morris</u>		
Fax #: <u>505-722-0210</u>					Sample Temperature: <u>2</u>		
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HNO ₃	
<u>12-13-05</u>	<u>10:00 AM</u>	<u>H₂O</u>	<u>AL-2 to EP-1</u>				<u>052891</u>
Date: <u>12-14-05</u>	Time: <u>0900A</u>	Relinquished By: (Signature) <u>[Signature]</u>		Received By: (Signature) <u>[Signature]</u>	12/15/05		
Date: <u>12-14-05</u>	Time: <u>0900A</u>	Relinquished By: (Signature) <u>[Signature]</u>		Received By: (Signature) <u>[Signature]</u>	1325		

Chavez, Carl J, EMNRD

From: Steve Morris [smorris@giant.com]
Sent: Tuesday, January 10, 2006 10:24 AM
To: Chavez, Carl J, EMNRD
Cc: Ed Riege
Subject: RE: Ciniza weekly update 1/6/06



HALL7290_OAPIS1
21905.pdf (374 ...

Carl,

The results from the OAPIS came in after I'd gone home yesterday, and I haven't gotten the BOD & COD from pond #2 as yet. I'm attaching the OAPIS sample results from 12/19/05 here and will send the BOD & COD as soon as I get them.

Thanks, Steve

-----Original Message-----

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Tuesday, January 10, 2006 9:39 AM
To: Steve Morris
Subject: RE: Ciniza weekly update 1/6/06

Steve:

Hi. Where is the weekly monitoring data from the Old API Separator and the BOD and COD sampling results from Evaporation Pond #2? Thanks.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

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

Office: (505) 476-3491

Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <http://www.emnrd.state.nm.us/ocd/> (Pollution Prevention Guidance is under "Publications")

-----Original Message-----

From: Steve Morris [mailto:smorris@giant.com]
Sent: Friday, January 06, 2006 2:05 PM
To: Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV; Foust, Denny, EMNRD; Ed Riege; Monzeglio, Hope, NMENV; Johnny Sanchez; Steve Morris; Price, Wayne, EMNRD
Subject: Ciniza weekly update 1/6/06

- 1) Work continues on the east bay of the new API separator.
The east bay is expected to be completed next Tuesday the 10th.
 - 2) Chopper pump installation will commence as soon as the east bay of the NAPIS is put back in service. (Wednesday the 11th)
 - 3) Analysis for AL-2 to EP-1 dated 12/12/05 is attached.
- <<HALL7199_AL2EP1121205.pdf>>

If you have any questions, please give me a call at 505-722-0258.
Thanks, Steve Morris

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COVER LETTER

January 09, 2006

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Old API Separator Water Out

Order No.: 0512256

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 12/21/2005 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,

A handwritten signature in dark ink, appearing to read 'Andy Freeman', is written over the typed name.

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682
ORELAP Lab # NM100001



Hall Environmental Analysis Laboratory

Date: 09-Jan-06

CLIENT: Giant Refining Co
Lab Order: 0512256
Project: Old API Separator Water Out
Lab ID: 0512256-01

Client Sample ID: OAPIS Water
Collection Date: 12/19/2005 2:15:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	4.6	0.50		mg/L	5	12/21/2005
Chloride	240	1.0		mg/L	10	12/29/2005
Phosphorus, Orthophosphate (As P)	3.1	2.5	H	mg/L	5	12/21/2005
Sulfate	840	25		mg/L	50	12/29/2005
Sulfate	830	10		mg/L	20	1/4/2006
Nitrate (As N)+Nitrite (As N)	3.0	0.50		mg/L	5	1/4/2006
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	5800	100		µg/L	100	12/22/2005
Toluene	3400	100		µg/L	100	12/22/2005
Ethylbenzene	240	100		µg/L	100	12/22/2005
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	100	12/22/2005
1,2,4-Trimethylbenzene	250	100		µg/L	100	12/22/2005
1,3,5-Trimethylbenzene	ND	100		µg/L	100	12/22/2005
1,2-Dichloroethane (EDC)	ND	100		µg/L	100	12/22/2005
1,2-Dibromoethane (EDB)	ND	100		µg/L	100	12/22/2005
Naphthalene	ND	200		µg/L	100	12/22/2005
1-Methylnaphthalene	ND	400		µg/L	100	12/22/2005
2-Methylnaphthalene	ND	400		µg/L	100	12/22/2005
Acetone	ND	1000		µg/L	100	12/22/2005
Bromobenzene	ND	100		µg/L	100	12/22/2005
Bromochloromethane	ND	100		µg/L	100	12/22/2005
Bromodichloromethane	ND	100		µg/L	100	12/22/2005
Bromoform	ND	100		µg/L	100	12/22/2005
Bromomethane	ND	200		µg/L	100	12/22/2005
2-Butanone	ND	1000		µg/L	100	12/22/2005
Carbon disulfide	ND	1000		µg/L	100	12/22/2005
Carbon Tetrachloride	ND	200		µg/L	100	12/22/2005
Chlorobenzene	ND	100		µg/L	100	12/22/2005
Chloroethane	ND	200		µg/L	100	12/22/2005
Chloroform	ND	100		µg/L	100	12/22/2005
Chloromethane	ND	100		µg/L	100	12/22/2005
2-Chlorotoluene	ND	100		µg/L	100	12/22/2005
4-Chlorotoluene	ND	100		µg/L	100	12/22/2005
cis-1,2-DCE	ND	100		µg/L	100	12/22/2005
cis-1,3-Dichloropropene	ND	100		µg/L	100	12/22/2005
1,2-Dibromo-3-chloropropane	ND	200		µg/L	100	12/22/2005
Dibromochloromethane	ND	100		µg/L	100	12/22/2005
Dibromomethane	ND	200		µg/L	100	12/22/2005
1,2-Dichlorobenzene	ND	100		µg/L	100	12/22/2005
1,3-Dichlorobenzene	ND	100		µg/L	100	12/22/2005

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

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

Hall Environmental Analysis Laboratory

Date: 09-Jan-06

CLIENT: Giant Refining Co

Client Sample ID: OAPIS Water

Lab Order: 0512256

Collection Date: 12/19/2005 2:15:00 PM

Project: Old API Separator Water Out

Lab ID: 0512256-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	100		µg/L	100	12/22/2005
Dichlorodifluoromethane	ND	100		µg/L	100	12/22/2005
1,1-Dichloroethane	ND	200		µg/L	100	12/22/2005
1,1-Dichloroethene	ND	100		µg/L	100	12/22/2005
1,2-Dichloropropane	ND	100		µg/L	100	12/22/2005
1,3-Dichloropropane	ND	100		µg/L	100	12/22/2005
2,2-Dichloropropane	ND	200		µg/L	100	12/22/2005
1,1-Dichloropropene	ND	100		µg/L	100	12/22/2005
Hexachlorobutadiene	ND	200		µg/L	100	12/22/2005
2-Hexanone	ND	1000		µg/L	100	12/22/2005
Isopropylbenzene	ND	100		µg/L	100	12/22/2005
4-Isopropyltoluene	ND	100		µg/L	100	12/22/2005
4-Methyl-2-pentanone	ND	1000		µg/L	100	12/22/2005
Methylene Chloride	ND	300		µg/L	100	12/22/2005
n-Butylbenzene	ND	100		µg/L	100	12/22/2005
n-Propylbenzene	ND	100		µg/L	100	12/22/2005
sec-Butylbenzene	ND	100		µg/L	100	12/22/2005
Styrene	ND	100		µg/L	100	12/22/2005
tert-Butylbenzene	ND	100		µg/L	100	12/22/2005
1,1,1,2-Tetrachloroethane	ND	100		µg/L	100	12/22/2005
1,1,2,2-Tetrachloroethane	ND	100		µg/L	100	12/22/2005
Tetrachloroethene (PCE)	ND	100		µg/L	100	12/22/2005
trans-1,2-DCE	ND	100		µg/L	100	12/22/2005
trans-1,3-Dichloropropene	ND	100		µg/L	100	12/22/2005
1,2,3-Trichlorobenzene	ND	100		µg/L	100	12/22/2005
1,2,4-Trichlorobenzene	ND	100		µg/L	100	12/22/2005
1,1,1-Trichloroethane	ND	100		µg/L	100	12/22/2005
1,1,2-Trichloroethane	ND	100		µg/L	100	12/22/2005
Trichloroethene (TCE)	ND	100		µg/L	100	12/22/2005
Trichlorofluoromethane	ND	100		µg/L	100	12/22/2005
1,2,3-Trichloropropane	ND	200		µg/L	100	12/22/2005
Vinyl chloride	ND	100		µg/L	100	12/22/2005
Xylenes, Total	2000	100		µg/L	100	12/22/2005
Surr: 1,2-Dichloroethane-d4	93.9	69.9-130		%REC	100	12/22/2005
Surr: 4-Bromofluorobenzene	99.6	71.2-123		%REC	100	12/22/2005
Surr: Dibromofluoromethane	97.2	73.9-134		%REC	100	12/22/2005
Surr: Toluene-d8	92.1	81.9-122		%REC	100	12/22/2005

EPA METHOD 8310: PAHS

Analyst: JMP

Naphthalene	230	13		µg/L	5	1/4/2006 7:33:35 AM
1-Methylnaphthalene	230	13		µg/L	5	1/4/2006 7:33:35 AM
2-Methylnaphthalene	56	2.5		µg/L	1	12/29/2005 10:52:54 PM
Acenaphthylene	ND	2.5		µg/L	1	12/29/2005 10:52:54 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 09-Jan-06

CLIENT: Giant Refining Co

Client Sample ID: OAPIS Water

Lab Order: 0512256

Collection Date: 12/19/2005 2:15:00 PM

Project: Old API Separator Water Out

Lab ID: 0512256-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Acenaphthene	ND	2.5		µg/L	1	12/29/2005 10:52:54 PM
Fluorene	14	0.80		µg/L	1	12/29/2005 10:52:54 PM
Phenanthrene	10	3.0		µg/L	5	1/4/2006 7:33:35 AM
Anthracene	ND	0.60		µg/L	1	12/29/2005 10:52:54 PM
Fluoranthene	ND	0.30		µg/L	1	12/29/2005 10:52:54 PM
Pyrene	0.93	0.30		µg/L	1	12/29/2005 10:52:54 PM
Benz(a)anthracene	0.29	0.020		µg/L	1	12/29/2005 10:52:54 PM
Chrysene	0.29	0.20		µg/L	1	12/29/2005 10:52:54 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	12/29/2005 10:52:54 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	12/29/2005 10:52:54 PM
Benzo(a)pyrene	0.050	0.020		µg/L	1	12/29/2005 10:52:54 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	12/29/2005 10:52:54 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	12/29/2005 10:52:54 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	12/29/2005 10:52:54 PM
Surr: Benzo(e)pyrene	72.6	54-102		%REC	1	12/29/2005 10:52:54 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: TES
Specific Conductance	3100	0.010		µmhos/cm	1	12/23/2005
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	0.0016	0.00020		mg/L	1	1/3/2006
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	12/29/2005 10:53:59 AM
Barium	0.17	0.020		mg/L	1	12/29/2005 10:53:59 AM
Cadmium	ND	0.0020		mg/L	1	12/29/2005 10:53:59 AM
Calcium	82	1.0		mg/L	1	12/29/2005 10:53:59 AM
Chromium	0.019	0.0060		mg/L	1	12/29/2005 10:53:59 AM
Lead	0.0068	0.0050		mg/L	1	12/29/2005 10:53:59 AM
Magnesium	18	1.0		mg/L	1	12/29/2005 10:53:59 AM
Potassium	9.9	1.0		mg/L	1	12/29/2005 10:53:59 AM
Selenium	ND	0.050		mg/L	1	12/29/2005 10:53:59 AM
Silver	ND	0.0050		mg/L	1	12/29/2005 10:53:59 AM
Sodium	600	10		mg/L	10	12/29/2005 11:31:21 AM
EPA METHOD 150.1: PH						Analyst: TES
pH	7.56	0.010		pH units	1	12/23/2005

Qualifiers: ND - Not Detected at the Reporting Limit
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 R - RPD outside accepted recovery limits
 E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 09-Jan-06

CLIENT: Giant Refining Co
 Work Order: 0512256
 Project: Old API Separator Water Out

QC SUMMARY REPORT
 Method Blank

Sample ID: MBLK	Batch ID: R17700	Test Code: E300	Units: mg/L	Analysis Date: 12/21/2005	Prep Date:
Client ID:	Run ID: LC_051221A	SeqNo: 435031			
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			
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: R17744	Test Code: E300	Units: mg/L	Analysis Date: 12/28/2005	Prep Date:
Client ID:	Run ID: LC_051228A	SeqNo: 436213			
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			
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: R17761	Test Code: E300	Units: mg/L	Analysis Date: 12/29/2005	Prep Date:	
Client ID:	Run ID: LC_051229A	SeqNo: 436555				
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				
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: Giant Refining Co
 Work Order: 0512256
 Project: Old API Separator Water Out

Sample ID: MBLK	Batch ID: R17805	Test Code: E300	Units: mg/L	Analysis Date: 1/4/2006		Prep Date:					
Client ID:		Run ID: LC_060104A		SeqNo: 437805							
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									
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: Giant Refining Co
 Work Order: 0512256
 Project: Old API Separator Water Out

Sample ID: MB-9447	Batch ID: 9447	Test Code: SW8310	Units: µg/L	Analysis Date: 12/29/2005 4:28:56 PM	Prep Date: 12/22/2005						
Client ID:		Run ID: HUGO_051229A		SeqNo: 438131							
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	6.77	0	10	0	67.7	54	102	0			

Sample ID: MB-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006						
Client ID:		Run ID: MI-LA254_060103A		SeqNo: 437349							
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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0512256
 Project: Old API Separator Water Out

Sample ID: MB-9470		Batch ID: 9470	Test Code: SW6010A		Units: mg/L	Analysis Date: 12/29/2005 10:28:56 A		Prep Date: 12/28/2005			
Client ID:			Run ID:	ICP_051229A		SeqNo:	436445				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									J
Barium	0.000459	0.02									J
Cadmium	0.0005448	0.002									
Calcium	ND	1									
Chromium	ND	0.006									J
Lead	0.004693	0.005									
Magnesium	ND	1									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	0.002002	0.005									J
Sodium	ND	1									

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

Hall Environmental Analysis Laboratory

Date: 09-Jan-06

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0512256
 Project: Old API Separator Water Out

Sample ID: 5mL rb-b	Batch ID: R17705	Test Code: SWB260B	Units: µg/L	Analysis Date: 12/22/2005	Prep Date:						
Client ID:		Run ID: NEPTUNE_051221B		SeqNo: 435156							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co

Work Order: 0512256

Project: Old API Separator Water Out

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

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

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

B - Analyte detected in the associated Method Blank

Method Blank

CLIENT: Giant Refining Co

Work Order: 0512256

Project: Old API Separator Water Out

Compound	Concentration (ppm)	Retention Time (min)	Peak Area	Peak Height	Peak Width (min)	Peak Shape	Peak Type	Peak Label
1,1,1,2-Tetrachloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9.934	0	10	0	99.3	69.9	130	0
Surr: 4-Bromofluorobenzene	10.61	0	10	0	106	71.2	123	0
Surr: Dibromofluoromethane	9.754	0	10	0	97.5	73.9	134	0
Surr: Toluene-d8	9.852	0	10	0	98.5	81.9	122	0

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

Hall Environmental Analysis Laboratory

Date: 09-Jan-06

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co
 Work Order: 0512256
 Project: Old API Separator Water Out

Sample ID: LCS-ST300-05023	Batch ID: R17700	Test Code: E300	Units: mg/L	Analysis Date: 12/21/2005	Prep Date:
Client ID:		Run ID: LC_051221A		SeqNo: 435032	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Fluoride	0.4692	0.1	0.5	0	93.8 90 110 0
Chloride	4.743	0.1	5	0	94.9 90 110 0
Phosphorus, Orthophosphate (As P)	5.016	0.5	5	0	100 90 110 0
Sulfate	9.824	0.5	10	0	98.2 90 110 0
Nitrate (As N)+Nitrite (As N)	3.372	0.1	3.5	0	96.3 90 110 0

Sample ID: LCS-ST300-05023	Batch ID: R17744	Test Code: E300	Units: mg/L	Analysis Date: 12/28/2005	Prep Date:
Client ID:		Run ID: LC_051228A		SeqNo: 435214	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Fluoride	0.4757	0.1	0.5	0	95.1 90 110 0
Chloride	4.69	0.1	5	0	93.8 90 110 0
Phosphorus, Orthophosphate (As P)	4.878	0.5	5	0	97.6 90 110 0
Sulfate	9.637	0.5	10	0	96.4 90 110 0
Nitrate (As N)+Nitrite (As N)	3.297	0.1	3.5	0	94.2 90 110 0

Sample ID: LCS-ST300-05023	Batch ID: R17761	Test Code: E300	Units: mg/L	Analysis Date: 12/29/2005	Prep Date:
Client ID:		Run ID: LC_051229A		SeqNo: 436556	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Fluoride	0.518	0.1	0.5	0	104 90 110 0
Chloride	4.679	0.1	5	0	93.6 90 110 0
Phosphorus, Orthophosphate (As P)	4.778	0.5	5	0	95.6 90 110 0
Sulfate	9.615	0.5	10	0	96.2 90 110 0
Nitrate (As N)+Nitrite (As N)	3.28	0.1	3.5	0	93.7 90 110 0

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

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

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co
 Work Order: 0512256
 Project: Old API Separator Water Out

Sample ID: LCS-ST300-05023	Batch ID: R17805	Test Code: E300	Units: mg/L	Analysis Date: 1/4/2006	Prep Date:
Client ID:	Run ID: LC_060104A	PQL	SPK value	SeqNo: 437806	
Analyte	Result		SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Fluoride	0.4762	0.1	0.5	0	95.2 90 110 0
Chloride	4.786	0.1	5	0	95.7 90 110 0
Phosphorus, Orthophosphate (As P)	4.916	0.5	5	0	98.3 90 110 0
Sulfate	9.981	0.5	10	0	99.8 90 110 0
Nitrate (As N)+Nitrite (As N)	3.369	0.1	3.5	0	96.3 90 110 0

Sample ID: 100ng Ics-b	Batch ID: R17705	Test Code: SW8260B	Units: µg/L	Analysis Date: 12/22/2005	Prep Date:
Client ID:	Run ID: NEPTUNE_051221B	PQL	SPK value	SeqNo: 435157	
Analyte	Result		SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	20.13	1	20	0	101 79.3 136 0
Toluene	19.2	1	20	0	96.0 65.5 123 0
Chlorobenzene	21.45	1	20	0	107 85.6 134 0
1,1-Dichloroethene	20.24	1	20	0	101 72.7 135 0
Trichloroethene (TCE)	19.61	1	20	0	98.0 85.6 119 0

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

QC SUMMARY REPORT

CLIENT: Giant Refining Co
Work Order: 0512256
Project: Old API Separator Water Out

Laboratory Control Spike - generic

Sample ID: LCS-9447	Batch ID: 9447	Test Code: SW8310	Units: µg/L	Analysis Date: 12/29/2005 5:16:56 PM	Prep Date: 12/22/2005						
Client ID:	Run ID:	HUGO_051229A	SeqNo: 438132								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	29.13	2.5	40	0	72.8	34.8	97.4	0			
1-Methylnaphthalene	29.63	2.5	40.1	0	73.9	34.7	100	0			
2-Methylnaphthalene	29.96	2.5	40	0	74.9	35	98.1	0			
Acenaphthylene	30.85	2.5	40.1	0	76.9	48.3	95.1	0			
Acenaphthene	30.48	2.5	40	0	76.2	45	95	0			
Fluorene	3.14	0.8	4.01	0	78.3	46.8	93.4	0			
Phenanthrene	1.71	0.6	2.01	0	85.1	48.7	104	0			
Anthracene	1.78	0.6	2.01	0	88.6	47.5	102	0			
Fluoranthene	3.42	0.3	4.01	0	85.3	46.3	108	0			
Pyrene	3.38	0.3	4.01	0	84.3	43.8	109	0			
Benz(a)anthracene	0.32	0.02	0.401	0	79.8	40.3	115	0			
Chrysene	1.54	0.2	2.01	0	76.6	42.6	107	0			
Benzo(b)fluoranthene	0.39	0.05	0.501	0	77.8	48.6	107	0			
Benzo(k)luoranthene	0.22	0.02	0.25	0	88.0	23.3	136	0			
Benzo(a)pyrene	0.23	0.02	0.251	0	91.6	33.4	117	0			
Dibenz(a,h)anthracene	0.53	0.04	0.501	0	106	27.3	139	0			
Benzo(g,h,i)perylene	0.52	0.03	0.5	0	104	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.889	0.08	1.002	0	88.7	39.9	125	0			

Sample ID: LCS-9499		Batch ID: 9499		Test Code: SW7470		Units: mg/L		Analysis Date: 1/3/2006		Prep Date: 1/3/2006	
Client ID:		Run ID:		MI-LA254_060103A		SeqNo: 437350					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004489	0.0002	0.005	0	89.8	80	120	0			

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

CLIENT: Giant Refining Co

Work Order: 0512256

Project: Old API Separator Water Out

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCSD-9499	Batch ID: 9499	Test Code: SW7470	Units: mg/L	Analysis Date: 1/3/2006	Prep Date: 1/3/2006
Client ID:		Run ID: MI-LA254_060103A		SeqNo: 437370	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val
Mercury	0.004712	0.0002	0.005	0	94.2 80 120 0.004489 4.84 0

Sample ID: LCS-9470	Batch ID: 9470	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/29/2005 10:31:17 A	Prep Date: 12/28/2005
Client ID:		Run ID: ICP_051229A		SeqNo: 436446	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val
Arsenic	0.4794	0.02	0.5	0	95.9 80 120 0
Barium	0.4626	0.02	0.5	0.000459	92.4 80 120 0
Cadmium	0.4505	0.002	0.5	0.0005448	90.0 80 120 0
Calcium	49.95	1	50	0	99.9 80 120 0
Chromium	0.4619	0.006	0.5	0	92.4 80 120 0
Lead	0.4595	0.005	0.5	0.004693	91.0 80 120 0
Magnesium	49.87	1	50	0	99.7 80 120 0
Potassium	52.26	1	50	0	105 80 120 0
Selenium	0.4357	0.05	0.5	0	87.1 80 120 0
Silver	0.4731	0.005	0.5	0.002002	94.2 80 120 0
Sodium	52.47	1	50	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
-

CLIENT: Giant Refining Co
 Work Order: 0512256
 Project: Old API Separator Water Out

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

Sample ID: LCSD-9470	Batch ID: 9470	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/29/2005 10:34:32 A	Prep Date: 12/28/2005						
Client ID:	Run ID: ICP_051229A	SeqNo: 436447									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4852	0.02	0.5	0	97.0	80	120	0.4794	1.21	20	
Barium	0.4681	0.02	0.5	0.000459	93.5	80	120	0.4626	1.19	20	
Cadmium	0.451	0.002	0.5	0.0005448	90.1	80	120	0.4505	0.104	20	
Calcium	50.56	1	50	0	101	80	120	49.95	1.21	20	
Chromium	0.4652	0.006	0.5	0	93.0	80	120	0.4619	0.709	20	
Lead	0.4637	0.005	0.5	0.004693	91.8	80	120	0.4595	0.912	20	
Magnesium	50.14	1	50	0	100	80	120	49.87	0.540	20	
Potassium	52.3	1	50	0	105	80	120	52.26	0.0766	20	
Selenium	0.432	0.05	0.5	0	86.4	80	120	0.4357	0.860	20	
Silver	0.4748	0.005	0.5	0.002002	94.6	80	120	0.4731	0.350	20	
Sodium	52.54	1	50	0	105	80	120	52.47	0.148	20	

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

12/21/2005

Work Order Number 0512256

Received by GLS

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

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD

Sent: Tuesday, December 20, 2005 8:59 AM

To: 'Ed Riege'; 'Steve Morris'; 'Ed Rios'

Cc: Price, Wayne, EMNRD; Monzeglio, Hope, NMENV; Foust, Denny, EMNRD; Powell, Richard, NMENV

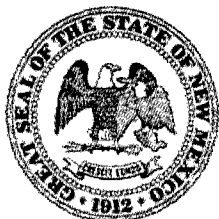
Ladies and Gentlemen:

RE: Ciniza Refinery

Please find attached the OCD summary from our November 10, 2005 site visit and the stormwater inspection letter from Mr. Richard Powell of the NMED to Giant. Also attached is OCD's analytical data results from the split-sample event that day. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/>
(Pollution Prevention Guidance is under "Publications")

12/20/2005



BILL RICHARDSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau
Harold Runnels Building Room N2050
1190 St. Francis Drive - Zip 87505
P.O. Box 26110 - Zip 87502-6110
Santa Fe, New Mexico
Telephone (505) 827-0187
Fax (505) 827-0160
www.nmenv.state.nm.us



RON CURRY
SECRETARY

DERRITH WATCHMAN MOORE
DEPUTY SECRETARY

Certified Mail - Return Receipt Requested

December 19, 2005

Mr. Ed Rios, General Manager
Giant Refining Company
Route 3, Box 7
Gallup, New Mexico 87301

RE: NPDES Storm Water Compliance Evaluation Inspection, Ciniza Refinery, NPDES #NMR05B157, November 10, 2005

Dear Mr. Rios:

Enclosed, please find a copy of the report for the referenced inspection that the New Mexico Environment Department (NMED) conducted at your facility on behalf of the U.S. Environmental Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas, for their review. These inspections are used by EPA to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permitting program in accordance with requirements of the federal Clean Water Act.

Problems noted during this inspection are discussed in the Further Explanations section of the inspection report. You are encouraged to review the inspection report, and are required per Part 4.10 of the multi-sector general storm water permit, to amend your Storm Water Pollution Prevention Plan as appropriate based on the findings of this report to incorporate additional structural and non-structural controls as needed to eliminate or significantly minimize pollutants in storm water discharges. Further, you are encouraged to notify in writing, both USEPA and NMED regarding modifications and compliance schedules.

My thanks for the help and cooperation of Messrs. Ed Riege and Steve Morris of your staff during this inspection. If you have any questions, please feel free to contact me at the above address or by telephone at (505) 827-2798.

Sincerely,

Richard E. Powell
Surface Water Quality Bureau

cc: Marcia Gail Bohling, USEPA (6EN-AS)
USEPA, NPDES Permits Branch (6WQ-P)
NMED, District V, Grants
Carl Chavez, EM&NRD, OCD, 1220 S. St. Francis, Santa Fe, New Mexico 87505

**NPDES Compliance Inspection
Giant Refining Company/Ciniza Refinery
NPDES Permit #NMR05B157, November 10, 2005**

Further Explanations

Introduction

On November 10, 2005, a Compliance Evaluation Inspection was conducted at the Giant Refining Company/Ciniza Refinery (petroleum refining - Standard Industrial Classification 2911) located near Gallup, New Mexico by Richard E. Powell of the State of New Mexico Environment Department (NMED). Carl Chavez and Wayne Price of the NM Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) accompanied the inspector. The primary purpose of this inspection was to document the permittee's status regarding the NPDES multi-sector general storm water permit (MSGP) for industrial activities (this facility has industrial activities being conducted on-site that meet the descriptions of industrial activities in section I) and storm water regulations at **40 Code of Federal Regulations (CFR) Part 122.26**. In addition, this inspection included an assessment of the potential co-mingling of "contaminated runoff" as defined under 40 CFR Part 419.11 that is subject to nationally established effluent guidelines found at 40 CFR Part 419 and ineligible for coverage under the MSGP, with storm water discharges that are eligible.

Permit Status: Overall rating of "Unsatisfactory"

"Contaminated runoff" is defined as "runoff which comes into contact with any raw material, intermediate product, finished product, by-product or waste product located on petroleum refinery property." Most areas at refineries are not eligible for coverage under the MSGP including: raw material, intermediate product, by-product, final product, waste material, chemical, and material storage areas; loading and unloading areas; transmission pipelines; and, processing areas. Runoff that may be eligible for coverage, provided discharges are not co-mingled with "contaminated runoff," include: vehicle and equipment storage, maintenance and refueling areas.

A number of areas from which "contaminated runoff" or co-mingled "contaminated runoff" and storm water runoff appears to discharge were identified during this inspection. These include: a fairly large area in the northeast part of the facility where some (most is contained) of the railcar loading/unloading facility and an LPG tank farm appear to drain either directly offsite or are co-mingled with storm water runoff directed to storm water outfall No. 2; the area along the south side of the main process area (north of the office complex) appears to co-mingle with storm water runoff directed to storm water outfall No. 1; and the area along the north side of the facility where some of the drainage from a scrap yard (from which discharges are likely eligible) appears to co-mingle with drainage from an adjacent (to the east) tank farm and then directed to storm water outfall No. 2. There may be other areas where "contaminated runoff" or co-mingled "contaminated runoff" and storm water runoff discharge from this facility but the difficulty of identifying these areas is exacerbated by the facility operator's failure to identify and provide adequate drainage area mapping. The site maps included in the SWPPP show only general drainage patterns and outfalls, but lack of detailed drainage area mapping creates a situation where even the facility operators may be unaware of exactly what areas drain to "contaminated runoff" containment systems, and what

areas drain offsite or are directed to the storm water outfalls. Figure No. 1 in the SWPPP does delineate eight drainage sectors, which are described in the attached "Storm Water Assessment" narrative, but these appear to be inaccurate per the above discussion. It appears that these eight sectors were determined by merely drawing a large box around a general area rather than making an accurate determination of specific drainage areas.

Section 301 (a) of the Federal Water Pollution Control Act states that "Except as in compliance with this section and sections 302, 306, 307, 318, 402 and 404 of this Act, the discharge of any pollutant by any person shall be unlawful." Since this facility does not have (and has apparently never had) NPDES permit coverage for discharges of process wastewater or contaminated runoff, all past, and continuing, discharges have been (are) in apparent violation of Section 301 of the Clean Water Act, 33 U.S.C. § 1311.

Storm water runoff from this facility discharges to unclassified tributaries to the North Fork of the Rio Puerco (west) in the Little Colorado River minor Basin, Lower Colorado River major Basin. This report is based on a review of files maintained by the permittee and NMED, on-site observation by NMED personnel, and verbal information provided by the permittee's representatives.

An entrance interview was conducted with Messrs. Ed Riege, Environmental Superintendent and Steve Morris, Environmental Engineer at approximately 1025 hours on November 10, 2005. The inspector made introductions, presented his credentials and discussed the purpose of the inspection.

This facility applied for permit coverage under the NPDES multi-sector general storm water permit (MSGP) 2000 and has been assigned reference #NMR05B157 effective April 24, 2002. There was an SWPPP last revised on April 12, 2005, available for review at the site on the date of this inspection. There is no documentation included in the SWPPP, which supports the permittee's determination of permit eligibility with regard to Part 1.2.3.6 (Endangered Species) and Part 1.2.3.7 (Historic Places). There is a signed/certified statement (by Ed Rios) in the "NPDES Certifications" section of the plan regarding eligibility "... due to previous authorization under the Endangered Species Act." However, although the facility may have followed proper procedures (see MSGP Addendum A) to establish MSGP permit eligibility regarding endangered species, no documentation, other than the above statement, regarding this determination was included in the SWPPP. Information to support the permittee's determination of permit eligibility must be included in the SWPPP.

Since most of the time available to conduct this inspection was spent doing the above documented "contaminated runoff" assessment, only a cursory, and after the fact review of the SWPPP, was completed. Some of the major findings of this brief review are as follows:

Storm Water Pollution Prevention Plan (SWPPP)

Pollution Prevention Team: Overall rating of "Marginal"

Part 4.2.1 of the permit states, in part, "You must identify the staff individual(s) (by name or title) that comprise the facility's storm water Pollution Prevention Team ... Responsibilities of each staff individual on the team must be listed."

Although, Mr. Riege appears to have rather significant responsibilities regarding storm water pollution prevention and implementation of the SWPPP, the permittee's SWPPP does not identify this individual or his responsibilities.

Description of Potential Pollutant Sources: Overall rating of "Marginal"

Part 4.1.1 of the permit requires that permittees "Identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from your facility."

The permit requires that this description include such things as a site map, an identification of the types of pollutants that are likely to be present in storm water discharges, an inventory of the types of materials handled at the site that potentially may be exposed to precipitation, a list of significant spills and leaks of toxic or hazardous pollutants, sampling data, a narrative description of the potential pollutant sources from specific activities at the facility, and identification of specific potential pollutants.

As noted above, the permittee has prepared an SWPPP for this facility. As above, the site map does not include an accurate depiction of drainage areas, all structural controls (berms, including berms associated with the truck parking and staging area; straw bale dikes; secondary containment; etc.) or receiving waters. The SWPPP must include a general location map and a site map identifying such things as: drainage areas, drainage patterns and outfalls, all structural BMPs, surface watercourses, all potential pollutant sources, locations of major spills or leaks, locations of all industrial activities exposed to precipitation, etc. The plan does a very thorough job of pollutant and pollutant source identification.

Although not specifically required (conducting analytical monitoring may be dictated for appropriate site assessment procedures, as well as documentation of SWPPP effectiveness) at these types of facilities by the MSGP 2000, benchmark analytical monitoring was required and conducted under the baseline general storm water permit as well as more limited monitoring since. Results of the September 1991, May 1997, August 2000, and August 2003 analytical monitoring indicate that the MSGP cut-off concentrations for total suspended solids (TSS) was greatly exceeded (range from 42 - 48,000 mg/L) most of the time, and results for COD (range 64 - 428 mg/L) was exceeded some of the time. These elevated analytical results (as well as the results of the quarterly visual examinations) must be taken into consideration during the facility's "Comprehensive Site Compliance Evaluation." These results must be used, in part, to determine required amendments to the SWPPP to incorporate additional structural and non-structural controls as appropriate to eliminate or significantly minimize pollutants in storm water discharges so that these pollutant levels are reduced to below cut-off concentrations. The operator has apparently taken no action to amend the SWPPP as required. However, the permittee has sampled outfalls that are located in "waters of the U.S." Because of this, these results may not be representative of actual discharges from the industrial activities at this facility. Sampling must be conducted in a location that is after the last treatment unit and prior to entry into a "water of the U.S." Also, the permittee has apparently not conducted required Quarterly Visual Monitoring (see 5.1.1 of the MSGP 2000) at this facility.

Description of Appropriate Measures and Controls: Overall rating of "Unsatisfactory"

Part 4.2.7 of the permit requires that the permittee, "Describe the type and location of existing non-structural and structural best management practices (BMPs) selected for each of the areas where industrial materials or activities are exposed to storm water," and describe appropriate proposed BMPs for areas not yet affected, and implement such controls.

Non-structural and structural BMPs to be described and implemented by the permittee include such things as good housekeeping, preventive maintenance, spill prevention and response procedures, periodic inspections, employee training, record keeping, non-storm water evaluations and certifications, sediment and erosion control, as well as implementation/maintenance of traditional storm water management practices, where appropriate.

Some of the BMPs are overly generic (e.g., "maintain in a clean and orderly work environment"). In addition, although the facility apparently does occasionally clean and repair storm water conveyances and replace straw bales dikes, the SWPPP does not include a record of regular inspections and preventive maintenance of these storm water management controls. Part 6.I.4.3.1 of the MSGP 2000 requires facility inspections at a minimum of 6-month intervals and at least quarterly inspections of equipment and vehicles that store, mix or transport chemicals/hazardous materials. It appears that these inspections are not conducted or are, at least, not recorded.

Routine facility storm water inspections must be recorded, including their scheduled frequency, personnel conducting the inspection, dates of the inspection, results of the inspection, actions taken to correct problems encountered during the inspection, etc., in the SWPPP. These inspections must include observations of all areas of the facility where industrial materials or activities are exposed to storm water, and include an evaluation of all BMPs, including sediment and erosion control measures such as silt fences, check dams, etc. These inspections must be conducted by "qualified" personnel and include a reasonable set of tracking or follow-up procedures to be used to ensure that appropriate actions are taken (deficiencies must be corrected no later than 14 days after the inspection) in response to problems documented during the inspections. As above, there are apparent problems at this facility with "contaminated runoff" control practices that the permittee has not addressed. This is the sort of problem that should be documented during the permittee's periodic inspections, and appropriate and timely corrective actions taken and documented.

Although the SWPPP includes a "Non-Storm Water Discharge Assessment Certification" that lists cooling tower mist as a source of non-storm water discharge, there is no description of results of tests/evaluations, evaluation criteria or testing methods used, dates of any testing and/or evaluation, or any other information upon which the certification decision could be based.

Annual Site Compliance Evaluation Reports: Overall rating of "Unsatisfactory"

Part 4.9 of the permit states, in part, "You must conduct facility inspections at least once a year. The inspections must be done by qualified personnel provided by you."

According to the plan, the last annual site compliance evaluation was conducted in December 2004. Ed Riege and Darren Joe, neither of whom are on the Pollution Prevention Team, conducted this evaluation. Other than the apparent failure to incorporate changes dictated by the above-mentioned

analytical sampling data, the areas evaluated, the recording of findings, follow-up, and post evaluation activities for these annual evaluations appear very thorough. However, the staff conducting the evaluations apparently failed to observe, document, and properly address the areas that appear to produce discharges of "contaminated runoff" from this facility. In addition, reports of these evaluations have not been signed and certified by a cognizant official or authorized representative per requirements in Parts 4.9.4 and 9.7.1 of the MSGP.

Per Part 4.9 of the permit, the required annual site compliance evaluation must be done by "qualified personnel that are knowledgeable and possess the skills to assess conditions at your facility that could impact storm water quality and assess the effectiveness of the BMPs ..." This inspection must include a comprehensive evaluation of the SWPPP and the entire facility, including effectiveness of current measures and controls, and identification of current and anticipated potential pollutant sources. The evaluation should include a review of the SWPPP to ascertain that all required inspections, maintenance, and good housekeeping activities are conducted and recorded, and that these activities are effective in controlling pollutant loads in storm water runoff. It should also include a review of visual and analytical monitoring results, and result in appropriate revisions to the SWPPP that describe, and provide for, implementation of any required changes/additions in a timely manner.

Based on this inspection, the operator(s) must prepare, and include with the SWPPP, a properly signed report (and reports documenting any follow-up actions taken) signed by a cognizant official or an authorized representative (see Part 9.7 of the permit) which summarizes the scope of the inspection, includes the name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and any incidents of non-compliance (or a certification that the facility is in compliance with the SWPPP and the permit).

An exit interview to discuss the preliminary findings of this inspection was conducted from approximately 1515-1550 hours on November 10, 2005 with Mr. Ed Rios, General Manager, Mr. Stan Fisher, Operations Manager, and Messrs. Riege and Morris all of Ciniza Refinery, as well as Messrs. Chavez and Price of OCD, at the site.



Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code										NPDES										yr/mo/day										Inspec. Type		Inspector		Fac Type	
1	N	2	5	3	N	M	R	0	5	B	1	5	7	11	12	0	5	1	1	1	0	17	18	W	19	S	20	2							
Remarks																																			
P	E	T	R	O	L	E	U	M		R	E	F	I	N	E	R	Y		S	I	C	2	9	1	1										
Inspection Work Days										Facility Evaluation Rating										BI		QA		Reserved											
67										70	1							71	N	72	N	73							80						

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NPDES permit number) GIANT REFINING COMPANY/CINIZA REFINERY, JAMESTOWN, NM. EAST OF GALLUP ON I 40, EXIT 39 BEHIND PILOT TRAVEL CENTER MCKINLEY COUNTY	Entry Time /Date 1025/11-10-05	Permit Effective Date 10-30-00
	Exit Time/Date 1550/11-10-05	Permit Expiration Date 10-30-05
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) *ED RIEGE, ENVIRONMENTAL SUPERINTENDENT 505-722-0217 *STEPHEN MORRIS, ENVIRONMENTAL ENGINEER 505-722-3833		Other Facility Data LAT 35 29 10.9 LONG -108 25 36.3
Name, Address of Responsible Official/Title/Phone and Fax Number *ED RIOS, GENERAL MANAGER, CINIZA REFINERY, ROUTE 3 BOX 7, GALLUP, NM 87301 505-722-0202		
Contacted Yes ☒ No ☐		

Section C: Areas Evaluated During Inspection (S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

U	Permit	N	Flow Measurement	N	Operations & Maintenance	N	CSO/SSO
M	Records/Reports	U	Self-Monitoring Program	N	Sludge Handling/Disposal	U	Pollution Prevention
U	Facility Site Review	N	Compliance Schedules	N	Pretreatment	N	Multimedia
N	Effluent/Receiving Waters	N	Laboratory	U	Storm Water	N	Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

- FACILITY HAS COVERAGE UNDER THE MSGP 2000 (UNDER CINIZA REFINERY, JAMESTOWN, NM) AND HAS PREPARED A SWPPP.
- THIS INSPECTION INCLUDED AN ASSESSMENT OF THE POTENTIAL CO-MINGLING OF "CONTAMINATED RUNOFF" AS DEFINED UNDER 40 CFR PART 419.11 THAT IS SUBJECT TO NATIONALLY ESTABLISHED EFFLUENT GUIDELINES FOUND AT 40 CFR PART 419 AND INELIGIBLE FOR COVERAGE UNDER THE MSGP, WITH STORM WATER DISCHARGES THAT ARE ELIGIBLE. A NUMBER OF AREAS FROM WHICH "CONTAMINATED RUNOFF" OR CO-MINGLED "CONTAMINATED RUNOFF" AND STORM WATER RUNOFF APPEARS TO DISCHARGE WERE IDENTIFIED DURING THIS INSPECTION.
- "PETROLEUM REFINERY OF MODERATE COMPLEXITY RATING" WITH CATALYTIC CRACKING CAPABILITY, REFORMING, AND TOPPING (BASIC DISTILLATION).
- SEE REPORT AND FURTHER EXPLANATION.

RICHARD E. POWELL	Agency/Office/Telephone/Fax NMED/SWQB 505-827-2798	Date
Signature of Management QA Reviewer <i>Sandy Jones</i>	Agency/Office/Phone and Fax Numbers NMED/SWQB 505-222-9560	Date

SUMMARY

Ciniza Refinery EPA Stormwater Inspection & OCD Follow-up from September 8, 2005 Inspection

November 10, 2005

Attendees:

Giant Refining Company: Stephen Morris (SM), Ed Riege (ER1) and Ed Rios (ER2)
New Mexico Environment Department (NMED). Surface Water Quality Division:
Richard Powell (RP)
Oil Conservation Division: Carl Chavez (CC) and Wayne Price (WP)

Disclaimer: The following are the minutes of the meeting, and observation notes taken by OCD personnel. These comments do not release Giant of responsibility of any OCD permit condition or rule, or compliance with any other federal, state, or local laws and/or regulations. In addition, these comments are not to be construed to imply enforcement of any permit condition or regulation outside of the authority of the OCD.

Agenda:

- I. NPDES Stormwater Inspection (see attached stormwater inspection letter dated December 19, 2005 to Giant from RP)
- II OCD September 8, 2005 Refinery Follow-up

I. NPDES Stormwater Inspection of Giant Ciniza's Multi-Site (MS04) General Discharge Permit (NMR05B157)

RP asked for a copy of Giant's general discharge permit and Stormwater pollution prevention plan (SWPPP) with maps of existing stormwater non-contact areas. RP checked the accuracy of the maps in the field and pointed out areas that appear to be missing from the diagram(s). A field inspection was conducted with the assistance of ER and SM.

RP indicated that stormwater (non-contact) is in contact with contact water off-site; this constitutes a non-permitted discharge. Individual NPDES permits are required for contaminated stormwater discharging off-site. Giant has the option to capture or contain contaminated run-off and/or to apply for individual permits for discharge locations with effluent monitoring. If contaminated stormwater leaves the site, Giant is in violation of CWA. Parameters to sample for may include: industry standard contaminants for refinery as specified under 40 CFR 119 and WQCC standards. If concentrations are below regulatory limits, there is no violation.

The conclusions from the stormwater inspection were:

- 1) Need Endangered Species Act and Historical Society information for refinery location.

- 2) Need a more detailed site map with property boundaries (note boundary survey needed for map) and all berms, drainage, etc. depicted to help identify contact areas where contaminated runoff could impact non-contact stormwater drainage areas on the facility. There are several locations where contaminated runoff can discharge into stormwater from ineligible areas. For example, a potential of commingling was observed at the south edge of the refinery process area, east of the railroad lagoon and in the bone yard.
- 3) Parking area and drainage appear to be adequate, but need map depicting all stormwater drainage systems to satisfy NPDES Stormwater requirements.
- 4) Truck staging, warehouse, bone yard and any other areas that are in non-contact or storm drain areas should be depicted on a map with stormwater drainage and outfall areas. Giant will need to address or work to isolate any point source locations within storm drain areas that may impact stormwater areas.
- 5) Truck load-out area drains to sewer process drain and into the new API separator.
- 6) There are areas where refinery process water or contaminated runoff (contact areas) can discharge to stormwater drainage areas (non-contact areas) or to ineligible areas. For example, the refinery process area needs to be bermed all along its perimeter to retain spills/releases that could easily migrate into nearby stormwater (non-contact) drainage areas or features. Any drains within the refinery process area are considered process drains and need to be routed to an API treatment unit with a benzene stripper before it can be discharged into aeration lagoon #1 (AL1). At the south edge of the production area, RR Lagoon Rack and bone yard areas there is potential for commingling of contact with non-contact runoff. Problem areas appear to be located at the NE corner of the site, south process area and north bone yard area.
- 7) A berm encompassing the tank battery (white natural gas liquid storage tanks) at the northeast side of the refinery west of the RR Lagoon Rack and south of the high pressure storage bullets is required that will address SPCC requirements and prevent spills/releases from migrating unobstructed into a non-contact stormwater drainage areas east of the RR Lagoon Rack and toward stormwater outfall #2. At the time of inspection, there was no berm around these tanks.
- 8) During the stormwater inspection, OCD noticed a boiler feed tank west of the RR Lagoon Rack along tank battery pipelines east of the tank battery steaming, leaking and spraying water onto the ground and Giant agreed to fix the pump and bring a vacuum truck in to recover ponded fluids on the ground.
- 9) Giant can opt for individual permits with monitoring at downgradient outfalls for its contact areas or implement local containment controls to eliminate the need for individual NPDES stormwater permits at different locations throughout its refinery. OCD can approve local containment.
- 10) RP decided due to time constraints to take home a copy of Giant's SWPPP for his inspection.
- 11) Individual NPDES stormwater permits are not needed, unless Giant cannot isolate contact areas from stormwater or non-contact areas. If Giant cannot properly isolate stormwater from process areas, then individual permits with more specific monitoring requirements will be required. Giant indicated that it preferred to be under a general discharge permit and will work to isolate contact from non-contact areas.
- 12) RP will send inspection report to Giant with copies to all parties (EPA and OCD) with recommendations.

II. OCD September 8, 2005 Ciniza Refinery Follow-up

- 1) Status of installation of chopper pump at new API separator (NAPIS) that was scheduled to be installed the week of Nov. 8, 2005? Giant stated that Rinchem is scheduled to install the pump during the week of December 4, 2005.
- 2) Is the secondary containment at NAPIS holding? Some fluctuation in fluid level, but lately the level has remained constant at 1 ft. of head. Giant feels the primary and secondary containment systems have integrity. OCD is concerned about the integrity of the secondary containment system. OCD wanted to evaluate this situation further and discuss with Giant later. OCD concerns are: 1) integrity of the secondary containment system; and 2) geohydrologic connection to the water table aquifer with potential for leaking contaminants to discharge to the surface and/or migrate via groundwater beneath the refinery property.
- 3) Cleanup of shorelines around evaporation ponds? Giant is scheduled to scrape the shorelines and increase fluid level before the end of December 2005. Waste will be characterized for proper disposal and or treatment in the land farm. EPI is skimming oil off the top of the ponds today.
- 4) Status of oil in the OAPIS? Oil (i.e., TPH) and hazardous waste constituents are still being detected in weekly monitoring.
- 5) OCD Data Quality Objectives (DQOs)? Giant needs to be aware of the appropriate regulatory limits based on site sampling to ensure analytical methods and detection limits are adequate for use by the State. For example, sampling at the OAPIS, evaporation ponds, etc. would require detection limits that do not exceed 40 CFR 261.24 Toxicity Characteristic to determine whether hazardous wastes are present where they should not be. Groundwater sampling would require lower detection limits and it is Giant's responsibility to ensure that any dilutions performed by the lab will not exceed the states DQOs.
- 6) Pilot station effluent (PSE) and monitoring per OCD permit? A couple of analytical monitoring reports were provided at the meeting, which showed significantly elevated BOD levels. OCD is not sure why there were only 2 reports provided, since the permit requires quarterly monitoring? The PSE discharges directly into aeration lagoon #1 without any treatment. BOD levels from the PSE were observed to be significantly elevated. OCD requested that Giant analyze PSE for 405.1, 418.1, 6010, 7470, 8015B, 8260, 8270, 8310, etc. to get a better handle on waste loading to the existing treatment system. Giant will need to determine the volume flow rate from the PSE, refinery process water, determine hazardous constituent concentrations, and estimate loading to the current treatment system to compare with the total capacity of the current treatment system. If loading exceeds its treatment capacity, then Giant needs to undertake actions to operate within its treatment capacity.
- 7) OCD's Nov. 15, 2005 e-mail requirement for Giant to address the OAPIS? There appears to be another point source(s) migrating into the OAPIS. Giant is working to investigate the source(s) of contamination. OCD is concerned about hazardous wastes in contact with stormwater at the OAPIS.
- 8) Rail Road Lagoon Rack excavation map displaying sample locations for verification of soil remediation? Giant is sending the map in its final report.

- 9) What caused the Tank 232 release? Why the disparity between release and recovery volumes in the C-141 forms? OCD concerns about Giant's response effort in excavating contaminated soils in unlined berm areas? Giant indicated the release occurred due to operator error. OCD mentioned that Giant should consider incorporating a zero loss or pollution prevention goal at its facility to help reinforce and prevent releases from occurring at the facility. OCD is concerned that Giant did not dig down deep enough to recover impacted soils in the unlined berm area. Giant indicated that it has never completely excavated contaminated soil in berm areas after releases occur. Giant collected waste characterization samples of the excavated soil in order to properly dispose or treat it in their land farm. Giant indicated that their general protocol for releases in berm areas is to excavate the bulk of the contamination, but they never excavate deep enough to assess impacts to groundwater. OCD acknowledged the presence of clay substrate underneath the refinery; however, it clarified that all impacted soil, regardless of release location should be properly investigated, removed, and characterized for disposal and/or land treatment. Giant acknowledged OCD's concerns.
- 10) Land farm area status? Giant tills the land farm once per month as specified in the permit.
- 11) Stockpiled soils update? Giant confirmed that cooling tower salt contaminated soil piles observed during the Sept. 8, 2005 inspection were properly disposed.
- 12) Firewater pit status? OCD has not received any information on Giant's request to use an existing facility pit filled with RO reject water for the storage of firewater. Giant indicated that the request is ongoing with permeability test results in hand, etc.
- 13) OCD split-samples with SM from the Old API Separator (OAPIS), the discharge point from Aeration Lagoon 2 to Evaporation Pond (EP) #1, and discharge point from EP #1 to EP #2. OCD is currently awaiting receipt of the analytical sample results from Hall Environmental of Albuquerque. OCD followed all chain-of-custody procedures up to and including delivery to the laboratory the next morning.
- 14) ER2 was present during OCD's agenda discussion and is the new Superintendent of Giant's Ciniza Refinery.

Attachment: NMED Stormwater letter to Giant (December 19, 2005)

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COVER LETTER

December 06, 2005

Carl Chavez
NM Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
TEL: (505) 476-3488
FAX (505) 476-3462

RE: Ciniza Refinery Gallup NM

Order No.: 0511114

Dear Carl Chavez:

Hall Environmental Analysis Laboratory received 4 samples on 11/11/2005 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,

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

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Project: Ciniza Refinery Gallup NM
Lab Order: 0511114

CASE NARRATIVE

EPA Method 8270 samples analyzed at a dilution due to:

1. Emulsion formed during extraction.
2. High amounts of petroleum in the sample.

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-01

Client Sample ID: OLD API
Collection Date: 11/10/2005 5:15:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						
Petroleum Hydrocarbons, TR	380	40		mg/L	20	11/16/2005
EPA METHOD 8260B: VOLATILES						
Benzene	120	10		µg/L	10	11/21/2005
Toluene	96	10		µg/L	10	11/21/2005
Ethylbenzene	ND	10		µg/L	10	11/21/2005
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/21/2005
1,2,4-Trimethylbenzene	140	10		µg/L	10	11/21/2005
1,3,5-Trimethylbenzene	67	10		µg/L	10	11/21/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/21/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/21/2005
Naphthalene	110	20		µg/L	10	11/21/2005
1-Methylnaphthalene	500	40		µg/L	10	11/21/2005
2-Methylnaphthalene	640	40		µg/L	10	11/21/2005
Acetone	ND	100		µg/L	10	11/21/2005
Bromobenzene	ND	10		µg/L	10	11/21/2005
Bromochloromethane	ND	10		µg/L	10	11/21/2005
Bromodichloromethane	ND	10		µg/L	10	11/21/2005
Bromoform	ND	10		µg/L	10	11/21/2005
Bromomethane	ND	20		µg/L	10	11/21/2005
2-Butanone	ND	100		µg/L	10	11/21/2005
Carbon disulfide	ND	100		µg/L	10	11/21/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/21/2005
Chlorobenzene	ND	10		µg/L	10	11/21/2005
Chloroethane	ND	20		µg/L	10	11/21/2005
Chloroform	ND	10		µg/L	10	11/21/2005
Chloromethane	ND	10		µg/L	10	11/21/2005
2-Chlorotoluene	ND	10		µg/L	10	11/21/2005
4-Chlorotoluene	ND	10		µg/L	10	11/21/2005
cis-1,2-DCE	ND	10		µg/L	10	11/21/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/21/2005
Dibromochloromethane	ND	10		µg/L	10	11/21/2005
Dibromomethane	ND	20		µg/L	10	11/21/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/21/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: OLD API

Lab Order: 0511114

Collection Date: 11/10/2005 5:15:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/21/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/21/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/21/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/21/2005
2-Hexanone	ND	100		µg/L	10	11/21/2005
Isopropylbenzene	ND	10		µg/L	10	11/21/2005
4-Isopropyltoluene	26	10		µg/L	10	11/21/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/21/2005
Methylene Chloride	ND	30		µg/L	10	11/21/2005
n-Butylbenzene	ND	10		µg/L	10	11/21/2005
n-Propylbenzene	ND	10		µg/L	10	11/21/2005
sec-Butylbenzene	ND	10		µg/L	10	11/21/2005
Styrene	ND	10		µg/L	10	11/21/2005
tert-Butylbenzene	ND	10		µg/L	10	11/21/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/21/2005
trans-1,2-DCE	ND	10		µg/L	10	11/21/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/21/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/21/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/21/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/21/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/21/2005
Vinyl chloride	ND	10		µg/L	10	11/21/2005
Xylenes, Total	220	10		µg/L	10	11/21/2005
Surr: 1,2-Dichloroethane-d4	95.6	69.9-130		%REC	10	11/21/2005
Surr: 4-Bromofluorobenzene	103	71.2-123		%REC	10	11/21/2005
Surr: Dibromofluoromethane	93.8	73.9-134		%REC	10	11/21/2005
Surr: Toluene-d8	73.0	81.9-122	S	%REC	10	11/21/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	2500		µg/L	10	11/18/2005
Acenaphthylene	ND	2500		µg/L	10	11/18/2005
Aniline	ND	5000		µg/L	10	11/18/2005
Anthracene	ND	2500		µg/L	10	11/18/2005
Azobenzene	ND	2500		µg/L	10	11/18/2005
Benz(a)anthracene	ND	3800		µg/L	10	11/18/2005
Benzo(a)pyrene	ND	3800		µg/L	10	11/18/2005
Benzo(b)fluoranthene	ND	3800		µg/L	10	11/18/2005
Benzo(g,h,i)perylene	ND	2500		µg/L	10	11/18/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-01

Client Sample ID: OLD API
Collection Date: 11/10/2005 5:15:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	2500		µg/L	10	11/18/2005
Benzoic acid	ND	13000		µg/L	10	11/18/2005
Benzyl alcohol	ND	5000		µg/L	10	11/18/2005
Bis(2-chloroethoxy)methane	ND	2500		µg/L	10	11/18/2005
Bis(2-chloroethyl)ether	ND	3800		µg/L	10	11/18/2005
Bis(2-chloroisopropyl)ether	ND	3800		µg/L	10	11/18/2005
Bis(2-ethylhexyl)phthalate	ND	3800		µg/L	10	11/18/2005
4-Bromophenyl phenyl ether	ND	2500		µg/L	10	11/18/2005
Butyl benzyl phthalate	ND	3800		µg/L	10	11/18/2005
Carbazole	ND	2500		µg/L	10	11/18/2005
4-Chloro-3-methylphenol	ND	5000		µg/L	10	11/18/2005
4-Chloroaniline	ND	5000		µg/L	10	11/18/2005
2-Chloronaphthalene	ND	2500		µg/L	10	11/18/2005
2-Chlorophenol	ND	2500		µg/L	10	11/18/2005
4-Chlorophenyl phenyl ether	ND	3800		µg/L	10	11/18/2005
Chrysene	ND	3800		µg/L	10	11/18/2005
Di-n-butyl phthalate	ND	2500		µg/L	10	11/18/2005
Di-n-octyl phthalate	ND	3800		µg/L	10	11/18/2005
Dibenz(a,h)anthracene	ND	2500		µg/L	10	11/18/2005
Dibenzofuran	ND	2500		µg/L	10	11/18/2005
1,2-Dichlorobenzene	ND	2500		µg/L	10	11/18/2005
1,3-Dichlorobenzene	ND	2500		µg/L	10	11/18/2005
1,4-Dichlorobenzene	ND	2500		µg/L	10	11/18/2005
3,3'-Dichlorobenzidine	ND	3800		µg/L	10	11/18/2005
Diethyl phthalate	ND	2500		µg/L	10	11/18/2005
Dimethyl phthalate	ND	2500		µg/L	10	11/18/2005
2,4-Dichlorophenol	ND	2500		µg/L	10	11/18/2005
2,4-Dimethylphenol	ND	2500		µg/L	10	11/18/2005
4,6-Dinitro-2-methylphenol	ND	13000		µg/L	10	11/18/2005
2,4-Dinitrophenol	ND	13000		µg/L	10	11/18/2005
2,4-Dinitrotoluene	ND	2500		µg/L	10	11/18/2005
2,6-Dinitrotoluene	ND	2500		µg/L	10	11/18/2005
Fluoranthene	ND	2500		µg/L	10	11/18/2005
Fluorene	ND	2500		µg/L	10	11/18/2005
Hexachlorobenzene	ND	2500		µg/L	10	11/18/2005
Hexachlorobutadiene	ND	2500		µg/L	10	11/18/2005
Hexachlorocyclopentadiene	ND	2500		µg/L	10	11/18/2005
Hexachloroethane	ND	2500		µg/L	10	11/18/2005
Indeno(1,2,3-cd)pyrene	ND	2500		µg/L	10	11/18/2005
Isophorone	ND	2500		µg/L	10	11/18/2005
2-Methylnaphthalene	ND	2500		µg/L	10	11/18/2005
2-Methylphenol	ND	3800		µg/L	10	11/18/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-01

Client Sample ID: OLD API
Collection Date: 11/10/2005 5:15:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	5000		µg/L	10	11/18/2005
N-Nitrosodi-n-propylamine	ND	2500		µg/L	10	11/18/2005
N-Nitrosodimethylamine	ND	2500		µg/L	10	11/18/2005
N-Nitrosodiphenylamine	ND	2500		µg/L	10	11/18/2005
Naphthalene	ND	2500		µg/L	10	11/18/2005
2-Nitroaniline	ND	13000		µg/L	10	11/18/2005
3-Nitroaniline	ND	13000		µg/L	10	11/18/2005
4-Nitroaniline	ND	5000		µg/L	10	11/18/2005
Nitrobenzene	ND	2500		µg/L	10	11/18/2005
2-Nitrophenol	ND	3800		µg/L	10	11/18/2005
4-Nitrophenol	ND	13000		µg/L	10	11/18/2005
Pentachlorophenol	ND	13000		µg/L	10	11/18/2005
Phenanthrene	ND	2500		µg/L	10	11/18/2005
Phenol	ND	2500		µg/L	10	11/18/2005
Pyrene	ND	3800		µg/L	10	11/18/2005
Pyridine	ND	7500		µg/L	10	11/18/2005
1,2,4-Trichlorobenzene	ND	2500		µg/L	10	11/18/2005
2,4,5-Trichlorophenol	ND	2500		µg/L	10	11/18/2005
2,4,6-Trichlorophenol	ND	3800		µg/L	10	11/18/2005
Surr: 2,4,6-Tribromophenol	104	16.6-150		%REC	10	11/18/2005
Surr: 2-Fluorobiphenyl	83.0	19.6-134		%REC	10	11/18/2005
Surr: 2-Fluorophenol	51.3	9.54-113		%REC	10	11/18/2005
Surr: 4-Terphenyl-d14	89.0	22.7-145		%REC	10	11/18/2005
Surr: Nitrobenzene-d5	132	14.6-134		%REC	10	11/18/2005
Surr: Phenol-d5	59.0	10.7-80.3		%REC	10	11/18/2005

EPA METHOD 245.1: MERCURY

Analyst: CMC

Mercury	0.0019	0.00020	mg/L	1	11/18/2005
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EPA 6010: TOTAL RECOVERABLE METALS

Analyst: NMO

Aluminum	1.6	0.40	mg/L	20	12/1/2005 12:20:01 PM
Antimony	ND	0.010	mg/L	1	12/1/2005 2:52:09 PM
Arsenic	ND	0.020	mg/L	1	12/1/2005 10:04:45 AM
Barium	0.22	0.020	mg/L	1	12/1/2005 10:04:45 AM
Beryllium	ND	0.0030	mg/L	1	12/1/2005 10:04:45 AM
Boron	0.36	0.040	mg/L	1	12/1/2005 2:52:09 PM
Cadmium	0.0023	0.0020	mg/L	1	12/1/2005 10:04:45 AM
Calcium	110	20	mg/L	20	12/1/2005 12:20:01 PM
Chromium	0.023	0.0060	mg/L	1	12/1/2005 10:04:45 AM
Cobalt	0.0064	0.0060	mg/L	1	12/1/2005 10:04:45 AM
Copper	0.059	0.0060	mg/L	1	12/1/2005 10:04:45 AM
Iron	46	1.0	mg/L	20	12/1/2005 12:20:01 PM
Lead	0.015	0.0050	mg/L	1	12/1/2005 10:04:45 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: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: OLD API

Lab Order: 0511114

Collection Date: 11/10/2005 5:15:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	27	1.0		mg/L	1	12/1/2005 10:04:45 AM
Manganese	0.72	0.0020		mg/L	1	12/1/2005 10:04:45 AM
Molybdenum	0.063	0.0080		mg/L	1	12/1/2005 10:04:45 AM
Nickel	0.055	0.010		mg/L	1	12/1/2005 10:04:45 AM
Potassium	32	1.0		mg/L	1	12/1/2005 10:04:45 AM
Selenium	ND	0.050		mg/L	1	12/1/2005 10:04:45 AM
Silver	ND	0.0050		mg/L	1	12/1/2005 10:04:45 AM
Sodium	510	20		mg/L	20	12/1/2005 12:20:01 PM
Thallium	ND	0.050		mg/L	1	12/1/2005 10:04:45 AM
Vanadium	ND	0.050		mg/L	1	12/1/2005 10:04:45 AM
Zinc	3.5	1.0		mg/L	20	12/1/2005 12:20:01 PM
Silica	31	22		mg/L	20	12/2/2005 9:01:45 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: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-02

Client Sample ID: AL2-EP1
Collection Date: 11/10/2005 5:30:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						
Petroleum Hydrocarbons, TR	61	2.0		mg/L	1	11/16/2005
EPA METHOD 8260B: VOLATILES						
Benzene	35	10		µg/L	10	11/21/2005
Toluene	32	10		µg/L	10	11/21/2005
Ethylbenzene	ND	10		µg/L	10	11/21/2005
Methyl tert-butyl ether (MTBE)	30	10		µg/L	10	11/21/2005
1,2,4-Trimethylbenzene	24	10		µg/L	10	11/21/2005
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/21/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/21/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/21/2005
Naphthalene	43	20		µg/L	10	11/21/2005
1-Methylnaphthalene	220	40		µg/L	10	11/21/2005
2-Methylnaphthalene	320	40		µg/L	10	11/21/2005
Acetone	3900	1000		µg/L	100	11/23/2005
Bromobenzene	ND	10		µg/L	10	11/21/2005
Bromochloromethane	ND	10		µg/L	10	11/21/2005
Bromodichloromethane	ND	10		µg/L	10	11/21/2005
Bromoform	ND	10		µg/L	10	11/21/2005
Bromomethane	ND	20		µg/L	10	11/21/2005
2-Butanone	440	100		µg/L	10	11/21/2005
Carbon disulfide	ND	100		µg/L	10	11/21/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/21/2005
Chlorobenzene	ND	10		µg/L	10	11/21/2005
Chloroethane	ND	20		µg/L	10	11/21/2005
Chloroform	ND	10		µg/L	10	11/21/2005
Chloromethane	ND	10		µg/L	10	11/21/2005
2-Chlorotoluene	ND	10		µg/L	10	11/21/2005
4-Chlorotoluene	ND	10		µg/L	10	11/21/2005
cis-1,2-DCE	ND	10		µg/L	10	11/21/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/21/2005
Dibromochloromethane	ND	10		µg/L	10	11/21/2005
Dibromomethane	ND	20		µg/L	10	11/21/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/21/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: AL2-EPI

Lab Order: 0511114

Collection Date: 11/10/2005 5:30:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/21/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/21/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/21/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/21/2005
2-Hexanone	ND	100		µg/L	10	11/21/2005
Isopropylbenzene	ND	10		µg/L	10	11/21/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/21/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/21/2005
Methylene Chloride	ND	30		µg/L	10	11/21/2005
n-Butylbenzene	ND	10		µg/L	10	11/21/2005
n-Propylbenzene	ND	10		µg/L	10	11/21/2005
sec-Butylbenzene	ND	10		µg/L	10	11/21/2005
Styrene	ND	10		µg/L	10	11/21/2005
tert-Butylbenzene	ND	10		µg/L	10	11/21/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/21/2005
trans-1,2-DCE	ND	10		µg/L	10	11/21/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/21/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/21/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/21/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/21/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/21/2005
Vinyl chloride	ND	10		µg/L	10	11/21/2005
Xylenes, Total	19	10		µg/L	10	11/21/2005
Surr: 1,2-Dichloroethane-d4	95.5	69.9-130		%REC	10	11/21/2005
Surr: 4-Bromofluorobenzene	86.8	71.2-123		%REC	10	11/21/2005
Surr: Dibromofluoromethane	97.8	73.9-134		%REC	10	11/21/2005
Surr: Toluene-d8	97.7	81.9-122		%REC	10	11/21/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	20		µg/L	1	11/18/2005
Acenaphthylene	ND	20		µg/L	1	11/18/2005
Aniline	68	40		µg/L	1	11/18/2005
Anthracene	ND	20		µg/L	1	11/18/2005
Azobenzene	ND	20		µg/L	1	11/18/2005
Benz(a)anthracene	ND	30		µg/L	1	11/18/2005
Benzo(a)pyrene	ND	30		µg/L	1	11/18/2005
Benzo(b)fluoranthene	ND	30		µg/L	1	11/18/2005
Benzo(g,h,i)perylene	ND	20		µg/L	1	11/18/2005

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: AL2-EP1

Lab Order: 0511114

Collection Date: 11/10/2005 5:30:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	20		µg/L	1	11/18/2005
Benzoic acid	510	100		µg/L	1	11/21/2005
Benzyl alcohol	ND	40		µg/L	1	11/18/2005
Bis(2-chloroethoxy)methane	ND	20		µg/L	1	11/18/2005
Bis(2-chloroethyl)ether	ND	30		µg/L	1	11/18/2005
Bis(2-chloroisopropyl)ether	ND	30		µg/L	1	11/18/2005
Bis(2-ethylhexyl)phthalate	ND	30		µg/L	1	11/18/2005
4-Bromophenyl phenyl ether	ND	20		µg/L	1	11/18/2005
Butyl benzyl phthalate	ND	30		µg/L	1	11/18/2005
Carbazole	ND	20		µg/L	1	11/18/2005
4-Chloro-3-methylphenol	ND	40		µg/L	1	11/18/2005
4-Chloroaniline	ND	40		µg/L	1	11/18/2005
2-Chloronaphthalene	ND	20		µg/L	1	11/18/2005
2-Chlorophenol	ND	20		µg/L	1	11/18/2005
4-Chlorophenyl phenyl ether	ND	30		µg/L	1	11/18/2005
Chrysene	46	30		µg/L	1	11/18/2005
Di-n-butyl phthalate	ND	20		µg/L	1	11/18/2005
Di-n-octyl phthalate	ND	30		µg/L	1	11/18/2005
Dibenz(a,h)anthracene	ND	20		µg/L	1	11/18/2005
Dibenzofuran	ND	20		µg/L	1	11/18/2005
1,2-Dichlorobenzene	ND	20		µg/L	1	11/18/2005
1,3-Dichlorobenzene	ND	20		µg/L	1	11/18/2005
1,4-Dichlorobenzene	ND	20		µg/L	1	11/18/2005
3,3'-Dichlorobenzidine	ND	30		µg/L	1	11/18/2005
Diethyl phthalate	ND	20		µg/L	1	11/18/2005
Dimethyl phthalate	ND	20		µg/L	1	11/18/2005
2,4-Dichlorophenol	ND	20		µg/L	1	11/18/2005
2,4-Dimethylphenol	140	20		µg/L	1	11/18/2005
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/18/2005
2,4-Dinitrophenol	ND	100		µg/L	1	11/18/2005
2,4-Dinitrotoluene	ND	20		µg/L	1	11/18/2005
2,6-Dinitrotoluene	ND	20		µg/L	1	11/18/2005
Fluoranthene	ND	20		µg/L	1	11/18/2005
Fluorene	53	20		µg/L	1	11/18/2005
Hexachlorobenzene	ND	20		µg/L	1	11/18/2005
Hexachlorobutadiene	ND	20		µg/L	1	11/18/2005
Hexachlorocyclopentadiene	ND	20		µg/L	1	11/18/2005
Hexachloroethane	ND	20		µg/L	1	11/18/2005
Indeno(1,2,3-cd)pyrene	ND	20		µg/L	1	11/18/2005
Isophorone	ND	20		µg/L	1	11/18/2005
2-Methylnaphthalene	89	20		µg/L	1	11/18/2005
2-Methylphenol	ND	30		µg/L	1	11/18/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-02

Client Sample ID: AL2-EP1
Collection Date: 11/10/2005 5:30:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	40		µg/L	1	11/18/2005
N-Nitrosodi-n-propylamine	ND	20		µg/L	1	11/18/2005
N-Nitrosodimethylamine	ND	20		µg/L	1	11/18/2005
N-Nitrosodiphenylamine	ND	20		µg/L	1	11/18/2005
Naphthalene	ND	20		µg/L	1	11/18/2005
2-Nitroaniline	ND	100		µg/L	1	11/18/2005
3-Nitroaniline	ND	100		µg/L	1	11/18/2005
4-Nitroaniline	ND	40		µg/L	1	11/18/2005
Nitrobenzene	ND	20		µg/L	1	11/18/2005
2-Nitrophenol	ND	30		µg/L	1	11/18/2005
4-Nitrophenol	ND	100		µg/L	1	11/18/2005
Pentachlorophenol	ND	100		µg/L	1	11/18/2005
Phenanthrene	130	20		µg/L	1	11/18/2005
Phenol	ND	20		µg/L	1	11/18/2005
Pyrene	32	30		µg/L	1	11/18/2005
Pyridine	ND	60		µg/L	1	11/18/2005
1,2,4-Trichlorobenzene	ND	20		µg/L	1	11/18/2005
2,4,5-Trichlorophenol	ND	20		µg/L	1	11/18/2005
2,4,6-Trichlorophenol	ND	30		µg/L	1	11/18/2005
Surr: 2,4,6-Tribromophenol	84.1	16.6-150		%REC	1	11/18/2005
Surr: 2-Fluorobiphenyl	77.1	19.6-134		%REC	1	11/18/2005
Surr: 2-Fluorophenol	51.9	9.54-113		%REC	1	11/18/2005
Surr: 4-Terphenyl-d14	77.9	22.7-145		%REC	1	11/18/2005
Surr: Nitrobenzene-d5	71.5	14.6-134		%REC	1	11/18/2005
Surr: Phenol-d5	40.7	10.7-80.3		%REC	1	11/18/2005

EPA METHOD 245.1: MERCURY

Analyst: CMC

Mercury	0.0021	0.00020	mg/L	1	11/18/2005
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EPA 6010: TOTAL RECOVERABLE METALS

Analyst: NMO

Aluminum	0.86	0.020	mg/L	1	11/21/2005 10:24:41 AM
Antimony	ND	0.010	mg/L	1	11/21/2005 10:24:41 AM
Arsenic	ND	0.020	mg/L	1	11/21/2005 10:24:41 AM
Barium	0.13	0.020	mg/L	1	11/21/2005 10:24:41 AM
Beryllium	ND	0.0030	mg/L	1	11/21/2005 10:24:41 AM
Boron	0.22	0.040	mg/L	1	11/21/2005 10:24:41 AM
Cadmium	ND	0.0020	mg/L	1	11/21/2005 10:24:41 AM
Calcium	72	1.0	mg/L	1	11/21/2005 10:24:41 AM
Chromium	0.0086	0.0060	mg/L	1	11/21/2005 10:24:41 AM
Cobalt	0.0087	0.0060	mg/L	1	11/21/2005 10:24:41 AM
Copper	0.012	0.0060	mg/L	1	11/21/2005 10:24:41 AM
Iron	8.1	0.25	mg/L	5	11/21/2005 11:02:04 AM
Lead	ND	0.0050	mg/L	1	11/21/2005 10:24:41 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: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-02

Client Sample ID: AL2-EP1
Collection Date: 11/10/2005 5:30:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	17	1.0		mg/L	1	11/21/2005 10:24:41 AM
Manganese	0.29	0.0020		mg/L	1	11/21/2005 10:24:41 AM
Molybdenum	0.014	0.0080		mg/L	1	11/21/2005 10:24:41 AM
Nickel	0.023	0.010		mg/L	1	11/21/2005 10:24:41 AM
Potassium	43	1.0		mg/L	1	11/21/2005 10:24:41 AM
Selenium	ND	0.050		mg/L	1	11/21/2005 10:24:41 AM
Silver	ND	0.0050		mg/L	1	11/21/2005 10:24:41 AM
Sodium	640	10		mg/L	10	11/21/2005 12:19:57 PM
Thallium	ND	0.050		mg/L	1	11/21/2005 10:24:41 AM
Vanadium	ND	0.050		mg/L	1	11/21/2005 10:24:41 AM
Zinc	1.4	0.50		mg/L	10	11/21/2005 12:19:57 PM
Silica	22	5.4		mg/L	5	11/21/2005 11:02:04 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: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-03

Client Sample ID: EP1-EP2
Collection Date: 11/10/2005 5:52:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						
Petroleum Hydrocarbons, TR	84	2.0		mg/L	1	11/16/2005
EPA METHOD 8260B: VOLATILES						
Benzene	16	10		µg/L	10	11/21/2005
Toluene	19	10		µg/L	10	11/21/2005
Ethylbenzene	ND	10		µg/L	10	11/21/2005
Methyl tert-butyl ether (MTBE)	17	10		µg/L	10	11/21/2005
1,2,4-Trimethylbenzene	40	10		µg/L	10	11/21/2005
1,3,5-Trimethylbenzene	14	10		µg/L	10	11/21/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/21/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/21/2005
Naphthalene	59	20		µg/L	10	11/21/2005
1-Methylnaphthalene	390	40		µg/L	10	11/21/2005
2-Methylnaphthalene	530	40		µg/L	10	11/21/2005
Acetone	ND	100		µg/L	10	11/21/2005
Bromobenzene	ND	10		µg/L	10	11/21/2005
Bromochloromethane	ND	10		µg/L	10	11/21/2005
Bromodichloromethane	ND	10		µg/L	10	11/21/2005
Bromoform	ND	10		µg/L	10	11/21/2005
Bromomethane	ND	20		µg/L	10	11/21/2005
2-Butanone	240	100		µg/L	10	11/21/2005
Carbon disulfide	ND	100		µg/L	10	11/21/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/21/2005
Chlorobenzene	ND	10		µg/L	10	11/21/2005
Chloroethane	ND	20		µg/L	10	11/21/2005
Chloroform	ND	10		µg/L	10	11/21/2005
Chloromethane	ND	10		µg/L	10	11/21/2005
2-Chlorotoluene	ND	10		µg/L	10	11/21/2005
4-Chlorotoluene	ND	10		µg/L	10	11/21/2005
cis-1,2-DCE	ND	10		µg/L	10	11/21/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/21/2005
Dibromochloromethane	ND	10		µg/L	10	11/21/2005
Dibromomethane	ND	20		µg/L	10	11/21/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/21/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: EP1-EP2

Lab Order: 0511114

Collection Date: 11/10/2005 5:52:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/21/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/21/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/21/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/21/2005
2-Hexanone	ND	100		µg/L	10	11/21/2005
Isopropylbenzene	ND	10		µg/L	10	11/21/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/21/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/21/2005
Methylene Chloride	ND	30		µg/L	10	11/21/2005
n-Butylbenzene	ND	10		µg/L	10	11/21/2005
n-Propylbenzene	ND	10		µg/L	10	11/21/2005
sec-Butylbenzene	ND	10		µg/L	10	11/21/2005
Styrene	ND	10		µg/L	10	11/21/2005
tert-Butylbenzene	ND	10		µg/L	10	11/21/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/21/2005
trans-1,2-DCE	ND	10		µg/L	10	11/21/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/21/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/21/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/21/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/21/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/21/2005
Vinyl chloride	ND	10		µg/L	10	11/21/2005
Xylenes, Total	23	10		µg/L	10	11/21/2005
Surr: 1,2-Dichloroethane-d4	96.0	69.9-130		%REC	10	11/21/2005
Surr: 4-Bromofluorobenzene	84.3	71.2-123		%REC	10	11/21/2005
Surr: Dibromofluoromethane	89.5	73.9-134		%REC	10	11/21/2005
Surr: Toluene-d8	93.4	81.9-122		%REC	10	11/21/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	50		µg/L	1	11/18/2005
Acenaphthylene	ND	50		µg/L	1	11/18/2005
Aniline	ND	100		µg/L	1	11/18/2005
Anthracene	ND	50		µg/L	1	11/18/2005
Azobenzene	ND	50		µg/L	1	11/18/2005
Benz(a)anthracene	ND	75		µg/L	1	11/18/2005
Benzo(a)pyrene	ND	75		µg/L	1	11/18/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	11/18/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/18/2005

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-03

Client Sample ID: EPI-EP2
Collection Date: 11/10/2005 5:52:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	50		µg/L	1	11/18/2005
Benzoic acid	ND	250		µg/L	1	11/18/2005
Benzyl alcohol	ND	100		µg/L	1	11/18/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/18/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	11/18/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	11/18/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	11/18/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/18/2005
Butyl benzyl phthalate	ND	75		µg/L	1	11/18/2005
Carbazole	ND	50		µg/L	1	11/18/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	11/18/2005
4-Chloroaniline	ND	100		µg/L	1	11/18/2005
2-Chloronaphthalene	ND	50		µg/L	1	11/18/2005
2-Chlorophenol	ND	50		µg/L	1	11/18/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	11/18/2005
Chrysene	ND	75		µg/L	1	11/18/2005
Di-n-butyl phthalate	ND	50		µg/L	1	11/18/2005
Di-n-octyl phthalate	ND	75		µg/L	1	11/18/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/18/2005
Dibenzofuran	ND	50		µg/L	1	11/18/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	11/18/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	11/18/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	11/18/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	11/18/2005
Diethyl phthalate	ND	50		µg/L	1	11/18/2005
Dimethyl phthalate	ND	50		µg/L	1	11/18/2005
2,4-Dichlorophenol	ND	50		µg/L	1	11/18/2005
2,4-Dimethylphenol	88	50		µg/L	1	11/18/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	11/18/2005
2,4-Dinitrophenol	ND	250		µg/L	1	11/18/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	11/18/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	11/18/2005
Fluoranthene	ND	50		µg/L	1	11/18/2005
Fluorene	66	50		µg/L	1	11/18/2005
Hexachlorobenzene	ND	50		µg/L	1	11/18/2005
Hexachlorobutadiene	ND	50		µg/L	1	11/18/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/18/2005
Hexachloroethane	ND	50		µg/L	1	11/18/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/18/2005
Isophorone	ND	50		µg/L	1	11/18/2005
2-Methylnaphthalene	120	50		µg/L	1	11/18/2005
2-Methylphenol	ND	75		µg/L	1	11/18/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: EPI-EP2

Lab Order: 0511114

Collection Date: 11/10/2005 5:52:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	100		µg/L	1	11/18/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/18/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	11/18/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/18/2005
Naphthalene	ND	50		µg/L	1	11/18/2005
2-Nitroaniline	ND	250		µg/L	1	11/18/2005
3-Nitroaniline	ND	250		µg/L	1	11/18/2005
4-Nitroaniline	ND	100		µg/L	1	11/18/2005
Nitrobenzene	ND	50		µg/L	1	11/18/2005
2-Nitrophenol	ND	75		µg/L	1	11/18/2005
4-Nitrophenol	ND	250		µg/L	1	11/18/2005
Pentachlorophenol	ND	250		µg/L	1	11/18/2005
Phenanthrene	130	50		µg/L	1	11/18/2005
Phenol	100	50		µg/L	1	11/18/2005
Pyrene	ND	75		µg/L	1	11/18/2005
Pyridine	ND	150		µg/L	1	11/18/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/18/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/18/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	11/18/2005
Surr: 2,4,6-Tribromophenol	90.4	16.6-150		%REC	1	11/18/2005
Surr: 2-Fluorobiphenyl	73.6	19.6-134		%REC	1	11/18/2005
Surr: 2-Fluorophenol	48.4	9.54-113		%REC	1	11/18/2005
Surr: 4-Terphenyl-d14	79.0	22.7-145		%REC	1	11/18/2005
Surr: Nitrobenzene-d5	69.2	14.6-134		%REC	1	11/18/2005
Surr: Phenol-d5	39.7	10.7-80.3		%REC	1	11/18/2005

EPA METHOD 245.1: MERCURY

Analyst: CMC

Mercury	0.0012	0.00020	mg/L	1	11/18/2005
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EPA 6010: TOTAL RECOVERABLE METALS

Analyst: NMO

Aluminum	0.63	0.020	mg/L	1	11/21/2005 10:27:03 AM
Antimony	ND	0.010	mg/L	1	11/21/2005 10:27:03 AM
Arsenic	ND	0.020	mg/L	1	11/21/2005 10:27:03 AM
Barium	0.10	0.020	mg/L	1	11/21/2005 10:27:03 AM
Beryllium	ND	0.0030	mg/L	1	11/21/2005 10:27:03 AM
Boron	0.23	0.040	mg/L	1	11/21/2005 10:27:03 AM
Cadmium	ND	0.0020	mg/L	1	11/21/2005 10:27:03 AM
Calcium	60	1.0	mg/L	1	11/21/2005 10:27:03 AM
Chromium	0.0083	0.0060	mg/L	1	11/21/2005 10:27:03 AM
Cobalt	0.0072	0.0060	mg/L	1	11/21/2005 10:27:03 AM
Copper	0.012	0.0060	mg/L	1	11/21/2005 10:27:03 AM
Iron	7.9	0.25	mg/L	5	11/21/2005 11:05:01 AM
Lead	ND	0.0050	mg/L	1	11/21/2005 10:27:03 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: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: EP1-EP2

Lab Order: 0511114

Collection Date: 11/10/2005 5:52:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	16	1.0		mg/L	1	11/21/2005 10:27:03 AM
Manganese	0.33	0.0020		mg/L	1	11/21/2005 10:27:03 AM
Molybdenum	0.014	0.0080		mg/L	1	11/21/2005 10:27:03 AM
Nickel	0.018	0.010		mg/L	1	11/21/2005 10:27:03 AM
Potassium	43	1.0		mg/L	1	11/21/2005 10:27:03 AM
Selenium	ND	0.050		mg/L	1	11/21/2005 10:27:03 AM
Silver	ND	0.0050		mg/L	1	11/21/2005 10:27:03 AM
Sodium	800	10		mg/L	10	11/21/2005 12:22:39 PM
Thallium	ND	0.050		mg/L	1	11/21/2005 10:27:03 AM
Vanadium	ND	0.050		mg/L	1	11/21/2005 10:27:03 AM
Zinc	1.2	0.50		mg/L	10	11/21/2005 12:22:39 PM
Silica	22	5.4		mg/L	5	11/21/2005 11:05:01 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: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: Trip Blank

Lab Order: 0511114

Collection Date:

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-04

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	ND	1.0		µg/L	1	11/21/2005
Toluene	ND	1.0		µg/L	1	11/21/2005
Ethylbenzene	ND	1.0		µg/L	1	11/21/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2005
Naphthalene	ND	2.0		µg/L	1	11/21/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2005
Acetone	ND	10		µg/L	1	11/21/2005
Bromobenzene	ND	1.0		µg/L	1	11/21/2005
Bromochloromethane	ND	1.0		µg/L	1	11/21/2005
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2005
Bromoform	ND	1.0		µg/L	1	11/21/2005
Bromomethane	ND	2.0		µg/L	1	11/21/2005
2-Butanone	ND	10		µg/L	1	11/21/2005
Carbon disulfide	ND	10		µg/L	1	11/21/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	11/21/2005
Chlorobenzene	ND	1.0		µg/L	1	11/21/2005
Chloroethane	ND	2.0		µg/L	1	11/21/2005
Chloroform	ND	1.0		µg/L	1	11/21/2005
Chloromethane	ND	1.0		µg/L	1	11/21/2005
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2005
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2005
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2005
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2005
Dibromomethane	ND	2.0		µg/L	1	11/21/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: Trip Blank

Lab Order: 0511114

Collection Date:

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-04

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2005
2-Hexanone	ND	10		µg/L	1	11/21/2005
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2005
Methylene Chloride	ND	3.0		µg/L	1	11/21/2005
n-Butylbenzene	ND	1.0		µg/L	1	11/21/2005
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2005
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2005
Styrene	ND	1.0		µg/L	1	11/21/2005
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2005
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2005
Vinyl chloride	ND	1.0		µg/L	1	11/21/2005
Xylenes, Total	ND	1.0		µg/L	1	11/21/2005
Surr: 1,2-Dichloroethane-d4	94.8	69.9-130		%REC	1	11/21/2005
Surr: 4-Bromofluorobenzene	92.3	71.2-123		%REC	1	11/21/2005
Surr: Dibromofluoromethane	83.6	73.9-134		%REC	1	11/21/2005
Surr: Toluene-d8	98.5	81.9-122		%REC	1	11/21/2005

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT:

NM Oil Conservation Division

Work Order:

0511114

Project:

Ciniza Refinery Gallup NM

QC SUMMARY REPORT

Method Blank

Sample ID: MB-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date: 11/17/2005	Prep Date: 11/14/2005
Client ID:	Run ID: ELMO_051117A	PQL	SPK value	SeqNo: 424365	
Analyte	Result	%REC	LowLimit	HighLimit	RPD Ref Val
		%RPD	RPDLimit		Qual
Acenaphthene	ND				
Acenaphthylene	ND				
Aniline	ND				
Anthracene	ND				
Azobenzene	ND				
Benz(a)anthracene	ND				
Benzo(a)pyrene	ND				
Benzo(b)fluoranthene	ND				
Benzo(g,h,i)perylene	ND				
Benzo(k)fluoranthene	ND				
Benzoic acid	ND				
Benzyl alcohol	ND				
Bis(2-chloroethoxy)methane	ND				
Bis(2-chloroethyl)ether	ND				
Bis(2-chloroisopropyl)ether	ND				
Bis(2-ethylhexyl)phthalate	ND				
4-Bromophenyl phenyl ether	ND				
Butyl benzyl phthalate	ND				
Carbazole	ND				
4-Chloro-3-methylphenol	ND				
4-Chloroaniline	ND				
2-Chloronaphthalene	ND				
2-Chlorophenol	ND				
4-Chlorophenyl phenyl ether	ND				
Chrysene	ND				
Di-n-butyl phthalate	ND				
Di-n-octyl phthalate	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
/

QC SUMMARY REPORT

Method Blank

CLIENT: NM Oil Conservation Division

Work Order: 0511114

Project: Citinza Refinery Gallup NM

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

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

Method Blank

Project: Ciniza Refinery Gallup NM

Sample ID: MB-9223	Batch ID: 9223	Test Code: SW7470	Units: mg/L	Analysis Date: 11/18/2005	Prep Date: 11/18/2005
Client ID:		Run ID: MI-LA254_051118B		SeqNo: 423799	
Analyte	Result	PQL	SPK value	SPK Ref Val	
Mercury	ND		0.0002		
			%REC	LowLimit	HighLimit
			%RPD	RPDLimit	RPD Ref Val
					Qual

B - Analyte detected in the associated Method Blank 3

QC SUMMARY REPORT

Method Blank

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Ciniza Refinery Gallup NM

Sample ID: MB-9176	Batch ID: 9176	Test Code: SW6010A	Units: mg/L	Analysis Date: 11/22/2005 12:14:23 P	Prep Date: 11/11/2005						
Client ID:	Run ID: ICP_051121A	SeqNo: 424886									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.02									
Antimony	ND	0.01									
Arsenic	ND	0.02									
Barium	0.0006184	0.02									
Beryllium	ND	0.003									
Boron	ND	0.04									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Cobalt	ND	0.006									
Copper	0.0005311	0.006									
Iron	ND	0.05									
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	0.0002601	0.002									
Molybdenum	ND	0.008									
Nickel	ND	0.01									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									
Thallium	ND	0.05									
Vanadium	ND	0.05									
Zinc	0.004426	0.05									
Silica	ND	1.1									

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: NM Oil Conservation Division
 Work Order: 0511114
 Project: Cimiza Refinery Gallup NM

Sample ID: MB-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:45:18 AM	Prep Date: 11/28/2005
Client ID:	Run ID: ICP_051201B	SeqNo: 427777			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Aluminum	ND	0.02			
Antimony	ND	0.01			
Arsenic	ND	0.02			
Barium	ND	0.02			
Beryllium	ND	0.003			
Boron	ND	0.04			
Cadmium	ND	0.002			
Calcium	ND	1			
Chromium	ND	0.006			
Cobalt	ND	0.006			
Copper	ND	0.008			
Iron	0.004867	0.05			
Lead	ND	0.005			
Magnesium	ND	1			
Manganese	ND	0.002			
Molybdenum	ND	0.008			
Nickel	ND	0.01			
Potassium	0.1007	1			
Selenium	ND	0.05			
Silver	ND	0.005			
Sodium	ND	1			
Thallium	ND	0.05			
Vanadium	ND	0.05			
Zinc	ND	0.05			
Silica	ND	1.1			

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

QC SUMMARY REPORT
Method Blank

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Ciniza Refinery Gallup NM

Sample ID: 5mL rb-b	Batch ID: R17378	Test Code: SW8260B	Units: µg/L	Analysis Date: 11/21/2005	Prep Date:						
Client ID:	Run ID:	NEPTUNE_051121A	SeqNo:	424656							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers: ND - Not Detected at the Reporting Limit
 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: NM Oil Conservation Division

Work Order: 0511114

Project: Ciniza Refinery Gallup NM

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

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

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

B - Analyte detected in the associated Method Blank
2

QC SUMMARY REPORT

Method Blank

CLIENT: NM Oil Conservation Division

Work Order: 0511114

Project: · Ciniza Refinery Gallup NM

Chemical	Concentration (ppm)	Detection Limit (ppm)
1,1,2-Trichloroethane	ND	1
Trichloroethene (TCE)	ND	1
Trichlorofluoromethane	ND	1
1,2,3-Trichloropropane	ND	2
Vinyl chloride	ND	1
Xylenes, Total	ND	1
Surr: 1,2-Dichloroethane-d4	9.462	0
Surr: 4-Bromofluorobenzene	9.246	0
Surr: Dibromofluoromethane	8.632	0
Surr: Toluene-d8	9.426	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 - Analytic detected below quantitation limits	R - RPD outside accepted recovery limits	

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Ciniza Refinery Gallup NM

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID: 100ng Ics	Batch ID: R17378	Test Code: SW8260B	Units: µg/L	Analysis Date: 11/21/2005	Prep Date:						
Client ID:	Run ID:	NEPTUNE_051121A		SeqNo: 424657							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.67	1	20	0	108	79.3	136	0			
Toluene	20.46	1	20	0	102	65.5	123	0			
Chlorobenzene	20.15	1	20	0	101	85.6	126	0			
1,1-Dichloroethene	23.18	1	20	0	116	72.7	135	0			
Trichloroethene (TCE)	19.38	1	20	0	96.9	85.6	119	0			

Sample ID: 100ng Ics		Batch ID: R17403		Test Code: SW8260B		Units: µg/L		Analysis Date: 11/23/2005		Prep Date:	
Client ID:		Run ID:		NEPTUNE_051123A		SeqNo: 425281					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.22	1	20	0	111	79.3	136	0			
Toluene	20.48	1	20	0	102	65.5	123	0			
Chlorobenzene	20.27	1	20	0	101	85.6	126	0			
1,1-Dichloroethene	24.5	1	20	0	123	72.7	135	0			
Trichloroethene (TCE)	19.94	1	20	0	99.7	85.6	119	0			

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

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Ciniza Refinery Gallup NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date: 11/17/2005	Prep Date: 11/14/2005						
Client ID:		Run ID: ELMO_051117A		SeqNo: 424366							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.72	10	100	0	75.7	11	123	0			
4-Chloro-3-methylphenol	140.7	20	200	0	70.4	15.4	119	0			
2-Chlorophenol	141	10	200	0	70.5	12.2	122	0			
1,4-Dichlorobenzene	68.12	10	100	0	68.1	16.9	100	0			
2,4-Dinitrotoluene	71.96	10	100	0	72.0	13	138	0			
N-Nitrosodi-n-propylamine	68.28	10	100	0	68.3	9.93	122	0			
4-Nitrophenol	87.36	50	200	0	43.7	-20.5	87.4	0			
Pentachlorophenol	129.2	50	200	0	64.6	-0.355	114	0			
Phenol	76.18	10	200	0	38.1	7.53	73.1	0			
Pyrene	80.9	15	100	0	80.9	12.6	140	0			
1,2,4-Trichlorobenzene	66.78	10	100	0	66.8	17.4	98.7	0			

Sample ID: LCSD-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date: 11/17/2005				Prep Date: 11/14/2005			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 424368		RPD Ref Val	%RPD	RPDLimit	Qual
						LowLimit	HighLimit				
Acenaphthene	75.94	10	100	0	75.9	11	123	75.72	0.290	30.5	
4-Chloro-3-methylphenol	145.9	20	200	0	72.9	15.4	119	140.7	3.60	28.6	
2-Chlorophenol	128.1	10	200	0	64.0	12.2	122	141	9.59	107	
1,4-Dichlorobenzene	59.16	10	100	0	59.2	16.9	100	68.12	14.1	62.1	
2,4-Dinitrotoluene	71.68	10	100	0	71.7	13	138	71.96	0.390	14.7	
N-Nitrosodi-n-propylamine	66.94	10	100	0	66.9	9.93	122	68.28	1.98	30.3	
4-Nitrophenol	56.1	50	200	0	28.1	12.5	87.4	87.36	43.6	36.3	R
Pentachlorophenol	74.34	50	200	0	37.2	3.55	114	129.2	53.9	49	R
Phenol	75.02	10	200	0	37.5	7.53	73.1	76.18	1.53	52.4	
Pyrene	82.6	15	100	0	82.6	12.6	140	80.9	2.08	16.3	
1,2,4-Trichlorobenzene	62.1	10	100	0	62.1	17.4	98.7	66.78	7.26	36.4	

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

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Ciniza Refinery Gallup NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9223	Batch ID: 9223	Test Code: SW7470	Units: mg/L	Analysis Date: 11/18/2005	Prep Date: 11/18/2005
Client ID:		Run ID: MI-LA254_051118B		SeqNo: 423800	
Analyte	Result	PQL	SPK value	%REC	LowLimit
Mercury	0.004886	0.0002	0.005	97.7	HighLimit
			0		120
				%RPD	RPDLimit
					0
					Qual

Sample ID: LCS-9223	Batch ID: 9223	Test Code: SW7470	Units: mg/L	Analysis Date: 11/18/2005	Prep Date: 11/18/2005
Client ID:		Run ID: MI-LA254_051118B		SeqNo: 423805	
Analyte	Result	PQL	SPK value	%REC	LowLimit
Mercury	0.004877	0.0002	0.005	97.5	HighLimit
			0		120
				%RPD	RPDLimit
					0.181
					0
					Qual

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

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: NM Oil Conservation Division
Work Order: 0511114
Project: Ciniza Refinery Gallup NM

Sample ID: LCS-9176	Batch ID: 9176	Test Code: SW6010A		Units: mg/L	Analysis Date: 11/21/2005 10:03:44 A		Prep Date: 11/11/2005				
Client ID:	Run ID:	ICP_051121A			SeqNo:	424426					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Rel Val	%RPD	RPDLimit	Qual
Aluminum	0.5574	0.02	0.5	0	111	80	120	0			
Antimony	0.5415	0.01	0.5	0	108	80	120	0			
Arsenic	0.5357	0.02	0.5	0	107	80	120	0			
Barium	0.5119	0.02	0.5	0.0006184	102	80	120	0			
Beryllium	0.5461	0.003	0.5	0	109	80	120	0			
Boron	0.5305	0.04	0.5	0	106	80	120	0			
Cadmium	0.519	0.002	0.5	0	104	80	120	0			
Calcium	52.35	1	50	0	105	80	120	0			
Chromium	0.5269	0.006	0.5	0	105	80	120	0			
Cobalt	0.5276	0.006	0.5	0	106	80	120	0			
Copper	0.5351	0.006	0.5	0.0005311	107	80	120	0			
Iron	0.5209	0.05	0.5	0	104	80	120	0			
Lead	0.5096	0.005	0.5	0	102	80	120	0			
Magnesium	52.58	1	50	0	105	80	120	0			
Manganese	0.521	0.002	0.5	0.0002601	104	80	120	0			
Molybdenum	0.5406	0.008	0.5	0	108	80	120	0			
Nickel	0.4969	0.01	0.5	0	99.4	80	120	0			
Potassium	55.65	1	50	0	111	80	120	0			
Selenium	0.5221	0.05	0.5	0	104	80	120	0			
Silver	0.529	0.005	0.5	0	106	80	120	0			
Sodium	56.07	1	50	0	112	80	120	0			
Thallium	0.5173	0.05	0.5	0	103	80	120	0			
Vanadium	0.5359	0.05	0.5	0	107	80	120	0			
Zinc	0.5091	0.05	0.5	0.004426	101	80	120	0			
Silica	5.457	1.1	5.35	0	102	80	120	0			

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

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Ciniza Refinery Gallup NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:48:31 AM	Prep Date: 11/28/2005						
Client ID:	Run ID:	ICP_051201B		SeqNo: 427778							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.5081	0.02	0.5	0	102	80	120	0			
Antimony	0.5127	0.01	0.5	0	103	80	120	0			
Arsenic	0.4912	0.02	0.5	0	98.2	80	120	0			
Barium	0.4885	0.02	0.5	0	97.7	80	120	0			
Beryllium	0.5113	0.003	0.5	0	102	80	120	0			
Boron	0.4961	0.04	0.5	0	99.2	80	120	0			
Cadmium	0.49	0.002	0.5	0	98.0	80	120	0			
Calcium	49.2	1	50	0	98.4	80	120	0			
Chromium	0.4941	0.006	0.5	0	98.8	80	120	0			
Cobalt	0.498	0.006	0.5	0	99.6	80	120	0			
Copper	0.5065	0.006	0.5	0	101	80	120	0			
Iron	0.4738	0.05	0.5	0.004867	93.8	80	120	0			
Lead	0.4856	0.005	0.5	0	97.1	80	120	0			
Magnesium	49.4	1	50	0	98.8	80	120	0			
Manganese	0.4561	0.002	0.5	0	91.2	80	120	0			
Molybdenum	0.508	0.008	0.5	0	102	80	120	0			
Nickel	0.4692	0.01	0.5	0	93.8	80	120	0			
Potassium	51.72	1	50	0.1007	103	80	120	0			
Selenium	0.4823	0.05	0.5	0	96.5	80	120	0			
Silver	0.495	0.005	0.5	0	99.0	80	120	0			
Sodium	52.1	1	50	0	104	80	120	0			
Thallium	0.5157	0.05	0.5	0	103	80	120	0			
Vanadium	0.5001	0.05	0.5	0	100	80	120	0			
Zinc	0.4727	0.05	0.5	0	94.5	80	120	0			
Silica	4.945	1.1	5.35	0	92.4	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: NM Oil Conservation Division
 Work Order: 0511114
 Project: Cimiza Refinery Gallup NM

Sample ID: LCSD-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:51:42 AM	Prep Date: 11/28/2005						
Client ID:		Run ID: ICP_051201B	SeqNo: 427779								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.5116	0.02	0.5	0	102	80	120	0.5081	0.684	20	
Antimony	0.526	0.01	0.5	0	105	80	120	0.5127	2.55	20	
Arsenic	0.509	0.02	0.5	0	102	80	120	0.4912	3.56	20	
Barium	0.4971	0.02	0.5	0	99.4	80	120	0.4885	1.74	20	
Beryllium	0.5196	0.003	0.5	0	104	80	120	0.5113	1.59	20	
Boron	0.5106	0.04	0.5	0	102	80	120	0.4961	2.87	20	
Cadmium	0.5009	0.002	0.5	0	100	80	120	0.49	2.21	20	
Calcium	49.43	1	50	0	98.9	80	120	49.2	0.467	20	
Chromium	0.5053	0.006	0.5	0	101	80	120	0.4941	2.24	20	
Cobalt	0.5093	0.006	0.5	0	102	80	120	0.498	2.25	20	
Copper	0.5159	0.006	0.5	0	103	80	120	0.5065	1.84	20	
Iron	0.4774	0.05	0.5	0.004867	94.5	80	120	0.4738	0.750	20	
Lead	0.4931	0.005	0.5	0	98.6	80	120	0.4856	1.52	20	
Magnesium	49.54	1	50	0	99.1	80	120	49.4	0.272	20	
Manganese	0.4645	0.002	0.5	0	92.9	80	120	0.4561	1.81	20	
Molybdenum	0.519	0.008	0.5	0	104	80	120	0.508	2.15	20	
Nickel	0.4769	0.01	0.5	0	95.4	80	120	0.4692	1.64	20	
Potassium	52.15	1	50	0.1007	104	80	120	51.72	0.835	20	
Selenium	0.4853	0.05	0.5	0	97.1	80	120	0.4823	0.614	20	
Silver	0.5036	0.005	0.5	0	101	80	120	0.495	1.72	20	
Sodium	52.25	1	50	0	104	80	120	52.1	0.295	20	
Thallium	0.5221	0.05	0.5	0	104	80	120	0.5157	1.23	20	
Vanadium	0.51	0.05	0.5	0	102	80	120	0.5001	1.96	20	
Zinc	0.483	0.05	0.5	0	96.6	80	120	0.4727	2.16	20	
Silica	5.018	1.1	5.35	0	93.8	80	120	4.945	1.45	20	

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name NMOCD SF

Date and Time Received:

11/11/2005

Work Order Number 0511114

Received by AT

Checklist completed by

Signature

Date

Matrix

Carrier name Client drop-off

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☐

Not Shipped ☒

Custody seals intact on sample bottles?

Yes ☐

No ☒

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD

Sent: Tuesday, December 20, 2005 8:59 AM

To: 'Ed Riege'; 'Steve Morris'; 'Ed Rios'

Cc: Price, Wayne, EMNRD; Monzeglio, Hope, NMENV; Foust, Denny, EMNRD; Powell, Richard, NMENV

Ladies and Gentlemen:

RE: Ciniza Refinery

Please find attached the OCD summary from our November 10, 2005 site visit and the stormwater inspection letter from Mr. Richard Powell of the NMED to Giant. Also attached is OCD's analytical data results from the split-sample event that day. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/>
(Pollution Prevention Guidance is under "Publications")

12/20/2005

SUMMARY

Ciniza Refinery EPA Stormwater Inspection & OCD Follow-up from September 8, 2005 Inspection

November 10, 2005

Attendees:

Giant Refining Company: Stephen Morris (SM), Ed Riege (ER1) and Ed Rios (ER2)

New Mexico Environment Department (NMED). Surface Water Quality Division:
Richard Powell (RP)

Oil Conservation Division: Carl Chavez (CC) and Wayne Price (WP)

Disclaimer: The following are the minutes of the meeting, and observation notes taken by OCD personnel. These comments do not release Giant of responsibility of any OCD permit condition or rule, or compliance with any other federal, state, or local laws and/or regulations. In addition, these comments are not to be construed to imply enforcement of any permit condition or regulation outside of the authority of the OCD.

Agenda:

I. NPDES Stormwater Inspection (see attached stormwater inspection letter dated December 19, 2005 to Giant from RP)

II OCD September 8, 2005 Refinery Follow-up

I. NPDES Stormwater Inspection of Giant Ciniza's Multi-Site (MS04) General Discharge Permit (NMR05B157)

RP asked for a copy of Giant's general discharge permit and Stormwater pollution prevention plan (SWPPP) with maps of existing stormwater non-contact areas. RP checked the accuracy of the maps in the field and pointed out areas that appear to be missing from the diagram(s). A field inspection was conducted with the assistance of ER and SM.

RP indicated that stormwater (non-contact) is in contact with contact water off-site; this constitutes a non-permitted discharge. Individual NPDES permits are required for contaminated stormwater discharging off-site. Giant has the option to capture or contain contaminated run-off and/or to apply for individual permits for discharge locations with effluent monitoring. If contaminated stormwater leaves the site, Giant is in violation of CWA. Parameters to sample for may include: industry standard contaminants for refinery as specified under 40 CFR 119 and WQCC standards. If concentrations are below regulatory limits, there is no violation.

The conclusions from the stormwater inspection were:

- 1) Need Endangered Species Act and Historical Society information for refinery location.

- 2) Need a more detailed site map with property boundaries (note boundary survey needed for map) and all berms, drainage, etc. depicted to help identify contact areas where contaminated runoff could impact non-contact stormwater drainage areas on the facility. There are several locations where contaminated runoff can discharge into stormwater from ineligible areas. For example, a potential of commingling was observed at the south edge of the refinery process area, east of the railroad lagoon and in the bone yard.
- 3) Parking area and drainage appear to be adequate, but need map depicting all stormwater drainage systems to satisfy NPDES Stormwater requirements.
- 4) Truck staging, warehouse, bone yard and any other areas that are in non-contact or storm drain areas should be depicted on a map with stormwater drainage and outfall areas. Giant will need to address or work to isolate any point source locations within storm drain areas that may impact stormwater areas.
- 5) Truck load-out area drains to sewer process drain and into the new API separator.
- 6) There are areas where refinery process water or contaminated runoff (contact areas) can discharge to stormwater drainage areas (non-contact areas) or to ineligible areas. For example, the refinery process area needs to be bermed all along its perimeter to retain spills/releases that could easily migrate into nearby stormwater (non-contact) drainage areas or features. Any drains within the refinery process area are considered process drains and need to be routed to an API treatment unit with a benzene stripper before it can be discharged into aeration lagoon #1 (AL1). At the south edge of the production area, RR Lagoon Rack and bone yard areas there is potential for commingling of contact with non-contact runoff. Problem areas appear to be located at the NE corner of the site, south process area and north bone yard area.
- 7) A berm encompassing the tank battery (white natural gas liquid storage tanks) at the northeast side of the refinery west of the RR Lagoon Rack and south of the high pressure storage bullets is required that will address SPCC requirements and prevent spills/releases from migrating unobstructed into a non-contact stormwater drainage areas east of the RR Lagoon Rack and toward stormwater outfall #2. At the time of inspection, there was no berm around these tanks.
- 8) During the stormwater inspection, OCD noticed a boiler feed tank west of the RR Lagoon Rack along tank battery pipelines east of the tank battery steaming, leaking and spraying water onto the ground and Giant agreed to fix the pump and bring a vacuum truck in to recover ponded fluids on the ground.
- 9) Giant can opt for individual permits with monitoring at downgradient outfalls for its contact areas or implement local containment controls to eliminate the need for individual NPDES stormwater permits at different locations throughout its refinery. OCD can approve local containment.
- 10) RP decided due to time constraints to take home a copy of Giant's SWPPP for his inspection.
- 11) Individual NPDES stormwater permits are not needed, unless Giant cannot isolate contact areas from stormwater or non-contact areas. If Giant cannot properly isolate stormwater from process areas, then individual permits with more specific monitoring requirements will be required. Giant indicated that it preferred to be under a general discharge permit and will work to isolate contact from non-contact areas.
- 12) RP will send inspection report to Giant with copies to all parties (EPA and OCD) with recommendations.

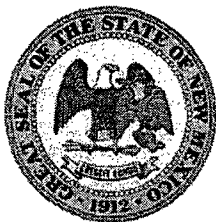
II. OCD September 8, 2005 Ciniza Refinery Follow-up

- 1) Status of installation of chopper pump at new API separator (NAPIS) that was scheduled to be installed the week of Nov. 8, 2005? Giant stated that Rinchem is scheduled to install the pump during the week of December 4, 2005.
- 2) Is the secondary containment at NAPIS holding? Some fluctuation in fluid level, but lately the level has remained constant at 1 ft. of head. Giant feels the primary and secondary containment systems have integrity. OCD is concerned about the integrity of the secondary containment system. OCD wanted to evaluate this situation further and discuss with Giant later. OCD concerns are: 1) integrity of the secondary containment system; and 2) geohydrologic connection to the water table aquifer with potential for leaking contaminants to discharge to the surface and/or migrate via groundwater beneath the refinery property.
- 3) Cleanup of shorelines around evaporation ponds? Giant is scheduled to scrape the shorelines and increase fluid level before the end of December 2005. Waste will be characterized for proper disposal and or treatment in the land farm. EPI is skimming oil off the top of the ponds today.
- 4) Status of oil in the OAPIS? Oil (i.e., TPH) and hazardous waste constituents are still being detected in weekly monitoring.
- 5) OCD Data Quality Objectives (DQOs)? Giant needs to be aware of the appropriate regulatory limits based on site sampling to ensure analytical methods and detection limits are adequate for use by the State. For example, sampling at the OAPIS, evaporation ponds, etc. would require detection limits that do not exceed 40 CFR 261.24 Toxicity Characteristic to determine whether hazardous wastes are present where they should not be. Groundwater sampling would require lower detection limits and it is Giant's responsibility to ensure that any dilutions performed by the lab will not exceed the states DQOs.
- 6) Pilot station effluent (PSE) and monitoring per OCD permit? A couple of analytical monitoring reports were provided at the meeting, which showed significantly elevated BOD levels. OCD is not sure why there were only 2 reports provided, since the permit requires quarterly monitoring? The PSE discharges directly into aeration lagoon #1 without any treatment. BOD levels from the PSE were observed to be significantly elevated. OCD requested that Giant analyze PSE for 405.1, 418.1, 6010, 7470, 8015B, 8260, 8270, 8310, etc. to get a better handle on waste loading to the existing treatment system. Giant will need to determine the volume flow rate from the PSE, refinery process water, determine hazardous constituent concentrations, and estimate loading to the current treatment system to compare with the total capacity of the current treatment system. If loading exceeds its treatment capacity, then Giant needs to undertake actions to operate within its treatment capacity.
- 7) OCD's Nov. 15, 2005 e-mail requirement for Giant to address the OAPIS? There appears to be another point source(s) migrating into the OAPIS. Giant is working to investigate the source(s) of contamination. OCD is concerned about hazardous wastes in contact with stormwater at the OAPIS.
- 8) Rail Road Lagoon Rack excavation map displaying sample locations for verification of soil remediation? Giant is sending the map in its final report.

- 9) What caused the Tank 232 release? Why the disparity between release and recovery volumes in the C-141 forms? OCD concerns about Giant's response effort in excavating contaminated soils in unlined berm areas? Giant indicated the release occurred due to operator error. OCD mentioned that Giant should consider incorporating a zero loss or pollution prevention goal at its facility to help reinforce and prevent releases from occurring at the facility. OCD is concerned that Giant did not dig down deep enough to recover impacted soils in the unlined berm area. Giant indicated that it has never completely excavated contaminated soil in berm areas after releases occur. Giant collected waste characterization samples of the excavated soil in order to properly dispose or treat it in their land farm. Giant indicated that their general protocol for releases in berm areas is to excavate the bulk of the contamination, but they never excavate deep enough to assess impacts to groundwater. OCD acknowledged the presence of clay substrate underneath the refinery; however, it clarified that all impacted soil, regardless of release location should be properly investigated, removed, and characterized for disposal and/or land treatment. Giant acknowledged OCD's concerns.
- 10) Land farm area status? Giant tills the land farm once per month as specified in the permit.
- 11) Stockpiled soils update? Giant confirmed that cooling tower salt contaminated soil piles observed during the Sept. 8, 2005 inspection were properly disposed.
- 12) Firewater pit status? OCD has not received any information on Giant's request to use an existing facility pit filled with RO reject water for the storage of firewater. Giant indicated that the request is ongoing with permeability test results in hand, etc.
- 13) OCD split-samples with SM from the Old API Separator (OAPIS), the discharge point from Aeration Lagoon 2 to Evaporation Pond (EP) #1, and discharge point from EP #1 to EP #2. OCD is currently awaiting receipt of the analytical sample results from Hall Environmental of Albuquerque. OCD followed all chain-of-custody procedures up to and including delivery to the laboratory the next morning.
- 14) ER2 was present during OCD's agenda discussion and is the new Superintendent of Giant's Ciniza Refinery.

Attachment: NMED Stormwater letter to Giant (December 19, 2005)

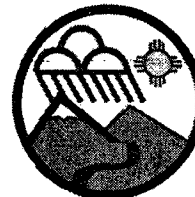
Disclaimer: The above are the notes from the meeting, and observation notes taken by OCD personnel. These comments do not release Giant of responsibility of any OCD permit condition or rule, or compliance with any other federal, state, or local laws and/or regulations. In addition, these comments are not to be construed to imply enforcement of any permit condition or regulation outside of the authority of the OCD



BILL RICHARDSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau
Harold Runnels Building Room N2050
1190 St. Francis Drive - Zip 87505
P.O. Box 26110 - Zip 87502-6110
Santa Fe, New Mexico
Telephone (505) 827-0187
Fax (505) 827-0160
www.nmenv.state.nm.us



RON CURRY
SECRETARY

DERRITH WATCHMAN MOORE
DEPUTY SECRETARY

Certified Mail - Return Receipt Requested

RECEIVED

December 19, 2005

Mr. Ed Rios, General Manager
Giant Refining Company
Route 3, Box 7
Gallup, New Mexico 87301

DEC 21 2005

OIL CONSERVATION
DIVISION

RE: NPDES Storm Water Compliance Evaluation Inspection, Ciniza Refinery, NPDES
#NMR05B157, November 10, 2005

Dear Mr. Rios:

Enclosed, please find a copy of the report for the referenced inspection that the New Mexico Environment Department (NMED) conducted at your facility on behalf of the U.S. Environmental Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas, for their review. These inspections are used by EPA to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permitting program in accordance with requirements of the federal Clean Water Act.

Problems noted during this inspection are discussed in the Further Explanations section of the inspection report. You are encouraged to review the inspection report, and are required per Part 4.10 of the multi-sector general storm water permit, to amend your Storm Water Pollution Prevention Plan as appropriate based on the findings of this report to incorporate additional structural and non-structural controls as needed to eliminate or significantly minimize pollutants in storm water discharges. Further, you are encouraged to notify in writing, both USEPA and NMED regarding modifications and compliance schedules.

My thanks for the help and cooperation of Messrs. Ed Riege and Steve Morris of your staff during this inspection. If you have any questions, please feel free to contact me at the above address or by telephone at (505) 827-2798.

Sincerely,


Richard E. Powell
Surface Water Quality Bureau

cc: Marcia Gail Bohling, USEPA (6EN-AS)
USEPA, NPDES Permits Branch (6WQ-P)
NMED, District V, Grants
Carl Chavez, EM&NRD, OCD, 1220 S. St. Francis, Santa Fe, New Mexico 87505



Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspec. Type	Inspector	Fac Type
1 N 2 5 3 N M R 0 5 B 1 5 7 11 12 0 5 1 1 1 0 17 18 W 19 S 20 2					
Remarks					
P E T R O L E U M R E F I N E R Y S I C 2 9 1 1					
Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved	
67 69	70 1	71 N	72 N	73	74 75 80

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NPDES permit number) GIANT REFINING COMPANY/CINIZA REFINERY, JAMESTOWN, NM. EAST OF GALLUP ON I 40, EXIT 39 BEHIND PILOT TRAVEL CENTER MCKINLEY COUNTY	Entry Time /Date 1025/11-10-05	Permit Effective Date 10-30-00
	Exit Time/Date 1550/11-10-05	Permit Expiration Date 10-30-05
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) *ED RIEGE, ENVIRONMENTAL SUPERINTENDENT 505-722-0217 *STEPHEN MORRIS, ENVIRONMENTAL ENGINEER 505-722-3833	Other Facility Data LAT 35 29 10.9 LONG -108 25 36.3	
Name, Address of Responsible Official/Title/Phone and Fax Number *ED RIOS, GENERAL MANAGER, CINIZA REFINERY, ROUTE 3 BOX 7, GALLUP, NM 87301 505-722-0202	Yes ☒ No ☐	

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

U Permit	N Flow Measurement	N Operations & Maintenance	N CSO/SSO
M Records/Reports	U Self-Monitoring Program	N Sludge Handling/Disposal	U Pollution Prevention
U Facility Site Review	N Compliance Schedules	N Pretreatment	N Multimedia
N Effluent/Receiving Waters	N Laboratory	U Storm Water	N Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

1. FACILITY HAS COVERAGE UNDER THE MSGP 2000 (UNDER CINIZA REFINERY, JAMESTOWN, NM) AND HAS PREPARED A SWPPP.
2. THIS INSPECTION INCLUDED AN ASSESSMENT OF THE POTENTIAL CO-MINGLING OF "CONTAMINATED RUNOFF" AS DEFINED UNDER 40 CFR PART 419.11 THAT IS SUBJECT TO NATIONALLY ESTABLISHED EFFLUENT GUIDELINES FOUND AT 40 CFR PART 419 AND INELIGIBLE FOR COVERAGE UNDER THE MSGP, WITH STORM WATER DISCHARGES THAT ARE ELIGIBLE. A NUMBER OF AREAS FROM WHICH "CONTAMINATED RUNOFF" OR CO-MINGLED "CONTAMINATED RUNOFF" AND STORM WATER RUNOFF APPEARS TO DISCHARGE WERE IDENTIFIED DURING THIS INSPECTION.
3. "PETROLEUM REFINERY OF MODERATE COMPLEXITY RATING" WITH CATALYTIC CRACKING CAPABILITY, REFORMING, AND TOPPING (BASIC DISTILLATION).
4. SEE REPORT AND FURTHER EXPLANATION.

RICHARD E. POWELL	Agency/Office/Telephone/Fax NMED/SWQB 505-827-2798	Date 12-16-05
Signature of Management QA Reviewer Sandy Jan	Agency/Office/Phone and Fax Numbers NMED/SWQB 505-222-9560	Date 12-16-05

**NPDES Compliance Inspection
Giant Refining Company/Ciniza Refinery
NPDES Permit #NMR05B157, November 10, 2005**

Further Explanations

Introduction

On November 10, 2005, a Compliance Evaluation Inspection was conducted at the Giant Refining Company/Ciniza Refinery (petroleum refining - Standard Industrial Classification 2911) located near Gallup, New Mexico by Richard E. Powell of the State of New Mexico Environment Department (NMED). Carl Chavez and Wayne Price of the NM Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) accompanied the inspector. The primary purpose of this inspection was to document the permittee's status regarding the NPDES multi-sector general storm water permit (MSGP) for industrial activities (this facility has industrial activities being conducted on-site that meet the descriptions of industrial activities in section I) and storm water regulations at **40 Code of Federal Regulations (CFR) Part 122.26**. In addition, this inspection included an assessment of the potential co-mingling of "contaminated runoff" as defined under 40 CFR Part 419.11 that is subject to nationally established effluent guidelines found at 40 CFR Part 419 and ineligible for coverage under the MSGP, with storm water discharges that are eligible.

Permit Status: Overall rating of "Unsatisfactory"

"Contaminated runoff" is defined as "runoff which comes into contact with any raw material, intermediate product, finished product, by-product or waste product located on petroleum refinery property." Most areas at refineries are not eligible for coverage under the MSGP including: raw material, intermediate product, by-product, final product, waste material, chemical, and material storage areas; loading and unloading areas; transmission pipelines; and, processing areas. Runoff that may be eligible for coverage, provided discharges are not co-mingled with "contaminated runoff," include: vehicle and equipment storage, maintenance and refueling areas.

A number of areas from which "contaminated runoff" or co-mingled "contaminated runoff" and storm water runoff appears to discharge were identified during this inspection. These include: a fairly large area in the northeast part of the facility where some (most is contained) of the railcar loading/unloading facility and an LPG tank farm appear to drain either directly offsite or are co-mingled with storm water runoff directed to storm water outfall No. 2; the area along the south side of the main process area (north of the office complex) appears to co-mingle with storm water runoff directed to storm water outfall No. 1; and the area along the north side of the facility where some of the drainage from a scrap yard (from which discharges are likely eligible) appears to co-mingle with drainage from an adjacent (to the east) tank farm and then directed to storm water outfall No. 2. There may be other areas where "contaminated runoff" or co-mingled "contaminated runoff" and storm water runoff discharge from this facility but the difficulty of identifying these areas is exacerbated by the facility operator's failure to identify and provide adequate drainage area mapping. The site maps included in the SWPPP show only general drainage patterns and outfalls, but lack of detailed drainage area mapping creates a situation where even the facility operators may be unaware of exactly what areas drain to "contaminated runoff" containment systems, and what

areas drain offsite or are directed to the storm water outfalls. Figure No. 1 in the SWPPP does delineate eight drainage sectors, which are described in the attached "Storm Water Assessment" narrative, but these appear to be inaccurate per the above discussion. It appears that these eight sectors were determined by merely drawing a large box around a general area rather than making an accurate determination of specific drainage areas.

Section 301 (a) of the Federal Water Pollution Control Act states that "Except as in compliance with this section and sections 302, 306, 307, 318, 402 and 404 of this Act, the discharge of any pollutant by any person shall be unlawful." Since this facility does not have (and has apparently never had) NPDES permit coverage for discharges of process wastewater or contaminated runoff, all past, and continuing, discharges have been (are) in apparent violation of Section 301 of the Clean Water Act, 33 U.S.C. § 1311.

Storm water runoff from this facility discharges to unclassified tributaries to the North Fork of the Rio Puerco (west) in the Little Colorado River minor Basin, Lower Colorado River major Basin. This report is based on a review of files maintained by the permittee and NMED, on-site observation by NMED personnel, and verbal information provided by the permittee's representatives.

An entrance interview was conducted with Messrs. Ed Riege, Environmental Superintendent and Steve Morris, Environmental Engineer at approximately 1025 hours on November 10, 2005. The inspector made introductions, presented his credentials and discussed the purpose of the inspection.

This facility applied for permit coverage under the NPDES multi-sector general storm water permit (MSGP) 2000 and has been assigned reference #NMR05B157 effective April 24, 2002. There was an SWPPP last revised on April 12, 2005, available for review at the site on the date of this inspection. There is no documentation included in the SWPPP, which supports the permittee's determination of permit eligibility with regard to Part 1.2.3.6 (Endangered Species) and Part 1.2.3.7 (Historic Places). There is a signed/certified statement (by Ed Rios) in the "NPDES Certifications" section of the plan regarding eligibility "... due to previous authorization under the Endangered Species Act." However, although the facility may have followed proper procedures (see MSGP Addendum A) to establish MSGP permit eligibility regarding endangered species, no documentation, other than the above statement, regarding this determination was included in the SWPPP. Information to support the permittee's determination of permit eligibility must be included in the SWPPP.

Since most of the time available to conduct this inspection was spent doing the above documented "contaminated runoff" assessment, only a cursory, and after the fact review of the SWPPP, was completed. Some of the major findings of this brief review are as follows:

Storm Water Pollution Prevention Plan (SWPPP)

Pollution Prevention Team: Overall rating of "Marginal"

Part 4.2.1 of the permit states, in part, "You must identify the staff individual(s) (by name or title) that comprise the facility's storm water Pollution Prevention Team ... Responsibilities of each staff individual on the team must be listed."

Although, Mr. Riege appears to have rather significant responsibilities regarding storm water pollution prevention and implementation of the SWPPP, the permittee's SWPPP does not identify this individual or his responsibilities.

Description of Potential Pollutant Sources: Overall rating of "Marginal"

Part 4.1.1 of the permit requires that permittees "Identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from your facility."

The permit requires that this description include such things as a site map, an identification of the types of pollutants that are likely to be present in storm water discharges, an inventory of the types of materials handled at the site that potentially may be exposed to precipitation, a list of significant spills and leaks of toxic or hazardous pollutants, sampling data, a narrative description of the potential pollutant sources from specific activities at the facility, and identification of specific potential pollutants.

As noted above, the permittee has prepared an SWPPP for this facility. As above, the site map does not include an accurate depiction of drainage areas, all structural controls (berms, including berms associated with the truck parking and staging area; straw bale dikes; secondary containment; etc.) or receiving waters. The SWPPP must include a general location map and a site map identifying such things as: drainage areas, drainage patterns and outfalls, all structural BMPs, surface watercourses, all potential pollutant sources, locations of major spills or leaks, locations of all industrial activities exposed to precipitation, etc. The plan does a very thorough job of pollutant and pollutant source identification.

Although not specifically required (conducting analytical monitoring may be dictated for appropriate site assessment procedures, as well as documentation of SWPPP effectiveness) at these types of facilities by the MSGP 2000, benchmark analytical monitoring was required and conducted under the baseline general storm water permit as well as more limited monitoring since. Results of the September 1991, May 1997, August 2000, and August 2003 analytical monitoring indicate that the MSGP cut-off concentrations for total suspended solids (TSS) was greatly exceeded (range from 42 - 48,000 mg/L) most of the time, and results for COD (range 64 - 428 mg/L) was exceeded some of the time. These elevated analytical results (as well as the results of the quarterly visual examinations) must be taken into consideration during the facility's "Comprehensive Site Compliance Evaluation." These results must be used, in part, to determine required amendments to the SWPPP to incorporate additional structural and non-structural controls as appropriate to eliminate or significantly minimize pollutants in storm water discharges so that these pollutant levels are reduced to below cut-off concentrations. The operator has apparently taken no action to amend the SWPPP as required. However, the permittee has sampled outfalls that are located in "waters of the U.S." Because of this, these results may not be representative of actual discharges from the industrial activities at this facility. Sampling must be conducted in a location that is after the last treatment unit and prior to entry into a "water of the U.S." Also, the permittee has apparently not conducted required Quarterly Visual Monitoring (see 5.1.1 of the MSGP 2000) at this facility.

Description of Appropriate Measures and Controls: Overall rating of "Unsatisfactory"

Part 4.2.7 of the permit requires that the permittee, "Describe the type and location of existing non-structural and structural best management practices (BMPs) selected for each of the areas where industrial materials or activities are exposed to storm water," and describe appropriate proposed BMPs for areas not yet affected, and implement such controls.

Non-structural and structural BMPs to be described and implemented by the permittee include such things as good housekeeping, preventive maintenance, spill prevention and response procedures, periodic inspections, employee training, record keeping, non-storm water evaluations and certifications, sediment and erosion control, as well as implementation/maintenance of traditional storm water management practices, where appropriate.

Some of the BMPs are overly generic (e.g., "maintain in a clean and orderly work environment"). In addition, although the facility apparently does occasionally clean and repair storm water conveyances and replace straw bales dikes, the SWPPP does not include a record of regular inspections and preventive maintenance of these storm water management controls. Part 6.I.4.3.1 of the MSGP 2000 requires facility inspections at a minimum of 6-month intervals and at least quarterly inspections of equipment and vehicles that store, mix or transport chemicals/hazardous materials. It appears that these inspections are not conducted or are, at least, not recorded.

Routine facility storm water inspections must be recorded, including their scheduled frequency, personnel conducting the inspection, dates of the inspection, results of the inspection, actions taken to correct problems encountered during the inspection, etc., in the SWPPP. These inspections must include observations of all areas of the facility where industrial materials or activities are exposed to storm water, and include an evaluation of all BMPs, including sediment and erosion control measures such as silt fences, check dams, etc. These inspections must be conducted by "qualified" personnel and include a reasonable set of tracking or follow-up procedures to be used to ensure that appropriate actions are taken (deficiencies must be corrected no later than 14 days after the inspection) in response to problems documented during the inspections. As above, there are apparent problems at this facility with "contaminated runoff" control practices that the permittee has not addressed. This is the sort of problem that should be documented during the permittee's periodic inspections, and appropriate and timely corrective actions taken and documented.

Although the SWPPP includes a "Non-Storm Water Discharge Assessment Certification" that lists cooling tower mist as a source of non-storm water discharge, there is no description of results of tests/evaluations, evaluation criteria or testing methods used, dates of any testing and/or evaluation, or any other information upon which the certification decision could be based.

Annual Site Compliance Evaluation Reports: Overall rating of "Unsatisfactory"

Part 4.9 of the permit states, in part, "You must conduct facility inspections at least once a year. The inspections must be done by qualified personnel provided by you."

According to the plan, the last annual site compliance evaluation was conducted in December 2004. Ed Riege and Darren Joe, neither of whom are on the Pollution Prevention Team, conducted this evaluation. Other than the apparent failure to incorporate changes dictated by the above-mentioned

analytical sampling data, the areas evaluated, the recording of findings, follow-up, and post evaluation activities for these annual evaluations appear very thorough. However, the staff conducting the evaluations apparently failed to observe, document, and properly address the areas that appear to produce discharges of "contaminated runoff" from this facility. In addition, reports of these evaluations have not been signed and certified by a cognizant official or authorized representative per requirements in Parts 4.9.4 and 9.7.1 of the MSGP.

Per Part 4.9 of the permit, the required annual site compliance evaluation must be done by "qualified personnel that are knowledgeable and possess the skills to assess conditions at your facility that could impact storm water quality and assess the effectiveness of the BMPs ..." This inspection must include a comprehensive evaluation of the SWPPP and the entire facility, including effectiveness of current measures and controls, and identification of current and anticipated potential pollutant sources. The evaluation should include a review of the SWPPP to ascertain that all required inspections, maintenance, and good housekeeping activities are conducted and recorded, and that these activities are effective in controlling pollutant loads in storm water runoff. It should also include a review of visual and analytical monitoring results, and result in appropriate revisions to the SWPPP that describe, and provide for, implementation of any required changes/additions in a timely manner.

Based on this inspection, the operator(s) must prepare, and include with the SWPPP, a properly signed report (and reports documenting any follow-up actions taken) signed by a cognizant official or an authorized representative (see Part 9.7 of the permit) which summarizes the scope of the inspection, includes the name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and any incidents of non-compliance (or a certification that the facility is in compliance with the SWPPP and the permit).

An exit interview to discuss the preliminary findings of this inspection was conducted from approximately 1515-1550 hours on November 10, 2005 with Mr. Ed Rios, General Manager, Mr. Stan Fisher, Operations Manager, and Messrs. Riege and Morris all of Ciniza Refinery, as well as Messrs. Chavez and Price of OCD, at the site.

GIANT

REFINING COMPANY

CERTIFIED MAIL # 7004 1350 0002 9320 1997

December 16, 2005

Ms. Hope Monzeglio
State of New Mexico Environmental Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

RECEIVED
DEC 19 2005
OIL CONSERVATION
DIVISION

Re: RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION AND
CHANGES TO THE NORTH BOUNDARY BARRIER COLLECTION
SYSTEM DESIGN AND MONITORING PLAN PHASE II
GIANT REFINING COMPANY, BLOOMFIED REFINERY
RCRA PERMIT NO. NMDD 089416416
HWB-GRCB-04-005

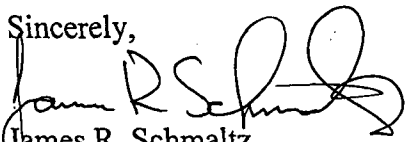
Dear Ms. Monzeglio:

According to NMED's November 1, 2005 letter in response to the *Request for additional Information and Changes to the North Boundary Barrier Collection System Design and Monitoring Plan Phase II*, the Bureau requires Giant to submit a System Start-up Six Month Report. This report is to be submitted to NMED on or before December 31, 2005.

Giant requests a thirteen-day extension of the December 31, 2005, thus requiring The System Start-up Six Month Report to be submitted to NMED on or before January 13, 2006.

Your consideration in this matter is greatly appreciated!

Sincerely,


James R. Schmaltz
Environmental Manager

Cc:

Wayne Price - OCD
Ed Riege
Chad King

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

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



BILL RICHARDSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT

Water and Waste Management Division
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-1758
Fax (505) 827-0310
www.nmenv.state.nm.us



RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

December 13, 2005

Mr. Ed Riege
Environmental Superintendent
Giant Refining Company
Route 3 Box 7
Gallup, New Mexico 87301

**SUBJECT: MODIFIED SAMPLING SCHEDULE
AMERICAN PETROLEUM INSTITUTE SEPARATOR (API)
GIANT REFINING COMPANY, CINIZA REFINERY
EPA NO. NMD000333211
HWB-GRCC-MISC**

RECEIVED
DEC 19 2005
OIL CONSERVATION
DIVISION

Dear Mr. Riege:

The New Mexico Environment Department (NMED) is revising the sampling requirements that were established in the email from NMED to Mr. Ed Riege of Giant Refining Company dated 10/20/2005 titled *Sampling AL2-EP-1* that were imposed as a result of the API separator releases in August of 2005 at the Giant Refining Company, Ciniza Refinery (GRCC). The sampling requirements, identified in the table attached to this letter, will aid in determining the source(s) of petroleum constituents entering the evaporation ponds.

Mr. Ed Riege
Giant Ciniza Refining Company
December 13, 2005
Page 2 of 2

If you have any questions regarding this letter, please call me at (505) 428-2545.

Sincerely,



Hope Monzeglio
Project Leader
Permits Management Program

HM

Attachment

cc: *D. Cobrain, NMED HWB
 W. Price, OCD
 C. Chavez, OCD
 S. Morris, GRCC

File: Reading and GRCC 2005

Giant Ciniza Refinery Sampling Schedule Resulting From The API Separator Spill

Sampling Location	Sampling Frequency	Analytical Suite	Comments and Additional Parameters
Effluent from AL-2 to EP-1	Weekly	EPA Method 8021B + MTBE; RCRA 8 Metals (totals); EPA Method 8015B must include C ₆ -C ₁₀ and C ₁₀ -C ₃₆ carbon ranges. *monthly – EPA Method 8260, EPA Method 8015B must include C ₆ -C ₁₀ and C ₁₀ -C ₃₆ carbon ranges, RCRA 8 Metals (totals)	GRCC must sample effluent discharged from AL2 to EP-1 on a weekly basis until four weeks after the API Separator repair and monthly thereafter. Sampling frequency will be modified as needed by NMED *
Effluent from Old API separator (storm water Separator Effluent)	Monthly	EPA Method 8260, EPA Method 8310, RCRA 8 Metals (totals); EPA Method 8015B must include C ₆ -C ₁₀ and C ₁₀ -C ₃₆ carbon ranges	Measure product thickness on surface water on a weekly basis and after every rain event. * Sampling frequency will be evaluated after receipt of three months analytical results by NMED
Effluent from Pilot Gas Station to the Aeration Lagoon	Monthly	EPA method 8260, RCRA 8 Metals (totals); EPA Method 8015B must include C ₆ -C ₁₀ and C ₁₀ -C ₃₆ carbon ranges	Sampling frequency will be evaluated after receipt of three months analytical results by NMED *
Effluent from New API separator	Monthly	EPA method 8260, EPA Method 8015B must include C ₆ -C ₁₀ and C ₁₀ -C ₃₆ carbon ranges	Sampling frequency will be evaluated after receipt of three months analytical results by NMED *
*Note: Monthly effluent samples from AL-2 to EP-1, the New API separator, the Old API separator, and the Pilot Truck Stop discharge must be collected on the same day and analyzed for EPA method 8260 and EPA Method 8015B (C ₆ -C ₁₀ and C ₁₀ -C ₃₆). Effluent samples from AL2-EP-1, Old API separator, and the Pilot Station must also be analyzed for RCRA Metals (totals).			

Table date: December 13, 2005.

The revised sampling is in response to the August 2005 spill from the breakdown of the new API separator.

Chavez, Carl J, EMNRD

From: Steve Morris [smorris@giant.com]
Sent: Monday, December 12, 2005 9:51 AM
To: Chavez, Carl J, EMNRD
Cc: Ed Riege; Steve Morris
Subject: OAPIS & AL-2 TO EP-1



HALL6746_OldNew
APIA12Ep1.pdf(...

Carl,

I apologize for not including the analysis mentioned in your email. Hope had asked to have the OAPIS, New API separator, and AL-2 to EP-1 samples to be taken at the same time for a comparison of the three. I forgot to include that PDF in the weekly update. The New API separator sample in that group was taken upstream of the benzene strippers.

The analysis with the project name Stormwater Separator Water Out 11-16-2005 is the OAPIS effluent sample.

Sorry about the confusion and the mistake on my part, Steve <<HALL6746_OldNewAPIA12Ep1.pdf>>

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COVER LETTER

November 30, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Old & New API Sep Eff & AL-2-EP-1 SP.

Order No.: 0511192

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 3 samples on 11/17/2005 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: 30-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: Old API Effluent

Lab Order: 0511192

Collection Date: 11/16/2005 10:40:00 AM

Project: Old & New API Sep Eff & AL-2-EP-1 SP.

Lab ID: 0511192-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	7.7	1.0		mg/L	1	11/23/2005 9:13:32 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/23/2005 9:13:32 AM
Surr: DNOP	126	58-140		%REC	1	11/23/2005 9:13:32 AM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: KTM
Benzene	170	10		µg/L	10	11/29/2005
Toluene	240	10		µg/L	10	11/29/2005
Ethylbenzene	24	10		µg/L	10	11/29/2005
Methyl tert-butyl ether (MTBE)	15	10		µg/L	10	11/29/2005
Xylenes, Total	570	10		µg/L	10	11/29/2005
Surr: 4-Bromofluorobenzene	87.2	71.2-123		%REC	10	11/29/2005

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

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

Hall Environmental Analysis Laboratory

Date: 30-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: New API Effluent

Lab Order: 0511192

Collection Date: 11/16/2005 10:45:00 AM

Project: Old & New API Sep Eff & AL-2-EP-1 SP.

Lab ID: 0511192-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	90	3.0		mg/L	1	11/23/2005 9:46:20 AM
Motor Oil Range Organics (MRO)	ND	15		mg/L	1	11/23/2005 9:46:20 AM
Surr: DNOP	132	58-140		%REC	1	11/23/2005 9:46:20 AM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: KTM
Benzene	2000	50		µg/L	50	11/29/2005
Toluene	1100	50		µg/L	50	11/29/2005
Ethylbenzene	110	10		µg/L	10	11/29/2005
Methyl tert-butyl ether (MTBE)	1800	10		µg/L	10	11/29/2005
Xylenes, Total	560	10		µg/L	10	11/29/2005
Surr: 4-Bromofluorobenzene	83.7	71.2-123		%REC	10	11/29/2005

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

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

Hall Environmental Analysis Laboratory

Date: 30-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0511192

Collection Date: 11/16/2005 10:50:00 AM

Project: Old & New API Sep Eff & AL-2-EP-1 SP.

Lab ID: 0511192-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	43	1.0		mg/L	1	11/23/2005 10:18:51 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/23/2005 10:18:51 AM
Surr: DNOP	85.4	58-140		%REC	1	11/23/2005 10:18:51 AM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: KTM
Benzene	11	5.0		µg/L	5	11/30/2005
Toluene	7.3	5.0		µg/L	5	11/30/2005
Ethylbenzene	ND	5.0		µg/L	5	11/30/2005
Methyl tert-butyl ether (MTBE)	17	5.0		µg/L	5	11/30/2005
Xylenes, Total	ND	5.0		µg/L	5	11/30/2005
Surr: 4-Bromofluorobenzene	87.6	71.2-123		%REC	5	11/30/2005

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

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

Hall Environmental Analysis Laboratory

Date: 30-Nov-05

CLIENT: Giant Refining Co
 Work Order: 0511192
 Project: Old & New API Sep Eff & AL-2-EP-1 SP.
 QC SUMMARY REPORT
 Method Blank

Sample ID	MB-9247	Batch ID: 9247	Test Code: SW8015	Units: mg/L	Analysis Date	11/23/2005 7:35:10 AM	Prep Date	11/22/2005			
Client ID:			Run ID: FID(17A) 2_051122A		SeqNo: 425190						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.18	0	1	0	118	58	140	0			

Sample ID	5mL rb-b	Batch ID: R17450	Test Code: SW8260B	Units: µg/L	Analysis Date	11/29/2005	Prep Date				
Client ID:			Run ID:	NEPTUNE_051129A	SeqNo:	426506					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
Xylenes, Total	ND	1									
Surr: 4-Bromofluorobenzene	9.612	0	10	0	96.1	71.2	123	0			

Sample ID	5mL rb-b	Batch ID: R17458	Test Code: SW8260B	Units: µg/L	Analysis Date	11/30/2005	Prep Date				
Client ID:			Run ID:	NEPTUNE_051130A	SeqNo:	426786					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
Xylenes, Total	ND	1									
Surr: 4-Bromofluorobenzene	9.368	0	10	0	93.7	71.2	123	0			

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

Hall Environmental Analysis Laboratory

Date: 30-Nov-05

CLIENT: Giant Refining Co
 Work Order: 0511192
 Project: Old & New API Sep Eff & AL-2-EP-1 SP.

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-9247	Batch ID: 9247	Test Code: SW8015	Units: mg/L	Analysis Date	11/23/2005 8:07:57 AM	Prep Date	11/22/2005				
Client ID:			Run ID: FID(17A) 2_051122A		SeqNo: 425191							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		5.706	1	5	0	114	81.2	149	0			
Sample ID	LCSD-9247	Batch ID: 9247	Test Code: SW8015	Units: mg/L	Analysis Date	11/23/2005 8:40:45 AM	Prep Date	11/22/2005				
Client ID:			Run ID: FID(17A) 2_051122A		SeqNo: 425275							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		6.086	1	5	0	122	81.2	149	5.706	6.44	23	
Sample ID	100ng lcs	Batch ID: R17450	Test Code: SW8260B	Units: µg/L	Analysis Date	11/29/2005	Prep Date					
Client ID:			Run ID: NEPTUNE_051129A		SeqNo: 426508							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		19.31	1	20	0	96.6	80	130	0			
Toluene		18.39	1	20	0	92.0	77	121	0			
Sample ID	100NG LCS	Batch ID: R17458	Test Code: SW8260B	Units: µg/L	Analysis Date	11/30/2005	Prep Date					
Client ID:			Run ID: NEPTUNE_051130A		SeqNo: 426787							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		19.3	1	20	0	96.5	80	130	0			
Toluene		19.23	1	20	0	96.1	77	121	0			

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

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

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

11/17/2005

Work Order Number 0511192

Received by AT

Checklist completed by

Signature

Date

11/17/05

Matrix

Carrier name Client drop-off

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 _____

QA/QC Package: ☐ Level 4 ☐

Std ☐

Uniza

Gallup, NM 87301

Project Manager:

Steve Morris

Sampler: Steve Morris

Sample Temperature:

Phone #:

Phone #: 505-722-3833

Fax #: 505-722-0210

Date _____

Time

Matrix

Sample I.D. No.

Number/Volume

הרצון להצטרף

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

HEAL No.

50-91-11

10:40A	H ₂ O	CD	API	Effluent
--------	------------------	----	-----	----------

22

10:45A	12	NEW API Element
--------	----	-----------------

2

10:50A	"	AL-2 to EP-1
--------	---	-------------------------

Date: _____

Time:

Relinquished By: (Signature)

Received By: (Signature) 11/17/05

Date: _____

Time:

Relinquished By: (Signature)

Received By: (Signature)

1715

**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:	
----------	--

Asm

Chavez, Carl J, EMNRD

To: Ed Riege
Cc: Foust, Denny, EMNRD; Monzeglio, Hope, NMENV; Steve Morris; Ed Rios; Price, Wayne, EMNRD
Subject: RE: Pilot Station Effluent 12-1-05 - 0512010 & Additional OCD Sampling Requirements

Ed:

Re: Giant Ciniza Refinery

Good morning. The OCD has reviewed the analytical data (see attachment) results from the Pilot Plant effluent (effluent) that is discharging into the aeration lagoons for treatment.

Please provide an summary of Giant's evaluation and conclusions pertaining to the attached Pilot Plant analytical data results on the existing treatment system for OCD review.

The remaining issues for OCD revolve around issues stemming from the September 8, 2005 site inspection and subsequent site visits. Until these remaining issues are resolved, OCD is requiring additional sampling to monitor the effectiveness of the treatment system, in addition to the modified sampling schedule outlined in the NMED- HWB's December 13, 2005 letter with an attached table entitled, "Giant Ciniza Refinery Sampling Schedule Resulting From The API Separator Spill." OCD requires the following:

- 1) Weekly sampling commensurate with HWB sampling methods for effluent from the Old API separator; and
- 2) Weekly sampling for biochemical oxygen demand (BOD) and chemical oxygen demand (COD) at evaporation pond #2.

Please make note of OCDs sampling requirements in addition to the HWB. Also, please continue to copy the HWB and OCD personnel on the data results. The above sampling shall continue until OCD determines that the remaining issues referred to above have been resolved.

Please be advised that this e-mail does not relieve Giant- Ciniza of responsibility should their operations pose a threat to ground water, surface water, human health or the environment. In addition, Giant is not relieved of responsibility for compliance with any other federal, state, or local laws and/or regulations. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/>
(Pollution Prevention Guidance is under "Publications")

From: Steve Morris [<mailto:smorris@giant.com>]
Sent: Wednesday, December 28, 2005 7:43 AM
To: Chavez, Carl J, EMNRD
Subject: FW: Pilot Station Effluent 12-1-05 - 0512010

-----Original Message-----

From: Vicki Brown [<mailto:vickie@hallenvironmental.com>]
Sent: Tuesday, December 20, 2005 1:26 PM
To: Steve Morris
Subject: Pilot Station Effluent 12-1-05 - 0512010

12/28/2005

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COVER LETTER

December 20, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Pilot Station Effluent 12-1-2005

Order No.: 0512010

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 12/1/2005 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-Dec-05

CLIENT: Giant Refining Co
Lab Order: 0512010
Project: Pilot Station Effluent 12-1-2005
Lab ID: 0512010-01

Client Sample ID: Pilot Effluent
Collection Date: 12/1/2005 9:00:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						
Petroleum Hydrocarbons, TR	5.8	2.0		mg/L	1	12/7/2005
EPA METHOD 8015B: DIESEL RANGE						
Diesel Range Organics (DRO)	6.2	3.0		mg/L	1	12/9/2005 12:45:02 PM
Motor Oil Range Organics (MRO)	ND	15		mg/L	1	12/9/2005 12:45:02 PM
Surr: DNOP	116	58-140		%REC	1	12/9/2005 12:45:02 PM
EPA METHOD 8015B: GASOLINE RANGE						
Gasoline Range Organics (GRO)	0.095	0.050		mg/L	1	12/14/2005 3:18:29 PM
Surr: BFB	116	79.7-118		%REC	1	12/14/2005 3:18:29 PM
EPA METHOD 8260B: VOLATILES						
Benzene	1.5	1.0		µg/L	1	12/7/2005
Toluene	6.8	1.0		µg/L	1	12/7/2005
Ethylbenzene	ND	1.0		µg/L	1	12/7/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/7/2005
1,2,4-Trimethylbenzene	1.1	1.0		µg/L	1	12/7/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/7/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/7/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/7/2005
Naphthalene	ND	2.0		µg/L	1	12/7/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	12/7/2005
2-Methylnaphthalene	4.3	4.0		µg/L	1	12/7/2005
Acetone	ND	10		µg/L	1	12/7/2005
Bromobenzene	ND	1.0		µg/L	1	12/7/2005
Bromochloromethane	ND	1.0		µg/L	1	12/7/2005
Bromodichloromethane	ND	1.0		µg/L	1	12/7/2005
Bromoform	ND	1.0		µg/L	1	12/7/2005
Bromomethane	ND	2.0		µg/L	1	12/7/2005
2-Butanone	ND	10		µg/L	1	12/7/2005
Carbon disulfide	ND	10		µg/L	1	12/7/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	12/7/2005
Chlorobenzene	ND	1.0		µg/L	1	12/7/2005
Chloroethane	ND	2.0		µg/L	1	12/7/2005
Chloroform	4.2	1.0		µg/L	1	12/7/2005
Chloromethane	ND	1.0		µg/L	1	12/7/2005
2-Chlorotoluene	ND	1.0		µg/L	1	12/7/2005
4-Chlorotoluene	ND	1.0		µg/L	1	12/7/2005
cis-1,2-DCE	ND	1.0		µg/L	1	12/7/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/7/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/7/2005
Dibromochloromethane	ND	1.0		µg/L	1	12/7/2005

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

Hall Environmental Analysis Laboratory

Date: 20-Dec-05

CLIENT: Giant Refining Co

Client Sample ID: Pilot Effluent

Lab Order: 0512010

Collection Date: 12/1/2005 9:00:00 AM

Project: Pilot Station Effluent 12-1-2005

Lab ID: 0512010-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dibromomethane	ND	2.0		µg/L	1	12/7/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/7/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/7/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/7/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/7/2005
1,1-Dichloroethane	ND	2.0		µg/L	1	12/7/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	12/7/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	12/7/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	12/7/2005
2,2-Dichloropropane	ND	2.0		µg/L	1	12/7/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	12/7/2005
Hexachlorobutadiene	ND	2.0		µg/L	1	12/7/2005
2-Hexanone	ND	10		µg/L	1	12/7/2005
Isopropylbenzene	ND	1.0		µg/L	1	12/7/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	12/7/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	12/7/2005
Methylene Chloride	ND	3.0		µg/L	1	12/7/2005
n-Butylbenzene	ND	1.0		µg/L	1	12/7/2005
n-Propylbenzene	ND	1.0		µg/L	1	12/7/2005
sec-Butylbenzene	ND	1.0		µg/L	1	12/7/2005
Styrene	ND	1.0		µg/L	1	12/7/2005
tert-Butylbenzene	ND	1.0		µg/L	1	12/7/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/7/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	12/7/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/7/2005
trans-1,2-DCE	ND	1.0		µg/L	1	12/7/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/7/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/7/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/7/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/7/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/7/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/7/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	12/7/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/7/2005
Vinyl chloride	ND	1.0		µg/L	1	12/7/2005
Xylenes, Total	7.1	1.0		µg/L	1	12/7/2005
Surr: 1,2-Dichloroethane-d4	89.7	69.9-130		%REC	1	12/7/2005
Surr: 4-Bromofluorobenzene	91.6	71.2-123		%REC	1	12/7/2005
Surr: Dibromofluoromethane	98.4	73.9-134		%REC	1	12/7/2005
Surr: Toluene-d8	92.9	81.9-122		%REC	1	12/7/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	50	µg/L	1	12/14/2005
--------------	----	----	------	---	------------

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 20-Dec-05

CLIENT: Giant Refining Co

Client Sample ID: Pilot Effluent

Lab Order: 0512010

Collection Date: 12/1/2005 9:00:00 AM

Project: Pilot Station Effluent 12-1-2005

Lab ID: 0512010-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Acenaphthylene	ND	50		µg/L	1	12/14/2005
Aniline	ND	100		µg/L	1	12/14/2005
Anthracene	ND	50		µg/L	1	12/14/2005
Azobenzene	ND	50		µg/L	1	12/14/2005
Benz(a)anthracene	ND	75		µg/L	1	12/14/2005
Benzo(a)pyrene	ND	75		µg/L	1	12/14/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	12/14/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	12/14/2005
Benzo(k)fluoranthene	ND	50		µg/L	1	12/14/2005
Benzoic acid	ND	250		µg/L	1	12/14/2005
Benzyl alcohol	ND	100		µg/L	1	12/14/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	12/14/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	12/14/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	12/14/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	12/14/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	12/14/2005
Butyl benzyl phthalate	ND	75		µg/L	1	12/14/2005
Carbazole	ND	50		µg/L	1	12/14/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	12/14/2005
4-Chloroaniline	ND	100		µg/L	1	12/14/2005
2-Chloronaphthalene	ND	50		µg/L	1	12/14/2005
2-Chlorophenol	ND	50		µg/L	1	12/14/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	12/14/2005
Chrysene	ND	75		µg/L	1	12/14/2005
Di-n-butyl phthalate	ND	50		µg/L	1	12/14/2005
Di-n-octyl phthalate	ND	75		µg/L	1	12/14/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	12/14/2005
Dibenzofuran	ND	50		µg/L	1	12/14/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	12/14/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	12/14/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	12/14/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	12/14/2005
Diethyl phthalate	ND	50		µg/L	1	12/14/2005
Dimethyl phthalate	ND	50		µg/L	1	12/14/2005
2,4-Dichlorophenol	ND	50		µg/L	1	12/14/2005
2,4-Dimethylphenol	ND	50		µg/L	1	12/14/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	12/14/2005
2,4-Dinitrophenol	ND	250		µg/L	1	12/14/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	12/14/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	12/14/2005
Fluoranthene	ND	50		µg/L	1	12/14/2005
Fluorene	ND	50		µg/L	1	12/14/2005

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

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

Hall Environmental Analysis Laboratory

Date: 20-Dec-05

CLIENT: Giant Refining Co

Client Sample ID: Pilot Effluent

Lab Order: 0512010

Collection Date: 12/1/2005 9:00:00 AM

Project: Pilot Station Effluent 12-1-2005

Lab ID: 0512010-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobenzene	ND	50		µg/L	1	12/14/2005
Hexachlorobutadiene	ND	50		µg/L	1	12/14/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	12/14/2005
Hexachloroethane	ND	50		µg/L	1	12/14/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	12/14/2005
Isophorone	ND	50		µg/L	1	12/14/2005
2-Methylnaphthalene	ND	50		µg/L	1	12/14/2005
2-Methylphenol	ND	75		µg/L	1	12/14/2005
3+4-Methylphenol	250	100		µg/L	1	12/14/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	12/14/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	12/14/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	12/14/2005
Naphthalene	ND	50		µg/L	1	12/14/2005
2-Nitroaniline	ND	250		µg/L	1	12/14/2005
3-Nitroaniline	ND	250		µg/L	1	12/14/2005
4-Nitroaniline	ND	100		µg/L	1	12/14/2005
Nitrobenzene	ND	50		µg/L	1	12/14/2005
2-Nitrophenol	ND	75		µg/L	1	12/14/2005
4-Nitrophenol	ND	250		µg/L	1	12/14/2005
Pentachlorophenol	ND	250		µg/L	1	12/14/2005
Phenanthrene	ND	50		µg/L	1	12/14/2005
Phenol	ND	50		µg/L	1	12/14/2005
Pyrene	ND	75		µg/L	1	12/14/2005
Pyridine	ND	150		µg/L	1	12/14/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	12/14/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	12/14/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	12/14/2005
Surr: 2,4,6-Tribromophenol	89.3	16.6-150		%REC	1	12/14/2005
Surr: 2-Fluorobiphenyl	79.0	19.6-134		%REC	1	12/14/2005
Surr: 2-Fluorophenol	53.7	9.54-113		%REC	1	12/14/2005
Surr: 4-Terphenyl-d14	89.1	22.7-145		%REC	1	12/14/2005
Surr: Nitrobenzene-d5	72.6	14.6-134		%REC	1	12/14/2005
Surr: Phenol-d5	39.8	10.7-80.3		%REC	1	12/14/2005

EPA METHOD 8310: PAHS

Analyst: JMP

Naphthalene	ND	2.5		µg/L	1	12/12/2005 4:38:28 PM
1-Methylnaphthalene	ND	2.5		µg/L	1	12/12/2005 4:38:28 PM
2-Methylnaphthalene	ND	2.5		µg/L	1	12/12/2005 4:38:28 PM
Acenaphthylene	ND	2.5		µg/L	1	12/12/2005 4:38:28 PM
Acenaphthene	ND	2.5		µg/L	1	12/12/2005 4:38:28 PM
Fluorene	ND	0.80		µg/L	1	12/12/2005 4:38:28 PM
Phenanthrene	ND	0.60		µg/L	1	12/12/2005 4:38:28 PM
Anthracene	ND	0.60		µg/L	1	12/12/2005 4:38:28 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: 20-Dec-05

CLIENT: Giant Refining Co
Lab Order: 0512010
Project: Pilot Station Effluent 12-1-2005
Lab ID: 0512010-01

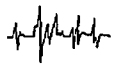
Client Sample ID: Pilot Effluent
Collection Date: 12/1/2005 9:00:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Fluoranthene	ND	0.30		µg/L	1	12/12/2005 4:38:28 PM
Pyrene	ND	0.30		µg/L	1	12/12/2005 4:38:28 PM
Benz(a)anthracene	ND	0.020		µg/L	1	12/12/2005 4:38:28 PM
Chrysene	ND	0.20		µg/L	1	12/12/2005 4:38:28 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	12/12/2005 4:38:28 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	12/12/2005 4:38:28 PM
Benzo(a)pyrene	0.020	0.020		µg/L	1	12/12/2005 4:38:28 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	12/12/2005 4:38:28 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	12/12/2005 4:38:28 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	12/12/2005 4:38:28 PM
Surr: Benzo(e)pyrene	54.3	54-102		%REC	1	12/12/2005 4:38:28 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	12/7/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	12/6/2005 12:33:53 PM
Barium	0.046	0.020		mg/L	1	12/6/2005 12:33:53 PM
Cadmium	ND	0.0020		mg/L	1	12/6/2005 12:33:53 PM
Chromium	ND	0.0060		mg/L	1	12/6/2005 12:33:53 PM
Lead	ND	0.0050		mg/L	1	12/6/2005 12:33:53 PM
Selenium	ND	0.050		mg/L	1	12/6/2005 12:33:53 PM
Silver	ND	0.0050		mg/L	1	12/6/2005 12:33:53 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



**ASSAIGAI
ANALYTICAL
LABORATORIES, INC.**

4301 Masthead NE, Ste. A • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259

3332 Wedgewood, Ste. N • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820

127 Eastgate Drive, 212-C • Los Alamos, New Mexico 87544 • (505) 662-2558

HALL ENVIRONMENTAL

attn: ANDY FREEMAN

4901 HAWKINS NE, SUITE D

ALBUQUERQUE

NM 87109-4372

Explanation of codes

B	Analyte Detected in Method Blank
E	Result is Estimated
H	Analyzed Out of Hold Time
N	Tentatively Identified Compound
S	Subcontracted
1-9	See Footnote

Assaigai Analytical Laboratories, Inc.

STANDARD

Certificate of Analysis

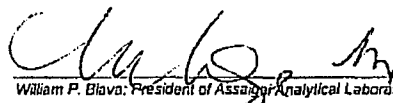
All samples are reported on an "as received" basis, unless otherwise noted (i.e. - Dry Weight).

Client: **HALL ENVIRONMENTAL**

Project: **0512010**

Order: **0512020 HAL03**

Receipt: **12-01-05**


William P. Blava, President of Assaigai Analytical Laboratories, Inc.

Sample: **PILOT EFFLUENT**

Collected: **12-01-05 9:00:00** By:

Matrix: **AQUEOUS**

QC Group	Run Sequence	CAS #	Analyte	Result	Units	Dilution Factor	Detection Limit	Code	Prep Date	Run Date
0512020-0001A			EPA 405.1 Biochemical Oxygen Demand					By: MKM		
BOD05148	WC.2005.3272.9	10-26-4	Biochemical Oxygen Demand	504	mg/L	1	2		12-02-05	12-07-05
0512020-0001B			EPA 410.1 Chemical Oxygen Demand					By: MKM		
WC05.3215	WC.2005.3217.6	C-004	Chemical Oxygen Demand	828	mg/L	1	10		12-08-05	12-08-05

Unless otherwise noted, all samples were received in acceptable condition and all sampling was performed by client or client representative. Sample result of ND indicates Not Detected, ie result is less than the sample specific Detection Limit. Sample specific Detection Limit is determined by multiplying the sample Dilution Factor by the listed Reporting Detection Limit. All results relate only to the items tested. Any miscellaneous workorder information or footnotes will appear below.

Analytical results are not corrected for method blank or field blank contamination.

Hall Environmental Analysis Laboratory

Date: 20-Dec-05

CLIENT: Giant Refining Co
 Work Order: 0512010
 Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT
Method Blank

Sample ID: MB-9320	Batch ID: 9320	Test Code: E418.1	Units: mg/L	Analysis Date: 12/7/2005	Prep Date: 12/2/2005
Client ID:		Run ID: BUCK IR_051207A		SeqNo: 429683	
Analyte	Result	PQL	SPK value	%REC	LowLimit
Petroleum Hydrocarbons, TR	ND	1			HighLimit
			SPK Ref Val	RPD Ref Val	%RPD
					RPDLimit
					Qual

Sample ID: MB-9336	Batch ID: 9336	Test Code: SW8015	Units: mg/L	Analysis Date: 12/6/2005 2:02:14 PM	Prep Date: 12/6/2005
Client ID:		Run ID: FID(17A) 2_051206A		SeqNo: 429110	
Analyte	Result	PQL	SPK value	%REC	LowLimit
Diesel Range Organics (DRO)	ND	1			HighLimit
Motor Oil Range Organics (MRO)	ND	5			%RPD
Surr: DNOP	1.029	0	1	103	140
			SPK Ref Val	RPD Ref Val	RPDLimit
					Qual

Sample ID: Reagent Blank 5m	Batch ID: R17607	Test Code: SW8015	Units: mg/L	Analysis Date: 12/14/2005 9:37:13 AM	Prep Date:
Client ID:		Run ID: PIDFID_051214A		SeqNo: 432398	
Analyte	Result	PQL	SPK value	%REC	LowLimit
Gasoline Range Organics (GRO)	0.0116	0.05			HighLimit
Surr: BFB	22.73	0	20	114	118
			SPK Ref Val	RPD Ref Val	%RPD
					RPDLimit
					Qual

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

CLIENT: Giant Refining Co

Work Order: 0512010

Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT

Method Blank

Sample ID: MB-9345	Batch ID: 9345	Test Code: SW8270C	Units: µg/L	Analysis Date: 12/14/2005	Prep Date: 12/7/2005
Client ID:	Run ID:	SeqNo: 433048	LowLimit	HighLimit	RPD Ref Val
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Acenaphthene	ND	10			
Acenaphthylene	ND	10			
Aniline	ND	20			
Anthracene	ND	10			
Azobenzene	ND	10			
Benz(a)anthracene	ND	15			
Benzo(a)pyrene	ND	15			
Benzo(b)fluoranthene	ND	15			
Benzo(g,h,i)perylene	ND	10			
Benzo(k)fluoranthene	ND	10			
Benzoic acid	ND	50			
Benzyl alcohol	ND	20			
Bis(2-chloroethoxy)methane	ND	10			
Bis(2-chloroethyl)ether	ND	15			
Bis(2-chloroisopropyl)ether	ND	15			
Bis(2-ethylhexyl)phthalate	ND	15			
4-Bromophenyl phenyl ether	ND	10			
Butyl benzyl phthalate	ND	15			
Carbazole	ND	10			
4-Chloro-3-methylphenol	ND	20			
4-Chloroaniline	ND	20			
2-Chloronaphthalene	ND	10			
2-Chlorophenol	ND	10			
4-Chlorophenyl phenyl ether	ND	15			
Chrysene	ND	15			
Di-n-butyl phthalate	ND	10			
Di-n-octyl phthalate	ND	15			
Dibenz(a,h)anthracene	ND	10			

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0512010
 Project: Pilot Station Effluent 12-1-2005

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

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

B - Analyte detected in the associated Method Blank
 3

Method Blank

Project: Pilot Station Effluent 12-1-2005

[illegible]

Qualifiers:

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

B - Analyte detected in the associated Method Blank

2

CLIENT: Giant Refining Co

Work Order: 0512010

Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT

Method Blank

Sample ID: MB-9309	Batch ID: 9309	Test Code: SW8310	Units: µg/L	Analysis Date: 12/9/2005 2:15:11 PM	Prep Date: 12/1/2005						
Client ID:		Run ID: HUGO_051208A		SeqNo: 431058							
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	7.964	0	10	0	79.6	54	102	0			

Sample ID: MB-9349	Batch ID: 9349	Test Code: SW7470	Units: mg/L	Analysis Date: 12/7/2005	Prep Date: 12/7/2005						
Client ID:		Run ID: MI-LA254_051207A		SeqNo: 429648							
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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0512010
 Project: Pilot Station Effluent 12-1-2005

Sample ID: MB-9317	Batch ID: 9317	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/6/2005 12:07:27 PM	Prep Date: 12/2/2005						
Client ID:		Run ID: ICP_051206C		SeqNo: 429195							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									J
Barium	0.001153	0.02									J
Cadmium	0.0002834	0.002									
Chromium	ND	0.005									
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

Hall Environmental Analysis Laboratory

Date: 20-Dec-05

CLIENT: Giant Refining Co
 Work Order: 0512010
 Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT
Method Blank

Sample ID: 5mL rb-c	Batch ID: R17522	Test Code: SW8260B	Units: µg/L	Analysis Date: 12/6/2005	Prep Date:
Client ID:	Run ID:	NEPTUNE_051205B		SeqNo: 429146	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	1			
Toluene	ND	1			
Ethylbenzene	ND	1			
Methyl tert-butyl ether (MTBE)	ND	1			
1,2,4-Trimethylbenzene	ND	1			
1,3,5-Trimethylbenzene	ND	1			
1,2-Dichloroethane (EDC)	ND	1			
1,2-Dibromoethane (EDB)	ND	1			
Naphthalene	ND	2			
1-Methylnaphthalene	ND	4			
2-Methylnaphthalene	ND	4			
Acetone	ND	10			
Bromobenzene	ND	1			
Bromochloromethane	ND	1			
Bromodichloromethane	ND	1			
Bromoform	ND	1			
Bromomethane	ND	2			
2-Butanone	ND	10			
Carbon disulfide	ND	10			
Carbon Tetrachloride	ND	2			
Chlorobenzene	ND	1			
Chloroethane	ND	2			
Chloroform	ND	1			
Chloromethane	ND	1			
2-Chlorotoluene	ND	1			
4-Chlorotoluene	ND	1			
cis-1,2-DCE	ND	1			

Qualifiers: ND - Not Detected at the Reporting Limit
 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: Giant Refining Co

Work Order: 0512010

Project: Pilot Station Effluent 12-1-2005

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

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

2

Method Blank

CLIENT: Giant Refining Co

Work Order: 0512010

Project: Pilot Station Effluent 12-1-2005

	1	1	0	69.9	86.1	130	0
1,1,2-Trichloroethane	ND						
Trichloroethene (TCE)	ND	1				123	0
Trichlorofluoromethane	0.228	1			97.0	134	0
1,2,3-Trichloropropane	ND	2			89.5	122	0
Vinyl chloride	ND	1			91.4		
Xylenes, Total	ND	1					
Surr: 1,2-Dichloroethane-d4	8.61	0	10	0			
Surr: 4-Bromofluorobenzene	9.696	0	10	0			
Surr: Dibromofluoromethane	8.958	0	10	0			
Surr: Toluene-d8	9.136	0	10	0			

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

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

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: Giant Refining Co
 Work Order: 0512010
 Project: Pilot Station Effluent 12-1-2005

Sample ID: GRO lcsd 2.5ug Batch ID: R17607 Test Code: SW8015 Units: mg/L Analysis Date: 12/15/2005 1:56:41 AM Prep Date:
 Client ID: Run ID: PIDFID_051214A SeqNo: 432400
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
 Gasoline Range Organics (GRO) 0.5304 0.05 0.5 0.0116 104 82.6 114 0.5238 1.25 8.39

Sample ID: 100ng lcs-c Batch ID: R17522 Test Code: SW8260B Units: µg/L Analysis Date: 12/6/2005 Prep Date:
 Client ID: Run ID: NEPTUNE_051205B SeqNo: 429147
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
 Benzene 22.29 1 20 0 111 79.3 136 0
 Toluene 21.85 1 20 0 109 65.5 123 0
 Chlorobenzene 20.54 1 20 0 103 85.6 134 0
 1,1-Dichloroethene 21.79 1 20 0 109 72.7 135 0
 Trichloroethene (TCE) 21.47 1 20 0 107 85.6 119 0

Sample ID: 100ng lcs2 Batch ID: R17539 Test Code: SW8260B Units: µg/L Analysis Date: 12/7/2005 Prep Date:
 Client ID: Run ID: NEPTUNE_051207A SeqNo: 429737
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
 Benzene 21.19 1 20 0 106 79.3 136 0
 Toluene 20.56 1 20 0 103 65.5 123 0
 Chlorobenzene 19.45 1 20 0 97.3 85.6 134 0
 1,1-Dichloroethene 21.09 1 20 0 105 72.7 135 0
 Trichloroethene (TCE) 20.8 1 20 0 104 85.6 119 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 2

Hall Environmental Analysis Laboratory

Date: 20-Dec-05

CLIENT: Giant Refining Co

Work Order: 0512010

Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9320	Batch ID: 9320	Test Code: E418.1	Units: mg/L	Analysis Date: 12/7/2005	Prep Date: 12/2/2005
Client ID:	Run ID: BUCK IR_051207A	SeqNo: 429684			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Petroleum Hydrocarbons, TR	4.92	1	5	0	98.4 112 0
Sample ID: LCS-9320	Batch ID: 9320	Test Code: E418.1	Units: mg/L	Analysis Date: 12/7/2005	Prep Date: 12/2/2005
Client ID:	Run ID: BUCK IR_051207A	SeqNo: 429694			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Petroleum Hydrocarbons, TR	4.98	1	5	0	99.6 112 4.92 1.21 7.43
Sample ID: LCS-9336	Batch ID: 9336	Test Code: SW8015	Units: mg/L	Analysis Date: 12/6/2005 2:34:58 PM	Prep Date: 12/6/2005
Client ID:	Run ID: FID(17A) 2_051206A	SeqNo: 429111			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Diesel Range Organics (DRO)	6.408	1	5	0	128 81.2 149 0
Sample ID: LCS-9336	Batch ID: 9336	Test Code: SW8015	Units: mg/L	Analysis Date: 12/6/2005 3:06:00 PM	Prep Date: 12/6/2005
Client ID:	Run ID: FID(17A) 2_051206A	SeqNo: 429112			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Diesel Range Organics (DRO)	6.959	1	5	0	139 81.2 149 8.24 23
Sample ID: GRO lcs 2.5ug	Batch ID: R17607	Test Code: SW8015	Units: mg/L	Analysis Date: 12/14/2005 1:42:22 PM	Prep Date:
Client ID:	Run ID: PIDFID_051214A	SeqNo: 432399			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	0.5238	0.05	0.5	0.0116	102 82.6 114 0

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

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

B - Analyte detected in the associated Method Blank
/

CLIENT: Giant Refining Co

Work Order: 0512010

Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9309	Batch ID: 9309	Test Code: SW8310	Units: µg/L	Analysis Date: 12/9/2005 3:03:12 PM	Prep Date: 12/1/2005						
Client ID:	Run ID:	HUGO_051208A	SeqNo:	431061							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	18.16	2.5	40	0	45.4	34.8	97.4	0			
1-Methylnaphthalene	19.59	2.5	40.1	0	48.9	34.7	100	0			
2-Methylnaphthalene	19.21	2.5	40	0	48.0	35	98.1	0			
Acenaphthylene	23.88	2.5	40.1	0	59.6	48.3	95.1	0			
Acenaphthene	24	2.5	40	0	60.0	45	95	0			
Fluorene	2.72	0.8	4.01	0	67.8	46.8	93.4	0			
Phenanthrene	1.5	0.6	2.01	0	74.6	48.7	104	0			
Anthracene	1.5	0.6	2.01	0	74.6	47.5	102	0			
Fluoranthene	2.98	0.3	4.01	0	74.3	46.3	108	0			
Pyrene	2.83	0.3	4.01	0	70.6	43.8	109	0			
Benz(a)anthracene	0.29	0.02	0.401	0	72.3	40.3	115	0			
Chrysene	1.43	0.2	2.01	0	71.1	42.6	107	0			
Benzo(b)fluoranthene	0.31	0.05	0.501	0	61.9	48.6	107	0			
Benzo(k)fluoranthene	0.19	0.02	0.25	0	76.0	23.3	136	0			
Benzo(a)pyrene	0.19	0.02	0.251	0	75.7	33.4	117	0			
Dibenz(a,h)anthracene	0.41	0.04	0.501	0	81.8	27.3	139	0			
Benzo(g,h,i)perylene	0.43	0.03	0.5	0	86.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.465	0.08	1.002	0	46.4	39.9	125	0			

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

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

B - Analyte detected in the associated Method Blank
4

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co
Work Order: 0512010
Project: Pilot Station Effluent 12-1-2005

Sample ID: LCS-9345	Batch ID: 9345	Test Code: SW8270C	Units: µg/L	Analysis Date: 12/14/2005	Prep Date: 12/7/2005						
Client ID:		Run ID: ELMO_051213B		SeqNo: 433049							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	82.12	10	100	0	82.1	11	123	0			
4-Chloro-3-methylphenol	155.2	20	200	0	77.6	15.4	119	0			
2-Chlorophenol	138.9	10	200	0	69.5	12.2	122	0			
1,4-Dichlorobenzene	64.6	10	100	0	64.6	16.9	100	0			
2,4-Dinitrotoluene	67.88	10	100	0	67.9	13	138	0			
N-Nitrosodi-n-propylamine	73.32	10	100	0	73.3	9.93	122	0			
4-Nitrophenol	49.72	50	200	0	24.9	-20.5	87.4	0			J
Pentachlorophenol	96.46	50	200	0	48.2	-0.355	114	0			
Phenol	78.86	10	200	0	39.4	7.53	73.1	0			
Pyrene	91.86	15	100	0	91.9	12.6	140	0			
1,2,4-Trichlorobenzene	69.62	10	100	0	69.6	17.4	98.7	0			

Sample ID: LCSD-9345	Batch ID: 9345	Test Code: SW8270C	Units: µg/L	Analysis Date: 12/14/2005		Prep Date: 12/7/2005					
Client ID:		Run ID: ELMO_051213B		SeqNo: 433050							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	73.2	10	100	0	73.2	11	123	82.12	11.5	30.5	
	131.2	20	200	0	65.6	15.4	119	155.2	16.8	28.6	
4-Chloro-3-methylphenol	138	10	200	0	69.0	12.2	122	138.9	0.650	107	
2-Chlorophenol	65.48	10	100	0	65.5	16.9	100	64.6	1.35	62.1	
1,4-Dichlorobenzene	56.9	10	100	0	56.9	13	138	67.88	17.6	14.7	R
2,4-Dinitrotoluene	67.62	10	100	0	67.6	9.93	122	73.32	8.09	30.3	
N-Nitrosodi-n-propylamine	45.38	50	200	0	22.7	12.5	87.4	49.72	0	36.3	J
4-Nitrophenol	85.52	50	200	0	42.8	3.55	114	96.46	12.0	49	
Pentachlorophenol	76.4	10	200	0	38.2	7.53	73.1	78.86	3.17	52.4	
Phenol	80.04	15	100	0	80.0	12.6	140	91.86	13.8	16.3	
Pyrene	66.68	10	100	0	66.7	17.4	98.7	69.62	4.31	36.4	
1,2,4-Trichlorobenzene											

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

CLIENT: Giant Refining Co

Work Order: -0512010

Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCS-9309	Batch ID: 9309	Test Code: SW8310	Units: µg/L	Analysis Date: 12/9/2005 3:51:13 PM	Prep Date: 12/1/2005
Client ID:	Run ID:	PQL	SPK value	SeqNo: 431062	
Analyte	Result			LowLimit	HighLimit
Naphthalene	18.87	2.5	40	34.8	97.4
1-Methylnaphthalene	20.17	2.5	40.1	34.7	100
2-Methylnaphthalene	19.61	2.5	40	35	98.1
Acenaphthylene	25.14	2.5	40.1	48.3	95.1
Acenaphthene	25.25	2.5	40	63.1	95
Fluorene	2.89	0.8	4.01	46.8	93.4
Phenanthrene	1.65	0.6	2.01	48.7	104
Anthracene	1.65	0.6	2.01	47.5	102
Fluoranthene	3.25	0.3	4.01	46.3	108
Pyrene	3.16	0.3	4.01	43.8	109
Benz(a)anthracene	0.31	0.02	0.401	40.3	115
Chrysene	1.6	0.2	2.01	42.6	107
Benzo(b)fluoranthene	0.39	0.05	0.501	48.6	107
Benzo(k)fluoranthene	0.21	0.02	0.25	23.3	136
Benzo(a)pyrene	0.22	0.02	0.251	33.4	117
Dibenz(a,h)anthracene	0.46	0.04	0.501	27.3	139
Benzo(g,h,i)perylene	0.47	0.03	0.5	38.2	117
Indeno(1,2,3-cd)pyrene	0.54	0.08	1.002	39.9	125
				%REC	RPD Ref Val
				47.2	18.16
				50.3	19.59
				49.0	19.21
				62.7	23.88
				63.1	24
				72.1	2.72
				82.1	1.5
				82.1	1.5
				81.0	2.98
				78.8	2.83
				77.3	0.29
				79.6	1.43
				77.8	0.31
				84.0	0.19
				87.6	0.19
				91.8	0.41
				94.0	0.43
				53.9	0.465
				%RPD	RPDLimit
				3.83	32.1
				2.92	32.7
				2.06	34
				5.12	38.8
				5.08	38.6
				6.06	39.3
				9.52	25
				9.52	23.9
				8.67	15.7
				11.0	15.3
				6.67	119
				11.2	16.6
				22.9	21.7
				10.0	19.4
				14.6	16.7
				11.5	17.3
				8.89	118
				14.9	17.7

Sample ID: LCS-9349	Batch ID: 9349	Test Code: SW7470	Units: mg/L	Analysis Date: 12/7/2005	Prep Date: 12/7/2005
Client ID:	Run ID:	PQL	SPK value	SeqNo: 429649	
Analyte	Result			LowLimit	HighLimit
Mercury	0.004347	0.0002	0.005	80	120
				%REC	RPD Ref Val
				86.9	0
				%RPD	RPDLimit

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

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

B - Analyte detected in the associated Method Blank
5

CLIENT: Giant Refining Co

Work Order: 0512010

Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCSD-9349	Batch ID: 9349	Test Code: SW7470	Units: mg/L	Analysis Date: 12/7/2005	Prep Date: 12/7/2005
Client ID:		Run ID: MI-LA254_051207A		SeqNo: 429669	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Mercury	0.004779	0.0002	0.005	0	95.6
					HighLimit 120
					RPDLimit 0
					%RPD 9.46
					Qual 0
Sample ID: LCS-9317	Batch ID: 9317	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/6/2005 12:10:44 PM	Prep Date: 12/2/2005
Client ID:		Run ID: ICP_051206C		SeqNo: 429196	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	0.5017	0.02	0.5	0	100
Barium	0.4743	0.02	0.5	0.001153	94.6
Cadmium	0.4806	0.002	0.5	0.0002834	96.1
Chromium	0.4852	0.006	0.5	0	97.0
Lead	0.4757	0.005	0.5	0	95.1
Selenium	0.4554	0.05	0.5	0	93.1
Silver	0.4952	0.005	0.5	0	99.0
					HighLimit 120
					RPDLimit 120
					%RPD 9.46
					Qual 0
Sample ID: LCSD-9317	Batch ID: 9317	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/6/2005 12:13:23 PM	Prep Date: 12/2/2005
Client ID:		Run ID: ICP_051206C		SeqNo: 429197	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	0.4935	0.02	0.5	0	98.7
Barium	0.4793	0.02	0.5	0.001153	95.6
Cadmium	0.4847	0.002	0.5	0.0002834	96.9
Chromium	0.4904	0.006	0.5	0	98.1
Lead	0.4753	0.005	0.5	0	95.1
Selenium	0.4556	0.05	0.5	0	91.1
Silver	0.5006	0.005	0.5	0	100
					HighLimit 120
					RPDLimit 120
					%RPD 1.66
					Qual 20
					1.05
					0.861
					1.07
					0.0867
					2.11
					1.08
					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
6

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

12/1/2005

Work Order Number 0512010

Received by AMF

Checklist completed by

Signature

Date

12/1/05

Matrix

Carrier name Client drop-off

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?

14°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

Client:	Giant Refining Company - Tinaja Route 3 Box 7 Gallup, NM 87301
Project Name:	Pilot Station Effluent 12-1-2005
Project #:	

Project Name: Pilot Station
Effluent 12-1-2005
Project #: _____

Project #:

Project Manager:

Sampler: Steve Morris
Sample Temperature: 14

Sample Temperature:

Number/Volume	HEAL No.

HEAL No.

Preservative	HgCl ₂ HNO ₃
--------------	------------------------------------

05/20/01

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

Matrix

Time

12-1-05	0900	H ₂ O	Pilot Effluent
---------	------	------------------	----------------

Date: 12-1-95	Time: 1300	Relinquished By: (Signature) <i>Steve Morris</i>	Received By: (Signature) <i>[Signature]</i>	12/1/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	1300

Received By: (Signature) 12/1/05
Received By: (Signature) 1300

12/1/05
1300

**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:

Chavez, Carl J, EMNRD

From: Steve Morris [smorris@giant.com]
Sent: Friday, December 09, 2005 12:29 PM
To: Monzeglio, Hope, NMENV; Foust, Denny, EMNRD; Dave Cobrain (E-mail); Price, Wayne, EMNRD; Chavez, Carl J, EMNRD
Cc: Ed Riege; Johnny Sanchez; Steve Morris; Ed Rios; John Laurent; Jim Hallock
Subject: Ciniza Weekly Update 12/9/2005



-ALL6848_AL2EP1HALL6846_SW110HALL6745_AL12EP
11 14.pdf (148... 16.pdf (392 KB) 1Bank.pdf (289 ...

- 1) The new API separator continues to run properly. The east bay of the new API separator was taken out of service and work started on Monday the 5th of Dec., 2005. The bay will be inspected and repaired as needed.
- 2) Vector Arizona Inc. completed the field portion of the stormwater site map on Friday the 2nd of Dec., 2005. They plan to have the first draft to us in a couple of weeks.
- 3) Attached are water sample results from the week of 11/14/2005 and the results are below RCRA limits.
- 4) A composite sample of bank material from Aeration Lagoons 1 & 2, and Evaporation pond 1 was taken and analytical indicates this material is RCRA nonhazardous, (analysis attached). A TPH 418.1 is being run on this sample to profile the material for offsite disposal.
- 5) GWM 2 & 3 were inspected this week and both remain dry.
- 6) Giant Technical Services is still working on the repair plan for the new API separator secondary containment. It will be forwarded to you once environmental receives it.
- 7) The drawings and specifications for the new Chopper pump installation at the new API separator have been completed. Installation is to begin the first week in January, 2006.

<<HALL6848_AL2EP1 11 14.pdf>> <<HALL6846_SW11016.pdf>> <<HALL6745_AL12EP1Bank.pdf>>

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ALICZ
Paul Smith

COVER LETTER

November 30, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Aeration Lagoon Bank Material 11-16-05

Order No.: 0511189

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/17/2005 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: 30-Nov-05

CLIENT: Giant Refining Co
Project: Aeration Lagoon Bank Material 11-16-05
Lab Order: 0511189

CASE NARRATIVE

Analytical Comments for METHOD 8260_S, SAMPLE 0511189-01a: Sample analyzed at dilution because of late eluting hydrocarbons.

Method 6010: 0511189-1 DUP RPD >30 for Cd & Ba. 0511189-1 MSD recovery low for Cr and Pb. 0511189-1 MSD RPD >30 for Pb. Sample may not be homogenous. IN36-05223

Hall Environmental Analysis Laboratory

Date: 30-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL Bank Material

Lab Order: 0511189

Collection Date: 11/17/2005 8:45:00 AM

Project: Aeration Lagoon Bank Material 11-16-05

Lab ID: 0511189-01

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	ND	1.0		mg/Kg	20	11/21/2005
Toluene	ND	1.0		mg/Kg	20	11/21/2005
Ethylbenzene	ND	1.0		mg/Kg	20	11/21/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	20	11/21/2005
1,2,4-Trimethylbenzene	ND	1.0		mg/Kg	20	11/21/2005
1,3,5-Trimethylbenzene	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dichloroethane (EDC)	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dibromoethane (EDB)	ND	1.0		mg/Kg	20	11/21/2005
Naphthalene	ND	2.0		mg/Kg	20	11/21/2005
1-Methylnaphthalene	6.5	4.0		mg/Kg	20	11/21/2005
2-Methylnaphthalene	5.8	4.0		mg/Kg	20	11/21/2005
Acetone	ND	15		mg/Kg	20	11/21/2005
Bromobenzene	ND	1.0		mg/Kg	20	11/21/2005
Bromochloromethane	ND	1.0		mg/Kg	20	11/21/2005
Bromodichloromethane	ND	1.0		mg/Kg	20	11/21/2005
Bromoform	ND	1.0		mg/Kg	20	11/21/2005
Bromomethane	ND	2.0		mg/Kg	20	11/21/2005
2-Butanone	ND	10		mg/Kg	20	11/21/2005
Carbon disulfide	ND	10		mg/Kg	20	11/21/2005
Carbon tetrachloride	ND	2.0		mg/Kg	20	11/21/2005
Chlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
Chloroethane	ND	2.0		mg/Kg	20	11/21/2005
Chloroform	ND	1.0		mg/Kg	20	11/21/2005
Chloromethane	ND	1.0		mg/Kg	20	11/21/2005
2-Chlorotoluene	ND	1.0		mg/Kg	20	11/21/2005
4-Chlorotoluene	ND	1.0		mg/Kg	20	11/21/2005
cis-1,2-DCE	ND	1.0		mg/Kg	20	11/21/2005
cis-1,3-Dichloropropene	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dibromo-3-chloropropane	ND	2.0		mg/Kg	20	11/21/2005
Dibromochloromethane	ND	1.0		mg/Kg	20	11/21/2005
Dibromomethane	ND	2.0		mg/Kg	20	11/21/2005
1,2-Dichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
1,3-Dichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
1,4-Dichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
Dichlorodifluoromethane	ND	1.0		mg/Kg	20	11/21/2005
1,1-Dichloroethane	ND	1.0		mg/Kg	20	11/21/2005
1,1-Dichloroethene	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dichloropropane	ND	1.0		mg/Kg	20	11/21/2005
1,3-Dichloropropane	ND	1.0		mg/Kg	20	11/21/2005
2,2-Dichloropropane	ND	2.0		mg/Kg	20	11/21/2005
1,1-Dichloropropene	ND	1.0		mg/Kg	20	11/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 30-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL Bank Material

Lab Order: 0511189

Collection Date: 11/17/2005 8:45:00 AM

Project: Aeration Lagoon Bank Material 11-16-05

Lab ID: 0511189-01

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	1.0		mg/Kg	20	11/21/2005
2-Hexanone	ND	10		mg/Kg	20	11/21/2005
Isopropylbenzene	ND	1.0		mg/Kg	20	11/21/2005
4-Isopropyltoluene	ND	1.0		mg/Kg	20	11/21/2005
4-Methyl-2-pentanone	ND	10		mg/Kg	20	11/21/2005
Methylene chloride	ND	3.0		mg/Kg	20	11/21/2005
n-Butylbenzene	ND	1.0		mg/Kg	20	11/21/2005
n-Propylbenzene	ND	1.0		mg/Kg	20	11/21/2005
sec-Butylbenzene	ND	1.0		mg/Kg	20	11/21/2005
Styrene	ND	1.0		mg/Kg	20	11/21/2005
tert-Butylbenzene	ND	1.0		mg/Kg	20	11/21/2005
1,1,1,2-Tetrachloroethane	ND	1.0		mg/Kg	20	11/21/2005
1,1,2,2-Tetrachloroethane	ND	1.0		mg/Kg	20	11/21/2005
Tetrachloroethene (PCE)	ND	1.0		mg/Kg	20	11/21/2005
trans-1,2-DCE	ND	1.0		mg/Kg	20	11/21/2005
trans-1,3-Dichloropropene	ND	1.0		mg/Kg	20	11/21/2005
1,2,3-Trichlorobenzene	ND	2.0		mg/Kg	20	11/21/2005
1,2,4-Trichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
1,1,1-Trichloroethane	ND	1.0		mg/Kg	20	11/21/2005
1,1,2-Trichloroethane	ND	1.0		mg/Kg	20	11/21/2005
Trichloroethene (TCE)	ND	1.0		mg/Kg	20	11/21/2005
Trichlorofluoromethane	ND	1.0		mg/Kg	20	11/21/2005
1,2,3-Trichloropropane	ND	2.0		mg/Kg	20	11/21/2005
Vinyl chloride	ND	1.0		mg/Kg	20	11/21/2005
Xylenes, Total	ND	1.0		mg/Kg	20	11/21/2005
Surr: 1,2-Dichloroethane-d4	99.3	74.2-135		%REC	20	11/21/2005
Surr: 4-Bromofluorobenzene	98.2	72.9-143		%REC	20	11/21/2005
Surr: Dibromofluoromethane	97.9	76.9-138		%REC	20	11/21/2005
Surr: Toluene-d8	83.8	70-126		%REC	20	11/21/2005

EPA METHOD 7471: MERCURY

Analyst: CMC

Mercury	1.9	0.66	mg/Kg	20	11/28/2005
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EPA METHOD 6010B: SOIL METALS

Analyst: NMO

Arsenic	12	2.5	mg/Kg	1	11/22/2005 10:53:04 AM
Barium	190	1.0	mg/Kg	10	11/22/2005 11:08:04 AM
Cadmium	0.48	0.10	mg/Kg	1	11/22/2005 10:53:04 AM
Chromium	16	0.30	mg/Kg	1	11/22/2005 10:53:04 AM
Lead	23	0.25	mg/Kg	1	11/22/2005 10:53:04 AM
Selenium	ND	2.5	mg/Kg	1	11/22/2005 10:53:04 AM
Silver	ND	0.25	mg/Kg	1	11/22/2005 10:53:04 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: 30-Nov-05

CLIENT: Giant Refining Co

Work Order: 0511189

Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT

Method Blank

Sample ID	mb-9226	Batch ID: 9226	Test Code: SW8260B	Units: mg/kg	Analysis Date 11/21/2005		Prep Date 11/20/2005				
Client ID:			Run ID: THOR_051118C		SeqNo: 424791						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.05									
Toluene	ND	0.05									
Ethylbenzene	ND	0.05									
Methyl tert-butyl ether (MTBE)	0.0465	0.05									
1,2,4-Trimethylbenzene	ND	0.05									
1,3,5-Trimethylbenzene	ND	0.05									
1,2-Dichloroethane (EDC)	ND	0.05									
1,2-Dibromoethane (EDB)	ND	0.05									
Naphthalene	ND	0.1									
1-Methylnaphthalene	ND	0.2									
2-Methylnaphthalene	ND	0.2									
Acetone	ND	0.75									
Bromobenzene	ND	0.05									
Bromochloromethane	ND	0.05									
Bromodichloromethane	ND	0.05									
Bromoform	ND	0.05									
Bromomethane	ND	0.1									
2-Butanone	ND	0.5									
Carbon disulfide	ND	0.5									
Carbon tetrachloride	ND	0.1									
Chlorobenzene	ND	0.05									
Chloroethane	ND	0.1									
Chloroform	ND	0.05									
Chloromethane	ND	0.05									
2-Chlorotoluene	ND	0.05									
4-Chlorotoluene	ND	0.05									
cis-1,2-DCE	ND	0.05									
											J

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: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
 Method Blank

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

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

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

B - Analyte detected in the associated Method Blank
 2

CLIENT: Giant Refining Co

Work Order: 0511189

Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Method Blank

[illegible]

Sample ID	MB-9270	Batch ID:	9270	Test Code:	SW7471	Units:	mg/Kg	Analysis Date	11/28/2005	Prep Date	11/28/2005
Client ID:		Run ID:			MI-LA254_051128A			SeqNo:	425769		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit
Mercury		ND	0.033								Qual

Sample ID	MB-9222	Batch ID:	9222	Test Code:	SW6010A	Units:	mg/Kg	Analysis Date	11/22/2005 10:18:50 A	Prep Date	11/18/2005
Client ID:		Run ID:		ICP_051122A				SeqNo:	424797		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit
Lead		ND	0.25								Qual

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 30-Nov-05

QC SUMMARY REPORT
Sample Duplicate

CLIENT: Giant Refining Co

Work Order: 0511189

Project: Aeration Lagoon Bank Material 11-16-05

Sample ID	0511189-01B DUP	Batch ID	9222	Test Code	SW6010A	Units	mg/Kg	Analysis Date	11/22/2005 10:55:37 A	Prep Date	11/18/2005
Client ID	AL Bank Material	Run ID	ICP_051122A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Limit	RPD Ref Val
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Limit	RPD Ref Val	%RPD	RPD Limit
Arsenic	12.02	2.5	0	0	0	0	0	0	11.93	0.730	30
Cadmium	0.6731	0.1	0	0	0	0	0	0	0.4753	34.4	30 R
Chromium	17.82	0.3	0	0	0	0	0	0	16.08	10.2	30
Lead	28.17	0.25	0	0	0	0	0	0	23.24	19.2	30
Selenium	ND	2.5	0	0	0	0	0	0	0	0	30
Silver	ND	0.25	0	0	0	0	0	0	0	0	30

Sample ID	0511189-01B DUP	Batch ID	9222	Test Code	SW6010A	Units	mg/Kg	Analysis Date	11/22/2005 11:10:57 A	Prep Date	11/18/2005
Client ID	AL Bank Material	Run ID	ICP_051122A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Limit	RPD Ref Val
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Limit	RPD Ref Val	%RPD	RPD Limit
Barium	108.3	1	0	0	0	0	0	0	187.7	53.6	30 R

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

Hall Environmental Analysis Laboratory

Date: 30-Nov-05

CLIENT: Giant Refining Co
 Work Order: 0511189
 Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0511189-01B MS	Batch ID: 9222	Test Code: SW6010A	Units: mg/Kg	Analysis Date	11/22/2005 10:59:54 A	Prep Date	11/18/2005			
Client ID:	AL Bank Material	Run ID:	ICP_051122A	SeqNo:	424909						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	35.82	2.5	24.42	11.93	97.8	75	125	0			
Cadmium	23.51	0.1	24.42	0.4753	94.3	75	125	0			
Chromium	38.25	0.3	24.42	16.08	90.8	75	125	0			
Selenium	21.42	2.5	24.42	0	87.7	75	125	0			
Silver	23.02	0.25	24.42	0	94.2	75	125	0			

Sample ID	0511189-01B MSD	Batch ID: 9222	Test Code: SW6010A	Units: mg/Kg	Analysis Date	11/22/2005 11:04:15 A	Prep Date	11/18/2005			
Client ID:	AL Bank Material	Run ID:	ICP_051122A	SeqNo:	424910						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	34	2.5	24.42	11.93	90.4	75	125	35.82	5.23	30	
Cadmium	23.26	0.1	24.42	0.4753	93.3	75	125	23.51	1.06	30	
Chromium	32.35	0.3	24.42	16.08	66.6	75	125	38.25	16.7	30	S
Lead	35.33	0.25	24.42	23.24	49.5	75	125	48.97	32.4	30	SR
Selenium	19.21	2.5	24.42	0	78.7	75	125	21.42	10.9	30	
Silver	23.2	0.25	24.42	0	95.0	75	125	23.02	0.769	30	

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

Hall Environmental Analysis Laboratory

Date: 30-Nov-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co

Work Order: 0511189

Project: Aeration Lagoon Bank Material 11-16-05

Sample ID	ICS-9226	Batch ID: 9226	Test Code: SW8260B	Units: mg/Kg	Analysis Date	11/21/2005	Prep Date	11/20/2005			
Client ID:		Run ID:	THOR_051118C		SeqNo:	424792					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.004	0.05	1	0	100	80.8	132	0			
Toluene	0.7508	0.05	1	0	75.1	72.1	126	0			
Chlorobenzene	1.098	0.05	1	0	110	83	124	0			
1,1-Dichloroethene	0.8875	0.05	1	0	88.8	59	147	0			
Trichloroethene (TCE)	0.9096	0.05	1	0	91.0	77.2	123	0			

Sample ID	LCS-9270	Batch ID: 9270	Test Code: SW7471	Units: mg/Kg	Analysis Date	11/28/2005	Prep Date	11/28/2005			
Client ID:		Run ID:	MI-LA254_051128A		SeqNo:	425770					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1838	0.033	0.1667	0	110	80	120	0			

Sample ID	LCSD-9270	Batch ID: 9270	Test Code: SW7471	Units: mg/Kg	Analysis Date	11/28/2005	Prep Date	11/28/2005			
Client ID:		Run ID:	MI-LA254_051128A		SeqNo:	425777					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1816	0.033	0.1667	0	109	80	120	0.1838	1.21	20	

Sample ID	LCS-9222	Batch ID: 9222	Test Code: SW6010A	Units: mg/Kg	Analysis Date	11/22/2005 10:21:10 A	Prep Date	11/18/2005			
Client ID:		Run ID:	ICP_051122A		SeqNo:	424798					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	24.01	0.25	25	0	96.0	80	120	0			

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

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID	LCSD-9222	Batch ID: 9222	Test Code: SW6010A	Units: mg/Kg	Analysis Date	11/22/2005 10:23:45 A	Prep Date	11/18/2005				
Client ID:		Run ID:	ICP_051122A		SeqNo:	424799						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		24.17	0.25	25	0	96.7	80	120	24.01	0.670	20	

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

11/17/2005

Work Order Number 0511189

Received by AT

Checklist completed by

Signature

Date

11/17/05

Matrix

Carrier name Client drop-off

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.haffenviroental.com

CHAIN-OF-CUSTODY RECORD					QA/QC Package:		
					Std ☐ Level 4 ☐		Other: _____
Client: <u>Giant Refining Company - Ciniga</u> Address: <u>Route 3 Box 7</u> <u>Fallup, NM 87301</u>					Project Name: <u>Aeration Lagoons</u> <u>Bank Material 11-16-2005</u>		
Phone #: <u>505 722 3833</u> Fax #: <u>505 722 0210</u>					Project #: _____ Project Manager: <u>Steve Morris</u>		
Sampler: <u>Steve Morris</u> Sample Temperature: <u>6</u>					Number/Volume: _____ HEAL No. <u>051189-1</u>		
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		
					HgCl ₂	HNO ₃	
11-17-05	0845	Non Reagents	AL Bank Material	2 x 4 oz			
Date: <u>11-17-05</u> Time: <u>1430</u> Relinquished By: (Signature) <u>Steve Morris</u>					Received By: (Signature) <u>Steve Morris</u> 11/17/05		
Date: _____ Time: _____ Relinquished By: (Signature) _____					Received By: (Signature) _____		



OAP 11/18/05

COVER LETTER

December 06, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Stormwater Separator Water 11-16-2005

Order No.: 0511190

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/18/2005 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



NAPLES & OAPLS

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: Giant Refining Co
Lab Order: 0511190
Project: Stormwater Separator Water 11-16-2005
Lab ID: 0511190-01

Client Sample ID: SW Sep Water Out
Collection Date: 11/16/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	69	2.0		mg/L	20	11/18/2005
Chloride	370	1.0		mg/L	10	11/18/2005
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	11/18/2005
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	11/18/2005
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	11/18/2005
Sulfate	1100	10		mg/L	20	11/18/2005
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	280	10		µg/L	10	11/21/2005
Toluene	330	10		µg/L	10	11/21/2005
Ethylbenzene	36	10		µg/L	10	11/21/2005
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/21/2005
1,2,4-Trimethylbenzene	230	10		µg/L	10	11/21/2005
1,3,5-Trimethylbenzene	68	10		µg/L	10	11/21/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/21/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/21/2005
Naphthalene	150	20		µg/L	10	11/21/2005
1-Methylnaphthalene	120	40		µg/L	10	11/21/2005
2-Methylnaphthalene	140	40		µg/L	10	11/21/2005
Acetone	340	100		µg/L	10	11/21/2005
Bromobenzene	ND	10		µg/L	10	11/21/2005
Bromochloromethane	ND	10		µg/L	10	11/21/2005
Bromodichloromethane	ND	10		µg/L	10	11/21/2005
Bromoform	ND	10		µg/L	10	11/21/2005
Bromomethane	ND	20		µg/L	10	11/21/2005
2-Butanone	ND	100		µg/L	10	11/21/2005
Carbon disulfide	ND	100		µg/L	10	11/21/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/21/2005
Chlorobenzene	ND	10		µg/L	10	11/21/2005
Chloroethane	ND	20		µg/L	10	11/21/2005
Chloroform	ND	10		µg/L	10	11/21/2005
Chloromethane	ND	10		µg/L	10	11/21/2005
2-Chlorotoluene	ND	10		µg/L	10	11/21/2005
4-Chlorotoluene	ND	10		µg/L	10	11/21/2005
cis-1,2-DCE	ND	10		µg/L	10	11/21/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/21/2005
Dibromochloromethane	ND	10		µg/L	10	11/21/2005
Dibromomethane	ND	20		µg/L	10	11/21/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: Giant Refining Co

Client Sample ID: SW Sep Water Out

Lab Order: 0511190

Collection Date: 11/16/2005 10:30:00 AM

Project: Stormwater Separator Water 11-16-2005

Lab ID: 0511190-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/21/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/21/2005
1,3-Dichloropropane	ND	10		µg/L	10	11/21/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/21/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/21/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/21/2005
2-Hexanone	ND	100		µg/L	10	11/21/2005
Isopropylbenzene	ND	10		µg/L	10	11/21/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/21/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/21/2005
Methylene Chloride	ND	30		µg/L	10	11/21/2005
n-Butylbenzene	13	10		µg/L	10	11/21/2005
n-Propylbenzene	ND	10		µg/L	10	11/21/2005
sec-Butylbenzene	ND	10		µg/L	10	11/21/2005
Styrene	ND	10		µg/L	10	11/21/2005
tert-Butylbenzene	ND	10		µg/L	10	11/21/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/21/2005
trans-1,2-DCE	ND	10		µg/L	10	11/21/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/21/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/21/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/21/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/21/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/21/2005
Vinyl chloride	ND	10		µg/L	10	11/21/2005
Xylenes, Total	880	10		µg/L	10	11/21/2005
Surr: 1,2-Dichloroethane-d4	93.0	69.9-130		%REC	10	11/21/2005
Surr: 4-Bromofluorobenzene	111	71.2-123		%REC	10	11/21/2005
Surr: Dibromofluoromethane	94.0	73.9-134		%REC	10	11/21/2005
Surr: Toluene-d8	93.5	80-122		%REC	10	11/21/2005

EPA METHOD 8310: PAHS

Analyst: JMP

Naphthalene	230	13	µg/L	1	11/30/2005 4:13:34 AM
1-Methylnaphthalene	ND	13	µg/L	1	11/30/2005 4:13:34 AM
2-Methylnaphthalene	93	13	µg/L	1	11/30/2005 4:13:34 AM
Acenaphthylene	ND	13	µg/L	1	11/30/2005 4:13:34 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: 06-Dec-05

CLIENT: Giant Refining Co
Lab Order: 0511190
Project: Stormwater Separator Water 11-16-2005
Lab ID: 0511190-01

Client Sample ID: SW Sep Water Out
Collection Date: 11/16/2005 10:30:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Acenaphihene	ND	13		µg/L	1	11/30/2005 4:13:34 AM
Fluorene	22	4.0		µg/L	1	11/30/2005 4:13:34 AM
Phenanthrene	21	3.0		µg/L	1	11/30/2005 4:13:34 AM
Anthracene	ND	3.0		µg/L	1	11/30/2005 4:13:34 AM
Fluoranthene	ND	1.5		µg/L	1	11/30/2005 4:13:34 AM
Pyrene	2.7	1.5		µg/L	1	11/30/2005 4:13:34 AM
Benz(a)anthracene	ND	0.10		µg/L	1	11/30/2005 4:13:34 AM
Chrysene	ND	1.0		µg/L	1	11/30/2005 4:13:34 AM
Benzo(b)fluoranthene	ND	0.25		µg/L	1	11/30/2005 4:13:34 AM
Benzo(k)fluoranthene	ND	0.10		µg/L	1	11/30/2005 4:13:34 AM
Benzo(a)pyrene	0.10	0.10		µg/L	1	11/30/2005 4:13:34 AM
Dibenz(a,h)anthracene	ND	0.20		µg/L	1	11/30/2005 4:13:34 AM
Benzo(g,h,i)perylene	ND	0.15		µg/L	1	11/30/2005 4:13:34 AM
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	1	11/30/2005 4:13:34 AM
Surr: Benzo(e)pyrene	80.9	54-102		%REC	1	11/30/2005 4:13:34 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: TES
Specific Conductance	4500	0.010		µmhos/cm	1	11/30/2005
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	0.00021	0.00020		mg/L	1	11/22/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	12/1/2005 10:13:05 AM
Barium	0.30	0.020		mg/L	1	12/1/2005 10:13:05 AM
Cadmium	ND	0.0020		mg/L	1	12/1/2005 10:13:05 AM
Calcium	95	1.0		mg/L	1	12/1/2005 10:13:05 AM
Chromium	0.031	0.0060		mg/L	1	12/1/2005 10:13:05 AM
Lead	0.011	0.0050		mg/L	1	12/1/2005 10:13:05 AM
Magnesium	25	1.0		mg/L	1	12/1/2005 10:13:05 AM
Potassium	33	1.0		mg/L	1	12/1/2005 10:13:05 AM
Selenium	ND	0.050		mg/L	1	12/1/2005 10:13:05 AM
Silver	ND	0.0050		mg/L	1	12/1/2005 10:13:05 AM
Sodium	870	10		mg/L	10	12/1/2005 12:22:55 PM
EPA METHOD 150.1: PH						Analyst: TES
pH	7.29	0.010		pH units	1	12/2/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: Giant Refining Co
 Work Order: 0511190
 Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT

Method Blank

Sample ID: MBLK	Batch ID: R17358	Test Code: E300	Units: mg/L	Analysis Date: 11/18/2005	Prep Date:
Client ID:	Run ID: LC_051118A	SeqNo: 423979			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Fluoride	ND	0.1			
Chloride	ND	0.1			
Nitrogen, Nitrite (As N)	ND	0.1			
Nitrogen, Nitrate (As N)	ND	0.1			
Phosphorus, Orthophosphate (As P)	ND	0.5			
Sulfate	ND	0.5			

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: Giant Refining Co

Work Order: 0511190

Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT

Method Blank

Sample ID: 5mL rb	Batch ID: R17359	Test Code: SW8260B	Units: µg/L	Analysis Date: 11/18/2005	Prep Date:
Client ID:	Run ID:	NEPTUNE_051118A	SeqNo: 424054		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	1			
Toluene	ND	1			
Ethylbenzene	ND	1			
Methyl tert-butyl ether (MTBE)	ND	1			
1,2,4-Trimethylbenzene	ND	1			
1,3,5-Trimethylbenzene	ND	1			
1,2-Dichloroethane (EDC)	ND	1			
1,2-Dibromoethane (EDB)	ND	1			
Naphthalene	ND	2			
1-Methylnaphthalene	ND	4			
2-Methylnaphthalene	ND	4			
Acetone	ND	10			
Bromobenzene	ND	1			
Bromochloromethane	ND	1			
Bromodichloromethane	ND	1			
Bromoforn	ND	1			
Bromomethane	ND	2			
2-Butanone	ND	10			
Carbon disulfide	ND	10			
Carbon Tetrachloride	ND	2			
Chlorobenzene	ND	1			
Chloroethane	ND	2			
Chloroform	ND	1			
Chloromethane	ND	1			
2-Chlorotoluene	ND	1			
4-Chlorotoluene	ND	1			
cis-1,2-DCE	ND	1			
cis-1,3-Dichloropropene	ND	1			

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

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

B - Analyte detected in the associated Method Blank
2

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co

Work Order: 0511190

Project: Stormwater Separator Water 11-16-2005

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

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co

Work Order: 0511190

Project: Stormwater Separator Water 11-16-2005

Sample ID: b12	Batch ID: R17385	Test Code: SW8260B	Units: µg/L	Analysis Date: 11/22/2005	Prep Date:						
Client ID:	Run ID:	THOR_051118C		SeqNo: 424815							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
ds-1,2-DCE	ND	1									
ds-1,3-Dichloropropene	ND	1									

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0511190
 Project: Stormwater Separator Water 11-16-2005

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

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

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

B - Analyte detected in the associated Method Blank
 6

CLIENT:

Giant Refining Co

Work Order:

0511190

Project:

Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT

Method Blank

Sample ID: MB-9249	Batch ID: 9249	Test Code: SW7470	Units: mg/L	Analysis Date: 11/22/2005	Prep Date: 11/22/2005
Client ID:	Run ID: MI-LA254_051122A	SeqNo: 424992			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	ND	0.0002			
Sample ID: MB-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:45:18 AM	Prep Date: 11/28/2005
Client ID:	Run ID: ICP_051201B	SeqNo: 427777			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.02			
Barium	ND	0.02			
Cadmium	ND	0.002			
Calcium	ND	1			
Chromium	ND	0.006			
Lead	ND	0.005			
Magnesium	ND	1			
Potassium	0.1007	1			
Selenium	ND	0.05			
Silver	ND	0.005			
Sodium	ND	1			

J

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

8

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: Giant Refining Co
 Work Order: 0511190
 Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0511190-01C DUP	Batch ID: R17465	Test Code: E120.1	Units: µmhos/cm	Analysis Date: 11/30/2005	Prep Date:						
Client ID: SW Sep Water Ou		Run ID: WC_051130C		SeqNo: 427033							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	4490	0.01	0	0	0	0	0	4480	0.223	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: 06-Dec-05

CLIENT: Giant Refining Co

Work Order: 0511190

Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS	Batch ID: R17358	Test Code: E300	Units: mg/L	Analysis Date: 11/18/2005	Prep Date:
Client ID:	Run ID: LC_051118A	SeqNo: 423983			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Fluoride	0.5001	0.1	0.5	0	100 90 110 0
Chloride	4.925	0.1	5	0	98.5 90 110 0
Nitrogen, Nitrite (As N)	0.9703	0.1	1	0	97.0 90 110 0
Nitrogen, Nitrate (As N)	2.568	0.1	2.5	0	103 90 110 0
Phosphorus, Orthophosphate (As P)	5.178	0.5	5	0	104 90 110 0
Sulfate	10.29	0.5	10	0	103 90 110 0

Sample ID: 100ng Ics	Batch ID: R17359	Test Code: SW8260B	Units: µg/L	Analysis Date: 11/18/2005	Prep Date:
Client ID:	Run ID: NEPTUNE_051118A	SeqNo: 424055			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	21.45	1	20	0	107 79.3 136 0
Toluene	20.71	1	20	0	104 65.5 123 0
Chlorobenzene	20.78	1	20	0	104 85.6 126 0
1,1-Dichloroethene	23.46	1	20	0	117 72.7 135 0
Trichloroethene (TCE)	19.59	1	20	0	98.0 85.6 119 0

Sample ID: 227.27ng ccv-b m	Batch ID: R17385	Test Code: SW8260B	Units: µg/L	Analysis Date: 11/21/2005	Prep Date:
Client ID:	Run ID: THOR_051118C	SeqNo: 424816			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	44.7	1	45	0	99.3 79.3 136 0
Toluene	39.86	1	45	0	88.6 65.5 123 0
Chlorobenzene	48.93	1	45	0	109 85.6 126 0
1,1-Dichloroethene	42.28	1	45	0	94.0 72.7 135 0
Trichloroethene (TCE)	45.02	1	45	0	100 85.6 119 0

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

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

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co

Work Order: 0511190

Project: Stormwater Separator Water 11-16-2005

Sample ID: LCS-9252	Batch ID: 9252	Test Code: SW8310	Units: µg/L	Analysis Date: 11/29/2005 12:07:59 A	Prep Date: 11/22/2005						
Client ID:	Run ID:	HUGO_051128A	SeqNo:	426284							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	20.28	2.5	40	0	50.7	34.8	97.4	0			
1-Methylnaphthalene	20.65	2.5	40.1	0	51.5	34.7	100	0			
2-Methylnaphthalene	19.96	2.5	40	0	49.9	35	98.1	0			
Acenaphthylene	24.74	2.5	40.1	0	61.7	48.3	95.1	0			
Acenaphthene	24.12	2.5	40	0	60.3	45	95	0			
Fluorene	2.71	0.8	4.01	0	67.6	46.8	93.4	0			
Phenanthrene	1.53	0.6	2.01	0	76.1	48.7	104	0			
Anthracene	1.52	0.6	2.01	--0	75.6	47.5	102	0			
Fluoranthene	3.35	0.3	4.01	0	83.5	46.3	108	0			
Pyrene	3.23	0.3	4.01	0	80.5	43.8	109	0			
Benz(a)anthracene	0.32	0.02	0.401	0	79.8	40.3	115	0			
Chrysene	1.67	0.2	2.01	0	83.1	42.6	107	0			
Benz(b)fluoranthene	0.4	0.05	0.501	0	79.8	48.6	107	0			
Benz(k)fluoranthene	0.2	0.02	0.25	0	80.0	23.3	136	0			
Benzo(a)pyrene	0.22	0.02	0.251	0	87.6	33.4	117	0			
Dibenz(a,h)anthracene	0.45	0.04	0.501	0	89.8	27.3	139	0			
Benzo(g,h,i)perylene	0.47	0.03	0.5	0	94.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	1.052	0.08	1.002	0	105	39.9	125	0			

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

Sample ID: LCSD-9252	Batch ID: 9252	Test Code: SW6310	Units: µg/L	Analysis Date: 11/29/2005 12:55:59 A	Prep Date: 11/22/2005						
Client ID:	Run ID:	HUGO_051128A	SeqNo: 426285								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	22.64	2.5	40	0	56.6	34.8	97.4	20.28	11.0	32.1	
1-Methylnaphthalene	22.3	2.5	40.1	0	55.6	34.7	100	20.65	7.68	32.7	
2-Methylnaphthalene	22.18	2.5	40	0	55.5	35	98.1	19.96	10.5	34	
Acenaphthylene	25.48	2.5	40.1	0	63.5	48.3	95.1	24.74	2.97	38.8	
Acenaphthene	24.82	2.5	40	0	62.1	45	95	24.12	2.86	38.6	
Fluorene	2.72	0.8	4.01	0	67.8	46.8	93.4	2.71	0.368	39.3	
Phenanthrene	1.51	0.6	2.01	0	75.1	48.7	104	1.53	1.32	25	
Anthracene	1.52	0.6	2.01	0	75.6	47.5	102	1.52	0	23.9	
Fluoranthene	3.13	0.3	4.01	0	78.1	46.3	108	3.35	6.79	15.7	
Pyrene	3.06	0.3	4.01	0	76.3	43.8	109	3.23	5.41	15.3	
Benz(a)anthracene	0.3	0.02	0.401	0	74.8	40.3	115	0.32	6.45	119	
Chrysene	1.65	0.2	2.01	0	82.1	42.6	107	1.67	1.20	16.6	
Benzo(b)fluoranthene	0.4	0.05	0.501	0	79.8	48.6	107	0.4	0	21.7	
Benzo(k)fluoranthene	0.19	0.02	0.25	0	76.0	23.3	136	0.2	5.13	19.4	
Benzo(a)pyrene	0.2	0.02	0.251	0	79.7	33.4	117	0.22	9.52	16.7	
Dibenz(a,h)anthracene	0.42	0.04	0.501	0	83.8	27.3	139	0.45	6.90	17.3	
Benzo(g,h,i)perylene	0.43	0.03	0.5	0	86.0	38.2	117	0.47	8.89	118	
Indeno(1,2,3-cd)pyrene	0.822	0.08	1.002	0	82.0	39.9	125	1.052	24.5	17.7	R

Sample ID: LCS-9249	Batch ID: 9249	Test Code: SW7470	Units: mg/L	Analysis Date: 11/22/2005	Prep Date: 11/22/2005						
Client ID:	Run ID:	MI-LA254_051122A	SeqNo: 424993								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004685	0.0002	0.005	0	93.7	80	120	0			

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

CLIENT: Giant Refining Co

Work Order: 0511190

Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCSD-9249	Batch ID: 9249	Test Code: SW7470	Units: mg/L	Analysis Date: 11/22/2005	Prep Date: 11/22/2005
Client ID:	Run ID: MI-LA254_051122A	SeqNo: 425008			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Mercury	0.005046	0.0002	0.005	0	101
				RPD Ref Val	%RPD
				0.004685	7.41
				HighLimit	RPDLimit
				120	0

Sample ID: LCS-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:48:31 AM	Prep Date: 11/28/2005
Client ID:	Run ID: ICP_051201B	SeqNo: 427778			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	0.4912	0.02	0.5	0	98.2
Barium	0.4885	0.02	0.5	0	97.7
Cadmium	0.49	0.002	0.5	0	98.0
Calcium	49.2	1	50	0	98.4
Chromium	0.4941	0.006	0.5	0	98.8
Lead	0.4856	0.005	0.5	0	97.1
Magnesium	49.4	1	50	0	98.8
Potassium	51.72	1	50	0.1007	103
Selenium	0.4823	0.05	0.5	0	96.5
Silver	0.495	0.005	0.5	0	99.0
Sodium	52.1	1	50	0	104
				RPD Ref Val	%RPD
				0	
				HighLimit	RPDLimit
				120	

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

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

B - Analyte detected in the associated Method Blank
4

CLIENT:

Giant Refining Co

Work Order:

0511190

Project:

Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCSD-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:51:42 AM	Prep Date: 11/28/2005
Client ID:	Run ID: ICP_051201B	PQL	SPK value	SPK Ref Val	SeqNo: 427779
Analyte	Result	%REC	LowLimit	HighLimit	RPD Limit
Arsenic	0.509	102	80	120	20
Barium	0.4971	99.4	80	120	20
Cadmium	0.5009	100	80	120	20
Calcium	49.43	98.9	80	120	20
Chromium	0.5053	101	80	120	20
Lead	0.4931	98.6	80	120	20
Magnesium	49.54	99.1	80	120	20
Potassium	52.15	104	80	120	20
Selenium	0.4853	97.1	80	120	20
Silver	0.5036	101	80	120	20
Sodium	52.25	104	80	120	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

5

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

11/18/2005

Work Order Number 0511190

Received by AT

Checklist completed by

Signature

Date

11/18/05

Matrix

Carrier name Client drop-off

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 505.345.4
www.hallenvironmental.com

CHAIN-OF-CUSTODY RECORD					QA / QC Package:		
					Std	Level 4	
Client: <u>Giant Refining Company -</u>					Other: _____		
<u>Caniza</u>					Project Name: <u>Stormwater separate</u>		
Address: <u>Route 3, Box 7</u>					Project #: _____		
<u>Gallup, NM 87301</u>					Project Manager: _____		
Phone #: <u>505-722-3833</u>					Sampler: <u>Steve Morris</u>		
Fax #: <u>505-722-0210</u>					Sample Temperature: <u>6°</u>		
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HNO ₃	
<u>11-16-05</u>	<u>10:30A</u>	<u>H₂O</u>	<u>5W_{sp} Water Out</u>				<u>0511190-1</u>
Date: <u>11-17-05</u>	Time: <u>1435</u>	Relinquished By: (Signature) <u>Steve Morris</u>		Relinquished By: (Signature)	Received By: (Signature) <u>Steve Morris</u>		
Date: _____	Time: _____	Relinquished By: (Signature) _____		Relinquished By: (Signature)	Received By: (Signature) _____		



COVER LETTER

December 06, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 11/14/2005

Order No.: 0511191

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/17/2005 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,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0511191

Collection Date: 11/16/2005 10:50:00 AM

Project: AL-2 to EP-1 Week of 11/14/2005

Lab ID: 0511191-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	0.0013	0.00020		mg/L	1	11/22/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Antimony	ND	0.010		mg/L	1	12/1/2005 2:48:32 PM
Arsenic	ND	0.020		mg/L	1	12/1/2005 10:00:47 AM
Beryllium	ND	0.0030		mg/L	1	12/1/2005 10:00:47 AM
Cadmium	ND	0.0020		mg/L	1	12/1/2005 10:00:47 AM
Chromium	ND	0.0060		mg/L	1	12/1/2005 10:00:47 AM
Copper	0.0061	0.0060		mg/L	1	12/1/2005 10:00:47 AM
Lead	ND	0.0050		mg/L	1	12/1/2005 10:00:47 AM
Nickel	ND	0.010		mg/L	1	12/1/2005 10:00:47 AM
Selenium	ND	0.050		mg/L	1	12/1/2005 10:00:47 AM
Silver	ND	0.0050		mg/L	1	12/1/2005 10:00:47 AM
Thallium	ND	0.050		mg/L	1	12/1/2005 10:00:47 AM
Zinc	1.1	0.50		mg/L	10	12/1/2005 12:16:53 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: 06-Dec-05

CLIENT: Giant Refining Co
 Work Order: 0511191
 Project: AL-2 to EP-1 Week of 11/14/2005

QC SUMMARY REPORT
 Method Blank

Sample ID: MB-9249	Batch ID: 9249	Test Code: SW7470	Units: mg/L	Analysis Date: 11/22/2005	Prep Date: 11/22/2005
Client ID:		Run ID: MI-LA254_051122A		SeqNo: 424992	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val
Mercury	ND	0.0002			%RPD RPDLimit Qual
Sample ID: MB-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:45:18 AM	Prep Date: 11/28/2005
Client ID:		Run ID: ICP_051201B		SeqNo: 427777	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val
Antimony	ND	0.01			%RPD RPDLimit Qual
Arsenic	ND	0.02			
Beryllium	ND	0.003			
Cadmium	ND	0.002			
Chromium	ND	0.006			
Copper	ND	0.006			
Lead	ND	0.005			
Nickel	ND	0.01			
Selenium	ND	0.05			
Silver	ND	0.005			
Thallium	ND	0.05			
Zinc	ND	0.05			

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: Giant Refining Co
 Work Order: 0511191
 Project: AL-2 to EP-1 Week of 11/14/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9249	Batch ID: 9249	Test Code: SW7470	Units: mg/L	Analysis Date: 11/22/2005	Prep Date: 11/22/2005
Client ID:		Run ID: MI-LA254_051122A		SeqNo: 424993	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Mercury	0.004685	0.0002	0.005	0	93.7
				LowLimit	HighLimit
				80	120
				%RPD	RPDLimit
				0	0
				Qual	
Sample ID: LCSD-9249	Batch ID: 9249	Test Code: SW7470	Units: mg/L	Analysis Date: 11/22/2005	Prep Date: 11/22/2005
Client ID:		Run ID: MI-LA254_051122A		SeqNo: 425008	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Mercury	0.005046	0.0002	0.005	0	101
				LowLimit	HighLimit
				80	120
				%RPD	RPDLimit
				7.41	0
				Qual	
Sample ID: LCS-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:48:31 AM	Prep Date: 11/28/2005
Client ID:		Run ID: ICP_051201B		SeqNo: 427778	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Antimony	0.5127	0.01	0.5	0	103
Arsenic	0.4912	0.02	0.5	0	98.2
Beryllium	0.5113	0.003	0.5	0	102
Cadmium	0.49	0.002	0.5	0	98.0
Chromium	0.4941	0.006	0.5	0	98.8
Copper	0.5065	0.006	0.5	0	101
Lead	0.4856	0.005	0.5	0	97.1
Nickel	0.4692	0.01	0.5	0	93.8
Selenium	0.4823	0.05	0.5	0	96.5
Silver	0.495	0.005	0.5	0	99.0
Thallium	0.5157	0.05	0.5	0	103
Zinc	0.4727	0.05	0.5	0	94.5
				LowLimit	HighLimit
				80	120
				%RPD	RPDLimit
				0	0
				Qual	

3 / 5

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

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: Giant Refining Co
 Work Order: 0511191
 Project: AL-2 to EP-1 Week of 11/14/2005

Sample ID: LCSD-9267		Batch ID: 9267		Test Code: SW6010A		Units: mg/L		Analysis Date: 12/1/2005 9:51:42 AM		Prep Date: 11/28/2005	
Client ID:		Run ID: ICP_051201B		SeqNo: 427779							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.526	0.01	0.5	0	105	80	120	0.5127	2.55	20	
Arsenic	0.509	0.02	0.5	0	102	80	120	0.4912	3.56	20	
Beryllium	0.5196	0.003	0.5	0	104	80	120	0.5113	1.59	20	
Cadmium	0.5009	0.002	0.5	0	100	80	120	0.49	2.21	20	
Chromium	0.5053	0.006	0.5	0	101	80	120	0.4941	2.24	20	
Copper	0.5159	0.006	0.5	0	103	80	120	0.5065	1.84	20	
Lead	0.4931	0.005	0.5	0	98.6	80	120	0.4856	1.52	20	
Nickel	0.4769	0.01	0.5	0	95.4	80	120	0.4692	1.64	20	
Selenium	0.4853	0.05	0.5	0	97.1	80	120	0.4823	0.614	20	
Silver	0.5036	0.005	0.5	0	101	80	120	0.495	1.72	20	
Thallium	0.5221	0.05	0.5	0	104	80	120	0.5157	1.23	20	
Zinc	0.483	0.05	0.5	0	96.6	80	120	0.4727	2.16	20	

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

11/17/2005

Work Order Number 0511191

Received by AT

Checklist completed by

Signature

Date

11/17/05

Matrix

Carrier name Client drop-off

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

Client: Giant Refining Company
Clara

Address: Route 3, Box 7
Gallup, NM 87301

Phone #: 505-722-3833
Fax #: 505-722-0210

Date	Time	Matrix	Sample I.D. No.
1-05	10:50A	Ag	AL-22-EP-1

Date:	7-2-05	Time:	1440	Relinquished By: (Signature)	<i>Steve Morris</i>
Date:		Time:		Relinquished By: (Signature)	

Date:	Time:	Relinquished By: (Signature)
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QA/QC Package: _____
Std ☐ Level 4 ☐
Other: _____

Project Name: AL-2 to EP-1
Week of 11-14-2005
Project #:

Project #:

Project Manager:

Steve Morris

Sampler: Steve Morris

Sample Temperature: 10

Number/Volume	HEAL No.
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Preservative

HgCl ₂	HNO ₃
-------------------	------------------

FEAL No.

1-191150

Received By: [Signature] 11/17/05

Received By: (Signature) 1940

1440

ANALYSIS REQUEST

[illegible]

Remarks: *RUSH*

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, December 09, 2005 8:03 AM
To: 'Ed Riege'; 'Ed Rios'
Cc: Price, Wayne, EMNRD; Foust, Denny, EMNRD
Subject: Follow-up to Yesterday's 12/9/05 Old API Separator Phone Call

Ed and Ed:

We are waiting to see the analytical data results from Giant's sampling of the transportation facility influent into the Ciniza Refinery before following up on your call concerning sampling and meeting regulatory limits yesterday. We appreciate the dialogue and communication as Giant and OCD work to resolve issues at Giant's Ciniza Refinery. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/>
(Pollution Prevention Guidance is under "Publications")

12/9/2005

Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Wednesday, December 07, 2005 11:43 AM
To: Price, Wayne, EMNRD; Chavez, Carl J, EMNRD
Cc: Cobrain, Dave, NMENV
Subject: Ciniza sampling specific to the API Spill

Wayne and Carl

I have attached a table that summarizes sampling requirements that are underway specific to the API Spill. I have modified some of these and this is what NMED would like sampled. I figured a table would put everyone on the same page and can easily be revised instead of sifting through emails. Let me know if you are in agreement with the sampling requirements established in the table and if you would like me to add anything.

Thanks
Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 428-2545
Fax: (505)-428-2567
hope.monzeglio@state.nm.us

12/8/2005

Giant Ciniza Refinery Sampling Schedule Post New API Separator Spill

Sampling Location	Sampling Frequency	Analytical Suite	Comments and Additional Parameters
Effluent from AL-2 to EP-1	Weekly	EPA Method 8021B + MTBE; RCRA 8 Metals (totals); EPA Method 8015B must include C ₆ –C ₁₀ and C ₁₀ –C ₃₆ carbon ranges. *monthly - EPA Method 8260, EPA Method 8015B must include C ₆ –C ₁₀ and C ₁₀ –C ₃₆ carbon ranges, RCRA 8 Metals (totals)	GRCC must sample effluent discharged from AL2 to EP-1 on a weekly basis until four weeks after the API Separator repair and monthly thereafter. Sampling frequency will be modified as needed. *
Effluent from Old API separator (storm water Separator Effluent)	Monthly	EPA Method 8260, EPA Method 8310, RCRA 8 Metals (totals); EPA Method 8015B must include C ₆ –C ₁₀ and C ₁₀ –C ₃₆ carbon ranges	Measure product thickness on surface water on a weekly basis and after every rain event. * Sampling frequency will be evaluated after three months
Effluent from Pilot Gas Station to the Aeration Lagoon	Monthly	EPA method 8260, RCRA 8 Metals (totals); EPA Method 8015B must include C ₆ –C ₁₀ and C ₁₀ –C ₃₆ carbon ranges	Sampling frequency will be evaluated after three months. *
Effluent from New API separator	Monthly	EPA method 8260, EPA Method 8015B must include C ₆ –C ₁₀ and C ₁₀ –C ₃₆ carbon ranges	Sampling frequency will be evaluated after three months. *

***Note:** On a monthly basis effluent samples from AL-2 to EP-1, the New API separator, the Old API separator, and the Pilot Station must be sampled on the same day and analyzed for EPA method 8260 and EPA Method 8015B to include C₆–C₁₀ and C₁₀–C₃₆ carbon ranges. Effluent samples from AL2-EP-1, Old API separator, and the Pilot Station must also analyze for RCRA 8 Metals (totals).

Table date: December 16, 2005

The sampling is initiated from the August 2005 spill from the breakdown of the new API separator spill.



COVER LETTER

December 06, 2005

Carl Chavez
NM Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
TEL: (505) 476-3488
FAX (505) 476-3462

RE: Ciniza Refinery Gallup NM

Order No.: 0511114

Dear Carl Chavez:

Hall Environmental Analysis Laboratory received 4 samples on 11/11/2005 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,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

JAN 11 2006

RECEIVED



Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Project: Ciniza Refinery Gallup NM
Lab Order: 0511114

CASE NARRATIVE

EPA Method 8270 samples analyzed at a dilution due to:

1. Emulsion formed during extraction.
2. High amounts of petroleum in the sample.

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-01

Client Sample ID: OLD API
Collection Date: 11/10/2005 5:15:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						Analyst: JAT
Petroleum Hydrocarbons, TR	380	40		mg/L	20	11/16/2005
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	120	10		µg/L	10	11/21/2005
Toluene	96	10		µg/L	10	11/21/2005
Ethylbenzene	ND	10		µg/L	10	11/21/2005
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/21/2005
1,2,4-Trimethylbenzene	140	10		µg/L	10	11/21/2005
1,3,5-Trimethylbenzene	67	10		µg/L	10	11/21/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/21/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/21/2005
Naphthalene	110	20		µg/L	10	11/21/2005
1-Methylnaphthalene	500	40		µg/L	10	11/21/2005
2-Methylnaphthalene	640	40		µg/L	10	11/21/2005
Acetone	ND	100		µg/L	10	11/21/2005
Bromobenzene	ND	10		µg/L	10	11/21/2005
Bromochloromethane	ND	10		µg/L	10	11/21/2005
Bromodichloromethane	ND	10		µg/L	10	11/21/2005
Bromoform	ND	10		µg/L	10	11/21/2005
Bromomethane	ND	20		µg/L	10	11/21/2005
2-Butanone	ND	100		µg/L	10	11/21/2005
Carbon disulfide	ND	100		µg/L	10	11/21/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/21/2005
Chlorobenzene	ND	10		µg/L	10	11/21/2005
Chloroethane	ND	20		µg/L	10	11/21/2005
Chloroform	ND	10		µg/L	10	11/21/2005
Chloromethane	ND	10		µg/L	10	11/21/2005
2-Chlorotoluene	ND	10		µg/L	10	11/21/2005
4-Chlorotoluene	ND	10		µg/L	10	11/21/2005
cis-1,2-DCE	ND	10		µg/L	10	11/21/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/21/2005
Dibromochloromethane	ND	10		µg/L	10	11/21/2005
Dibromomethane	ND	20		µg/L	10	11/21/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/21/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-01

Client Sample ID: OLD API
Collection Date: 11/10/2005 5:15:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/21/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/21/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/21/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/21/2005
2-Hexanone	ND	100		µg/L	10	11/21/2005
Isopropylbenzene	ND	10		µg/L	10	11/21/2005
4-Isopropyltoluene	26	10		µg/L	10	11/21/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/21/2005
Methylene Chloride	ND	30		µg/L	10	11/21/2005
n-Butylbenzene	ND	10		µg/L	10	11/21/2005
n-Propylbenzene	ND	10		µg/L	10	11/21/2005
sec-Butylbenzene	ND	10		µg/L	10	11/21/2005
Styrene	ND	10		µg/L	10	11/21/2005
tert-Butylbenzene	ND	10		µg/L	10	11/21/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/21/2005
trans-1,2-DCE	ND	10		µg/L	10	11/21/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/21/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/21/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/21/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/21/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/21/2005
Vinyl chloride	ND	10		µg/L	10	11/21/2005
Xylenes, Total	220	10		µg/L	10	11/21/2005
Surr: 1,2-Dichloroethane-d4	95.6	69.9-130		%REC	10	11/21/2005
Surr: 4-Bromofluorobenzene	103	71.2-123		%REC	10	11/21/2005
Surr: Dibromofluoromethane	93.8	73.9-134		%REC	10	11/21/2005
Surr: Toluene-d8	73.0	81.9-122	S	%REC	10	11/21/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	2500	µg/L	10	11/18/2005
Acenaphthylene	ND	2500	µg/L	10	11/18/2005
Aniline	ND	5000	µg/L	10	11/18/2005
Anthracene	ND	2500	µg/L	10	11/18/2005
Azobenzene	ND	2500	µg/L	10	11/18/2005
Benz(a)anthracene	ND	3800	µg/L	10	11/18/2005
Benzo(a)pyrene	ND	3800	µg/L	10	11/18/2005
Benzo(b)fluoranthene	ND	3800	µg/L	10	11/18/2005
Benzo(g,h,i)perylene	ND	2500	µg/L	10	11/18/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: OLD API

Lab Order: 0511114

Collection Date: 11/10/2005 5:15:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	2500		µg/L	10	11/18/2005
Benzoic acid	ND	13000		µg/L	10	11/18/2005
Benzyl alcohol	ND	5000		µg/L	10	11/18/2005
Bis(2-chloroethoxy)methane	ND	2500		µg/L	10	11/18/2005
Bis(2-chloroethyl)ether	ND	3800		µg/L	10	11/18/2005
Bis(2-chloroisopropyl)ether	ND	3800		µg/L	10	11/18/2005
Bis(2-ethylhexyl)phthalate	ND	3800		µg/L	10	11/18/2005
4-Bromophenyl phenyl ether	ND	2500		µg/L	10	11/18/2005
Butyl benzyl phthalate	ND	3800		µg/L	10	11/18/2005
Carbazole	ND	2500		µg/L	10	11/18/2005
4-Chloro-3-methylphenol	ND	5000		µg/L	10	11/18/2005
4-Chloroaniline	ND	5000		µg/L	10	11/18/2005
2-Chloronaphthalene	ND	2500		µg/L	10	11/18/2005
2-Chlorophenol	ND	2500		µg/L	10	11/18/2005
4-Chlorophenyl phenyl ether	ND	3800		µg/L	10	11/18/2005
Chrysene	ND	3800		µg/L	10	11/18/2005
Di-n-butyl phthalate	ND	2500		µg/L	10	11/18/2005
Di-n-octyl phthalate	ND	3800		µg/L	10	11/18/2005
Dibenz(a,h)anthracene	ND	2500		µg/L	10	11/18/2005
Dibenzofuran	ND	2500		µg/L	10	11/18/2005
1,2-Dichlorobenzene	ND	2500		µg/L	10	11/18/2005
1,3-Dichlorobenzene	ND	2500		µg/L	10	11/18/2005
1,4-Dichlorobenzene	ND	2500		µg/L	10	11/18/2005
3,3'-Dichlorobenzidine	ND	3800		µg/L	10	11/18/2005
Diethyl phthalate	ND	2500		µg/L	10	11/18/2005
Dimethyl phthalate	ND	2500		µg/L	10	11/18/2005
2,4-Dichlorophenol	ND	2500		µg/L	10	11/18/2005
2,4-Dimethylphenol	ND	2500		µg/L	10	11/18/2005
4,6-Dinitro-2-methylphenol	ND	13000		µg/L	10	11/18/2005
2,4-Dinitrophenol	ND	13000		µg/L	10	11/18/2005
2,4-Dinitrotoluene	ND	2500		µg/L	10	11/18/2005
2,6-Dinitrotoluene	ND	2500		µg/L	10	11/18/2005
Fluoranthene	ND	2500		µg/L	10	11/18/2005
Fluorene	ND	2500		µg/L	10	11/18/2005
Hexachlorobenzene	ND	2500		µg/L	10	11/18/2005
Hexachlorobutadiene	ND	2500		µg/L	10	11/18/2005
Hexachlorocyclopentadiene	ND	2500		µg/L	10	11/18/2005
Hexachloroethane	ND	2500		µg/L	10	11/18/2005
Indeno(1,2,3-cd)pyrene	ND	2500		µg/L	10	11/18/2005
Isophorone	ND	2500		µg/L	10	11/18/2005
2-Methylnaphthalene	ND	2500		µg/L	10	11/18/2005
2-Methylphenol	ND	3800		µg/L	10	11/18/2005

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-01

Client Sample ID: OLD API
Collection Date: 11/10/2005 5:15:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	5000		µg/L	10	11/18/2005
N-Nitrosodi-n-propylamine	ND	2500		µg/L	10	11/18/2005
N-Nitrosodimethylamine	ND	2500		µg/L	10	11/18/2005
N-Nitrosodiphenylamine	ND	2500		µg/L	10	11/18/2005
Naphthalene	ND	2500		µg/L	10	11/18/2005
2-Nitroaniline	ND	13000		µg/L	10	11/18/2005
3-Nitroaniline	ND	13000		µg/L	10	11/18/2005
4-Nitroaniline	ND	5000		µg/L	10	11/18/2005
Nitrobenzene	ND	2500		µg/L	10	11/18/2005
2-Nitrophenol	ND	3800		µg/L	10	11/18/2005
4-Nitrophenol	ND	13000		µg/L	10	11/18/2005
Pentachlorophenol	ND	13000		µg/L	10	11/18/2005
Phenanthrene	ND	2500		µg/L	10	11/18/2005
Phenol	ND	2500		µg/L	10	11/18/2005
Pyrene	ND	3800		µg/L	10	11/18/2005
Pyridine	ND	7500		µg/L	10	11/18/2005
1,2,4-Trichlorobenzene	ND	2500		µg/L	10	11/18/2005
2,4,5-Trichlorophenol	ND	2500		µg/L	10	11/18/2005
2,4,6-Trichlorophenol	ND	3800		µg/L	10	11/18/2005
Surr: 2,4,6-Tribromophenol	104	16.6-150		%REC	10	11/18/2005
Surr: 2-Fluorobiphenyl	83.0	19.6-134		%REC	10	11/18/2005
Surr: 2-Fluorophenol	51.3	9.54-113		%REC	10	11/18/2005
Surr: 4-Terphenyl-d14	89.0	22.7-145		%REC	10	11/18/2005
Surr: Nitrobenzene-d5	132	14.6-134		%REC	10	11/18/2005
Surr: Phenol-d5	59.0	10.7-80.3		%REC	10	11/18/2005

EPA METHOD 7470: MERCURY

Analyst: CMC

Mercury	0.0019	0.00020	mg/L	1	11/18/2005
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EPA 6010: TOTAL RECOVERABLE METALS

Analyst: NMO

Aluminum	1.6	0.40	mg/L	20	12/1/2005 12:20:01 PM
Antimony	ND	0.010	mg/L	1	12/1/2005 2:52:09 PM
Arsenic	ND	0.020	mg/L	1	12/1/2005 10:04:45 AM
Barium	0.22	0.020	mg/L	1	12/1/2005 10:04:45 AM
Beryllium	ND	0.0030	mg/L	1	12/1/2005 10:04:45 AM
Boron	0.36	0.040	mg/L	1	12/1/2005 2:52:09 PM
Cadmium	0.0023	0.0020	mg/L	1	12/1/2005 10:04:45 AM
Calcium	110	20	mg/L	20	12/1/2005 12:20:01 PM
Chromium	0.023	0.0060	mg/L	1	12/1/2005 10:04:45 AM
Cobalt	0.0064	0.0060	mg/L	1	12/1/2005 10:04:45 AM
Copper	0.059	0.0060	mg/L	1	12/1/2005 10:04:45 AM
Iron	46	1.0	mg/L	20	12/1/2005 12:20:01 PM
Lead	0.015	0.0050	mg/L	1	12/1/2005 10:04:45 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: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-01

Client Sample ID: OLD API
Collection Date: 11/10/2005 5:15:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	27	1.0		mg/L	1	12/1/2005 10:04:45 AM
Manganese	0.72	0.0020		mg/L	1	12/1/2005 10:04:45 AM
Molybdenum	0.063	0.0080		mg/L	1	12/1/2005 10:04:45 AM
Nickel	0.055	0.010		mg/L	1	12/1/2005 10:04:45 AM
Potassium	32	1.0		mg/L	1	12/1/2005 10:04:45 AM
Selenium	ND	0.050		mg/L	1	12/1/2005 10:04:45 AM
Silver	ND	0.0050		mg/L	1	12/1/2005 10:04:45 AM
Sodium	510	20		mg/L	20	12/1/2005 12:20:01 PM
Thallium	ND	0.050		mg/L	1	12/1/2005 10:04:45 AM
Vanadium	ND	0.050		mg/L	1	12/1/2005 10:04:45 AM
Zinc	3.5	1.0		mg/L	20	12/1/2005 12:20:01 PM
Silica	31	22		mg/L	20	12/2/2005 9:01:45 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: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-02

Client Sample ID: AL2-EP1
Collection Date: 11/10/2005 5:30:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						
Petroleum Hydrocarbons, TR	61	2.0		mg/L	1	11/16/2005
EPA METHOD 8260B: VOLATILES						
Benzene	35	10		µg/L	10	11/21/2005
Toluene	32	10		µg/L	10	11/21/2005
Ethylbenzene	ND	10		µg/L	10	11/21/2005
Methyl tert-butyl ether (MTBE)	30	10		µg/L	10	11/21/2005
1,2,4-Trimethylbenzene	24	10		µg/L	10	11/21/2005
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/21/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/21/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/21/2005
Naphthalene	43	20		µg/L	10	11/21/2005
1-Methylnaphthalene	220	40		µg/L	10	11/21/2005
2-Methylnaphthalene	320	40		µg/L	10	11/21/2005
Acetone	3900	1000		µg/L	100	11/23/2005
Bromobenzene	ND	10		µg/L	10	11/21/2005
Bromochloromethane	ND	10		µg/L	10	11/21/2005
Bromodichloromethane	ND	10		µg/L	10	11/21/2005
Bromoform	ND	10		µg/L	10	11/21/2005
Bromomethane	ND	20		µg/L	10	11/21/2005
2-Butanone	440	100		µg/L	10	11/21/2005
Carbon disulfide	ND	100		µg/L	10	11/21/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/21/2005
Chlorobenzene	ND	10		µg/L	10	11/21/2005
Chloroethane	ND	20		µg/L	10	11/21/2005
Chloroform	ND	10		µg/L	10	11/21/2005
Chloromethane	ND	10		µg/L	10	11/21/2005
2-Chlorotoluene	ND	10		µg/L	10	11/21/2005
4-Chlorotoluene	ND	10		µg/L	10	11/21/2005
cis-1,2-DCE	ND	10		µg/L	10	11/21/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/21/2005
Dibromochloromethane	ND	10		µg/L	10	11/21/2005
Dibromomethane	ND	20		µg/L	10	11/21/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/21/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/21/2005

Analyst: JAT

Analyst: KTM

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: 06-Dec-05

CLIENT: NM Oil Conservation Division
 Lab Order: 0511114
 Project: Ciniza Refinery Gallup NM
 Lab ID: 0511114-02

Client Sample ID: AL2-EP1
 Collection Date: 11/10/2005 5:30:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/21/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/21/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/21/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/21/2005
2-Hexanone	ND	100		µg/L	10	11/21/2005
Isopropylbenzene	ND	10		µg/L	10	11/21/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/21/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/21/2005
Methylene Chloride	ND	30		µg/L	10	11/21/2005
n-Butylbenzene	ND	10		µg/L	10	11/21/2005
n-Propylbenzene	ND	10		µg/L	10	11/21/2005
sec-Butylbenzene	ND	10		µg/L	10	11/21/2005
Styrene	ND	10		µg/L	10	11/21/2005
tert-Butylbenzene	ND	10		µg/L	10	11/21/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/21/2005
trans-1,2-DCE	ND	10		µg/L	10	11/21/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/21/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/21/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/21/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/21/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/21/2005
Vinyl chloride	ND	10		µg/L	10	11/21/2005
Xylenes, Total	19	10		µg/L	10	11/21/2005
Surr: 1,2-Dichloroethane-d4	95.5	69.9-130		%REC	10	11/21/2005
Surr: 4-Bromofluorobenzene	86.8	71.2-123		%REC	10	11/21/2005
Surr: Dibromofluoromethane	97.8	73.9-134		%REC	10	11/21/2005
Surr: Toluene-d8	97.7	81.9-122		%REC	10	11/21/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	20	µg/L	1	11/18/2005
Acenaphthylene	ND	20	µg/L	1	11/18/2005
Aniline	68	40	µg/L	1	11/18/2005
Anthracene	ND	20	µg/L	1	11/18/2005
Azobenzene	ND	20	µg/L	1	11/18/2005
Benz(a)anthracene	ND	30	µg/L	1	11/18/2005
Benzo(a)pyrene	ND	30	µg/L	1	11/18/2005
Benzo(b)fluoranthene	ND	30	µg/L	1	11/18/2005
Benzo(g,h,i)perylene	ND	20	µg/L	1	11/18/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
 Lab Order: 0511114
 Project: Ciniza Refinery Gallup NM
 Lab ID: 0511114-02

Client Sample ID: AL2-EP1
 Collection Date: 11/10/2005 5:30:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	20		µg/L	1	11/18/2005
Benzoic acid	510	100		µg/L	1	11/21/2005
Benzyl alcohol	ND	40		µg/L	1	11/18/2005
Bis(2-chloroethoxy)methane	ND	20		µg/L	1	11/18/2005
Bis(2-chloroethyl)ether	ND	30		µg/L	1	11/18/2005
Bis(2-chloroisopropyl)ether	ND	30		µg/L	1	11/18/2005
Bis(2-ethylhexyl)phthalate	ND	30		µg/L	1	11/18/2005
4-Bromophenyl phenyl ether	ND	20		µg/L	1	11/18/2005
Butyl benzyl phthalate	ND	30		µg/L	1	11/18/2005
Carbazole	ND	20		µg/L	1	11/18/2005
4-Chloro-3-methylphenol	ND	40		µg/L	1	11/18/2005
4-Chloroaniline	ND	40		µg/L	1	11/18/2005
2-Chloronaphthalene	ND	20		µg/L	1	11/18/2005
2-Chlorophenol	ND	20		µg/L	1	11/18/2005
4-Chlorophenyl phenyl ether	ND	30		µg/L	1	11/18/2005
Chrysene	46	30		µg/L	1	11/18/2005
Di-n-butyl phthalate	ND	20		µg/L	1	11/18/2005
Di-n-octyl phthalate	ND	30		µg/L	1	11/18/2005
Dibenz(a,h)anthracene	ND	20		µg/L	1	11/18/2005
Dibenzofuran	ND	20		µg/L	1	11/18/2005
1,2-Dichlorobenzene	ND	20		µg/L	1	11/18/2005
1,3-Dichlorobenzene	ND	20		µg/L	1	11/18/2005
1,4-Dichlorobenzene	ND	20		µg/L	1	11/18/2005
3,3'-Dichlorobenzidine	ND	30		µg/L	1	11/18/2005
Diethyl phthalate	ND	20		µg/L	1	11/18/2005
Dimethyl phthalate	ND	20		µg/L	1	11/18/2005
2,4-Dichlorophenol	ND	20		µg/L	1	11/18/2005
2,4-Dimethylphenol	140	20		µg/L	1	11/18/2005
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/18/2005
2,4-Dinitrophenol	ND	100		µg/L	1	11/18/2005
2,4-Dinitrotoluene	ND	20		µg/L	1	11/18/2005
2,6-Dinitrotoluene	ND	20		µg/L	1	11/18/2005
Fluoranthene	ND	20		µg/L	1	11/18/2005
Fluorene	53	20		µg/L	1	11/18/2005
Hexachlorobenzene	ND	20		µg/L	1	11/18/2005
Hexachlorobutadiene	ND	20		µg/L	1	11/18/2005
Hexachlorocyclopentadiene	ND	20		µg/L	1	11/18/2005
Hexachloroethane	ND	20		µg/L	1	11/18/2005
Indeno(1,2,3-cd)pyrene	ND	20		µg/L	1	11/18/2005
Isophorone	ND	20		µg/L	1	11/18/2005
2-Methylnaphthalene	89	20		µg/L	1	11/18/2005
2-Methylphenol	ND	30		µg/L	1	11/18/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-02

Client Sample ID: AL2-EP1
Collection Date: 11/10/2005 5:30:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	40		µg/L	1	11/18/2005
N-Nitrosodi-n-propylamine	ND	20		µg/L	1	11/18/2005
N-Nitrosodimethylamine	ND	20		µg/L	1	11/18/2005
N-Nitrosodiphenylamine	ND	20		µg/L	1	11/18/2005
Naphthalene	ND	20		µg/L	1	11/18/2005
2-Nitroaniline	ND	100		µg/L	1	11/18/2005
3-Nitroaniline	ND	100		µg/L	1	11/18/2005
4-Nitroaniline	ND	40		µg/L	1	11/18/2005
Nitrobenzene	ND	20		µg/L	1	11/18/2005
2-Nitrophenol	ND	30		µg/L	1	11/18/2005
4-Nitrophenol	ND	100		µg/L	1	11/18/2005
Pentachlorophenol	ND	100		µg/L	1	11/18/2005
Phenanthrene	130	20		µg/L	1	11/18/2005
Phenol	ND	20		µg/L	1	11/18/2005
Pyrene	32	30		µg/L	1	11/18/2005
Pyridine	ND	60		µg/L	1	11/18/2005
1,2,4-Trichlorobenzene	ND	20		µg/L	1	11/18/2005
2,4,5-Trichlorophenol	ND	20		µg/L	1	11/18/2005
2,4,6-Trichlorophenol	ND	30		µg/L	1	11/18/2005
Surr: 2,4,6-Tribromophenol	84.1	16.6-150		%REC	1	11/18/2005
Surr: 2-Fluorobiphenyl	77.1	19.6-134		%REC	1	11/18/2005
Surr: 2-Fluorophenol	51.9	9.54-113		%REC	1	11/18/2005
Surr: 4-Terphenyl-d14	77.9	22.7-145		%REC	1	11/18/2005
Surr: Nitrobenzene-d5	71.5	14.6-134		%REC	1	11/18/2005
Surr: Phenol-d5	40.7	10.7-80.3		%REC	1	11/18/2005

EPA METHOD 7470: MERCURY

Analyst: CMC

Mercury	0.0021	0.00020	mg/L	1	11/18/2005
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EPA 6010: TOTAL RECOVERABLE METALS

Analyst: NMO

Aluminum	0.86	0.020	mg/L	1	11/21/2005 10:24:41 AM
Antimony	ND	0.010	mg/L	1	11/21/2005 10:24:41 AM
Arsenic	ND	0.020	mg/L	1	11/21/2005 10:24:41 AM
Barium	0.13	0.020	mg/L	1	11/21/2005 10:24:41 AM
Beryllium	ND	0.0030	mg/L	1	11/21/2005 10:24:41 AM
Boron	0.22	0.040	mg/L	1	11/21/2005 10:24:41 AM
Cadmium	ND	0.0020	mg/L	1	11/21/2005 10:24:41 AM
Calcium	72	1.0	mg/L	1	11/21/2005 10:24:41 AM
Chromium	0.0086	0.0060	mg/L	1	11/21/2005 10:24:41 AM
Cobalt	0.0087	0.0060	mg/L	1	11/21/2005 10:24:41 AM
Copper	0.012	0.0060	mg/L	1	11/21/2005 10:24:41 AM
Iron	8.1	0.25	mg/L	5	11/21/2005 11:02:04 AM
Lead	ND	0.0050	mg/L	1	11/21/2005 10:24:41 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: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: AL2-EP1

Lab Order: 0511114

Collection Date: 11/10/2005 5:30:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	17	1.0		mg/L	1	11/21/2005 10:24:41 AM
Manganese	0.29	0.0020		mg/L	1	11/21/2005 10:24:41 AM
Molybdenum	0.014	0.0080		mg/L	1	11/21/2005 10:24:41 AM
Nickel	0.023	0.010		mg/L	1	11/21/2005 10:24:41 AM
Potassium	43	1.0		mg/L	1	11/21/2005 10:24:41 AM
Selenium	ND	0.050		mg/L	1	11/21/2005 10:24:41 AM
Silver	ND	0.0050		mg/L	1	11/21/2005 10:24:41 AM
Sodium	640	10		mg/L	10	11/21/2005 12:19:57 PM
Thallium	ND	0.050		mg/L	1	11/21/2005 10:24:41 AM
Vanadium	ND	0.050		mg/L	1	11/21/2005 10:24:41 AM
Zinc	1.4	0.50		mg/L	10	11/21/2005 12:19:57 PM
Silica	22	5.4		mg/L	5	11/21/2005 11:02:04 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: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-03

Client Sample ID: EP1-EP2
Collection Date: 11/10/2005 5:52:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						
Petroleum Hydrocarbons, TR	84	2.0		mg/L	1	11/16/2005
EPA METHOD 8260B: VOLATILES						
Benzene	16	10		µg/L	10	11/21/2005
Toluene	19	10		µg/L	10	11/21/2005
Ethylbenzene	ND	10		µg/L	10	11/21/2005
Methyl tert-butyl ether (MTBE)	17	10		µg/L	10	11/21/2005
1,2,4-Trimethylbenzene	40	10		µg/L	10	11/21/2005
1,3,5-Trimethylbenzene	14	10		µg/L	10	11/21/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/21/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/21/2005
Naphthalene	59	20		µg/L	10	11/21/2005
1-Methylnaphthalene	390	40		µg/L	10	11/21/2005
2-Methylnaphthalene	530	40		µg/L	10	11/21/2005
Acetone	ND	100		µg/L	10	11/21/2005
Bromobenzene	ND	10		µg/L	10	11/21/2005
Bromochloromethane	ND	10		µg/L	10	11/21/2005
Bromodichloromethane	ND	10		µg/L	10	11/21/2005
Bromoform	ND	10		µg/L	10	11/21/2005
Bromomethane	ND	20		µg/L	10	11/21/2005
2-Butanone	240	100		µg/L	10	11/21/2005
Carbon disulfide	ND	100		µg/L	10	11/21/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/21/2005
Chlorobenzene	ND	10		µg/L	10	11/21/2005
Chloroethane	ND	20		µg/L	10	11/21/2005
Chloroform	ND	10		µg/L	10	11/21/2005
Chloromethane	ND	10		µg/L	10	11/21/2005
2-Chlorotoluene	ND	10		µg/L	10	11/21/2005
4-Chlorotoluene	ND	10		µg/L	10	11/21/2005
cis-1,2-DCE	ND	10		µg/L	10	11/21/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/21/2005
Dibromochloromethane	ND	10		µg/L	10	11/21/2005
Dibromomethane	ND	20		µg/L	10	11/21/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/21/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-03

Client Sample ID: EP1-EP2
Collection Date: 11/10/2005 5:52:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/21/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/21/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/21/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/21/2005
2-Hexanone	ND	100		µg/L	10	11/21/2005
Isopropylbenzene	ND	10		µg/L	10	11/21/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/21/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/21/2005
Methylene Chloride	ND	30		µg/L	10	11/21/2005
n-Butylbenzene	ND	10		µg/L	10	11/21/2005
n-Propylbenzene	ND	10		µg/L	10	11/21/2005
sec-Butylbenzene	ND	10		µg/L	10	11/21/2005
Styrene	ND	10		µg/L	10	11/21/2005
tert-Butylbenzene	ND	10		µg/L	10	11/21/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/21/2005
trans-1,2-DCE	ND	10		µg/L	10	11/21/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/21/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/21/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/21/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/21/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/21/2005
Vinyl chloride	ND	10		µg/L	10	11/21/2005
Xylenes, Total	23	10		µg/L	10	11/21/2005
Surr: 1,2-Dichloroethane-d4	96.0	69.9-130		%REC	10	11/21/2005
Surr: 4-Bromofluorobenzene	84.3	71.2-123		%REC	10	11/21/2005
Surr: Dibromofluoromethane	89.5	73.9-134		%REC	10	11/21/2005
Surr: Toluene-d8	93.4	81.9-122		%REC	10	11/21/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	50		µg/L	1	11/18/2005
Acenaphthylene	ND	50		µg/L	1	11/18/2005
Aniline	ND	100		µg/L	1	11/18/2005
Anthracene	ND	50		µg/L	1	11/18/2005
Azobenzene	ND	50		µg/L	1	11/18/2005
Benz(a)anthracene	ND	75		µg/L	1	11/18/2005
Benzo(a)pyrene	ND	75		µg/L	1	11/18/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	11/18/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/18/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: EP1-EP2

Lab Order: 0511114

Collection Date: 11/10/2005 5:52:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	50		µg/L	1	11/18/2005
Benzoic acid	ND	250		µg/L	1	11/18/2005
Benzyl alcohol	ND	100		µg/L	1	11/18/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/18/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	11/18/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	11/18/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	11/18/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/18/2005
Butyl benzyl phthalate	ND	75		µg/L	1	11/18/2005
Carbazole	ND	50		µg/L	1	11/18/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	11/18/2005
4-Chloroaniline	ND	100		µg/L	1	11/18/2005
2-Chloronaphthalene	ND	50		µg/L	1	11/18/2005
2-Chlorophenol	ND	50		µg/L	1	11/18/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	11/18/2005
Chrysene	ND	75		µg/L	1	11/18/2005
Di-n-butyl phthalate	ND	50		µg/L	1	11/18/2005
Di-n-octyl phthalate	ND	75		µg/L	1	11/18/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/18/2005
Dibenzofuran	ND	50		µg/L	1	11/18/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	11/18/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	11/18/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	11/18/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	11/18/2005
Diethyl phthalate	ND	50		µg/L	1	11/18/2005
Dimethyl phthalate	ND	50		µg/L	1	11/18/2005
2,4-Dichlorophenol	ND	50		µg/L	1	11/18/2005
2,4-Dimethylphenol	88	50		µg/L	1	11/18/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	11/18/2005
2,4-Dinitrophenol	ND	250		µg/L	1	11/18/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	11/18/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	11/18/2005
Fluoranthene	ND	50		µg/L	1	11/18/2005
Fluorene	66	50		µg/L	1	11/18/2005
Hexachlorobenzene	ND	50		µg/L	1	11/18/2005
Hexachlorobutadiene	ND	50		µg/L	1	11/18/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/18/2005
Hexachloroethane	ND	50		µg/L	1	11/18/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/18/2005
Isophorone	ND	50		µg/L	1	11/18/2005
2-Methylnaphthalene	120	50		µg/L	1	11/18/2005
2-Methylphenol	ND	75		µg/L	1	11/18/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Client Sample ID: EPI-EP2

Lab Order: 0511114

Collection Date: 11/10/2005 5:52:00 PM

Project: Ciniza Refinery Gallup NM

Lab ID: 0511114-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	100		µg/L	1	11/18/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/18/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	11/18/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/18/2005
Naphthalene	ND	50		µg/L	1	11/18/2005
2-Nitroaniline	ND	250		µg/L	1	11/18/2005
3-Nitroaniline	ND	250		µg/L	1	11/18/2005
4-Nitroaniline	ND	100		µg/L	1	11/18/2005
Nitrobenzene	ND	50		µg/L	1	11/18/2005
2-Nitrophenol	ND	75		µg/L	1	11/18/2005
4-Nitrophenol	ND	250		µg/L	1	11/18/2005
Pentachlorophenol	ND	250		µg/L	1	11/18/2005
Phenanthrene	130	50		µg/L	1	11/18/2005
Phenol	100	50		µg/L	1	11/18/2005
Pyrene	ND	75		µg/L	1	11/18/2005
Pyridine	ND	150		µg/L	1	11/18/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/18/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/18/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	11/18/2005
Surr: 2,4,6-Tribromophenol	90.4	16.6-150		%REC	1	11/18/2005
Surr: 2-Fluorobiphenyl	73.6	19.6-134		%REC	1	11/18/2005
Surr: 2-Fluorophenol	48.4	9.54-113		%REC	1	11/18/2005
Surr: 4-Terphenyl-d14	79.0	22.7-145		%REC	1	11/18/2005
Surr: Nitrobenzene-d5	69.2	14.6-134		%REC	1	11/18/2005
Surr: Phenol-d5	39.7	10.7-80.3		%REC	1	11/18/2005

EPA METHOD 7470: MERCURY

Analyst: CMC

Mercury	0.0012	0.00020	mg/L	1	11/18/2005
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EPA 6010: TOTAL RECOVERABLE METALS

Analyst: NMO

Aluminum	0.63	0.020	mg/L	1	11/21/2005 10:27:03 AM
Antimony	ND	0.010	mg/L	1	11/21/2005 10:27:03 AM
Arsenic	ND	0.020	mg/L	1	11/21/2005 10:27:03 AM
Barium	0.10	0.020	mg/L	1	11/21/2005 10:27:03 AM
Beryllium	ND	0.0030	mg/L	1	11/21/2005 10:27:03 AM
Boron	0.23	0.040	mg/L	1	11/21/2005 10:27:03 AM
Cadmium	ND	0.0020	mg/L	1	11/21/2005 10:27:03 AM
Calcium	60	1.0	mg/L	1	11/21/2005 10:27:03 AM
Chromium	0.0083	0.0060	mg/L	1	11/21/2005 10:27:03 AM
Cobalt	0.0072	0.0060	mg/L	1	11/21/2005 10:27:03 AM
Copper	0.012	0.0060	mg/L	1	11/21/2005 10:27:03 AM
Iron	7.9	0.25	mg/L	5	11/21/2005 11:05:01 AM
Lead	ND	0.0050	mg/L	1	11/21/2005 10:27:03 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: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-03

Client Sample ID: EP1-EP2
Collection Date: 11/10/2005 5:52:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	16	1.0		mg/L	1	11/21/2005 10:27:03 AM
Manganese	0.33	0.0020		mg/L	1	11/21/2005 10:27:03 AM
Molybdenum	0.014	0.0080		mg/L	1	11/21/2005 10:27:03 AM
Nickel	0.018	0.010		mg/L	1	11/21/2005 10:27:03 AM
Potassium	43	1.0		mg/L	1	11/21/2005 10:27:03 AM
Selenium	ND	0.050		mg/L	1	11/21/2005 10:27:03 AM
Silver	ND	0.0050		mg/L	1	11/21/2005 10:27:03 AM
Sodium	800	10		mg/L	10	11/21/2005 12:22:39 PM
Thallium	ND	0.050		mg/L	1	11/21/2005 10:27:03 AM
Vanadium	ND	0.050		mg/L	1	11/21/2005 10:27:03 AM
Zinc	1.2	0.50		mg/L	10	11/21/2005 12:22:39 PM
Silica	22	5.4		mg/L	5	11/21/2005 11:05:01 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: 06-Dec-05

CLIENT: NM Oil Conservation Division
Lab Order: 0511114
Project: Ciniza Refinery Gallup NM
Lab ID: 0511114-04

Client Sample ID: Trip Blank

Collection Date:

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	ND	1.0		µg/L	1	11/21/2005
Toluene	ND	1.0		µg/L	1	11/21/2005
Ethylbenzene	ND	1.0		µg/L	1	11/21/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2005
Naphthalene	ND	2.0		µg/L	1	11/21/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2005
Acetone	ND	10		µg/L	1	11/21/2005
Bromobenzene	ND	1.0		µg/L	1	11/21/2005
Bromochloromethane	ND	1.0		µg/L	1	11/21/2005
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2005
Bromoform	ND	1.0		µg/L	1	11/21/2005
Bromomethane	ND	2.0		µg/L	1	11/21/2005
2-Butanone	ND	10		µg/L	1	11/21/2005
Carbon disulfide	ND	10		µg/L	1	11/21/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	11/21/2005
Chlorobenzene	ND	1.0		µg/L	1	11/21/2005
Chloroethane	ND	2.0		µg/L	1	11/21/2005
Chloroform	ND	1.0		µg/L	1	11/21/2005
Chloromethane	ND	1.0		µg/L	1	11/21/2005
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2005
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2005
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2005
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2005
Dibromomethane	ND	2.0		µg/L	1	11/21/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2005

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division
 Lab Order: 0511114
 Project: Ciniza Refinery Gallup NM
 Lab ID: 0511114-04

Client Sample ID: Trip Blank
 Collection Date:

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2005
2-Hexanone	ND	10		µg/L	1	11/21/2005
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2005
Methylene Chloride	ND	3.0		µg/L	1	11/21/2005
n-Butylbenzene	ND	1.0		µg/L	1	11/21/2005
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2005
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2005
Styrene	ND	1.0		µg/L	1	11/21/2005
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2005
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2005
Vinyl chloride	ND	1.0		µg/L	1	11/21/2005
Xylenes, Total	ND	1.0		µg/L	1	11/21/2005
Surr: 1,2-Dichloroethane-d4	94.8	69.9-130		%REC	1	11/21/2005
Surr: 4-Bromofluorobenzene	92.3	71.2-123		%REC	1	11/21/2005
Surr: Dibromofluoromethane	83.6	73.9-134		%REC	1	11/21/2005
Surr: Toluene-d8	98.5	81.9-122		%REC	1	11/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Work Order: 0511114

Project: Ciniza Refinery Gallup NM

QC SUMMARY REPORT

Method Blank

Sample ID: MB-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date: 11/17/2005	Prep Date: 11/14/2005
Client ID:	Run ID: ELMO_051117A	PQL	SPK value	SPK Ref Val	SeqNo: 424365
Analyte	Result	%REC	LowLimit	HighLimit	RPD Ref Val
Acenaphthene	ND				%RPD RPDLimit Qual
Acenaphthylene	ND				
Aniline	ND				
Anthracene	ND				
Azobenzene	ND				
Benz(a)anthracene	ND				
Benzo(a)pyrene	ND				
Benzo(b)fluoranthene	ND				
Benzo(g,h,i)perylene	ND				
Benzo(k)fluoranthene	ND				
Benzoic acid	ND				
Benzyl alcohol	ND				
Bis(2-chloroethoxy)methane	ND				
Bis(2-chloroethyl)ether	ND				
Bis(2-chloroisopropyl)ether	ND				
Bis(2-ethylhexyl)phthalate	ND				
4-Bromophenyl phenyl ether	ND				
Butyl benzyl phthalate	ND				
Carbazole	ND				
4-Chloro-3-methylphenol	ND				
4-Chloroaniline	ND				
2-Chloronaphthalene	ND				
2-Chlorophenol	ND				
4-Chlorophenyl phenyl ether	ND				
Chrysene	ND				
Di-n-butyl phthalate	ND				
Di-n-octyl phthalate	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
/

QC SUMMARY REPORT

Method Blank

CLIENT: NM Oil Conservation Division

Work Order: 0511114

Project: Ciniza Refinery Gallup NM

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

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

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

B - Analyte detected in the associated Method Blank

Method Blank

Project: Ciniza Refinery Gallup NM

Sample ID: MB-9223	Batch ID: 9223	Test Code: SW7470	Units: mg/L	Analysis Date: 11/18/2005	Prep Date: 11/18/2005
Client ID:		Run ID: MI-LA254_051118B		SeqNo: 423799	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Mercury	ND		0.0002		
				LowLimit	HighLimit
				RPDLimit	RPD Ref Val
				%RPD	Qual

B - Analyte detected in the associated Method Blank

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Cimiza Refinery Gallup NM

QC SUMMARY REPORT

Method Blank

Sample ID: MB-9176	Batch ID: 9176	Test Code: SW6010A	Units: mg/L	Analysis Date: 11/22/2005 12:14:23 P	Prep Date: 11/11/2005						
Client ID:	Run ID:	ICP_051121A		SeqNo: 424886							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.02									
Antimony	ND	0.01									
Arsenic	ND	0.02									
Barium	0.0006184	0.02									
Beryllium	ND	0.003									
Boron	ND	0.04									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Cobalt	ND	0.006									
Copper	0.0005311	0.006									J
Iron	ND	0.05									
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	0.0002601	0.002									J
Molybdenum	ND	0.008									
Nickel	ND	0.01									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									
Thallium	ND	0.05									
Vanadium	ND	0.05									
Zinc	0.004426	0.05									J
Silica	ND	1.1									

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: NM Oil Conservation Division
 Work Order: 0511114
 Project: Cimiza Refinery Gallup NM

Sample ID: MB-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:45:18 AM	Prep Date: 11/28/2005						
Client ID:		Run ID: ICP_051201B		SeqNo: 427777							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.02									
Antimony	ND	0.01									
Arsenic	ND	0.02									
Barium	ND	0.02									
Beryllium	ND	0.003									
Boron	ND	0.04									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Cobalt	ND	0.006									
Copper	ND	0.006									
Iron	0.004867	0.05									J
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	ND	0.002									
Molybdenum	ND	0.008									
Nickel	ND	0.01									
Potassium	0.1007	1									J
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									
Thallium	ND	0.05									
Vanadium	ND	0.05									
Zinc	ND	0.05									
Silica	ND	1.1									

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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

QC SUMMARY REPORT

Method Blank

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Ciniza Refinery Gallup NM

Sample ID: 5mL rb-b	Batch ID: R17378	Test Code: SW8260B	Units: µg/L	Analysis Date: 11/21/2005				Prep Date:			
Client ID:	Run ID:	NEPTUNE_051121A		SeqNo: 424656							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers: ND - Not Detected at the Reporting Limit

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: NM Oil Conservation Division

Work Order: 0511114

Project: Ciniza Refinery Gallup NM

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

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Method Blank

Project: Ciniza Refinery Gallup NM

[illegible]

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

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: NM Oil Conservation Division

Work Order: 0511114

Project: Cimiza Refinery Gallup NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: 100ng Ics	Batch ID: R17378	Test Code: SW8260B	Units: µg/L	Analysis Date: 11/21/2005	Prep Date:						
Client ID:	Run ID:	NEPTUNE_051121A	SeqNo: 424657								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.67	1	20	0	108	79.3	136	0			
Toluene	20.46	1	20	0	102	65.5	123	0			
Chlorobenzene	20.15	1	20	0	101	85.6	126	0			
1,1-Dichloroethene	23.18	1	20	0	116	72.7	135	0			
Trichloroethene (TCE)	19.38	1	20	0	96.9	85.6	119	0			

Sample ID: 100ng Ics	Batch ID: R17403	Test Code: SW8260B	Units: µg/L	Analysis Date: 11/23/2005	Prep Date:						
Client ID:	Run ID: NEPTUNE_051123A	SeqNo: 425281									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.22	1	20	0	111	79.3	136	0			
Toluene	20.48	1	20	0	102	65.5	123	0			
Chlorobenzene	20.27	1	20	0	101	85.6	126	0			
1,1-Dichloroethene	24.5	1	20	0	123	72.7	135	0			
Trichloroethene (TCE)	19.94	1	20	0	99.7	85.6	119	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Cimiza Refinery Gallup NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date: 11/17/2005		Prep Date: 11/14/2005					
Client ID:		Run ID:	ELMO_051117A	SeqNo:	424366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.72	10	100	0	75.7	11	123	0			
4-Chloro-3-methylphenol	140.7	20	200	0	70.4	15.4	119	0			
2-Chlorophenol	141	10	200	0	70.5	12.2	122	0			
1,4-Dichlorobenzene	68.12	10	100	0	68.1	16.9	100	0			
2,4-Dinitrotoluene	71.96	10	100	0	72.0	13	138	0			
N-Nitrosodi-n-propylamine	68.28	10	100	0	68.3	9.93	122	0			
4-Nitrophenol	87.36	50	200	0	43.7	-20.5	87.4	0			
Pentachlorophenol	129.2	50	200	0	64.6	-0.355	114	0			
Phenol	76.18	10	200	0	38.1	7.53	73.1	0			
Pyrene	80.9	15	100	0	80.9	12.6	140	0			
1,2,4-Trichlorobenzene	66.78	10	100	0	66.8	17.4	98.7	0			

Sample ID: LCSD-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date: 11/17/2005				Prep Date: 11/14/2005			
Client ID:		Run ID:	ELMO_051117A	SeqNo: 424368							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.94	10	100	0	75.9	11	123	75.72	0.290	30.5	
4-Chloro-3-methylphenol	145.9	20	200	0	72.9	15.4	119	140.7	3.60	28.6	
2-Chlorophenol	128.1	10	200	0	64.0	12.2	122	141	9.59	107	
1,4-Dichlorobenzene	59.16	10	100	0	59.2	16.9	100	68.12	14.1	62.1	
2,4-Dinitrotoluene	71.68	10	100	0	71.7	13	138	71.96	0.390	14.7	
N-Nitrosodi-n-propylamine	66.94	10	100	0	66.9	9.93	122	68.28	1.98	30.3	
4-Nitrophenol	56.1	50	200	0	28.1	12.5	87.4	87.36	43.6	36.3	R
Pentachlorophenol	74.34	50	200	0	37.2	3.55	114	129.2	53.9	49	
Phenol	75.02	10	200	0	37.5	7.53	73.1	76.18	1.53	52.4	R
Pyrene	82.6	15	100	0	82.6	12.6	140	80.9	2.08	16.3	
1,2,4-Trichlorobenzene	62.1	10	100	0	62.1	17.4	98.7	66.78	7.26	36.4	

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

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

B - Analyte detected in the associated Method Blank
 2

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Cimiza Refinery Gallup NM

Sample ID: LCS-9223	Batch ID: 9223	Test Code: SW7470	Units: mg/L	Analysis Date: 11/18/2005	Prep Date: 11/18/2005					
Client ID:		Run ID: MI-LA254_051118B		SeqNo: 423800						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004886	0.0002	0.005	0	97.7	80	120	0		

Sample ID: LCSD-9223	Batch ID: 9223	Test Code: SW7470	Units: mg/L	Analysis Date: 11/18/2005	Prep Date: 11/18/2005						
Client ID:		Run ID: MI-LA254_051118B		SeqNo: 423806							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004877	0.0002	0.005	0	97.5	80	120	0.004886	0.181	0	

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

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

B - Analyte detected in the associated Method Blank
 3

CLIENT: NM Oil Conservation Division
Work Order: 0511114
Project: Ciniza Refinery Gallup NM

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID: LCS-9176	Batch ID: 9176	Test Code: SW6010A	Units: mg/L	Analysis Date: 11/21/2005 10:03:44 A				Prep Date: 11/11/2005	
Client ID:	Run ID:	ICP_051121A		SeqNo:	424426				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	Qual
Aluminum	0.5574	0.02	0.5	0	111	80	120	0	
Antimony	0.5415	0.01	0.5	0	108	80	120	0	
Arsenic	0.5357	0.02	0.5	0	107	80	120	0	
Barium	0.5119	0.02	0.5	0.0006184	102	80	120	0	
Beryllium	0.5461	0.003	0.5	0	109	80	120	0	
Boron	0.5305	0.04	0.5	0	106	80	120	0	
Cadmium	0.519	0.002	0.5	0	104	80	120	0	
Calcium	52.35	1	50	0	105	80	120	0	
Chromium	0.5269	0.006	0.5	0	105	80	120	0	
Cobalt	0.5276	0.006	0.5	0	106	80	120	0	
Copper	0.5351	0.006	0.5	0.0005311	107	80	120	0	
Iron	0.5209	0.05	0.5	0	104	80	120	0	
Lead	0.5096	0.005	0.5	0	102	80	120	0	
Magnesium	52.58	1	50	0	105	80	120	0	
Manganese	0.521	0.002	0.5	0.0002601	104	80	120	0	
Molybdenum	0.5406	0.008	0.5	0	108	80	120	0	
Nickel	0.4969	0.01	0.5	0	99.4	80	120	0	
Potassium	55.65	1	50	0	111	80	120	0	
Selenium	0.5221	0.05	0.5	0	104	80	120	0	
Silver	0.529	0.005	0.5	0	106	80	120	0	
Sodium	56.07	1	50	0	112	80	120	0	
Thallium	0.5173	0.05	0.5	0	103	80	120	0	
Vanadium	0.5359	0.05	0.5	0	107	80	120	0	
Zinc	0.5091	0.05	0.5	0.004426	101	80	120	0	
Silica	5.457	1.1	5.35	0	102	80	120	0	

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

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Ciniza Refinery Gallup NM

Sample ID: LCSD-9176	Batch ID: 9176	Test Code: SW6010A	Units: mg/L	Analysis Date: 11/21/2005 10:06:19 A	Prep Date: 11/11/2005
Client ID:	Run ID: ICP_051121A	PQL	SPK value	SeqNo: 424427	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Aluminum	0.5555	0.02	0.5	0	111
Antimony	0.5428	0.01	0.5	0	109
Arsenic	0.5374	0.02	0.5	0	107
Barium	0.5104	0.02	0.5	0.0006184	102
Beryllium	0.547	0.003	0.5	0	109
Boron	0.5294	0.04	0.5	0	106
Cadmium	0.5195	0.002	0.5	0	104
Calcium	53.82	1	50	0	108
Chromium	0.5258	0.006	0.5	0	105
Cobalt	0.5305	0.006	0.5	0	106
Copper	0.5318	0.006	0.5	0.0005311	106
Iron	0.5127	0.05	0.5	0	103
Lead	0.5125	0.005	0.5	0	103
Magnesium	53.96	1	50	0	108
Manganese	0.5191	0.002	0.5	0.0002601	104
Molybdenum	0.5423	0.008	0.5	0	108
Nickel	0.4961	0.01	0.5	0	99.2
Potassium	57.18	1	50	0	114
Selenium	0.523	0.05	0.5	0	105
Silver	0.527	0.005	0.5	0	105
Sodium	57.6	1	50	0	115
Thallium	0.5272	0.05	0.5	0	105
Vanadium	0.5357	0.05	0.5	0	107
Zinc	0.5082	0.05	0.5	0.004426	101
Silica	5.537	1.1	5.35	0	104
				LowLimit	HighLimit
				RPD Ref Val	%RPD
				RPDLimit	Qual
				80	120
				0.5574	0.354
				0.5415	0.247
				0.5357	0.322
				0.5119	0.298
				0.5461	0.158
				0.5305	0.202
				0.519	0.0933
				52.35	2.78
				0.5269	0.224
				0.5276	0.552
				0.5351	0.610
				0.5209	1.58
				0.5096	0.576
				52.58	2.59
				0.521	0.376
				0.5406	0.303
				0.4969	0.171
				55.65	2.72
				0.5221	0.170
				0.529	0.388
				56.07	2.68
				0.5173	1.90
				0.5359	0.0319
				0.5091	0.187
				5.457	1.47

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
 5

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Cimiza Refinery Gallup NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:48:31 AM	Prep Date: 11/28/2005						
Client ID:	Run ID:	ICP_051201B		SeqNo: 427778							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.5081	0.02	0.5	0	102	80	120	0			
Antimony	0.5127	0.01	0.5	0	103	80	120	0			
Arsenic	0.4912	0.02	0.5	0	98.2	80	120	0			
Barium	0.4885	0.02	0.5	0	97.7	80	120	0			
Beryllium	0.5113	0.003	0.5	0	102	80	120	0			
Boron	0.4961	0.04	0.5	0	99.2	80	120	0			
Cadmium	0.49	0.002	0.5	0	98.0	80	120	0			
Calcium	49.2	1	50	0	98.4	80	120	0			
Chromium	0.4941	0.006	0.5	0	98.8	80	120	0			
Cobalt	0.498	0.006	0.5	0	99.6	80	120	0			
Copper	0.5065	0.006	0.5	0	101	80	120	0			
Iron	0.4738	0.05	0.5	0.004867	93.8	80	120	0			
Lead	0.4856	0.005	0.5	0	97.1	80	120	0			
Magnesium	49.4	1	50	0	98.8	80	120	0			
Manganese	0.4561	0.002	0.5	0	91.2	80	120	0			
Molybdenum	0.508	0.008	0.5	0	102	80	120	0			
Nickel	0.4692	0.01	0.5	0	93.8	80	120	0			
Potassium	51.72	1	50	0.1007	103	80	120	0			
Selenium	0.4823	0.05	0.5	0	96.5	80	120	0			
Silver	0.495	0.005	0.5	0	99.0	80	120	0			
Sodium	52.1	1	50	0	104	80	120	0			
Thallium	0.5157	0.05	0.5	0	103	80	120	0			
Vanadium	0.5001	0.05	0.5	0	100	80	120	0			
Zinc	0.4727	0.05	0.5	0	94.5	80	120	0			
Silica	4.945	1.1	5.35	0	92.4	80	120	0			

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

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

B - Analyte detected in the associated Method Blank
 6

CLIENT: NM Oil Conservation Division
 Work Order: 0511114
 Project: Ciniza Refinery Gallup NM

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCSD-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:51:42 AM	Prep Date: 11/28/2005						
Client ID:	Run ID:	ICP_051201B		SeqNo: 427779							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.5116	0.02	0.5	0	102	80	120	0.5081	0.684	20	
Antimony	0.526	0.01	0.5	0	105	80	120	0.5127	2.55	20	
Arsenic	0.509	0.02	0.5	0	102	80	120	0.4912	3.56	20	
Barium	0.4971	0.02	0.5	0	99.4	80	120	0.4885	1.74	20	
Beryllium	0.5196	0.003	0.5	0	104	80	120	0.5113	1.59	20	
Boron	0.5106	0.04	0.5	0	102	80	120	0.4961	2.87	20	
Cadmium	0.5009	0.002	0.5	0	100	80	120	0.49	2.21	20	
Calcium	49.43	1	50	0	98.9	80	120	49.2	0.467	20	
Chromium	0.5053	0.006	0.5	0	101	80	120	0.4941	2.24	20	
Cobalt	0.5093	0.006	0.5	0	102	80	120	0.498	2.25	20	
Copper	0.5159	0.006	0.5	0	103	80	120	0.5065	1.84	20	
Iron	0.4774	0.05	0.5	0.004867	94.5	80	120	0.4738	0.750	20	
Lead	0.4931	0.005	0.5	0	98.6	80	120	0.4856	1.52	20	
Magnesium	49.54	1	50	0	99.1	80	120	49.4	0.272	20	
Manganese	0.4645	0.002	0.5	0	92.9	80	120	0.4561	1.81	20	
Molybdenum	0.519	0.008	0.5	0	104	80	120	0.508	2.15	20	
Nickel	0.4769	0.01	0.5	0	95.4	80	120	0.4692	1.64	20	
Potassium	52.15	1	50	0.1007	104	80	120	51.72	0.835	20	
Selenium	0.4853	0.05	0.5	0	97.1	80	120	0.4823	0.614	20	
Silver	0.5036	0.005	0.5	0	101	80	120	0.495	1.72	20	
Sodium	52.25	1	50	0	104	80	120	52.1	0.295	20	
Thallium	0.5221	0.05	0.5	0	104	80	120	0.5157	1.23	20	
Vanadium	0.51	0.05	0.5	0	102	80	120	0.5001	1.96	20	
Zinc	0.483	0.05	0.5	0	96.6	80	120	0.4727	2.16	20	
Silica	5.018	1.1	5.35	0	93.8	80	120	4.945	1.45	20	

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

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

B - Analyte detected in the associated Method Blank
 7

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name NMOCD SF

Date and Time Received:

11/11/2005

Work Order Number 0511114

Received by AT

Checklist completed by

Signature

Date

11/11/05

Matrix

Carrier name Client drop-off

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☐

Not Shipped ☒

Custody seals intact on sample bottles?

Yes ☐

No ☒

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

HALL ENVIRONMENTAL ANALYSIS LABORATORY

NM Oil Conservation Div.

Ciniza Refinery
Gallup, NM

Other:

QA/QC Package:

Std ☒ Level 4 ☐

Address:

Santa Fe, NM 87505

Project Manager:

Carl Chavez

Phone #:

505-476-3491

Sampler: Wayne Price & Carl Chavez

Fax #:

Sample Temperature:

Sampler: Wayne Price & Carl Chavez

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative			HEAL No.
					HgCl ₂	HNO ₃	Hg ₂	
11/10/05	17:15	600	OLD API		X			DS1114-1
11/10/05	17:21	420	" "					
11/10/05	17:25	"	" "			X		
11/10/05	17:27	"	" "					
"	17:30	"	AL2-EP1		X			-2
"	17:38	"	" "					
"	17:40	"	" "			X		
"	17:43	"	" "					
"	17:52	"	EP1-EP2		X			-3
"	17:55	"	" "			X		
"	17:56	"	" "					
"	18:00	"	" "					

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

Relinquished By: (Signature)

Received By: (Signature)

21/1/65

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

Relinquished By: (Signature)

Received By: (Signature)

8528

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:

Top Blank - 4

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, December 06, 2005 3:28 PM
To: Monzeglio, Hope, NMENV
Cc: Price, Wayne, EMNRD
Subject: OCD Old API Separator Sampling Requirement

Hope:

To address your question earlier today, OCD has been on board with HWB on the required sampling in the weekly reports; however, OCD may have plans to request weekly sampling at certain locations in the near future (see text below).

Currently, aside from the requirements of the OCD permit, i.e., quarterly sampling for BOD and TCLP of transportation facility influent into aeration lagoon #1 and Section 9.5 *[requires annual grab samples of inlet water to EP2 and analyzed for BOD, COD, TDS, BTEX, and MTBE; on an annual basis grab samples from evaporation pond water shall be collected and analyzed for gen. chem. parameters; the evaporation pond selected for sampling shall be the pond, considered by refinery personnel, to most likely contain the highest salinity or TDS; in addition, the selected pond shall be alternated from year-to-year in order to provide a broader indication of analysis]* of the OCD Discharge Plan Renewal Application (Sept. 10, 2003), OCD has been receiving the weekly reports with analytical data through week 9 commensurate with HWB requirements. The last analytical data received from Giant was dated Nov. 29, 2005 and stemmed from OCD's Nov. 10, 2005 split-sample event at Ciniza. I believe Giant requested to use this sample event for one of the weekly reports? The last weekly report OCD received was from the week of Nov. 10, 2005.

Regarding your question about OCD sampling. OCD has agreed on the exact sampling that the HWB has prescribed for weekly sampling at AL2 to EP1. However, OCD, as part of an independent sampling event, split-samples with Giant on Nov. 10, 2005 at the OAPIS (old API separator), AL2 to EP1, and EP1 to EP2. We also asked Giant to perform analyzes (8015B, 405.1, 418.1, 8260, 8270, 8310, 6010, and 7470) on the influent into AL1 from the Transportation Facility (TF) due to treatment capacity concerns. We are awaiting the results and may require more frequent sampling with additional analytical data there, i.e., weekly, depending on what we see. In addition, we may request additional BOD and COD sampling at AL2 to EP1 based on the elevated levels of BOD in TF influent into AL1 and concerns about the treatment capacity of their treatment system.

Finally, because of the situation at the Old API Separator (OAPIS), OCD will likely request weekly sampling at the OAPIS commensurate with the sampling and analyzes you are currently requiring on a weekly basis at AL2 to EP1, which may go to monthly or until OCD is assured the leakage problem into the OAPIS is taken care of. OCD has not informed Giant about the above yet, and you may want to postpone your question until OCD receives the TF analytical data when we may seek to implement the above sampling requirements directly by contacting Giant to inform them of our decision.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/>
(Pollution Prevention Guidance is under "Publications")

12/6/2005

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, November 30, 2005 2:15 PM
To: 'Ed Riege'
Cc: Price, Wayne, EMNRD; Monzeglio, Hope, NMENV; Cobrain, Dave, NMENV; Foust, Denny, EMNRD
Subject: RE: November 15, 2005

Ed:

RE: Ciniza Refinery

OCD takes exception to item #1 in your Nov. 29, 2005 message below. As you may recall, we discussed during our Nov. 10, 2005 meeting (meeting) that the OAPIS is supposed to handle stormwater and not contact water. As I recall, the OAPIS was designated for use in mid December 2004 for stormwater; however, Giant now appears to want to use it to handle any refinery process or contact water too. The problem is that the OAPIS cannot knock out hazardous wastes before discharging into aeration lagoon #1 (AL1), since effluent is not routed to a benzene stripper before discharging into AL1. Concurrently, Giant is attempting to identify and eliminate contact water from entering into the OAPIS; however, it appears from your message that Giant does not want to upgrade the OAPIS to knock out hazardous wastes similar to the new API separator (NAPIS).

During our meeting, we discussed the acceptability of using the OAPIS to treat contact water and routing effluent to the NAPIS for proper treatment through the benzene stripper before discharging into AL1; however, a capacity limitation prevented this from being an option. The other option was to install additional treatment systems, i.e., benzene stripper, to the OAPIS to knock out contact water or hazardous wastes before discharging into AL1. This would also involve adding secondary containment with leak detection to the OAPIS. In addition, OCD had concerns about the Pilot Station Effluent (PSE), which discharges directly into AL1 without any treatment. BOD levels from the PSE were observed to be significantly elevated. OCD requested that Giant analyze PSE for MRO, DRO, GRO, BOD, COD, 8260, 8270, 7470, 8310, 6010, etc. to get a better handle on waste loading to the existing treatment system. Giant will need to determine the volume flow rate from the PSE, determine hazardous constituent concentrations, and estimate loading to the current treatment system to compare with the total capacity of the current treatment system. This will help Giant to assess options for increasing capacity or reducing its capacity to accept and properly treat PSE, OAPIS wastes, refinery process water, etc. This will also indicate whether it is feasible, based on Giant's current treatment design and capacity, to handle the current flow volume into its treatment system. OCD is very concerned that Giant, even operating at 1/2 capacity for oil refining, may not be able to properly treat the total waste load it is attempting to treat with its existing treatment system. Giant will need to accurately determine its waste load limitations, consider upgrading equipment to increase its treatment system capacity to handle its total waste load, or reduce the flow and load to a level commensurate with its existing treatment capacity.

Please reconsider item #1 in your note. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/> (Pollution Prevention Guidance is under "Publications")

-----Original Message-----

From: Ed Riege [mailto:eriego@giant.com]
Sent: Tuesday, November 29, 2005 1:55 PM
To: Chavez, Carl J, EMNRD; Price, Wayne, EMNRD

Cc: Monzeglio, Hope, NMENV; Ed Rios; David Kirby; Jim Hallock; John Laurent; Steve Morris; James Romero
Subject: RE: November 15, 2005

Carl and Wayne:

In this email I will address the four concerns noted in your November 15 email.

(1) Additional treatment from the old API separator (OAPIS) By minimizing storm water contact with process contact the OAPIS will continue to provide treatment as it acts as a oil water separator and the effluent will continue to be routed to the aeration lagoons for biological treatment. The biological treatment will remove any remaining contaminants.

(2) To use the OAPIS, secondary containment with leak detection will be required.

Giant would like to propose installation of a primary liner/shell inside the OAPIS utilizing a leak detection system between. Giant would follow the OCD guideline for below grade tanks and sumps. A leak detection system consisting of a drainage and sump system would be constructed according to 2. B. Upon approval Giant would submit the plan and specifications for OCD approval.

(3) OCD does not think that Giant has isolated and eliminated the source(s) of oil or hazardous waste accumulation at the OAPIS.

Vector Engineering started their site survey on storm water/process water yesterday. Their report is due the end of December and Giants goal will be to find and eliminate all sources of oil.

(4) The secondary containment needs to be fixed to eliminate hydrogeologic connection with the aquifer to demonstrate that secondary containment is in tact and fully functional. The Ciniza engineering department is putting together a plan to address this and it should be forwarded to you within a week.

Thanks

Ed Riege

-----Original Message-----

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]

Sent: Monday, November 21, 2005 5:05 PM

To: Ed Riege

Cc: Price, Wayne, EMNRD; Monzeglio, Hope, NMENV

Subject: RE: November 15, 2005

Ed:

I am working to develop a summary of our November 10, 2005 meeting at the Ciniza Refinery that should help to itemize the issues we discussed during OCD's September 8, 2005 follow-up meeting. In addition, upon review of the attached plan, Giant does not appear to be addressing the "additional treatment from the old API separator (OAPIS)" issue where Wayne Price discussed the need to treat effluent from the OAPIS before routing it to aeration lagoon #1. Also, if Giant plans to use the OAPIS, secondary containment with leak detection will be required. OCD does not think that Giant has isolated and eliminated the source(s) of oil or hazardous waste accumulation at the OAPIS.

Regarding the NAPIS, there appears to be a hydrogeologic connection between the water table aquifer and the fluid level in the secondary containment structure or liner of the NAPIS. Giant had recently attempted to uncover and repair the secondary liner and felt that the once sporadic fluid level had stabilized to about the 1 foot level. However, OCD feels that the secondary containment needs to be fixed to eliminate hydrogeologic connection with the aquifer to demonstrate that secondary containment is in tact and fully functional. Untreated oil or hazardous waste could potentially migrate to the surface and/or worse, migrate underneath the Ciniza property via a groundwater pathway. While OCD is aware of the Chinle Clay Formation beneath and surrounding the Ciniza Refinery, there is a permeable zone where groundwater is migrating northward beneath the property. I will attempt to clarify the above matters in my summary.

Please consider the above in your plan when addressing API Separator issues. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New

Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/> (Pollution Prevention Guidance is under "Publications")

-----Original Message-----

From: Ed Riege [mailto:eriego@giant.com]
Sent: Monday, November 14, 2005 5:22 PM
To: Chavez, Carl J, EMNRD
Subject: FW: November 15, 2005

-----Original Message-----

From: Ed Riege
Sent: Monday, November 14, 2005 5:18 PM
To: 'wayne.price@state.nm.us'
Cc: David Kirby; Ed Rios; James Romero; 'carl.chavez@state.nm.us';
'hope.monzeglio@state.nm.us'; 'richard.powell@state.nm.us'
Subject: November 15, 2005

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Chavez, Carl J, EMNRD

From: Ed Riege [eriege@giant.com]
Sent: Tuesday, November 29, 2005 1:55 PM
To: Chavez, Carl J, EMNRD; Price, Wayne, EMNRD
Cc: Monzeglio, Hope, NMENV; Ed Rios; David Kirby; Jim Hallock; John Laurent; Steve Morris; James Romero
Subject: RE: November 15, 2005

Carl and Wayne:

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(1) Additional treatment from the old API separator (OAPIS) By minimizing storm water contact with process contact the OAPIS will continue to provide treatment as it acts as a oil water separator and the effluent will continue to be routed to the aeration lagoons for biological treatment. The biological treatment will remove any remaining contaminants.

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Thanks
Ed Riege

-----Original Message-----

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Monday, November 21, 2005 5:05 PM
To: Ed Riege
Cc: Price, Wayne, EMNRD; Monzeglio, Hope, NMENV
Subject: RE: November 15, 2005

Ed:

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Please consider the above in your plan when addressing API Separator issues. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/> (Pollution Prevention Guidance is under "Publications")

-----Original Message-----

From: Ed Riege [mailto:eriego@giant.com]
Sent: Monday, November 14, 2005 5:22 PM
To: Chavez, Carl J, EMNRD
Subject: FW: November 15, 2005

-----Original Message-----

From: Ed Riege
Sent: Monday, November 14, 2005 5:18 PM
To: 'wayne.price@state.nm.us'
Cc: David Kirby; Ed Rios; James Romero; 'carl.chavez@state.nm.us'; 'hope.monzeglio@state.nm.us'; 'richard.powell@state.nm.us'
Subject: November 15, 2005

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Chavez, Carl J, EMNRD

From: Steve Morris [smorris@giant.com]
Sent: Tuesday, November 29, 2005 6:23 AM
To: Monzeglio, Hope, NMENV; Foust, Denny, EMNRD; Chavez, Carl J, EMNRD; Price, Wayne, EMNRD; Dave Cobrain (E-mail)
Cc: Ed Riege; James Romero; Johnny Sanchez; Steve Morris
Subject: Update for the week of 11-25-2005



HALL6663_Conden.pdf (413 K...
HALL6674_SplitwOCD.pdf (721 KB...

1) API separator No problems noted.

2) Attached are sample results from the condensate leak west of Railroad Rack gathered on 11/11/2005 and analysis indicates it meets WQCC 20 NMAC, also Split samples were taken with OCD on 11/10/2005.

3) Vector Arizona Inc. will be onsite all week (11/28/2005 - 12/2/2005) to put together the stormwater/process water site map.

4) Dennis Fuhs of Fuhs Const. plans to be onsite January 3rd for clean up of the banks on Aeration lagoons 1 & 2 as well as Evaporation ponds 1 & 2. He will also build a berm around the LPG bullet tanks and Light Natural Gasoline tanks. When those two projects are complete he will take care of the mounds of soil east of the Central OCD landfarm.

<<HALL6663_Conden.pdf>> <<HALL6674_SplitwOCD.pdf>>

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COVER LETTER

November 21, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Water at Condensate Return Tank

Order No.: 0511124

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/11/2005 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: 21-Nov-05

CLIENT: Giant Refining Co
Lab Order: 0511124
Project: Water at Condensate Return Tank
Lab ID: 0511124-01

Client Sample ID: Condensate Leak
Collection Date: 11/11/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	ND	0.10		mg/L	1	11/12/2005
Chloride	0.11	0.10		mg/L	1	11/12/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/12/2005
Nitrogen, Nitrate (As N)	0.16	0.10		mg/L	1	11/12/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/12/2005
Sulfate	ND	0.50		mg/L	1	11/12/2005
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	ND	1.0		µg/L	1	11/16/2005
Toluene	ND	1.0		µg/L	1	11/16/2005
Ethylbenzene	ND	1.0		µg/L	1	11/16/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/16/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/16/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/16/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/16/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/16/2005
Naphthalene	ND	2.0		µg/L	1	11/16/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	11/16/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	11/16/2005
Acetone	ND	10		µg/L	1	11/16/2005
Bromobenzene	ND	1.0		µg/L	1	11/16/2005
Bromochloromethane	ND	1.0		µg/L	1	11/16/2005
Bromodichloromethane	ND	1.0		µg/L	1	11/16/2005
Bromoform	ND	1.0		µg/L	1	11/16/2005
Bromomethane	ND	2.0		µg/L	1	11/16/2005
2-Butanone	ND	10		µg/L	1	11/16/2005
Carbon disulfide	ND	10		µg/L	1	11/16/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	11/16/2005
Chlorobenzene	ND	1.0		µg/L	1	11/16/2005
Chloroethane	ND	2.0		µg/L	1	11/16/2005
Chloroform	ND	1.0		µg/L	1	11/16/2005
Chloromethane	ND	1.0		µg/L	1	11/16/2005
2-Chlorotoluene	ND	1.0		µg/L	1	11/16/2005
4-Chlorotoluene	ND	1.0		µg/L	1	11/16/2005
cis-1,2-DCE	ND	1.0		µg/L	1	11/16/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/16/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/16/2005
Dibromochloromethane	ND	1.0		µg/L	1	11/16/2005
Dibromomethane	ND	2.0		µg/L	1	11/16/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/16/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/16/2005

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

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

Hall Environmental Analysis Laboratory

Date: 21-Nov-05

CLIENT: Giant Refining Co
Lab Order: 0511124
Project: Water at Condensate Return Tank
Lab ID: 0511124-01

Client Sample ID: Condensate Leak
Collection Date: 11/11/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/16/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/16/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	11/16/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	11/16/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	11/16/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	11/16/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	11/16/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	11/16/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	11/16/2005
2-Hexanone	ND	10		µg/L	1	11/16/2005
Isopropylbenzene	ND	1.0		µg/L	1	11/16/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	11/16/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	11/16/2005
Methylene Chloride	ND	3.0		µg/L	1	11/16/2005
n-Butylbenzene	ND	1.0		µg/L	1	11/16/2005
n-Propylbenzene	ND	1.0		µg/L	1	11/16/2005
sec-Butylbenzene	ND	1.0		µg/L	1	11/16/2005
Styrene	ND	1.0		µg/L	1	11/16/2005
tert-Butylbenzene	ND	1.0		µg/L	1	11/16/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/16/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	11/16/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/16/2005
trans-1,2-DCE	ND	1.0		µg/L	1	11/16/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/16/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/16/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/16/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/16/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/16/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/16/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	11/16/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/16/2005
Vinyl chloride	ND	1.0		µg/L	1	11/16/2005
Xylenes, Total	ND	1.0		µg/L	1	11/16/2005
Surr: 1,2-Dichloroethane-d4	103	69.9-130		%REC	1	11/16/2005
Surr: 4-Bromofluorobenzene	107	71.2-123		%REC	1	11/16/2005
Surr: Dibromofluoromethane	104	73.9-134		%REC	1	11/16/2005
Surr: Toluene-d8	104	81.9-122		%REC	1	11/16/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	10		µg/L	1	11/17/2005
Acenaphthylene	ND	10		µg/L	1	11/17/2005
Aniline	ND	20		µg/L	1	11/17/2005
Anthracene	ND	10		µg/L	1	11/17/2005

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

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

Hall Environmental Analysis Laboratory

Date: 21-Nov-05

CLIENT: Giant Refining Co
Lab Order: 0511124
Project: Water at Condensate Return Tank
Lab ID: 0511124-01

Client Sample ID: Condensate Leak
Collection Date: 11/11/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Azobenzene	ND	10		µg/L	1	11/17/2005
Benz(a)anthracene	ND	15		µg/L	1	11/17/2005
Benzo(a)pyrene	ND	15		µg/L	1	11/17/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	11/17/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/17/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	11/17/2005
Benzoic acid	ND	50		µg/L	1	11/17/2005
Benzyl alcohol	ND	20		µg/L	1	11/17/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/17/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	11/17/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	11/17/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	11/17/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/17/2005
Butyl benzyl phthalate	ND	15		µg/L	1	11/17/2005
Carbazole	ND	10		µg/L	1	11/17/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	11/17/2005
4-Chloroaniline	ND	20		µg/L	1	11/17/2005
2-Chloronaphthalene	ND	10		µg/L	1	11/17/2005
2-Chlorophenol	ND	10		µg/L	1	11/17/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	11/17/2005
Chrysene	ND	15		µg/L	1	11/17/2005
Di-n-butyl phthalate	ND	10		µg/L	1	11/17/2005
Di-n-octyl phthalate	ND	15		µg/L	1	11/17/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/17/2005
Dibenzofuran	ND	10		µg/L	1	11/17/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	11/17/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	11/17/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	11/17/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	11/17/2005
Diethyl phthalate	ND	10		µg/L	1	11/17/2005
Dimethyl phthalate	ND	10		µg/L	1	11/17/2005
2,4-Dichlorophenol	ND	10		µg/L	1	11/17/2005
2,4-Dimethylphenol	ND	10		µg/L	1	11/17/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	11/17/2005
2,4-Dinitrophenol	ND	50		µg/L	1	11/17/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	11/17/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	11/17/2005
Fluoranthene	ND	10		µg/L	1	11/17/2005
Fluorene	ND	10		µg/L	1	11/17/2005
Hexachlorobenzene	ND	10		µg/L	1	11/17/2005
Hexachlorobutadiene	ND	10		µg/L	1	11/17/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/17/2005

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

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

Hall Environmental Analysis Laboratory

Date: 21-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: Condensate Leak

Lab Order: 0511124

Collection Date: 11/11/2005 10:30:00 AM

Project: Water at Condensate Return Tank

Lab ID: 0511124-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	10		µg/L	1	11/17/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/17/2005
Isophorone	ND	10		µg/L	1	11/17/2005
2-Methylnaphthalene	ND	10		µg/L	1	11/17/2005
2-Methylphenol	ND	15		µg/L	1	11/17/2005
3+4-Methylphenol	ND	20		µg/L	1	11/17/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/17/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	11/17/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/17/2005
Naphthalene	ND	10		µg/L	1	11/17/2005
2-Nitroaniline	ND	50		µg/L	1	11/17/2005
3-Nitroaniline	ND	50		µg/L	1	11/17/2005
4-Nitroaniline	ND	20		µg/L	1	11/17/2005
Nitrobenzene	ND	10		µg/L	1	11/17/2005
2-Nitrophenol	ND	15		µg/L	1	11/17/2005
4-Nitrophenol	ND	50		µg/L	1	11/17/2005
Pentachlorophenol	ND	50		µg/L	1	11/17/2005
Phenanthrene	ND	10		µg/L	1	11/17/2005
Phenol	ND	10		µg/L	1	11/17/2005
Pyrene	ND	15		µg/L	1	11/17/2005
Pyridine	ND	30		µg/L	1	11/17/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/17/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/17/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	11/17/2005
Surr: 2,4,6-Tribromophenol	70.8	16.6-150		%REC	1	11/17/2005
Surr: 2-Fluorobiphenyl	61.1	19.6-134		%REC	1	11/17/2005
Surr: 2-Fluorophenol	49.0	9.54-113		%REC	1	11/17/2005
Surr: 4-Terphenyl-d14	76.1	22.7-145		%REC	1	11/17/2005
Surr: Nitrobenzene-d5	57.8	14.6-134		%REC	1	11/17/2005
Surr: Phenol-d5	32.4	10.7-80.3		%REC	1	11/17/2005

EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: CMC

Specific Conductance	37	0.010	µmhos/cm	1	11/17/2005
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EPA METHOD 245.1: MERCURY

Analyst: CMC

Mercury	ND	0.00020	mg/L	1	11/14/2005
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EPA 6010: TOTAL RECOVERABLE METALS

Analyst: NMO

Arsenic	ND	0.020	mg/L	1	11/17/2005 11:16:14 AM
Barium	0.051	0.020	mg/L	1	11/17/2005 11:16:14 AM
Cadmium	ND	0.0020	mg/L	1	11/17/2005 11:16:14 AM
Calcium	4.6	1.0	mg/L	1	11/17/2005 11:16:14 AM
Chromium	ND	0.0060	mg/L	1	11/17/2005 11:16:14 AM
Lead	ND	0.0050	mg/L	1	11/17/2005 11:16:14 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

Page 4 of 5

Hall Environmental Analysis Laboratory

Date: 21-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: Condensate Leak

Lab Order: 0511124

Collection Date: 11/11/2005 10:30:00 AM

Project: Water at Condensate Return Tank

Lab ID: 0511124-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	ND	1.0		mg/L	1	11/17/2005 11:16:14 AM
Potassium	ND	1.0		mg/L	1	11/17/2005 11:16:14 AM
Selenium	ND	0.050		mg/L	1	11/17/2005 11:16:14 AM
Silver	ND	0.0050		mg/L	1	11/17/2005 11:16:14 AM
Sodium	ND	1.0		mg/L	1	11/17/2005 11:16:14 AM
EPA METHOD 150.1: PH						Analyst: TES
pH	8.53	0.010		pH units	1	11/18/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 2/1-Not-05

CLIENT: Giant Refining Co
 Work Order: 0511124
 Project: Water at Condensate Return Tank

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R17278	Test Code: E300	Units: mg/L	Analysis Date	11/11/2005	Prep Date				
Client ID:		Run ID:	LC_051111A		SeqNo:	421730					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

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: Giant Refining Co

Work Order: 0511124

Project: Water at Condensate Return Tank

QC SUMMARY REPORT

Method Blank

Sample ID	MB-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date	11/17/2005	Prep Date	11/14/2005			
Client ID:			Run ID: ELMO_051117A		SeqNo: 424365						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	10									
Acenaphthylene	ND	10									
Aniline	ND	20									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	15									
Benzo(b)fluoranthene	ND	15									
Benzo(g,h,i)perylene	ND	10									
Benzo(k)fluoranthene	ND	10									
Benzoic acid	ND	50									
Benzyl alcohol	ND	20									
Bis(2-chloroethoxy)methane	ND	10									
Bis(2-chloroethyl)ether	ND	15									
Bis(2-chloroisopropyl)ether	ND	15									
Bis(2-ethylhexyl)phthalate	ND	15									
4-Bromophenyl phenyl ether	ND	10									
Butyl benzyl phthalate	ND	15									
Carbazole	ND	10									
4-Chloro-3-methylphenol	ND	20									
4-Chloroaniline	ND	20									
2-Chloronaphthalene	ND	10									
2-Chlorophenol	ND	10									
4-Chlorophenyl phenyl ether	ND	15									
Chrysene	ND	15									
Di-n-butyl phthalate	ND	10									
Di-n-octyl phthalate	ND	15									
Dibenz(a,h)anthracene	ND	10									

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

2

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0511124
 Project: Water at Condensate Return Tank

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

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co

Work Order: 0511124

Project: Water at Condensate Return Tank

Sample ID	MB-9199	Batch ID: 9199	Test Code: SW6010A	Units: mg/L	Analysis Date	11/17/2005 11:00:56 A	Prep Date	11/15/2005			
Client ID:			Run ID:	ICP_051117A	SeqNo:	423291					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	0.0003728	0.002									
Calcium	ND	1									J
Chromium	ND	0.006									
Lead	ND	0.005									
Magnesium	ND	1									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	0.0004823	0.005									J
Sodium	ND	1									

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

Hall Environmental Analysis Laboratory

Date: 21-Nov-05

CLIENT: Giant Refining Co
 Work Order: 0511124
 Project: Water at Condensate Return Tank

QC SUMMARY REPORT
 Method Blank

Sample ID	5ml rb	Batch ID: R17297	Test Code: SW8260B	Units: µg/L	Analysis Date	11/15/2005	Prep Date				
Client ID:			Run ID:	THOR_051115A	SeqNo:	422319					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	0.506	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									
											J

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

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

B - Analyte detected in the associated Method Blank
 /

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co

Work Order: 05111124

Project: Water at Condensate Return Tank

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

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

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

B - Analyte detected in the associated Method Blank
2

Method Blank

Project: Water at Condensate Return Tank

[illegible]

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

Hall Environmental Analysis Laboratory

Date: 21-Nov-05

CLIENT: Giant Refining Co

Work Order: 0511124

Project: Water at Condensate Return Tank

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0511124-01C DUP	Batch ID: R17347	Test Code: E150.1	Units: pH units	Analysis Date	11/18/2005	Prep Date
Client ID:	Condensate Leak	Run ID:	WC_051117G		SeqNo:	423683	
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit
pH		8.49	0.01	0	0	0	0
				SPK Ref Val	%RPD	RPD Ref Val	RPDLimit
				0	0	0	0
							Qual

Qualifiers:

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

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

B - Analyte detected in the associated Method Blank
/

Hall Environmental Analysis Laboratory

Date: 2/1/Nov-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co
 Work Order: 0511124
 Project: Water at Condensate Return Tank

Sample ID	LCS-ST300-05023	Batch ID: R17278	Test Code: E300	Units: mg/L	Analysis Date	11/11/2005	Prep Date
Client ID:	Run ID:	PQL	SPK value	SPK Ref Val	SeqNo:	421731	
Analyte	Result				LowLimit	HighLimit	RPD Ref Val
Fluoride	0.4869	0.1	0.5	0	90	110	0
Chloride	4.634	0.1	5	0	90	110	0
Nitrogen, Nitrite (As N)	0.9198	0.1	1	0	90	110	0
Nitrogen, Nitrate (As N)	2.388	0.1	2.5	0	90	110	0
Phosphorus, Orthophosphate (As P)	4.837	0.5	5	0	90	110	0
Sulfate	9.668	0.5	10	0	90	110	0
					%REC	%RPD	RPDLimit
					97.4		
					92.7		
					92.0		
					95.5		
					96.7		
					96.7		

15/19

Sample ID	100ng Ics	Batch ID: R17297	Test Code: SW8260B	Units: µg/L	Analysis Date	11/15/2005	Prep Date
Client ID:	Run ID:	PQL	SPK value	SPK Ref Val	SeqNo:	422320	
Analyte	Result				LowLimit	HighLimit	RPD Ref Val
Benzene	19.87	1	20	0	79.3	136	0
Toluene	21.12	1	20	0	65.5	123	0
Chlorobenzene	20.12	1	20	0	85.6	126	0
1,1-Dichloroethene	22.63	1	20	0	72.7	135	0
Trichloroethene (TCE)	20.67	1	20	0	85.6	119	0
					%REC	%RPD	RPDLimit
					99.4		
					106		
					101		
					113		
					103		

Sample ID	100ng Icsd	Batch ID: R17297	Test Code: SW8260B	Units: µg/L	Analysis Date	11/16/2005	Prep Date
Client ID:	Run ID:	PQL	SPK value	SPK Ref Val	SeqNo:	422545	
Analyte	Result				LowLimit	HighLimit	RPD Ref Val
Benzene	21.45	1	20	0	81.4	130	19.87
Toluene	20.43	1	20	0	65.5	123	21.12
Chlorobenzene	19.96	1	20	0	89.6	134	20.12
1,1-Dichloroethene	22.16	1	20	0	75.1	120	22.63
Trichloroethene (TCE)	19.96	1	20	0	75.8	110	20.67
					%REC	%RPD	RPDLimit
					107		7.62
					102		3.33
					99.8		0.808
					111		2.07
					99.8		3.52
							11
							12.2
							12
							19.3
							15.5

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

CLIENT: Giant Refining Co

Work Order: 0511124

Project: Water at Condensate Return Tank

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date	11/17/2005	Prep Date	11/14/2005			
Client ID:			Run ID: ELMO_051117A		SeqNo: 424366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.72	10	100	0	75.7	11	123	0			
4-Chloro-3-methylphenol	140.7	20	200	0	70.4	15.4	119	0			
2-Chlorophenol	141	10	200	0	70.5	12.2	122	0			
1,4-Dichlorobenzene	68.12	10	100	0	68.1	16.9	100	0			
2,4-Dinitrotoluene	71.96	10	100	0	72.0	13	138	0			
N-Nitrosodi-n-propylamine	68.28	10	100	0	68.3	9.93	122	0			
4-Nitrophenol	87.36	50	200	0	43.7	-20.5	87.4	0			
Pentachlorophenol	129.2	50	200	0	64.6	-0.355	114	0			
Phenol	76.18	10	200	0	38.1	7.53	73.1	0			
Pyrene	80.9	15	100	0	80.9	12.6	140	0			
1,2,4-Trichlorobenzene	66.78	10	100	0	66.8	17.4	98.7	0			

Sample ID	LCSD-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date	11/17/2005	Prep Date	11/14/2005			
Client ID:			Run ID: ELMO_051117A		SeqNo: 424368						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.94	10	100	0	75.9	11	123	75.72	0.290	30.5	
4-Chloro-3-methylphenol	145.9	20	200	0	72.9	15.4	119	140.7	3.60	28.6	
2-Chlorophenol	128.1	10	200	0	64.0	12.2	122	141	9.59	107	
1,4-Dichlorobenzene	59.16	10	100	0	59.2	16.9	100	68.12	14.1	62.1	
2,2,4-Dinitrotoluene	71.68	10	100	0	71.7	13	138	71.96	0.390	14.7	
N-Nitrosodi-n-propylamine	66.94	10	100	0	66.9	9.93	122	68.28	1.98	30.3	
4-Nitrophenol	56.1	50	200	0	28.1	12.5	87.4	87.36	43.6	36.3	R
Pentachlorophenol	74.34	50	200	0	37.2	3.55	114	129.2	53.9	49	R
Phenol	75.02	10	200	0	37.5	7.53	73.1	76.18	1.53	52.4	
Pyrene	82.6	15	100	0	82.6	12.6	140	80.9	2.08	16.3	
1,2,4-Trichlorobenzene	62.1	10	100	0	62.1	17.4	98.7	66.78	7.26	36.4	

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

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

B - Analytic detected in the associated Method Blank
2

CLIENT: Giant Refining Co

Work Order: 0511124

Project: Water at Condensate Return Tank

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-9184	Batch ID: 9184	Test Code: SW7470	Units: mg/L	Analysis Date	11/14/2005	Prep Date	11/14/2005
Client ID:			Run ID: MI-LA254_051114A		SeqNo:	422037		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Mercury	0.004712	0.0002	0.005	0	94.2	80	120	0
Sample ID	LCSD-9184	Batch ID: 9184	Test Code: SW7470	Units: mg/L	Analysis Date	11/14/2005	Prep Date	11/14/2005
Client ID:			Run ID: MI-LA254_051114A		SeqNo:	422051		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Mercury	0.004592	0.0002	0.005	0	91.8	80	120	0.004712
								0
Sample ID	LCS-9199	Batch ID: 9199	Test Code: SW6010A	Units: mg/L	Analysis Date	11/17/2005 11:03:34 A	Prep Date	11/15/2005
Client ID:			Run ID: ICP_051117A		SeqNo:	423292		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Arsenic	0.478	0.02	0.5	0	95.6	80	120	0
Barium	0.467	0.02	0.5	0	93.4	80	120	0
Cadmium	0.4706	0.002	0.5	0.0003728	94.1	80	120	0
Calcium	52.36	1	50	0	105	80	120	0
Chromium	0.4743	0.006	0.5	0	94.9	80	120	0
Lead	0.4736	0.005	0.5	0	94.7	80	120	0
Magnesium	52.77	1	50	0	106	80	120	0
Potassium	55.53	1	50	0	111	80	120	0
Selenium	0.4616	0.05	0.5	0	92.3	80	120	0
Silver	0.4803	0.005	0.5	0.0004823	96.0	80	120	0
Sodium	56.54	1	50	0	113	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
3

Giant Refining Co

0511124

Project: Water at Condensate Return Tank

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID	LCSD-9199	Batch ID: 9199	Test Code: SW6010A		Units: mg/L	Analysis Date	11/17/2005 11:06:32 A		Prep Date	11/15/2005	
Client ID:			Run ID:	ICP_051117A		SeqNo:	423293				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4825	0.02	0.5	0	96.5	80	120	0.478	0.949	20	
Barium	0.4685	0.02	0.5	0	93.7	80	120	0.467	0.312	20	
Cadmium	0.471	0.002	0.5	0.0003728	94.1	80	120	0.4706	0.0773	20	
Calcium	51.81	1	50	0	104	80	120	52.36	1.06	20	
Chromium	0.4733	0.006	0.5	0	94.7	80	120	0.4743	0.210	20	
Lead	0.4725	0.005	0.5	0	94.5	80	120	0.4736	0.235	20	
Magnesium	52.4	1	50	0	105	80	120	52.77	0.688	20	
Potassium	55.08	1	50	0	110	80	120	55.53	0.809	20	
Selenium	0.4647	0.05	0.5	0	92.9	80	120	0.4616	0.672	20	
Silver	0.4643	0.005	0.5	0.0004823	96.8	80	120	0.4803	0.834	20	
Sodium	56.4	1	50	0	113	80	120	56.54	0.239	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 - Analytic detected in the associated Method Blank:

五

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

11/11/2005

Work Order Number 0511124

Received by AT

Checklist completed by

Signature

Date

Matrix

Carrier name Client drop-off

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

Project Name: Water at Condensate
Return Tank East of

Client: Giant Refining

Company - Cingular

Address: Route 3 Box 7

Gallegos, N14 87391

Project Manager:

Steve Abbott

Sampler: Steve G. Smith

Sample Temperature:

Phone #: 505 722 3833

Fax #: 505 722 0210

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

Time Matrix

Sample I.D. No.

Number/Volume

HEAL No.

HEAL No. 051124-1

11-11-05	1030	H ₂ O	Condensate Leak
----------	------	------------------	-----------------

Date:	11-11-95
Time:	1440

Relinquished By: (Signature) *Steve Morris*

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

Relinquished By: (Signature)

Received By: Signature *[Signature]* 11/11/05

11

Received By: [Signature]

14510

Remarks: RUSH

For Chem = Estions, Anions,
pH, and Conductivity

**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:



COVER LETTER

November 22, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Split samples w/OCD on Old API Sep

Order No.: 0511125

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 3 samples on 11/11/2005 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: 23-Nov-05

CLIENT: Giant Refining Co
Project: Split samples w/OCD on Old API Sep
Lab Order: 0511125

CASE NARRATIVE

Practical quantitation limits (PQL) elevated for EPA Method 8270 due to emulsion formed during extraction and the amount of hydrocarbons in the sample.

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: Old API Sep

Lab Order: 0511125

Collection Date: 11/10/2005 5:20:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						
Petroleum Hydrocarbons, TR	2100	100		mg/L	20	11/16/2005
EPA METHOD 8260B: VOLATILES						
Benzene	200	10		µg/L	10	11/16/2005
Toluene	220	10		µg/L	10	11/16/2005
Ethylbenzene	ND	10		µg/L	10	11/16/2005
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/16/2005
1,2,4-Trimethylbenzene	68	10		µg/L	10	11/16/2005
1,3,5-Trimethylbenzene	24	10		µg/L	10	11/16/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/16/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/16/2005
Naphthalene	82	20		µg/L	10	11/16/2005
1-Methylnaphthalene	ND	40		µg/L	10	11/16/2005
2-Methylnaphthalene	ND	40		µg/L	10	11/16/2005
Acetone	ND	100		µg/L	10	11/16/2005
Bromobenzene	ND	10		µg/L	10	11/16/2005
Bromochloromethane	ND	10		µg/L	10	11/16/2005
Bromodichloromethane	ND	10		µg/L	10	11/16/2005
Bromoform	ND	10		µg/L	10	11/16/2005
Bromomethane	ND	20		µg/L	10	11/16/2005
2-Butanone	ND	100		µg/L	10	11/16/2005
Carbon disulfide	ND	100		µg/L	10	11/16/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/16/2005
Chlorobenzene	ND	10		µg/L	10	11/16/2005
Chloroethane	ND	20		µg/L	10	11/16/2005
Chloroform	ND	10		µg/L	10	11/16/2005
Chloromethane	ND	10		µg/L	10	11/16/2005
2-Chlorotoluene	ND	10		µg/L	10	11/16/2005
4-Chlorotoluene	ND	10		µg/L	10	11/16/2005
cis-1,2-DCE	ND	10		µg/L	10	11/16/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/16/2005
Dibromochloromethane	ND	10		µg/L	10	11/16/2005
Dibromomethane	ND	20		µg/L	10	11/16/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/16/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/16/2005

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: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: Old API Sep

Lab Order: 0511125

Collection Date: 11/10/2005 5:20:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/16/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/16/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/16/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/16/2005
2-Hexanone	ND	100		µg/L	10	11/16/2005
Isopropylbenzene	ND	10		µg/L	10	11/16/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/16/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/16/2005
Methylene Chloride	ND	30		µg/L	10	11/16/2005
n-Butylbenzene	ND	10		µg/L	10	11/16/2005
n-Propylbenzene	ND	10		µg/L	10	11/16/2005
sec-Butylbenzene	ND	10		µg/L	10	11/16/2005
Styrene	ND	10		µg/L	10	11/16/2005
tert-Butylbenzene	ND	10		µg/L	10	11/16/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/16/2005
trans-1,2-DCE	ND	10		µg/L	10	11/16/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/16/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/16/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/16/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/16/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/16/2005
Vinyl chloride	ND	10		µg/L	10	11/16/2005
Xylenes, Total	290	10		µg/L	10	11/16/2005
Surr: 1,2-Dichloroethane-d4	109	69.9-130		%REC	10	11/16/2005
Surr: 4-Bromofluorobenzene	100	71.2-123		%REC	10	11/16/2005
Surr: Dibromofluoromethane	106	73.9-134		%REC	10	11/16/2005
Surr: Toluene-d8	104	81.9-122		%REC	10	11/16/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	20		µg/L	1	11/17/2005
Acenaphthylene	ND	20		µg/L	1	11/17/2005
Aniline	ND	40		µg/L	1	11/17/2005
Anthracene	ND	20		µg/L	1	11/17/2005
Azobenzene	ND	20		µg/L	1	11/17/2005
Benz(a)anthracene	ND	30		µg/L	1	11/17/2005
Benzo(a)pyrene	ND	30		µg/L	1	11/17/2005
Benzo(b)fluoranthene	ND	30		µg/L	1	11/17/2005
Benzo(g,h,i)perylene	ND	20		µg/L	1	11/17/2005

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT: Giant Refining Co
Lab Order: 0511125
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-01

Client Sample ID: Old API Sep
Collection Date: 11/10/2005 5:20:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	20		µg/L	1	11/17/2005
Benzoic acid	ND	100		µg/L	1	11/17/2005
Benzyl alcohol	ND	40		µg/L	1	11/17/2005
Bis(2-chloroethoxy)methane	ND	20		µg/L	1	11/17/2005
Bis(2-chloroethyl)ether	ND	30		µg/L	1	11/17/2005
Bis(2-chloroisopropyl)ether	ND	30		µg/L	1	11/17/2005
Bis(2-ethylhexyl)phthalate	31	30		µg/L	1	11/17/2005
4-Bromophenyl phenyl ether	ND	20		µg/L	1	11/17/2005
Butyl benzyl phthalate	ND	30		µg/L	1	11/17/2005
Carbazole	ND	20		µg/L	1	11/17/2005
4-Chloro-3-methylphenol	ND	40		µg/L	1	11/17/2005
4-Chloroaniline	ND	40		µg/L	1	11/17/2005
2-Chloronaphthalene	ND	20		µg/L	1	11/17/2005
2-Chlorophenol	ND	20		µg/L	1	11/17/2005
4-Chlorophenyl phenyl ether	ND	30		µg/L	1	11/17/2005
Chrysene	ND	30		µg/L	1	11/17/2005
Di-n-butyl phthalate	ND	20		µg/L	1	11/17/2005
Di-n-octyl phthalate	ND	30		µg/L	1	11/17/2005
Dibenz(a,h)anthracene	ND	20		µg/L	1	11/17/2005
Dibenzofuran	27	20		µg/L	1	11/17/2005
1,2-Dichlorobenzene	ND	20		µg/L	1	11/17/2005
1,3-Dichlorobenzene	ND	20		µg/L	1	11/17/2005
1,4-Dichlorobenzene	ND	20		µg/L	1	11/17/2005
3,3'-Dichlorobenzidine	ND	30		µg/L	1	11/17/2005
Diethyl phthalate	ND	20		µg/L	1	11/17/2005
Dimethyl phthalate	ND	20		µg/L	1	11/17/2005
2,4-Dichlorophenol	ND	20		µg/L	1	11/17/2005
2,4-Dimethylphenol	ND	20		µg/L	1	11/17/2005
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/17/2005
2,4-Dinitrophenol	ND	100		µg/L	1	11/17/2005
2,4-Dinitrotoluene	ND	20		µg/L	1	11/17/2005
2,6-Dinitrotoluene	ND	20		µg/L	1	11/17/2005
Fluoranthene	ND	20		µg/L	1	11/17/2005
Fluorene	75	20		µg/L	1	11/17/2005
Hexachlorobenzene	ND	20		µg/L	1	11/17/2005
Hexachlorobutadiene	ND	20		µg/L	1	11/17/2005
Hexachlorocyclopentadiene	ND	20		µg/L	1	11/17/2005
Hexachloroethane	ND	20		µg/L	1	11/17/2005
Indeno(1,2,3-cd)pyrene	ND	20		µg/L	1	11/17/2005
Isophorone	ND	20		µg/L	1	11/17/2005
2-Methylnaphthalene	250	20		µg/L	1	11/17/2005
2-Methylphenol	ND	30		µg/L	1	11/17/2005

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: 22-Nov-05

CLIENT: Giant Refining Co
Lab Order: 0511125
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-01

Client Sample ID: Old API Sep
Collection Date: 11/10/2005 5:20:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	40		µg/L	1	11/17/2005
N-Nitrosodi-n-propylamine	ND	20		µg/L	1	11/17/2005
N-Nitrosodimethylamine	ND	20		µg/L	1	11/17/2005
N-Nitrosodiphenylamine	ND	20		µg/L	1	11/17/2005
Naphthalene	92	20		µg/L	1	11/17/2005
2-Nitroaniline	ND	100		µg/L	1	11/17/2005
3-Nitroaniline	ND	100		µg/L	1	11/17/2005
4-Nitroaniline	ND	40		µg/L	1	11/17/2005
Nitrobenzene	ND	20		µg/L	1	11/17/2005
2-Nitrophenol	ND	30		µg/L	1	11/17/2005
4-Nitrophenol	ND	100		µg/L	1	11/17/2005
Pentachlorophenol	ND	100		µg/L	1	11/17/2005
Phenanthrene	170	20		µg/L	1	11/17/2005
Phenol	ND	20		µg/L	1	11/17/2005
Pyrene	86	30		µg/L	1	11/17/2005
Pyridine	ND	60		µg/L	1	11/17/2005
1,2,4-Trichlorobenzene	ND	20		µg/L	1	11/17/2005
2,4,5-Trichlorophenol	ND	20		µg/L	1	11/17/2005
2,4,6-Trichlorophenol	ND	30		µg/L	1	11/17/2005
Surr: 2,4,6-Tribromophenol	75.6	16.6-150		%REC	1	11/17/2005
Surr: 2-Fluorobiphenyl	80.2	19.6-134		%REC	1	11/17/2005
Surr: 2-Fluorophenol	48.2	9.54-113		%REC	1	11/17/2005
Surr: 4-Terphenyl-d14	78.1	22.7-145		%REC	1	11/17/2005
Surr: Nitrobenzene-d5	78.1	14.6-134		%REC	1	11/17/2005
Surr: Phenol-d5	38.1	10.7-80.3		%REC	1	11/17/2005

EPA METHOD 245.1: MERCURY

Mercury	0.0024	0.00020	mg/L	1	Analyst: CMC 11/14/2005
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EPA 6010: TOTAL RECOVERABLE METALS

Aluminum	4.3	0.40	mg/L	20	Analyst: NMO 11/17/2005 12:59:54 PM
Antimony	ND	0.010	mg/L	1	11/17/2005 11:19:21 AM
Arsenic	ND	0.020	mg/L	1	11/17/2005 11:19:21 AM
Barium	0.74	0.020	mg/L	1	11/17/2005 11:19:21 AM
Beryllium	ND	0.0030	mg/L	1	11/17/2005 11:19:21 AM
Boron	0.21	0.040	mg/L	1	11/17/2005 11:19:21 AM
Cadmium	0.0025	0.0020	mg/L	1	11/17/2005 11:19:21 AM
Calcium	110	20	mg/L	20	11/17/2005 12:59:54 PM
Chromium	0.027	0.0060	mg/L	1	11/17/2005 11:19:21 AM
Cobalt	0.0073	0.0060	mg/L	1	11/17/2005 11:19:21 AM
Copper	0.12	0.0060	mg/L	1	11/17/2005 11:19:21 AM
Iron	46	1.0	mg/L	20	11/17/2005 12:59:54 PM
Lead	0.028	0.0050	mg/L	1	11/17/2005 11:19:21 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

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: Old API Sep

Lab Order: 0511125

Collection Date: 11/10/2005 5:20:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	29	1.0		mg/L	1	11/17/2005 11:19:21 AM
Manganese	0.75	0.0020		mg/L	1	11/17/2005 11:19:21 AM
Molybdenum	0.091	0.0080		mg/L	1	11/17/2005 11:19:21 AM
Nickel	0.060	0.010		mg/L	1	11/17/2005 11:19:21 AM
Potassium	35	1.0		mg/L	1	11/17/2005 11:19:21 AM
Selenium	ND	0.050		mg/L	1	11/17/2005 11:19:21 AM
Silver	ND	0.0050		mg/L	1	11/17/2005 11:19:21 AM
Sodium	530	20		mg/L	20	11/17/2005 12:59:54 PM
Thallium	ND	0.050		mg/L	1	11/17/2005 11:19:21 AM
Vanadium	ND	0.050		mg/L	1	11/17/2005 11:19:21 AM
Zinc	2.6	1.0		mg/L	20	11/17/2005 12:59:54 PM
Silica	40	22		mg/L	20	11/17/2005 12:59:54 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: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0511125

Collection Date: 11/10/2005 5:35:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						
Petroleum Hydrocarbons, TR	65	2.0		mg/L	1	11/16/2005
EPA METHOD 8260B: VOLATILES						
Benzene	25	10		µg/L	10	11/16/2005
Toluene	28	10		µg/L	10	11/16/2005
Ethylbenzene	ND	10		µg/L	10	11/16/2005
Methyl tert-butyl ether (MTBE)	19	10		µg/L	10	11/16/2005
1,2,4-Trimethylbenzene	19	10		µg/L	10	11/16/2005
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/16/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/16/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/16/2005
Naphthalene	ND	20		µg/L	10	11/16/2005
1-Methylnaphthalene	ND	40		µg/L	10	11/16/2005
2-Methylnaphthalene	ND	40		µg/L	10	11/16/2005
Acetone	3500	500		µg/L	50	11/18/2005
Bromobenzene	ND	10		µg/L	10	11/16/2005
Bromochloromethane	ND	10		µg/L	10	11/16/2005
Bromodichloromethane	ND	10		µg/L	10	11/16/2005
Bromoform	ND	10		µg/L	10	11/16/2005
Bromomethane	ND	20		µg/L	10	11/16/2005
2-Butanone	360	100		µg/L	10	11/16/2005
Carbon disulfide	ND	100		µg/L	10	11/16/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/16/2005
Chlorobenzene	ND	10		µg/L	10	11/16/2005
Chloroethane	ND	20		µg/L	10	11/16/2005
Chloroform	ND	10		µg/L	10	11/16/2005
Chloromethane	ND	10		µg/L	10	11/16/2005
2-Chlorotoluene	ND	10		µg/L	10	11/16/2005
4-Chlorotoluene	ND	10		µg/L	10	11/16/2005
cis-1,2-DCE	ND	10		µg/L	10	11/16/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/16/2005
Dibromochloromethane	ND	10		µg/L	10	11/16/2005
Dibromomethane	ND	20		µg/L	10	11/16/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/16/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/16/2005

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

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

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0511125

Collection Date: 11/10/2005 5:35:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/16/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/16/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/16/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/16/2005
2-Hexanone	ND	100		µg/L	10	11/16/2005
Isopropylbenzene	ND	10		µg/L	10	11/16/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/16/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/16/2005
Methylene Chloride	ND	30		µg/L	10	11/16/2005
n-Butylbenzene	ND	10		µg/L	10	11/16/2005
n-Propylbenzene	ND	10		µg/L	10	11/16/2005
sec-Butylbenzene	ND	10		µg/L	10	11/16/2005
Styrene	ND	10		µg/L	10	11/16/2005
tert-Butylbenzene	ND	10		µg/L	10	11/16/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/16/2005
trans-1,2-DCE	ND	10		µg/L	10	11/16/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/16/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/16/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/16/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/16/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/16/2005
Vinyl chloride	ND	10		µg/L	10	11/16/2005
Xylenes, Total	18	10		µg/L	10	11/16/2005
Surr: 1,2-Dichloroethane-d4	103	69.9-130		%REC	10	11/16/2005
Surr: 4-Bromofluorobenzene	90.7	71.2-123		%REC	10	11/16/2005
Surr: Dibromofluoromethane	104	73.9-134		%REC	10	11/16/2005
Surr: Toluene-d8	114	81.9-122		%REC	10	11/16/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	200		µg/L	10	11/17/2005
Acenaphthylene	ND	200		µg/L	10	11/17/2005
Aniline	ND	400		µg/L	10	11/17/2005
Anthracene	ND	200		µg/L	10	11/17/2005
Azobenzene	ND	200		µg/L	10	11/17/2005
Benz(a)anthracene	ND	300		µg/L	10	11/17/2005
Benzo(a)pyrene	ND	300		µg/L	10	11/17/2005
Benzo(b)fluoranthene	ND	300		µg/L	10	11/17/2005
Benzo(g,h,i)perylene	ND	200		µg/L	10	11/17/2005

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0511125

Collection Date: 11/10/2005 5:35:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	200		µg/L	10	11/17/2005
Benzoic acid	ND	1000		µg/L	10	11/17/2005
Benzyl alcohol	ND	400		µg/L	10	11/17/2005
Bis(2-chloroethoxy)methane	ND	200		µg/L	10	11/17/2005
Bis(2-chloroethyl)ether	ND	300		µg/L	10	11/17/2005
Bis(2-chloroisopropyl)ether	ND	300		µg/L	10	11/17/2005
Bis(2-ethylhexyl)phthalate	ND	300		µg/L	10	11/17/2005
4-Bromophenyl phenyl ether	ND	200		µg/L	10	11/17/2005
Butyl benzyl phthalate	ND	300		µg/L	10	11/17/2005
Carbazole	ND	200		µg/L	10	11/17/2005
4-Chloro-3-methylphenol	ND	400		µg/L	10	11/17/2005
4-Chloroaniline	ND	400		µg/L	10	11/17/2005
2-Chloronaphthalene	ND	200		µg/L	10	11/17/2005
2-Chlorophenol	ND	200		µg/L	10	11/17/2005
4-Chlorophenyl phenyl ether	ND	300		µg/L	10	11/17/2005
Chrysene	ND	300		µg/L	10	11/17/2005
Di-n-butyl phthalate	ND	200		µg/L	10	11/17/2005
Di-n-octyl phthalate	ND	300		µg/L	10	11/17/2005
Dibenz(a,h)anthracene	ND	200		µg/L	10	11/17/2005
Dibenzofuran	ND	200		µg/L	10	11/17/2005
1,2-Dichlorobenzene	ND	200		µg/L	10	11/17/2005
1,3-Dichlorobenzene	ND	200		µg/L	10	11/17/2005
1,4-Dichlorobenzene	ND	200		µg/L	10	11/17/2005
3,3'-Dichlorobenzidine	ND	300		µg/L	10	11/17/2005
Diethyl phthalate	ND	200		µg/L	10	11/17/2005
Dimethyl phthalate	ND	200		µg/L	10	11/17/2005
2,4-Dichlorophenol	ND	200		µg/L	10	11/17/2005
2,4-Dimethylphenol	ND	200		µg/L	10	11/17/2005
4,6-Dinitro-2-methylphenol	ND	1000		µg/L	10	11/17/2005
2,4-Dinitrophenol	ND	1000		µg/L	10	11/17/2005
2,4-Dinitrotoluene	ND	200		µg/L	10	11/17/2005
2,6-Dinitrotoluene	ND	200		µg/L	10	11/17/2005
Fluoranthene	ND	200		µg/L	10	11/17/2005
Fluorene	ND	200		µg/L	10	11/17/2005
Hexachlorobenzene	ND	200		µg/L	10	11/17/2005
Hexachlorobutadiene	ND	200		µg/L	10	11/17/2005
Hexachlorocyclopentadiene	ND	200		µg/L	10	11/17/2005
Hexachloroethane	ND	200		µg/L	10	11/17/2005
Indeno(1,2,3-cd)pyrene	ND	200		µg/L	10	11/17/2005
Isophorone	ND	200		µg/L	10	11/17/2005
2-Methylnaphthalene	ND	200		µg/L	10	11/17/2005
2-Methylphenol	ND	300		µg/L	10	11/17/2005

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0511125

Collection Date: 11/10/2005 5:35:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	400		µg/L	10	11/17/2005
N-Nitrosodi-n-propylamine	ND	200		µg/L	10	11/17/2005
N-Nitrosodimethylamine	ND	200		µg/L	10	11/17/2005
N-Nitrosodiphenylamine	ND	200		µg/L	10	11/17/2005
Naphthalene	ND	200		µg/L	10	11/17/2005
2-Nitroaniline	ND	1000		µg/L	10	11/17/2005
3-Nitroaniline	ND	1000		µg/L	10	11/17/2005
4-Nitroaniline	ND	400		µg/L	10	11/17/2005
Nitrobenzene	ND	200		µg/L	10	11/17/2005
2-Nitrophenol	ND	300		µg/L	10	11/17/2005
4-Nitrophenol	ND	1000		µg/L	10	11/17/2005
Pentachlorophenol	ND	1000		µg/L	10	11/17/2005
Phenanthrene	ND	200		µg/L	10	11/17/2005
Phenol	ND	200		µg/L	10	11/17/2005
Pyrene	ND	300		µg/L	10	11/17/2005
Pyridine	ND	600		µg/L	10	11/17/2005
1,2,4-Trichlorobenzene	ND	200		µg/L	10	11/17/2005
2,4,5-Trichlorophenol	ND	200		µg/L	10	11/17/2005
2,4,6-Trichlorophenol	ND	300		µg/L	10	11/17/2005
Surr: 2,4,6-Tribromophenol	93.2	16.6-150		%REC	10	11/17/2005
Surr: 2-Fluorobiphenyl	75.6	19.6-134		%REC	10	11/17/2005
Surr: 2-Fluorophenol	50.3	9.54-113		%REC	10	11/17/2005
Surr: 4-Terphenyl-d14	80.2	22.7-145		%REC	10	11/17/2005
Surr: Nitrobenzene-d5	68.0	14.6-134		%REC	10	11/17/2005
Surr: Phenol-d5	37.8	10.7-80.3		%REC	10	11/17/2005

EPA METHOD 245.1: MERCURY

Analyst: CMC

Mercury	0.0013	0.00020	mg/L	1	11/14/2005
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EPA 6010: TOTAL RECOVERABLE METALS

Analyst: NMO

Aluminum	0.73	0.020	mg/L	1	11/17/2005 11:22:15 AM
Antimony	ND	0.010	mg/L	1	11/17/2005 11:22:15 AM
Arsenic	ND	0.020	mg/L	1	11/17/2005 11:22:15 AM
Barium	0.11	0.020	mg/L	1	11/17/2005 11:22:15 AM
Beryllium	ND	0.0030	mg/L	1	11/17/2005 11:22:15 AM
Boron	0.21	0.040	mg/L	1	11/17/2005 11:22:15 AM
Cadmium	ND	0.0020	mg/L	1	11/17/2005 11:22:15 AM
Calcium	57	1.0	mg/L	1	11/17/2005 11:22:15 AM
Chromium	0.0081	0.0060	mg/L	1	11/17/2005 11:22:15 AM
Cobalt	0.0081	0.0060	mg/L	1	11/17/2005 11:22:15 AM
Copper	0.0071	0.0060	mg/L	1	11/17/2005 11:22:15 AM
Iron	7.5	1.0	mg/L	20	11/17/2005 1:05:59 PM
Lead	ND	0.0050	mg/L	1	11/17/2005 11:22:15 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: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0511125

Collection Date: 11/10/2005 5:35:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	14	1.0		mg/L	1	11/17/2005 11:22:15 AM
Manganese	0.27	0.0020		mg/L	1	11/17/2005 11:22:15 AM
Molybdenum	0.013	0.0080		mg/L	1	11/17/2005 11:22:15 AM
Nickel	0.022	0.010		mg/L	1	11/17/2005 11:22:15 AM
Potassium	34	1.0		mg/L	1	11/17/2005 11:22:15 AM
Selenium	ND	0.050		mg/L	1	11/17/2005 11:22:15 AM
Silver	ND	0.0050		mg/L	1	11/17/2005 11:22:15 AM
Sodium	650	20		mg/L	20	11/17/2005 1:05:59 PM
Thallium	ND	0.050		mg/L	1	11/17/2005 11:22:15 AM
Vanadium	ND	0.050		mg/L	1	11/17/2005 11:22:15 AM
Zinc	1.4	1.0		mg/L	20	11/17/2005 1:05:59 PM
Silica	21	5.4		mg/L	5	11/18/2005 12:53:53 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: 22-Nov-05

CLIENT: Giant Refining Co
Lab Order: 0511125
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-03

Client Sample ID: EP-1 to EP-2
Collection Date: 11/10/2005 6:05:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						Analyst: JAT
Petroleum Hydrocarbons, TR	50	2.0		mg/L	1	11/16/2005
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	11	10		µg/L	10	11/16/2005
Toluene	20	10		µg/L	10	11/16/2005
Ethylbenzene	ND	10		µg/L	10	11/16/2005
Methyl tert-butyl ether (MTBE)	12	10		µg/L	10	11/16/2005
1,2,4-Trimethylbenzene	26	10		µg/L	10	11/16/2005
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/16/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/16/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/16/2005
Naphthalene	42	20		µg/L	10	11/16/2005
1-Methylnaphthalene	50	40		µg/L	10	11/16/2005
2-Methylnaphthalene	52	40		µg/L	10	11/16/2005
Acetone	1600	100		µg/L	10	11/16/2005
Bromobenzene	ND	10		µg/L	10	11/16/2005
Bromochloromethane	ND	10		µg/L	10	11/16/2005
Bromodichloromethane	ND	10		µg/L	10	11/16/2005
Bromoform	ND	10		µg/L	10	11/16/2005
Bromomethane	ND	20		µg/L	10	11/16/2005
2-Butanone	220	100		µg/L	10	11/16/2005
Carbon disulfide	ND	100		µg/L	10	11/16/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/16/2005
Chlorobenzene	ND	10		µg/L	10	11/16/2005
Chloroethane	ND	20		µg/L	10	11/16/2005
Chloroform	ND	10		µg/L	10	11/16/2005
Chloromethane	ND	10		µg/L	10	11/16/2005
2-Chlorotoluene	ND	10		µg/L	10	11/16/2005
4-Chlorotoluene	ND	10		µg/L	10	11/16/2005
cis-1,2-DCE	ND	10		µg/L	10	11/16/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/16/2005
Dibromochloromethane	ND	10		µg/L	10	11/16/2005
Dibromomethane	ND	20		µg/L	10	11/16/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/16/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/16/2005

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: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: EP-1 to EP-2

Lab Order: 0511125

Collection Date: 11/10/2005 6:05:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/16/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/16/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/16/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/16/2005
2-Hexanone	ND	100		µg/L	10	11/16/2005
Isopropylbenzene	ND	10		µg/L	10	11/16/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/16/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/16/2005
Methylene Chloride	ND	30		µg/L	10	11/16/2005
n-Butylbenzene	ND	10		µg/L	10	11/16/2005
n-Propylbenzene	ND	10		µg/L	10	11/16/2005
sec-Butylbenzene	ND	10		µg/L	10	11/16/2005
Styrene	ND	10		µg/L	10	11/16/2005
tert-Butylbenzene	ND	10		µg/L	10	11/16/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/16/2005
trans-1,2-DCE	ND	10		µg/L	10	11/16/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/16/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/16/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/16/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/16/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/16/2005
Vinyl chloride	ND	10		µg/L	10	11/16/2005
Xylenes, Total	29	10		µg/L	10	11/16/2005
Surr: 1,2-Dichloroethane-d4	96.7	69.9-130		%REC	10	11/16/2005
Surr: 4-Bromofluorobenzene	96.1	71.2-123		%REC	10	11/16/2005
Surr: Dibromofluoromethane	105	73.9-134		%REC	10	11/16/2005
Surr: Toluene-d8	114	81.9-122		%REC	10	11/16/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	50		µg/L	1	11/17/2005
Acenaphthylene	ND	50		µg/L	1	11/17/2005
Aniline	ND	100		µg/L	1	11/17/2005
Anthracene	ND	50		µg/L	1	11/17/2005
Azobenzene	ND	50		µg/L	1	11/17/2005
Benz(a)anthracene	ND	75		µg/L	1	11/17/2005
Benzo(a)pyrene	ND	75		µg/L	1	11/17/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	11/17/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/17/2005

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: EP-1 to EP-2

Lab Order: 0511125

Collection Date: 11/10/2005 6:05:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	50		µg/L	1	11/17/2005
Benzoic acid	ND	250		µg/L	1	11/17/2005
Benzyl alcohol	ND	100		µg/L	1	11/17/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/17/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	11/17/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	11/17/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	11/17/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/17/2005
Butyl benzyl phthalate	ND	75		µg/L	1	11/17/2005
Carbazole	ND	50		µg/L	1	11/17/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	11/17/2005
4-Chloroaniline	ND	100		µg/L	1	11/17/2005
2-Chloronaphthalene	ND	50		µg/L	1	11/17/2005
2-Chlorophenol	ND	50		µg/L	1	11/17/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	11/17/2005
Chrysene	ND	75		µg/L	1	11/17/2005
Di-n-butyl phthalate	ND	50		µg/L	1	11/17/2005
Di-n-octyl phthalate	ND	75		µg/L	1	11/17/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/17/2005
Dibenzofuran	ND	50		µg/L	1	11/17/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	11/17/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	11/17/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	11/17/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	11/17/2005
Diethyl phthalate	ND	50		µg/L	1	11/17/2005
Dimethyl phthalate	ND	50		µg/L	1	11/17/2005
2,4-Dichlorophenol	ND	50		µg/L	1	11/17/2005
2,4-Dimethylphenol	65	50		µg/L	1	11/17/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	11/17/2005
2,4-Dinitrophenol	ND	250		µg/L	1	11/17/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	11/17/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	11/17/2005
Fluoranthene	ND	50		µg/L	1	11/17/2005
Fluorene	53	50		µg/L	1	11/17/2005
Hexachlorobenzene	ND	50		µg/L	1	11/17/2005
Hexachlorobutadiene	ND	50		µg/L	1	11/17/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/17/2005
Hexachloroethane	ND	50		µg/L	1	11/17/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/17/2005
Isophorone	ND	50		µg/L	1	11/17/2005
2-Methylnaphthalene	98	50		µg/L	1	11/17/2005
2-Methylphenol	ND	75		µg/L	1	11/17/2005

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: EP-1 to EP-2

Lab Order: 0511125

Collection Date: 11/10/2005 6:05:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	100		µg/L	1	11/17/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/17/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	11/17/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/17/2005
Naphthalene	ND	50		µg/L	1	11/17/2005
2-Nitroaniline	ND	250		µg/L	1	11/17/2005
3-Nitroaniline	ND	250		µg/L	1	11/17/2005
4-Nitroaniline	ND	100		µg/L	1	11/17/2005
Nitrobenzene	ND	50		µg/L	1	11/17/2005
2-Nitrophenol	ND	75		µg/L	1	11/17/2005
4-Nitrophenol	ND	250		µg/L	1	11/17/2005
Pentachlorophenol	ND	250		µg/L	1	11/17/2005
Phenanthrene	110	50		µg/L	1	11/17/2005
Phenol	67	50		µg/L	1	11/17/2005
Pyrene	ND	75		µg/L	1	11/17/2005
Pyridine	ND	150		µg/L	1	11/17/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/17/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/17/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	11/17/2005
Surr: 2,4,6-Tribromophenol	87.2	16.6-150		%REC	1	11/17/2005
Surr: 2-Fluorobiphenyl	72.4	19.6-134		%REC	1	11/17/2005
Surr: 2-Fluorophenol	46.8	9.54-113		%REC	1	11/17/2005
Surr: 4-Terphenyl-d14	78.1	22.7-145		%REC	1	11/17/2005
Surr: Nitrobenzene-d5	66.9	14.6-134		%REC	1	11/17/2005
Surr: Phenol-d5	35.4	10.7-80.3		%REC	1	11/17/2005

EPA METHOD 245.1: MERCURY

Analyst: CMC

Mercury	0.00097	0.00020	mg/L	1	11/14/2005
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EPA 6010: TOTAL RECOVERABLE METALS

Analyst: NMO

Aluminum	0.37	0.020	mg/L	1	11/17/2005 11:25:32 AM
Antimony	ND	0.010	mg/L	1	11/17/2005 11:25:32 AM
Arsenic	ND	0.020	mg/L	1	11/17/2005 11:25:32 AM
Barium	0.081	0.020	mg/L	1	11/17/2005 11:25:32 AM
Beryllium	ND	0.0030	mg/L	1	11/17/2005 11:25:32 AM
Boron	0.22	0.040	mg/L	1	11/17/2005 11:25:32 AM
Cadmium	ND	0.0020	mg/L	1	11/17/2005 11:25:32 AM
Calcium	56	1.0	mg/L	1	11/17/2005 11:25:32 AM
Chromium	0.0074	0.0060	mg/L	1	11/17/2005 11:25:32 AM
Cobalt	ND	0.0060	mg/L	1	11/17/2005 11:25:32 AM
Copper	0.0067	0.0060	mg/L	1	11/17/2005 11:25:32 AM
Iron	6.2	1.0	mg/L	20	11/17/2005 1:08:12 PM
Lead	ND	0.0050	mg/L	1	11/17/2005 11:25:32 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

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: EP-1 to EP-2

Lab Order: 0511125

Collection Date: 11/10/2005 6:05:00 PM

Project: Split samples w/OCD on Old API Sep

Lab ID: 0511125-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	16	1.0		mg/L	1	11/17/2005 11:25:32 AM
Manganese	0.30	0.0020		mg/L	1	11/17/2005 11:25:32 AM
Molybdenum	ND	0.0080		mg/L	1	11/17/2005 11:25:32 AM
Nickel	0.016	0.010		mg/L	1	11/17/2005 11:25:32 AM
Potassium	40	1.0		mg/L	1	11/17/2005 11:25:32 AM
Selenium	ND	0.050		mg/L	1	11/17/2005 11:25:32 AM
Silver	ND	0.0050		mg/L	1	11/17/2005 11:25:32 AM
Sodium	800	20		mg/L	20	11/17/2005 1:08:12 PM
Thallium	ND	0.050		mg/L	1	11/17/2005 11:25:32 AM
Vanadium	ND	0.050		mg/L	1	11/17/2005 11:25:32 AM
Zinc	0.97	0.050		mg/L	1	11/17/2005 11:25:32 AM
Silica	20	5.4		mg/L	5	11/18/2005 12:51:39 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: 22-Nov-05

CLIENT: Giant Refining Co
 Work Order: 0511125
 Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date 11/17/2005	Prep Date 11/14/2005
Client ID:			Run ID: ELMO_051117A		SeqNo: 424365	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	%RPD RPDLimit Qual
Acenaphthene	ND	10				
Acenaphthylene	ND	10				
Aniline	ND	20				
Anthracene	ND	10				
Azobenzene	ND	10				
Benzo(a)anthracene	ND	15				
Benzo(a)pyrene	ND	15				
Benzo(b)fluoranthene	ND	15				
Benzo(g,h,i)perylene	ND	10				
Benzo(k)fluoranthene	ND	10				
Benzoic acid	ND	50				
Benzyl alcohol	ND	20				
Bis(2-chloroethoxy)methane	ND	10				
Bis(2-chloroethyl)ether	ND	15				
Bis(2-chloroisopropyl)ether	ND	15				
Bis(2-ethylhexyl)phthalate	ND	15				
4-Bromophenyl phenyl ether	ND	10				
Butyl benzyl phthalate	ND	15				
Carbazole	ND	10				
4-Chloro-3-methylphenol	ND	20				
4-Chloroaniline	ND	20				
2-Chloronaphthalene	ND	10				
2-Chlorophenol	ND	10				
4-Chlorophenyl phenyl ether	ND	15				
Chrysene	ND	15				
Di-n-butyl phthalate	ND	10				
Di-n-octyl phthalate	ND	15				

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giam Refining Co

Work Order: 0511125

Project: Split samples w/OCD on Old API Sep

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

B - Analyte detected in the associated Method Blank

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

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

Method Blank

CLIENT: Giant Refining Co

Work Order: 0511125

Project: Split samples w/OCD on Old API Sep

Compound	Concentration (ppb)	Recovery (%)	LOD (ppb)	LOQ (ppb)	Method
2-Nitrophenol	ND	15			
4-Nitrophenol	ND	50			
Pentachlorophenol	ND	50			
Phenanthrene	ND	10			
Phenol	ND	10			
Pyrene	ND	15			
Pyridine	ND	30			
1,2,4-Trichlorobenzene	ND	10			
2,4,5-Trichlorophenol	ND	10			
2,4,6-Trichlorophenol	ND	15			
Surr: 2,4,6-Tribromophenol	145.7	0	200	0	72.9
Surr: 2-Fluorobiphenyl	70.68	0	100	0	70.7
Surr: 2-Fluorophenol	114.8	0	200	0	57.4
Surr: 4-Terphenyl-d14	88.34	0	100	0	88.3
Surr: Nitrobenzene-d5	67.28	0	100	0	67.3
Surr: Phenol-d5	73.12	0	200	0	36.6

Sample ID	MB-9184	Batch ID:	9184	Test Code:	SW7470	Units:	mg/L	Analysis Date	11/14/2005	Prep Date	11/14/2005
Client ID:		Run ID:	MI-LA254_051114A	SeqNo:	422036						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit
Mercury		ND		0.0002							Qual

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

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

B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co

Work Order: 0511125

Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT

Method Blank

Sample ID	MB-9199	Batch ID: 9199	Test Code: SW6010A	Units: mg/L	Analysis Date	11/17/2005 11:00:56 A	Prep Date	11/15/2005			
Client ID:			Run ID: ICP_051117A		SeqNo:	423291					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.02									
Antimony	ND	0.01									
Arsenic	ND	0.02									
Barium	ND	0.02									
Beryllium	ND	0.003									
Boron	0.009077	0.04									J
Cadmium	0.0003728	0.002									J
Calcium	ND	1									
Chromium	ND	0.006									
Cobalt	ND	0.006									
Copper	ND	0.006									
Iron	ND	0.05									
Lead	ND	0.005									
Magnesium	ND	1									J
Manganese	0.0004479	0.002									
Molybdenum	ND	0.008									
Nickel	ND	0.01									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	0.0004823	0.005									J
Sodium	ND	1									
Thallium	ND	0.05									
Vanadium	ND	0.05									
Zinc	0.001187	0.05									J
Silica	ND	1.1									

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

4

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT: Giant Refining Co
 Work Order: 0511125
 Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Method Blank

Sample ID	5ml rb	Batch ID: R17297	Test Code: SW8260B	Units: µg/L	Analysis Date	11/15/2005	Prep Date				
Client ID:			Run ID: THOR_051115A		SeqNo: 422319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	0.506	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									J

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

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

B - Analyte detected in the associated Method Blank
 /

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co

Work Order: 0511125

Project: Split samples w/OCD on Old API Sep

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

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

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

B - Analyte detected in the associated Method Blank
2

QC SUMMARY REPORT
Method Blank

Method Blank

CLIENT: Giant Refining Co

Work Order: 0511125

Project: Split samples w/OCD on Old API Sep

[illegible]

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: Giant Refining Co

Work Order: 0511125

Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT

Method Blank

Sample ID	5mL rb	Batch ID: R17344	Test Code: SW8260B	Units: µg/L	Analysis Date	11/17/2005	Prep Date				
Client ID:			Run ID:	NEPTUNE_051117A	SeqNo:	423631					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									
cis-1,3-Dichloropropene	ND	1									

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

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

B - Analyte detected in the associated Method Blank
4

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co

Work Order: 0511125

Project: Split samples w/OCD on Old API Sep

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

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

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

B - Analyte detected in the associated Method Blank
5

Hall Environmental Analysis Laboratory

Date: 22-Nov-05

CLIENT:

Giant Refining Co

Work Order:

0511125

Project:

Split samples w/OCD on Old API Sep

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	100ng Ics	Batch ID: R17297	Test Code: SW8260B	Units: µg/L	Analysis Date	11/15/2005	Prep Date				
Client ID:		Run ID:	THOR_051115A		SeqNo:	422320					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.87	1	20	0	99.4	79.3	136	0			
Toluene	21.12	1	20	0	106	65.5	123	0			
Chlorobenzene	20.12	1	20	0	101	85.6	126	0			
1,1-Dichloroethene	22.63	1	20	0	113	72.7	135	0			
Trichloroethene (TCE)	20.67	1	20	0	103	85.6	119	0			

Sample ID	100ng Icsd	Batch ID: R17297	Test Code: SW8260B	Units: µg/L	Analysis Date	11/16/2005	Prep Date				
Client ID:		Run ID:	THOR_051115A		SeqNo:	422545					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.45	1	20	0	107	81.4	130	19.87	7.62	11	
Toluene	20.43	1	20	0	102	65.5	123	21.12	3.33	12.2	
Chlorobenzene	19.96	1	20	0	99.8	89.6	134	20.12	0.808	12	
1,1-Dichloroethene	22.16	1	20	0	111	75.1	120	22.63	2.07	19.3	
Trichloroethene (TCE)	19.96	1	20	0	99.8	75.8	110	20.67	3.52	15.5	

Sample ID	100ng Ics	Batch ID: R17344	Test Code: SW8260B	Units: µg/L	Analysis Date	11/17/2005	Prep Date				
Client ID:		Run ID:	NEPTUNE_051117A		SeqNo:	423632					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.77	1	20	0	104	79.3	136	0			
Toluene	20.54	1	20	0	103	65.5	123	0			
Chlorobenzene	20.81	1	20	0	104	85.6	126	0			
1,1-Dichloroethene	22.16	1	20	0	111	72.7	135	0			
Trichloroethene (TCE)	19.43	1	20	0	97.1	85.6	119	0			

Quantifiers:

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

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

B - Analyte detected in the associated Method Blank
 /

QC SUMMARY REPORT

CLIENT: Giant Refining Co
 Work Order: 0511125
 Project: Split samples w/OCD on Old API Sep

Laboratory Control Spike - generic

Sample ID	LCS-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date	11/17/2005	Prep Date	11/14/2005			
Client ID:			Run ID:	ELMO_051117A	SeqNo:	424366					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.72	10	100	0	75.7	11	123	0			
4-Chloro-3-methylphenol	140.7	20	200	0	70.4	15.4	119	0			
2-Chlorophenol	141	10	200	0	70.5	12.2	122	0			
1,4-Dichlorobenzene	68.12	10	100	0	68.1	16.9	100	0			
2,4-Dinitrotoluene	71.96	10	100	0	72.0	13	138	0			
N-Nitrosodi-n-propylamine	68.28	10	100	0	68.3	9.93	122	0			
4-Nitrophenol	87.36	50	200	0	43.7	-20.5	87.4	0			
Pentachlorophenol	129.2	50	200	0	64.6	-0.355	114	0			
Phenol	76.18	10	200	0	38.1	7.53	73.1	0			
Pyrene	80.9	15	100	0	80.9	12.6	140	0			
1,2,4-Trichlorobenzene	66.78	10	100	0	66.8	17.4	98.7	0			

Sample ID	LCSD-9185	Batch ID: 9185	Test Code: SW8270C	Units: µg/L	Analysis Date 11/17/2005		Prep Date 11/14/2005				
Client ID:			Run ID:	ELMO_051117A	SeqNo:	424368					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.94	10	100	0	75.9	11	123	75.72	0.290	30.5	
4-Chloro-3-methylphenol	145.9	20	200	0	72.9	15.4	119	140.7	3.60	28.6	
2-Chlorophenol	128.1	10	200	0	64.0	12.2	122	141	9.59	107	
1,4-Dichlorobenzene	59.16	10	100	0	59.2	16.9	100	68.12	14.1	62.1	
2,4-Dinitrotoluene	71.68	10	100	0	71.7	13	138	71.96	0.390	14.7	
N-Nitrosodi-n-propylamine	66.94	10	100	0	66.9	9.93	122	68.28	1.98	30.3	
4-Nitrophenol	56.1	50	200	0	28.1	12.5	87.4	87.36	43.6	36.3	R
Pentachlorophenol	74.34	50	200	0	37.2	3.55	114	129.2	53.9	49	R
Phenol	75.02	10	200	0	37.5	7.53	73.1	76.18	1.53	52.4	
Pyrene	82.6	15	100	0	82.6	12.6	140	80.9	2.08	16.3	
1,2,4-Trichlorobenzene	62.1	10	100	0	62.1	17.4	98.7	66.78	7.26	36.4	

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

CLIENT:

Work Order:

Project:

Giant Refining Co

0511125

Split samples w/OCD on Old API Sep

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-9184	Batch ID: 9184	Test Code: SW7470	Units: mg/L	Analysis Date	11/14/2005	Prep Date	11/14/2005				
Client ID:			Run ID: MI-LA254_051114A		SeqNo:	422037						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.004712	0.0002	0.005	0	94.2	80	120	0			

Sample ID	LCSD-9184	Batch ID: 9184	Test Code: SW7470	Units: mg/L	Analysis Date	11/14/2005	Prep Date	11/14/2005				
Client ID:			Run ID: MI-LA254_051114A		SeqNo:	422051						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.004592	0.0002	0.005	0	91.8	80	120	0.004712	2.59	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: Giant Refining Co
 Work Order: 0511125
 Project: Split samples w/OCD on Old API Sep

Sample ID	LCS-9199	Batch ID: 9199	Test Code: SW6010A	Units: mg/L	Analysis Date	11/17/2005 11:03:34 A	Prep Date	11/15/2005				
Client ID:	Run ID:	ICP_051117A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Aluminum	0.4958		0.02	0.5	0	99.2	80	120	0			
Antimony	0.4905		0.01	0.5	0	98.1	80	120	0			
Arsenic	0.478		0.02	0.5	0	95.6	80	120	0			
Barium	0.467		0.02	0.5	0	93.4	80	120	0			
Beryllium	0.4998		0.003	0.5	0	100	80	120	0			
Boron	0.4865		0.04	0.5	0.009077	95.5	80	120	0			
Cadmium	0.4706		0.002	0.5	0.0003728	94.1	80	120	0			
Calcium	52.36	1		50	0	105	80	120	0			
Chromium	0.4743		0.006	0.5	0	94.9	80	120	0			
Cobalt	0.4658		0.006	0.5	0	93.2	80	120	0			
Copper	0.4923		0.006	0.5	0	98.5	80	120	0			
Iron	0.4631		0.05	0.5	0	92.6	80	120	0			
Lead	0.4736		0.005	0.5	0	94.7	80	120	0			
Magnesium	52.77	1		50	0	106	80	120	0			
Manganese	0.4631		0.002	0.5	0.0004479	92.5	80	120	0			
Molybdenum	0.4934		0.008	0.5	0	98.7	80	120	0			
Nickel	0.455		0.01	0.5	0	91.0	80	120	0			
Potassium	55.53	1		50	0	111	80	120	0			
Selenium	0.4616		0.05	0.5	0	92.3	80	120	0			
Silver	0.4803		0.005	0.5	0.0004823	96.0	80	120	0			
Sodium	56.54	1		50	0	113	80	120	0			
Thallium	0.5019		0.05	0.5	0	100	80	120	0			
Vanadium	0.4881		0.05	0.5	0	97.6	80	120	0			
Zinc	0.4585		0.05	0.5	0.001187	91.5	80	120	0			
Silica	4.802	1.1		5.35	0	89.8	80	120	0			

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

CLIENT:

Giant Refining Co

Work Order:

0511125

Project:

Split samples w/OCD on Old API Sep

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID	LCSD-9199	Batch ID: 9199	Test Code: SW6010A		Units: mg/L	Analysis Date 11/17/2005 11:06:32 A		Prep Date 11/15/2005		
Client ID:	Run ID:	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 423293		%RPD	RPDLimit	Qual
						LowLimit	HighLimit			
Analyte	Result									
Aluminum	0.5036	0.02	0.5	0	101	80	120	0.4958	1.58	20
Antimony	0.483	0.01	0.5	0	96.6	80	120	0.4905	1.55	20
Arsenic	0.4825	0.02	0.5	0	96.5	80	120	0.478	0.949	20
Barium	0.4685	0.02	0.5	0	93.7	80	120	0.467	0.312	20
Beryllium	0.4968	0.003	0.5	0	99.4	80	120	0.4998	0.604	20
Boron	0.4937	0.04	0.5	0.009077	96.9	80	120	0.4865	1.47	20
Cadmium	0.471	0.002	0.5	0.0003728	94.1	80	120	0.4706	0.0773	20
Calcium	51.81	1	50	0	104	80	120	52.36	1.06	20
Chromium	0.4733	0.006	0.5	0	94.7	80	120	0.4743	0.210	20
Cobalt	0.4606	0.006	0.5	0	92.1	80	120	0.4658	1.13	20
Copper	0.4937	0.006	0.5	0	98.7	80	120	0.4923	0.273	20
Iron	0.4673	0.05	0.5	0	93.5	80	120	0.4631	0.891	20
Lead	0.4725	0.005	0.5	0	94.5	80	120	0.4736	0.235	20
Magnesium	52.4	1	50	0	105	80	120	52.77	0.688	20
Manganese	0.4655	0.002	0.5	0.0004479	93.0	80	120	0.4631	0.505	20
Molybdenum	0.4905	0.008	0.5	0	98.1	80	120	0.4934	0.585	20
Nickel	0.456	0.01	0.5	0	91.2	80	120	0.455	0.224	20
Potassium	55.08	1	50	0	110	80	120	55.53	0.809	20
Selenium	0.4647	0.05	0.5	0	92.9	80	120	0.4616	0.672	20
Silver	0.4843	0.005	0.5	0.0004823	96.8	80	120	0.4803	0.834	20
Sodium	56.4	1	50	0	113	80	120	56.54	0.239	20
Thallium	0.4935	0.05	0.5	0	98.7	80	120	0.5019	1.69	20
Vanadium	0.4911	0.05	0.5	0	98.2	80	120	0.4881	0.615	20
Zinc	0.4746	0.05	0.5	0.001187	94.7	80	120	0.4585	3.44	20
Silica	4.866	1.1	5.35	0	91.0	80	120	4.802	1.32	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

5

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

11/11/2005

Work Order Number 0511125

Received by AT

Checklist completed by

Signature

Date

11/11/05

Matrix

Carrier name Client drop-off

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

Client:	Giant Refining	Project Name:	Split Samples with
	Company - Cimiza		OC D on Old APT separator,
Address:	Route 3 Box 7		AL-2 to EP-1, and EP-1 to EP-2
	Gallup, NM 87301	Project #:	

Address: Company - Ciniza
P.O. Box 1

Address: Route 3 Box 7

Gallup, NM 87301

Phone #: 505 777 2022

Fax #: 505 727 0310

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

Matrix

Number/Volume

HEAL No.

11-10-05	1720	H ₂ O	Old API Sep. 6 each	05/125-1
----------	------	------------------	---------------------	----------

"	1735	"	AL-2 to EP-1	6 each	2
---	------	---	--------------	--------	---

"	1805 "	EP-1 to EP-2	6 each			3
---	--------	--------------	--------	--	--	---

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

Relinquished By: (Signature)

Received By: (Signature)

50111105

Date: _____

Time:

Relinquished By: (Signature)

Received By: (Signature)

1435

QA/QC Package: Std ☐ Level 4 ☐

Other:

Project Name: Split Samples with
OCB on Old APT assembly,
AL-2 to EP-1, and EP-1 to EP-2

Project #:

Project #:

Project Manager:

Steve Davis,

Sampler:

Sampler: Steve Smith

Sample Temperature:

Sample Temperature: 45

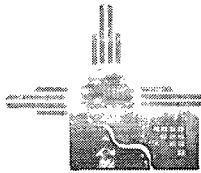
**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

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

ANALYSIS REQUEST

[illegible]

Remarks: RUSH



NPDES Primacy

Issue:

National Pollution Discharge Elimination System (NPDES) programs are currently regulated and administered by the Federal Environmental Protection Agency (EPA); and the EPA encourages and expects states to take over administration (assume "primacy") for this program.

Enabling legislation would be required to allow the New Mexico Environmental Department (NMED) to assume primacy.

There are problems with interpretations of the Construction General Permit (CGP) that have yet to be resolved with its current administrator, Region 6 of the EPA.

NMHBA Position:

We believe:

NMED will assume primacy for the NPDES program eventually since the EPA expects them to, and pressure on New Mexico will continue until primacy has been achieved.

NMED should include the construction industry in its drafting, and obtain consensus on the enabling legislation prior to the legislation being introduced.

NMHBA has not seen nor agreed with the regulations for the construction industry, and will not take a position in support of or opposition to NMED's primacy goal until these regulations have been completed with NMHBA's participation in the drafting process, and agreement with the result.

The construction industry must not be expected to subsidize NPDES primacy for New Mexico through permit fees; and additional funding mechanisms must be established to support NPDES primacy.

The EPA and the NMED should establish and maintain an effective outreach program through which the construction industry can understand the NPDES regulations and can work to achieve compliance prior to the initiation of enforcement actions.

NMED should help NMHBA resolve problematic issues in interpreting the CGP at the EPA Region 6 level prior to seeking primacy for New Mexico. Failure to resolve these issues will result in NMED accepting a flawed program that will only result in conflicts between the construction industry, NMED, and Region 6, as other states have seen.

Approved by Government Affairs Committee: 11-04-05

Approved by NMHBA Board of Directors: 11-05-05

Amended: _____

Date Approved for Continuance: _____

Chavez, Carl J, EMNRD

From: Steve Morris [smorris@giant.com]
Sent: Thursday, November 17, 2005 10:15 AM
To: Monzeglio, Hope, NMENV; Foust, Denny, EMNRD; Chavez, Carl J, EMNRD; Price, Wayne, EMNRD; Dave Cobrain (E-mail)
Cc: Ed Riege; James Romero; Steve Morris; Johnny Sanchez
Subject: Giant - Ciniza update week of Nov. 14, 2005

The following is an update for the week of Nov. 14, 2005

- 1) API separator.... Nothing new noted
- 2) Dennis Fuhs and Mike Shane from Fuhs Construction were onsite to put together a plan and cost estimate for clean up around the aeration lagoons and ponds 1 & 2.
- 3) Vector Arizona Inc. will be onsite Monday the 28th of November, 2005 to put together information for the site map needed at Ciniza.
This map will show drainage areas needed for stormwater controls.
- 4) Samples of the material around the aeration lagoons and pond 1 have been gathered and will be delivered to Hall Lab. in Albuquerque today.

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Chavez, Carl J, EMNRD

To: 'Ed Riege'
Cc: Price, Wayne, EMNRD; Monzeglio, Hope, NMENV
Subject: RE: November 15, 2005

Ed:

I am working to develop a summary of our November 10, 2005 meeting at the Ciniza Refinery that should help to itemize the issues we discussed during OCD's September 8, 2005 follow-up meeting. In addition, upon review of the attached plan, Giant does not appear to be addressing the "additional treatment from the old API separator (OAPIS)" issue where Wayne Price discussed the need to treat effluent from the OAPIS before routing it to aeration lagoon #1. Also, if Giant plans to use the OAPIS, secondary containment with leak detection will be required. OCD does not think that Giant has isolated and eliminated the source(s) of oil or hazardous waste accumulation at the OAPIS.

Regarding the NAPIS, there appears to be a hydrogeologic connection between the water table aquifer and the fluid level in the secondary containment structure or liner of the NAPIS. Giant had recently attempted to uncover and repair the secondary liner and felt that the once sporadic fluid level had stabilized to about the 1 foot level. However, OCD feels that the secondary containment needs to be fixed to eliminate hydrogeologic connection with the aquifer to demonstrate that secondary containment is in tact and fully functional. Untreated oil or hazardous waste could potentially migrate to the surface and/or worse, migrate underneath the Ciniza property via a groundwater pathway. While OCD is aware of the Chinle Clay Formation beneath and surrounding the Ciniza Refinery, there is a permeable zone where groundwater is migrating northwestward beneath the property. I will attempt to clarify the above matters in my summary.

Please consider the above in your plan when addressing API Separator issues. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/> (Pollution Prevention Guidance is under "Publications")

-----Original Message-----

From: Ed Riege [mailto:eriego@giant.com]
Sent: Monday, November 14, 2005 5:22 PM
To: Chavez, Carl J, EMNRD
Subject: FW: November 15, 2005

-----Original Message-----

From: Ed Riege
Sent: Monday, November 14, 2005 5:18 PM
To: 'wayne.price@state.nm.us'
Cc: David Kirby; Ed Rios; James Romero; 'carl.chavez@state.nm.us'; 'hope.monzeglio@state.nm.us'; 'richard.powell@state.nm.us'
Subject: November 15, 2005

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<<OCD Nov1405.doc>>

Chavez, Carl J, EMNRD

From: Ed Riege [eriege@giant.com]
Sent: Monday, November 14, 2005 5:22 PM
To: Chavez, Carl J, EMNRD
Subject: FW: November 15, 2005



OCD Nov1405.doc
(21 KB)

-----Original Message-----

From: Ed Riege
Sent: Monday, November 14, 2005 5:18 PM
To: 'wayne.price@state.nm.us'
Cc: David Kirby; Ed Rios; James Romero; 'carl.chavez@state.nm.us';
'hope.monzeglio@state.nm.us'; 'richard.powell@state.nm.us'
Subject: November 15, 2005

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<<OCD Nov1405.doc>>

November 14, 2005

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

Dear Mr. Price:

This letter is in response to your email dated October 21, 2005. Giant would like to thank you and Carl Chavez for arranging an informative meeting/inspection with Richard Powell of NMED Surface Water Quality Bureau at Ciniza on November 12, 2005. This inspection gave Giant insight to better answer your email asking for a plan to investigate ways to upgrade the current storm water plan and update the refinery process drains and additional treatment from the old API separator. The following is Ciniza's Plan for your approval:

Giant will hire a consultant to determine storm water and process water flows and verify if any commingling may be occurring. The consultant will provide a revised storm water property site map, which will include all existing controls. The consultant will also make recommendations based on their site investigation on what changes can be made to the current storm water plan, process drains, storm water drains and drainage systems to assure that no commingling takes place. Giant proposes the following schedule:

November 28	-	Have consultant hired with PO in place.
December 30	-	Provide OCD with a revised storm water/process water site map.
January 15, 2006	-	Set up meeting with OCD to discuss improvements in the storm water/process drainage based on the site investigation.

Thank you for your review of this plan.

Sincerely,

Ed Riege
Environmental Superintendent

C: Ed Rios

David Kirby

James Romero

Carl Chavez OCD

Hope Monzeglio NMED Hazardous Waste Bureau

Richard Powell NMED Surface Water Quality Bureau

Chavez, Carl J, EMNRD

From: Steve Morris [smorris@giant.com]
Sent: Monday, November 14, 2005 11:21 AM
To: Chavez, Carl J, EMNRD; Foust, Denny, EMNRD; Monzeglio, Hope, NMENV; Price, Wayne, EMNRD
Cc: Ed Riege; James Romero; Steve Morris
Subject: Week 9 update

The following is an update for week 9

- 1) API Separator - No problems noted.
 - 2) Split samples were taken with Wayne Price and Carl Chavez from OCD on 11/10/2005. Those samples included water from: The old API separator, aeration lagoon two to evaporation pond one, and the inlet of pond two. Parameters included: TPH (Method 418.1), 8260, 8270, 6010 Metals, and 7470 Mercury.
 - 3) Richard Powell conducted a stormwater inspection along with Wayne Price and Carl Chavez on 11/10/2005.
- Wayne and Carl also conducted a followup to their visit on 9/8/2005.

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Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Monday, November 14, 2005 9:52 AM
To: eriege@giant.com; smorris@giant.com; jromero@giant.com
Cc: Cobrain, Dave, NMENV; Price, Wayne, EMNRD; Chavez, Carl J, EMNRD
Subject: Weekly sampling adjustment for 11/14/05

Steve

To recap our phone conversation. The split samples collected with OCD on November 10, 2005 from the Old API, AL2-EP-1 are sufficient for weekly sampling event for last week.

When Giant collects the weekly sample this week (11/14/05) from AL2-EP-1, Giant must also collect effluent samples from the Old API Separator and the New API Separator. These three samples must be collected at the same time and analyzed for EPA Method 8021 (BTEX) + MTBE and EPA Method 8015B DRO. Please continue to analyze for pollutant priority metals from AL2-EP1 (requirement of weekly sampling) and any additional analysis to the Old API effluent sample required during the weekly sampling from OCD. If you have any questions please call.

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 428-2545
Fax: (505)-428-2567
hope.monzeglio@state.nm.us

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11/21/2005

CHAIN-OF-CUSTODY RECORD

QA/QC Package:
Std ☒ Level 4 ☐

Client: NM Oil Conservation Div.

Project Name: Cimiza Refinery
Gallup, NM

Address:

Project #:

Project Manager: David Chavez

Phone #: 505-476-3491

Sampler: David Chavez

Fax #:

Sample Temperature: ~50°F

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

Number/Volume

Preservative
HgCl₂ HNO₃

HEAL No.

BTEX + MTBE + TMB's (8021)

BTEX + MTBE + TPH (Gasoline Only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

EDC (Method 8021)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

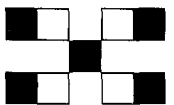
8081 Pesticides / PCB's (8082)

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles or Headspace (Y or N)

ANALYSIS REQUEST



**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)

Received By: (Signature)

Date:

Time:

Relinquished By: (Signature)

Received By: (Signature)

Chavez, Carl J, EMNRD

From: James Romero [jromero@giant.com]
Sent: Friday, November 04, 2005 2:30 PM
To: Chavez, Carl J, EMNRD; Price, Wayne, EMNRD; Foust, Denny, EMNRD; Monzeglio, Hope, NMENV
Cc: Ed Riege; Steve Morris; Johnny Sanchez; James Romero
Subject: Update for week 8



HALL6291_000.pdf (246 KB)



HALL6305_000.pdf (478 KB)



HALL6302_000.pdf (355 KB)

The following is an update for week 8

- 1) API Separator - The west bay was resealed, tested and is back in service. Work on the east bay is up coming
- 2) Excavation of impacted soil from spill at tank 232 is 95% complete. Excavated soil is being stockpiled on plastic
- 3) Soil samples from tank 232 spill were taken and shipped for analysis to determine disposal options
- 4) On 11/02 oil was observed in the old API Separator and the source was tracked to a sample point that tied into a stormwater drain. The sample point has been redirected to the process sewer and the oil at the separator has been vacuumed
- 5) Weekly samples were taken from AP2 to EP1, and Stormwater Separator Effluent
- 6) Weekly lab results are attached (AL2 to EP1 dated 10/13/05 and 10/20/05) (SW Separator dated 10/13/05). Investigations are underway to determine the cause(s) of the increased levels of benzene.
- 7) Updated NMED Hazardous Waste Bureau on the compliance inspection conducted October 26 and 27.
- 8) Discussed changes on PQL and DF and regulatory limits with Hall Laboratory per conference call with NMED, Hall, and Giant Industries, Inc.

<<HALL6291_000.pdf>> <<HALL6305_000.pdf>> <<HALL6302_000.pdf>>

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COVER LETTER

November 02, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 10-17-05

Order No.: 0510201

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 10/20/2005 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

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

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

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co
Project: AL-2 to EP-1 Week of 10-17-05
Lab Order: 0510201

CASE NARRATIVE

Analytical Comments for METHOD 8015DRO_W, SAMPLE 0510201-01A: DNOP not recovered due to dilution

The PQL was raised for EPA method 8015 GRO and 8021 due to elevated levels of diesel range organics.

Hall Environmental Analysis Laboratory

Date: 02-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0510201

Collection Date: 10/20/2005 12:00:00 PM

Project: AL-2 to EP-1 Week of 10-17-05

Lab ID: 0510201-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						
						Analyst: SCC
Diesel Range Organics (DRO)	600	86		mg/L	85.714	10/27/2005 10:36:30 AM
Motor Oil Range Organics (MRO)	ND	430		mg/L	85.714	10/27/2005 10:36:30 AM
Surr: DNOP	0	58-140	S	%REC	85.714	10/27/2005 10:36:30 AM
EPA METHOD 8015B: GASOLINE RANGE						
						Analyst: NSB
Gasoline Range Organics (GRO)	ND	1.0		mg/L	20	10/31/2005 1:40:43 PM
Surr: BFB	116	79.7-118		%REC	20	10/31/2005 1:40:43 PM
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	20	10/31/2005 1:40:43 PM
Benzene	ND	10		µg/L	20	10/31/2005 1:40:43 PM
Toluene	14	10		µg/L	20	10/31/2005 1:40:43 PM
Ethylbenzene	11	10		µg/L	20	10/31/2005 1:40:43 PM
Xylenes, Total	70	10		µg/L	20	10/31/2005 1:40:43 PM
Surr: 4-Bromofluorobenzene	112	82.2-119		%REC	20	10/31/2005 1:40:43 PM
EPA METHOD 245.1: MERCURY						
						Analyst: CMC
Mercury	0.0045	0.00020		mg/L	1	10/26/2005
EPA 6010: TOTAL RECOVERABLE METALS						
						Analyst: NMO
Antimony	ND	0.010		mg/L	1	10/27/2005 5:08:29 PM
Arsenic	ND	0.020		mg/L	1	10/27/2005 5:08:29 PM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 5:08:29 PM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 5:08:29 PM
Chromium	0.015	0.0060		mg/L	1	10/27/2005 5:08:29 PM
Copper	0.067	0.0080		mg/L	1	10/27/2005 5:08:29 PM
Lead	0.018	0.0050		mg/L	1	10/28/2005 9:53:37 AM
Nickel	0.028	0.010		mg/L	1	10/27/2005 5:08:29 PM
Selenium	ND	0.050		mg/L	1	10/27/2005 5:08:29 PM
Silver	ND	0.0050		mg/L	1	10/27/2005 5:08:29 PM
Thallium	ND	0.010		mg/L	1	10/27/2005 5:08:29 PM
Zinc	3.3	0.25		mg/L	5	10/28/2005 10:39:51 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 / 9

Page 1 of 1

Hall Environmental Analysis Laboratory

Date: 02-Nov-05

CLIENT: Giant Refining Co
 Work Order: 0510201
 Project: AL-2 to EP-1 Week of 10-17-05

QC SUMMARY REPORT
Method Blank

Sample ID	MB-9054	Batch ID: 9054	Test Code: SW8015	Units: mg/L	Analysis Date	10/27/2005 3:31:02 AM	Prep Date	10/26/2005			
Client ID:			Run ID: FID(17A)_2_051026A		SeqNo: 415187						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.252	0	1	0	125	58	140	0			

Sample ID	Reagent Blank 5m	Batch ID: R17139	Test Code: SW8015	Units: mg/L	Analysis Date	10/31/2005 8:13:11 AM	Prep Date				
Client ID:			Run ID: PIDFID_051031A		SeqNo: 417028						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	22.72	0	20	0	114	79.7	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R17139	Test Code: SW8021	Units: µg/L	Analysis Date	10/31/2005 8:13:11 AM	Prep Date				
Client ID:			Run ID: PIDFID_051031A		SeqNo: 416877						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	21.06	0	20	0	105	82.2	119	0			

Sample ID	MB-9056	Batch ID: 9056	Test Code: SW7470	Units: mg/L	Analysis Date	10/26/2005	Prep Date	10/26/2005			
Client ID:			Run ID: MI-LA254_051026A		SeqNo:	415137					
Analyte	Result	PQL	SPK value	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: Giant Refining Co
 Work Order: 0510201
 Project: AL-2 to EP-1 Week of 10-17-05

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-9044	Batch ID: 9044	Test Code: SW6010A	Units: mg/L	Analysis Date	10/27/2005 4:15:57 PM	Prep Date	10/25/2005				
Client ID:			Run ID: ICP_051027A		SeqNo:	415916						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		ND	0.01									
Arsenic		ND	0.02									
Beryllium		0.000151	0.003									
Cadmium		ND	0.002									
Chromium		ND	0.006									
Copper		ND	0.006									
Lead		ND	0.005									
Nickel		ND	0.01									
Selenium		ND	0.05									
Silver		ND	0.005									
Thallium		ND	0.01									
Zinc		ND	0.05									

J

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0510201
 Project: AL-2 to EP-1 Week of 10-17-05

Sample ID	MB-9044	Batch ID: 9044	Test Code: SW6010A	Units: mg/L	Analysis Date	10/28/2005 9:04:57 AM	Prep Date	10/25/2005			
Client ID:			Run ID:	ICP_051027A	SeqNo:	415951					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	ND	0.05									

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

Hall Environmental Analysis Laboratory

Date: 02-Nov-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co
Work Order: 0510201
Project: AL-2 to EP-1 Week of 10-17-05

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

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

Sample ID	GRO lcs 2.5ug	Batch ID	R17139	Test Code	SW8015	Units	mg/L	Analysis Date	11/1/2005 1:58:22 AM	Prep Date	
Client ID:		Run ID:	PIDFID_051031A	SeqNo:	417046						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit
Gasoline Range Organics (GRO)		0.4828	0.05	0.5	0	96.6	82.6	114	0		

Sample ID	BTEX lcs 100ng	Batch ID	R17139	Test Code	SW8021	Units	µg/L	Analysis Date	10/31/2005 12:07:58 P	Prep Date	
Client ID:		Run ID:	PIDFID_051031A	SeqNo:	416878						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit
Methyl tert-butyl ether (MTBE)		18.41	2.5	20	0	92.0	64.5	133	0		
Benzene		21.26	0.5	20	0	106	88.5	114	0		
Toluene		19.79	0.5	20	0	99.0	87.2	114	0		
Ethylbenzene		20.01	0.5	20	0	100	88.6	113	0		
Xylenes, Total		40.71	0.5	40	0	102	83.3	114	0		

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

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co
 Work Order: 0510201
 Project: AL-2 to EP-1 Week of 10-17-05

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

Sample ID	LCS-9056	Batch ID	9056	Test Code	SW7470	Units	mg/L	Analysis Date	10/26/2005	Prep Date	10/26/2005
Client ID:		Run ID:	MI-LA254_051026A					SeqNo:	415153		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit
Mercury		0.004765		0.0002	0.005	0	95.3	80	120	0.004627	0

Sample ID	LCS-9044	Batch ID	9044	Test Code	SW6010A	Units	mg/L	Analysis Date	10/27/2005 4:19:14 PM	Prep Date	10/25/2005
Client ID:		Run ID:	ICP_051027A					SeqNo:	415917		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit
Antimony		0.4933		0.01	0.5	0	98.7	80	120	0	
Arsenic		0.4732		0.02	0.5	0	94.6	80	120	0	
Beryllium		0.484		0.003	0.5	0.000151	96.8	80	120	0	
Cadmium		0.4645		0.002	0.5	0	92.9	80	120	0	
Chromium		0.4691		0.006	0.5	0	93.8	80	120	0	
Copper		0.4845		0.006	0.5	0	96.9	80	120	0	
Lead		0.4541		0.005	0.5	0	90.8	80	120	0	
Nickel		0.453		0.01	0.5	0	90.6	80	120	0	
Selenium		0.4463		0.05	0.5	0	89.3	80	120	0	
Silver		0.465		0.005	0.5	0	93.0	80	120	0	
Thallium		0.4693		0.01	0.5	0	93.9	80	120	0	
Zinc		0.4587		0.05	0.5	0	91.7	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: Giant Refining Co
 Work Order: 0510201
 Project: AL-2 to EP-1 Week of 10-17-05

Sample ID	LCSD-9044	Batch ID: 9044	Test Code: SW6010A	Units: mg/L	Analysis Date	10/27/2005 4:21:36 PM	Prep Date	10/25/2005			
Client ID:			Run ID: ICP_051027A		SeqNo: 415918						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4782	0.01	0.5	0	95.6	80	120	0.4933	3.11	20	
Arsenic	0.4697	0.02	0.5	0	93.9	80	120	0.4732	0.739	20	
Beryllium	0.4808	0.003	0.5	0.000151	96.1	80	120	0.484	0.666	20	
Cadmium	0.4561	0.002	0.5	0	91.2	80	120	0.4645	1.82	20	
Chromium	0.4598	0.006	0.5	0	92.0	80	120	0.4691	2.01	20	
Copper	0.4683	0.006	0.5	0	93.7	80	120	0.4845	3.40	20	
Lead	0.4461	0.005	0.5	0	89.2	80	120	0.4541	1.77	20	
Nickel	0.4391	0.01	0.5	0	87.8	80	120	0.453	3.13	20	
Selenium	0.4285	0.05	0.5	0	85.7	80	120	0.4463	4.06	20	
Silver	0.4501	0.005	0.5	0	90.0	80	120	0.465	3.25	20	
Thallium	0.4659	0.01	0.5	0	93.2	80	120	0.4693	0.732	20	
Zinc	0.4504	0.05	0.5	0	90.1	80	120	0.4587	1.83	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
 3

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

10/20/2005

Work Order Number 0510201

Received by AT

Checklist completed by

Signature

Date

10/20/05

Matrix

Carrier name Client drop-off

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

Container/Temp Blank temperature?

5°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

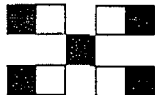
Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

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



CHAIN-OF-CUSTODY RECORD					QA / QC Package:		
					Std ☐	Level 4 ☐	
					Other:		
Client: Giant Refining					Project Name: AL-2 LEP-1		
Company - Linize					Week of 10-17-2005		
Address: Route 3 Box 7					Project #:		
Collins, NH 07301					Project Manager:		
					Sampler:		
Phone #: 505 722 3833					Sample Temperature: 5		
Fax #: 505 722 0210							
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl ₂ HNO ₃		HEAL No.
10/20/05	1200	H ₂ O	AL-2 LEP-1				05102041
Date: 10/20/05	Time: 1610	Relinquished By: (Signature) <i>Steve Morris</i>		Received By: (Signature) <i>Steve Morris</i>		10/20/05	
Date:	Time:	Relinquished By: (Signature)		Received By: (Signature)		10/10	

COVER LETTER

November 03, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Stormwater Separator Water 10-13-05

Order No.: 0510136

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 10/14/2005 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

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

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

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co
Project: Stormwater Separator Water 10-13-05
Lab Order: 0510136

CASE NARRATIVE

The reporting limits for EPA method 8270 have been elevated due to the amount of petroleum hydrocarbons in the sample.

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: SW Sep. Water Out

Lab Order: 0510136

Collection Date: 10/13/2005 2:00:00 PM

Project: Stormwater Separator Water 10-13-05

Lab ID: 0510136-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	1.9	0.50		mg/L	5	10/14/2005
Chloride	170	0.50		mg/L	5	10/14/2005
Nitrogen, Nitrite (As N)	5.8	0.50		mg/L	5	10/14/2005
Nitrogen, Nitrate (As N)	6.0	0.50		mg/L	5	10/14/2005
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	10/14/2005
Sulfate	2200	25		mg/L	50	10/24/2005
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	540	10		µg/L	10	10/18/2005
Toluene	690	10		µg/L	10	10/18/2005
Ethylbenzene	ND	10		µg/L	10	10/18/2005
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	10/18/2005
1,2,4-Trimethylbenzene	560	10		µg/L	10	10/18/2005
1,3,5-Trimethylbenzene	220	10		µg/L	10	10/18/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	10/18/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	10/18/2005
Naphthalene	170	20		µg/L	10	10/18/2005
1-Methylnaphthalene	190	40		µg/L	10	10/18/2005
2-Methylnaphthalene	260	40		µg/L	10	10/18/2005
Acetone	ND	100		µg/L	10	10/18/2005
Bromobenzene	ND	10		µg/L	10	10/18/2005
Bromochloromethane	ND	10		µg/L	10	10/18/2005
Bromodichloromethane	ND	10		µg/L	10	10/18/2005
Bromoform	ND	10		µg/L	10	10/18/2005
Bromomethane	ND	20		µg/L	10	10/18/2005
2-Butanone	ND	100		µg/L	10	10/18/2005
Carbon disulfide	ND	100		µg/L	10	10/18/2005
Carbon Tetrachloride	ND	20		µg/L	10	10/18/2005
Chlorobenzene	ND	10		µg/L	10	10/18/2005
Chloroethane	ND	20		µg/L	10	10/18/2005
Chloroform	ND	10		µg/L	10	10/18/2005
Chloromethane	ND	10		µg/L	10	10/18/2005
2-Chlorotoluene	ND	10		µg/L	10	10/18/2005
4-Chlorotoluene	ND	10		µg/L	10	10/18/2005
cis-1,2-DCE	ND	10		µg/L	10	10/18/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	10/18/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	10/18/2005
Dibromochloromethane	ND	10		µg/L	10	10/18/2005
Dibromomethane	ND	20		µg/L	10	10/18/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	10/18/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	10/18/2005

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co
Lab Order: 0510136
Project: Stormwater Separator Water 10-13-05
Lab ID: 0510136-01

Client Sample ID: SW Sep. Water Out
Collection Date: 10/13/2005 2:00:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	10		µg/L	10	10/18/2005
Dichlorodifluoromethane	ND	10		µg/L	10	10/18/2005
1,1-Dichloroethane	ND	10		µg/L	10	10/18/2005
1,1-Dichloroethene	ND	10		µg/L	10	10/18/2005
1,2-Dichloropropane	ND	10		µg/L	10	10/18/2005
1,3-Dichloropropane	ND	10		µg/L	10	10/18/2005
2,2-Dichloropropane	ND	10		µg/L	10	10/18/2005
1,1-Dichloropropene	ND	10		µg/L	10	10/18/2005
Hexachlorobutadiene	ND	10		µg/L	10	10/18/2005
2-Hexanone	ND	100		µg/L	10	10/18/2005
Isopropylbenzene	14	10		µg/L	10	10/18/2005
4-Isopropyltoluene	17	10		µg/L	10	10/18/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	10/18/2005
Methylene Chloride	ND	30		µg/L	10	10/18/2005
n-Butylbenzene	ND	10		µg/L	10	10/18/2005
n-Propylbenzene	ND	10		µg/L	10	10/18/2005
sec-Butylbenzene	ND	10		µg/L	10	10/18/2005
Styrene	ND	10		µg/L	10	10/18/2005
tert-Butylbenzene	ND	10		µg/L	10	10/18/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	10/18/2005
1,1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	10/18/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	10/18/2005
trans-1,2-DCE	ND	10		µg/L	10	10/18/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	10/18/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	10/18/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	10/18/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	10/18/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	10/18/2005
Trichloroethene (TCE)	ND	10		µg/L	10	10/18/2005
Trichlorofluoromethane	ND	10		µg/L	10	10/18/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	10/18/2005
Vinyl chloride	ND	10		µg/L	10	10/18/2005
Xylenes, Total	2500	20		µg/L	20	10/18/2005
Surr. 1,2-Dichloroethane-d4	92.4	69.9-130		%REC	10	10/18/2005
Surr. 4-Bromofluorobenzene	89.0	71.2-123		%REC	10	10/18/2005
Surr. Dibromofluoromethane	93.6	73.9-134		%REC	10	10/18/2005
Surr. Toluene-d8	92.6	81.9-122		%REC	10	10/18/2005

EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

Acenaphthene	ND	50		µg/L	1	10/21/2005
Acenaphthylene	ND	50		µg/L	1	10/21/2005
Aniline	ND	100		µg/L	1	10/21/2005
Anthracene	ND	50		µg/L	1	10/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co
Lab Order: 0510136
Project: Stormwater Separator Water 10-13-05
Lab ID: 0510136-01

Client Sample ID: SW Sep. Water Out
Collection Date: 10/13/2005 2:00:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Azobenzene	ND	50		µg/L	1	10/21/2005
Benz(a)anthracene	ND	75		µg/L	1	10/21/2005
Benzo(a)pyrene	ND	75		µg/L	1	10/21/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	10/21/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	10/21/2005
Benzo(k)fluoranthene	ND	50		µg/L	1	10/21/2005
Benzoic acid	ND	250		µg/L	1	10/21/2005
Benzyl alcohol	ND	100		µg/L	1	10/21/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	10/21/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	10/21/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	10/21/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	10/21/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	10/21/2005
Butyl benzyl phthalate	ND	75		µg/L	1	10/21/2005
Carbazole	ND	50		µg/L	1	10/21/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	10/21/2005
4-Chloroaniline	ND	100		µg/L	1	10/21/2005
2-Chloronaphthalene	ND	50		µg/L	1	10/21/2005
2-Chlorophenol	ND	50		µg/L	1	10/21/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	10/21/2005
Chrysene	ND	75		µg/L	1	10/21/2005
Di-n-butyl phthalate	ND	50		µg/L	1	10/21/2005
Di-n-octyl phthalate	ND	75		µg/L	1	10/21/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	10/21/2005
Dibenzofuran	ND	50		µg/L	1	10/21/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	10/21/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	10/21/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	10/21/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	10/21/2005
Diethyl phthalate	ND	50		µg/L	1	10/21/2005
Dimethyl phthalate	ND	50		µg/L	1	10/21/2005
2,4-Dichlorophenol	ND	50		µg/L	1	10/21/2005
2,4-Dimethylphenol	79	50		µg/L	1	10/21/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	10/21/2005
2,4-Dinitrophenol	ND	250		µg/L	1	10/21/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	10/21/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	10/21/2005
Fluoranthene	ND	50		µg/L	1	10/21/2005
Fluorene	ND	50		µg/L	1	10/21/2005
Hexachlorobenzene	ND	50		µg/L	1	10/21/2005
Hexachlorobutadiene	ND	50		µg/L	1	10/21/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	10/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co
Lab Order: 0510136
Project: Stormwater Separator Water 10-13-05
Lab ID: 0510136-01

Client Sample ID: SW Sep. Water Out
Collection Date: 10/13/2005 2:00:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	50		µg/L	1	10/21/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	10/21/2005
Isophorone	ND	50		µg/L	1	10/21/2005
2-Methylnaphthalene	ND	50		µg/L	1	10/21/2005
2-Methylphenol	ND	75		µg/L	1	10/21/2005
3+4-Methylphenol	ND	100		µg/L	1	10/21/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	10/21/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	10/21/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	10/21/2005
Naphthalene	ND	50		µg/L	1	10/21/2005
2-Nitroaniline	ND	250		µg/L	1	10/21/2005
3-Nitroaniline	ND	250		µg/L	1	10/21/2005
4-Nitroaniline	ND	100		µg/L	1	10/21/2005
Nitrobenzene	ND	50		µg/L	1	10/21/2005
2-Nitrophenol	ND	75		µg/L	1	10/21/2005
4-Nitrophenol	ND	250		µg/L	1	10/21/2005
Pentachlorophenol	ND	250		µg/L	1	10/21/2005
Phenanthrene	ND	50		µg/L	1	10/21/2005
Phenol	ND	50		µg/L	1	10/21/2005
Pyrene	ND	75		µg/L	1	10/21/2005
Pyridine	ND	150		µg/L	1	10/21/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	10/21/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	10/21/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	10/21/2005
Surr: 2,4,6-Tribromophenol	75.1	16.6-150		%REC	1	10/21/2005
Surr: 2-Fluorobiphenyl	58.1	19.6-134		%REC	1	10/21/2005
Surr: 2-Fluorophenol	54.3	9.54-113		%REC	1	10/21/2005
Surr: 4-Terphenyl-d14	78.3	22.7-145		%REC	1	10/21/2005
Surr: Nitrobenzene-d5	62.3	14.6-134		%REC	1	10/21/2005
Surr: Phenol-d6	36.3	10.7-80.3		%REC	1	10/21/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	5800	0.010		µmhos/cm	1	10/17/2005
EPA METHOD 245.1: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	10/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	0.027	0.020		mg/L	1	10/24/2005 3:26:24 PM
Barium	0.091	0.020		mg/L	1	10/24/2005 3:26:24 PM
Cadmium	ND	0.0020		mg/L	1	10/24/2005 3:26:24 PM
Calcium	58	1.0		mg/L	1	10/24/2005 3:26:24 PM
Chromium	0.017	0.0060		mg/L	1	10/24/2005 3:26:24 PM
Lead	ND	0.0050		mg/L	1	10/24/2005 3:26:24 PM

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

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

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: SW Sep. Water Out

Lab Order: 0510136

Collection Date: 10/13/2005 2:00:00 PM

Project: Stormwater Separator Water 10-13-05

Lab ID: 0510136-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	13	1.0		mg/L	1	10/24/2005 3:28:24 PM
Potassium	8.5	1.0		mg/L	1	10/24/2005 3:26:24 PM
Selenium	ND	0.050		mg/L	1	10/24/2005 3:26:24 PM
Silver	ND	0.0050		mg/L	1	10/24/2005 3:26:24 PM
Sodium	1200	20		mg/L	20	10/25/2005 9:48:53 AM
EPA METHOD 150.1: PH						Analyst: TES
pH	8.35	0.010		pH units	1	10/18/2005

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

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

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co
 Work Order: 0510136
 Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
 Method Blank

Sample ID	MBLK	Batch ID: R16980	Test Code: E300	Run ID: LC_051014A	Units: mg/L	Analysis Date 10/14/2005	Prep Date				
Client ID:						SeqNo: 411864					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND		0.1								
Chloride	ND		0.1								
Nitrogen, Nitrite (As N)	ND		0.1								
Nitrogen, Nitrate (As N)	ND		0.1								
Phosphorus, Orthophosphate (As P)	ND		0.5								
Sulfate	ND		0.5								

Sample ID	MBLK	Batch ID: R16980	Test Code: E300	Units: mg/L	Analysis Date	Prep Date					
Client ID:			Run ID: LC_051014A		SeqNo: 411907						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND		0.1								
Chloride	ND		0.1								
Nitrogen, Nitrite (As N)	ND		0.1								
Nitrogen, Nitrate (As N)	ND		0.1								
Phosphorus, Orthophosphate (As P)	ND		0.5								
Sulfate	ND		0.5								

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: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
 Method Blank

Sample ID	MBLK	Batch ID: R17066	Test Code: E300	Units: mg/L	Analysis Date	10/24/2005	Prep Date					
Client ID:			Run ID: LC_051024A		SeqNo:	414296						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		ND	0.1									
Chloride		ND	0.1									
Nitrogen, Nitrite (As N)		ND	0.1									
Nitrogen, Nitrate (As N)		ND	0.1									
Phosphorus, Orthophosphate (As P)		ND	0.5									
Sulfate		ND	0.5									

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: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-8996	Batch ID: 8996	Test Code: SW8270C	Units: µg/L	Analysis Date	10/21/2005	Prep Date	10/19/2005			
Client ID:			Run ID:	ELMO_051019B	SeqNo:	413329					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	10									
Acenaphthylene	ND	10									
Aniline	ND	20									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	15									
Benzo(b)fluoranthene	ND	15									
Benzo(g,h,i)perylene	ND	10									
Benzo(k)fluoranthene	ND	10									
Benzoic acid	ND	50									
Benzyl alcohol	ND	20									
Bis(2-chloroethoxy)methane	ND	10									
Bis(2-chloroethyl)ether	ND	15									
Bis(2-chloroisopropyl)ether	ND	15									
Bis(2-ethylhexyl)phthalate	ND	15									
4-Bromophenyl phenyl ether	ND	10									
Butyl benzyl phthalate	ND	15									
Carbazole	ND	10									
4-Chloro-3-methylphenol	ND	20									
4-Chloroaniline	ND	20									
2-Chloronaphthalene	ND	10									
2-Chlorophenol	ND	10									
4-Chlorophenyl phenyl ether	ND	15									
Chrysene	ND	15									
Di-n-butyl phthalate	ND	10									
Di-n-octyl phthalate	ND	15									
Dibenz(a,h)anthracene	ND	10									

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0510136
 Project: Stormwater Separator Water 10-13-05

Dibenzofuran	ND	10
1,2-Dichlorobenzene	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
3,3'-Dichlorobenzidine	ND	15
Diethyl phthalate	ND	10
Dimethyl phthalate	ND	10
2,4-Dichlorophenol	ND	10
2,4-Dimethylphenol	ND	10
4,6-Dinitro-2-methylphenol	ND	50
2,4-Dinitrophenol	ND	50
2,4-Dinitrotoluene	ND	10
2,6-Dinitrotoluene	ND	10
Fluoranthene	ND	10
Fluorene	ND	10
Hexachlorobenzene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
Hexachloroethane	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Isophorane	ND	10
2-Methylnaphthalene	ND	10
2-Methylphenol	ND	15
3+4-Methylphenol	ND	20
N-Nitrosodi-n-propylamine	ND	10
N-Nitrosodimethylamine	5.26	10
N-Nitrosodiphenylamine	ND	10
Naphthalene	ND	10
2-Nitroaniline	ND	50
3-Nitroaniline	ND	50
4-Nitroaniline	ND	20
Nitrobenzene	ND	10
2-Nitrophenol	ND	15

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

Method Blank

CLIENT: Giant Refining Co

Work Order: 0510136

Project: Stormwater Separator Water 10-13-05

Sample ID	MB-8972	Batch ID: 8972	Test Code: SW7470	Units: mg/L	Analysis Date	10/17/2005	Prep Date	10/17/2005
Client ID:			Run ID: MI-LA254_051117A		SeqNo:	412256		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Limit
Mercury	ND	0.0002						Qual
4-Nitrophenol	ND	50						
Pentachlorophenol	ND	50						
Phenanthrene	ND	10						
Phenol	ND	10						
Pyrene	ND	15						
Pyridine	ND	30						
1,2,4-Trichlorobenzene	ND	10						
2,4,5-Trichlorophenol	ND	10						
2,4,6-Trichlorophenol	ND	15						
Surr: 2,4,6-Tribromophenol	138.7	0	200	0	69.4	16.6	150	0
Surr: 2-Fluorobiphenyl	60.58	0	100	0	60.6	19.6	134	0
Surr: 2-Fluorophenol	126	0	200	0	63.0	9.54	113	0
Surr: 4-Terphenyl-d14	84.2	0	100	0	84.2	22.7	145	0
Surr: Nitrobenzene-d5	75.16	0	100	0	75.2	14.6	134	0
Surr: Phenol-d6	76.74	0	200	0	38.4	10.7	80.3	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	5

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-9015	Batch ID: 9015	Test Code: SW6010A	Units: mg/L	Analysis Date	10/24/2005 2:32:27 PM	Prep Date	10/21/2005				
Client ID:		Run ID:	ICP_051024B		SeqNo:	414602						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		ND	0.02									J
Barium		0.00152	0.02									
Cadmium		ND	0.002									
Calcium		ND	1									
Chromium		ND	0.006									
Lead		ND	0.005									
Magnesium		ND	1									
Potassium		0.1564	1									J
Selenium		ND	0.05									
Silver		ND	0.005									
Sodium		0.2702	1									J

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

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

Sample ID	5mL rb-b	Batch ID: R16991	Test Code: SW8260B	Units: µg/L	Analysis Date	10/17/2005	Prep Date				
Client ID:			Run ID: NEPTUNE_051017A		SeqNo: 412342						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

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

Work Order: 0510136

Project: Stormwater Separator Water 10-13-05

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

Qualifiers: ND - Not Detected at the Reporting Limit
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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: Giant Refining Co

Work Order: 0510136

Project: Stormwater Separator Water 10-13-05

Chemical	Concentration (ppm)	Retention Time (min)	Peak Area	Peak Height	Peak Width (min)	Peak Shape	Peak Type	Peak Label
1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9,208	0	10	0	92.1	69.9	130	0
Surr: 4-Bromofluorobenzene	9,238	0	10	0	92.4	71.2	123	0
Surr: Dibromofluoromethane	9,418	0	10	0	94.2	73.9	134	0
Surr: Toluene-d8	9,374	0	10	0	93.7	81.9	122	0

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spikes 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-Nov-05

CLIENT: Giant Refining Co

Work Order: 0510136

Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-ST300-05022	Batch ID: R16980	Test Code: E300	Units: mg/L	Analysis Date	10/14/2005	Prep Date				
Client ID:	Run ID:	LC_051014A	SeqNo:	411865							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4716	0.1	0.5	0	94.3	90	110	0			
Chloride	4.577	0.1	5	0	91.5	90	110	0			
Nitrogen, Nitrite (As N)	0.9484	0.1	1	0	94.8	90	110	0			
Nitrogen, Nitrate (As N)	2.299	0.1	2.5	0	91.9	90	110	0			
Phosphorus, Orthophosphate (As P)	4.599	0.5	5	0	92.0	90	110	0			
Sulfate	9.233	0.5	10	0	92.3	90	110	0			

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Sample ID	LCS	Batch ID: R16980	Test Code: E300	Units: mg/L	Analysis Date	10/14/2005	Prep Date				
Client ID:	Run ID:	LC_051014A	SeqNo:	411908							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.465	0.1	0.5	0	93.0	90	110	0			
Chloride	4.5	0.1	5	0	90.0	90	110	0			
Nitrogen, Nitrite (As N)	0.8585	0.1	1	0	85.9	90	110	0			S
Nitrogen, Nitrate (As N)	2.297	0.1	2.5	0	91.9	90	110	0			
Phosphorus, Orthophosphate (As P)	3.719	0.5	5	0	74.4	90	110	0			S
Sulfate	9.51	0.5	10	0	95.1	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 /

CLIENT:

Giant Refining Co

Work Order:

0510136

Project:

Stormwater Separator Water 10-13-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-ST300-05022	Batch ID: R17066	Test Code: E300	Units: mg/L	Analysis Date	10/24/2005	Prep Date				
Client ID:	Run ID: LC_051024A				SeqNo:	414301					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5209	0.1	0.5	0	104	90	110	0			
Chloride	4.625	0.1	5	0	92.5	90	110	0			
Nitrogen, Nitrite (As N)	0.9219	0.1	1	0	92.2	90	110	0			
Nitrogen, Nitrate (As N)	2.335	0.1	2.5	0	93.4	90	110	0			
Phosphorus, Orthophosphate (As P)	4.628	0.5	5	0	92.6	90	110	0			
Sulfate	9.36	0.5	10	0	93.6	90	110	0			

Sample ID	100ng Ics	Batch ID: R16991	Test Code: SW8260B	Units: µg/L	Analysis Date	10/17/2005	Prep Date				
Client ID:			Run ID: NEPTUNE_051017A		SeqNo:	412343					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.53	1	20	0	97.6	76.9	138	0			
Toluene	16.22	1	20	0	81.1	82.5	125	0			S
Chlorobenzene	18.88	1	20	0	94.4	89.6	134	0			
1,1-Dichloroethene	16.47	1	20	0	82.4	73.1	136	0			
Trichloroethene (TCE)	18.19	1	20	0	90.9	73.9	129	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co

Work Order: 0510136

Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-8996	Batch ID: 8996	Test Code: SW8270C	Units: µg/L	Analysis Date	10/21/2005	Prep Date	10/19/2005			
Client ID:			Run ID:	ELMO_051019B	SeqNo:	413330					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	74.86	10	100	0	74.9	11	123	0			
4-Chloro-3-methylphenol	146	20	200	0	73.0	15.4	119	0			
2-Chlorophenol	160.1	10	200	0	80.1	12.2	122	0			
1,4-Dichlorobenzene	75.82	10	100	0	75.8	16.9	100	0			
2,4-Dinitrotoluene	72.1	10	100	0	72.1	13	138	0			
N-Nitrosodi-n-propylamine	69	10	100	0	69.0	9.93	122	0			
4-Nitrophenol	65.18	50	200	0	32.6	-20.5	87.4	0			
Pentachlorophenol	123.6	50	200	0	61.8	-0.355	114	0			
Phenol	88.6	10	200	0	44.3	7.53	73.1	0			
Pyrene	75.9	15	100	0	75.9	12.6	140	0			
1,2,4-Trichlorobenzene	69.84	10	100	0	69.8	17.4	98.7	0			

Sample ID	LCSD-8996	Batch ID: 8996	Test Code: SW8270C	Units: µg/L	Analysis Date	10/21/2005	Prep Date	10/19/2005			
Client ID:			Run ID: ELMO_051019B		SeqNo:	413331					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	73.64	10	100	0	73.6	11	123	74.86	1.64	30.5	
4-Chloro-3-methylphenol	140.9	20	200	0	70.5	15.4	119	146	3.58	28.6	
2-Chlorophenol	157	10	200	0	78.5	12.2	122	160.1	2.01	107	
1,4-Dichlorobenzene	72.3	10	100	0	72.3	16.9	100	75.82	4.75	62.1	
2,4-Dinitrotoluene	70.96	10	100	0	71.0	13	138	72.1	1.59	14.7	
N-Nitrosodi-n-propylamine	66.18	10	100	0	66.2	9.93	122	69	4.17	30.3	
4-Nitrophenol	66.78	50	200	0	33.4	12.5	87.4	65.18	2.42	36.3	
Pentachlorophenol	120	50	200	0	60.0	3.55	114	123.6	2.94	49	
Phenol	88.54	10	200	0	44.3	7.53	73.1	88.6	0.0677	52.4	
Pyrene	74.8	15	100	0	74.8	12.6	140	75.9	1.46	16.3	
1,2,4-Trichlorobenzene	68.34	10	100	0	68.3	17.4	98.7	69.84	2.17	36.4	

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co

Work Order: 0510136

Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-8972	Batch ID:	8972	Test Code:	SW7470	Units:	mg/L	Analysis Date	10/17/2005	Prep Date	10/17/2005
Client ID:		Run ID:	MI-LA254_051117A					SeqNo:	412257		
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val
Mercury		0.004663		0.0002	0.005	0		93.3	75.2	134	0
											%RPD RPDLimit Qual

Sample ID	LCSD-8972	Batch ID:	8972	Test Code:	SW7470	Units:	mg/L	Analysis Date	10/17/2005	Prep Date	10/17/2005
Client ID:		Run ID:	MI-LA254_051117A					SeqNo:	412275		
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val
Mercury		0.004783		0.0002	0.005	0		95.7	75.2	134	0.004663
											%RPD RPDLimit Qual

Sample ID	LCS-9015	Batch ID:	9015	Test Code:	SW6010A	Units:	mg/L	Analysis Date	10/24/2005 2:35:44 PM	Prep Date	10/21/2005
Client ID:		Run ID:	ICP_051024B					SeqNo:	414603		
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val

Asenic	0.5233	0.02	0.5	0	105	80	120	0			
Barium	0.4835	0.02	0.5	0.00152	96.4	80	120	0			
Cadmium	0.4871	0.002	0.5	0	97.4	80	120	0			
Calcium	48.7	1	50	0	97.4	80	120	0			
Chromium	0.4839	0.006	0.5	0	96.8	80	120	0			
Lead	0.5089	0.005	0.5	0	102	80	120	0			
Magnesium	47.83	1	50	0	95.7	80	120	0			
Potassium	49.99	1	50	0.1564	99.7	80	120	0			
Selenium	0.4649	0.05	0.5	0	93.0	80	120	0			
Silver	0.4906	0.005	0.5	0	98.1	80	120	0			
Sodium	50.54	1	50	0.2702	101	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

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

Sample ID	LCSD-9015	Batch ID: 9015	Test Code: SW6010A	Units: mg/L	Analysis Date	10/24/2005 2:39:04 PM	Prep Date	10/21/2005			
Client ID:			Run ID: ICP_051024B		SeqNo: 414604						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5246	0.02	0.5	0	105	80	120	0.5233	0.238	20	
Barium	0.4908	0.02	0.5	0.00152	97.8	80	120	0.4835	1.50	20	
Cadmium	0.4951	0.002	0.5	0	98.0	80	120	0.4871	1.62	20	
Calcium	49.37	1	50	0	98.7	80	120	48.7	1.36	20	
Chromium	0.4923	0.006	0.5	0	98.5	80	120	0.4839	1.71	20	
Lead	0.5165	0.005	0.5	0	103	80	120	0.5089	1.47	20	
Magnesium	48.84	1	50	0	97.7	80	120	47.83	2.09	20	
Potassium	50.69	1	50	0.1564	101	80	120	49.99	1.39	20	
Selenium	0.4754	0.05	0.5	0	95.1	80	120	0.4649	2.23	20	
Silver	0.4994	0.005	0.5	0	99.9	80	120	0.4906	1.78	20	
Sodium	51.45	1	50	0.2702	102	80	120	50.54	1.78	20	

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

10/14/2005

Work Order Number 0510136

Received by AT

Checklist completed by

Signature

Date

10/14/05

Matrix

Carrier name Client drop-off

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐ Not Shipped ☒
Custody seals intact on sample bottles?	Yes ☐	No ☒	N/A ☐
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
Container/Temp Blank temperature?	5°	4° C ± 2 Acceptable If given sufficient time to cool.	

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____



COVER LETTER

November 03, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 10-10-05

Order No.: 0510135

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 10/14/2005 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

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

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

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0510135

Collection Date: 10/13/2005 2:30:00 PM

Project: AL-2 to EP-1 Week of 10-10-05

Lab ID: 0510135-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	25		µg/L	10	10/20/2005 8:11:50 PM
Benzene	21	5.0		µg/L	10	10/20/2005 8:11:50 PM
Toluene	29	5.0		µg/L	10	10/20/2005 8:11:50 PM
Ethylbenzene	8.0	5.0		µg/L	10	10/20/2005 8:11:50 PM
Xylenes, Total	49	5.0		µg/L	10	10/20/2005 8:11:50 PM
Surr: 4-Bromofluorobenzene	108	82.2-119		%REC	10	10/20/2005 8:11:50 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	22	20		µg/L	1	10/21/2005
Acenaphthylene	ND	20		µg/L	1	10/21/2005
Aniline	ND	40		µg/L	1	10/21/2005
Anthracene	ND	20		µg/L	1	10/21/2005
Azobenzene	ND	20		µg/L	1	10/21/2005
Benz(a)anthracene	ND	30		µg/L	1	10/21/2005
Benzo(a)pyrene	ND	30		µg/L	1	10/21/2005
Benzo(b)fluoranthene	ND	30		µg/L	1	10/21/2005
Benzo(g,h,i)perylene	ND	20		µg/L	1	10/21/2005
Benzo(k)fluoranthene	ND	20		µg/L	1	10/21/2005
Benzoic acid	ND	100		µg/L	1	10/21/2005
Benzyl alcohol	ND	40		µg/L	1	10/21/2005
Bis(2-chloroethoxy)methane	ND	20		µg/L	1	10/21/2005
Bis(2-chloroethyl)ether	ND	30		µg/L	1	10/21/2005
Bis(2-chloroisopropyl)ether	ND	30		µg/L	1	10/21/2005
Bis(2-ethylhexyl)phthalate	ND	30		µg/L	1	10/21/2005
4-Bromophenyl phenyl ether	ND	20		µg/L	1	10/21/2005
Butyl benzyl phthalate	ND	30		µg/L	1	10/21/2005
Carbazole	ND	20		µg/L	1	10/21/2005
4-Chloro-3-methylphenol	ND	40		µg/L	1	10/21/2005
4-Chloroaniline	ND	40		µg/L	1	10/21/2005
2-Chloronaphthalene	ND	20		µg/L	1	10/21/2005
2-Chlorophenol	ND	20		µg/L	1	10/21/2005
4-Chlorophenyl phenyl ether	ND	30		µg/L	1	10/21/2005
Chrysene	ND	30		µg/L	1	10/21/2005
Di-n-butyl phthalate	ND	20		µg/L	1	10/21/2005
Di-n-octyl phthalate	ND	30		µg/L	1	10/21/2005
Dibenz(a,h)anthracene	ND	20		µg/L	1	10/21/2005
Dibenzofuran	ND	20		µg/L	1	10/21/2005
1,2-Dichlorobenzene	ND	20		µg/L	1	10/21/2005
1,3-Dichlorobenzene	ND	20		µg/L	1	10/21/2005
1,4-Dichlorobenzene	ND	20		µg/L	1	10/21/2005
3,3'-Dichlorobenzidine	ND	30		µg/L	1	10/21/2005

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

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

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0510135

Collection Date: 10/13/2005 2:30:00 PM

Project: AL-2 to EP-1 Week of 10-10-05

Lab ID: 0510135-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Diethyl phthalate	ND	20		µg/L	1	10/21/2005
Dimethyl phthalate	ND	20		µg/L	1	10/21/2005
2,4-Dichlorophenol	ND	20		µg/L	1	10/21/2005
2,4-Dimethylphenol	31	20		µg/L	1	10/21/2005
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	10/21/2005
2,4-Dinitrophenol	ND	100		µg/L	1	10/21/2005
2,4-Dinitrotoluene	ND	20		µg/L	1	10/21/2005
2,6-Dinitrotoluene	ND	20		µg/L	1	10/21/2005
Fluoranthene	ND	20		µg/L	1	10/21/2005
Fluorene	96	20		µg/L	1	10/21/2005
Hexachlorobenzene	ND	20		µg/L	1	10/21/2005
Hexachlorobutadiene	ND	20		µg/L	1	10/21/2005
Hexachlorocyclopentadiene	ND	20		µg/L	1	10/21/2005
Hexachloroethane	62	20		µg/L	1	10/21/2005
Indeno(1,2,3-cd)pyrene	ND	20		µg/L	1	10/21/2005
Isophorone	ND	20		µg/L	1	10/21/2005
2-Methylnaphthalene	170	20		µg/L	1	10/21/2005
2-Methylphenol	ND	30		µg/L	1	10/21/2005
3+4-Methylphenol	ND	40		µg/L	1	10/21/2005
N-Nitrosodi-n-propylamine	ND	20		µg/L	1	10/21/2005
N-Nitrosodimethylamine	ND	20		µg/L	1	10/21/2005
N-Nitrosodiphenylamine	ND	20		µg/L	1	10/21/2005
Naphthalene	25	20		µg/L	1	10/21/2005
2-Nitroaniline	ND	100		µg/L	1	10/21/2005
3-Nitroaniline	ND	100		µg/L	1	10/21/2005
4-Nitroaniline	ND	40		µg/L	1	10/21/2005
Nitrobenzene	ND	20		µg/L	1	10/21/2005
2-Nitrophenol	ND	30		µg/L	1	10/21/2005
4-Nitrophenol	ND	100		µg/L	1	10/21/2005
Pentachlorophenol	ND	100		µg/L	1	10/21/2005
Phenanthrene	170	20		µg/L	1	10/21/2005
Phenol	ND	20		µg/L	1	10/21/2005
Pyrene	31	30		µg/L	1	10/21/2005
Pyridine	ND	60		µg/L	1	10/21/2005
1,2,4-Trichlorobenzene	ND	20		µg/L	1	10/21/2005
2,4,5-Trichlorophenol	ND	20		µg/L	1	10/21/2005
2,4,6-Trichlorophenol	ND	30		µg/L	1	10/21/2005
Surr: 2,4,6-Tribromophenol	90.4	16.6-150		%REC	1	10/21/2005
Surr: 2-Fluorobiphenyl	77.8	19.6-134		%REC	1	10/21/2005
Surr: 2-Fluorophenol	43.8	9.54-113		%REC	1	10/21/2005
Surr: 4-Terphenyl-d14	94.5	22.7-145		%REC	1	10/21/2005
Surr: Nitrobenzene-d5	69.7	14.6-134		%REC	1	10/21/2005

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co

Client Sample ID: AL-2 to EP-1

Lab Order: 0510135

Collection Date: 10/13/2005 2:30:00 PM

Project: AL-2 to EP-1 Week of 10-10-05

Lab ID: 0510135-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: Phenol-d6	34.2	10.7-80.3		%REC	1	10/21/2005
EPA METHOD 245.1: MERCURY						Analyst: CMC
Mercury	0.00068	0.00020		mg/L	1	10/17/2005
EPA METHOD 6010B: DISSOLVED METALS						Analyst: NMO
Antimony	ND	0.010		mg/L	1	10/19/2005 11:59:03 AM
Arsenic	ND	0.020		mg/L	1	10/19/2005 11:59:03 AM
Beryllium	ND	0.0030		mg/L	1	10/19/2005 11:59:03 AM
Cadmium	ND	0.0020		mg/L	1	10/19/2005 11:59:03 AM
Chromium	0.0090	0.0060		mg/L	1	10/19/2005 11:59:03 AM
Copper	0.012	0.0060		mg/L	1	10/19/2005 11:59:03 AM
Lead	0.0075	0.0050		mg/L	1	10/19/2005 11:59:03 AM
Nickel	0.042	0.010		mg/L	1	10/19/2005 11:59:03 AM
Selenium	ND	0.020		mg/L	1	10/19/2005 11:59:03 AM
Silver	ND	0.0050		mg/L	1	10/19/2005 11:59:03 AM
Thallium	ND	0.050		mg/L	1	10/19/2005 11:59:03 AM
Zinc	1.3	0.10		mg/L	2	10/19/2005 12:32:42 PM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Antimony	ND	0.010		mg/L	1	10/24/2005 3:22:24 PM
Arsenic	ND	0.020		mg/L	1	10/24/2005 3:22:24 PM
Beryllium	ND	0.0030		mg/L	1	10/24/2005 3:22:24 PM
Cadmium	ND	0.0020		mg/L	1	10/24/2005 3:22:24 PM
Chromium	ND	0.0060		mg/L	1	10/24/2005 3:22:24 PM
Copper	ND	0.0060		mg/L	1	10/24/2005 3:22:24 PM
Lead	ND	0.0050		mg/L	1	10/24/2005 3:22:24 PM
Nickel	0.040	0.010		mg/L	1	10/24/2005 3:22:24 PM
Selenium	ND	0.050		mg/L	1	10/24/2005 3:22:24 PM
Silver	ND	0.0050		mg/L	1	10/24/2005 3:22:24 PM
Thallium	ND	0.050		mg/L	1	10/24/2005 3:22:24 PM
Zinc	0.29	0.050		mg/L	1	10/24/2005 3:22:24 PM

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

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

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

CLIENT: Giant Refining Co
 Work Order: 0510135
 Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R17025	Test Code: SW8021	Units: µg/L	Analysis Date 10/20/2005 8:23:40 AM	Prep Date					
Client ID:			Run ID: PIDFID_051020A		SeqNo: 413182						
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	19.79	0	20	0	98.9	82.2	119	0			

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

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-8970	Batch ID: 8970	Test Code: SWB270C	Units: µg/L	Analysis Date	10/21/2005	Prep Date	10/17/2005			
Client ID:			Run ID:	ELMO_051019B	SeqNo:	413452					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	10									
Acenaphthylene	ND	10									
Aniline	ND	20									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	15									
Benzo(b)fluoranthene	ND	15									
Benzo(g,h,i)perylene	ND	10									
Benzo(k)fluoranthene	ND	10									
Benzoic acid	ND	50									
Benzyl alcohol	ND	20									
Bis(2-chloroethoxy)methane	ND	10									
Bis(2-chloroethyl)ether	ND	15									
Bis(2-chloroisopropyl)ether	ND	15									
Bis(2-ethylhexyl)phthalate	ND	15									
4-Bromophenyl phenyl ether	ND	10									
Butyl benzyl phthalate	ND	15									
Carbazole	ND	10									
4-Chloro-3-methylphenol	ND	20									
4-Chloroaniline	ND	20									
2-Chloronaphthalene	ND	10									
2-Chlorophenol	ND	10									
4-Chlorophenyl phenyl ether	ND	15									
Chrysene	ND	15									
Di-n-butyl phthalate	ND	10									
Di-n-octyl phthalate	ND	15									
Dibenz(a,h)anthracene	ND	10									

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co

Work Order: 0510135

Project: AL-2 to EP-1 Week of 10-10-05

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

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co

Work Order: 0510135

Project: AL-2 to EP-1 Week of 10-10-05

[illegible]

Sample ID	MB-8972	Batch ID:	8972	Test Code:	SW7470	Units:	mg/L	Analysis Date	10/17/2005	Prep Date	10/17/2005
Client ID:		Run ID:	MI-LA254_051117A	SeqNo:	412256						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit
Mercury			ND	0.0002							Qual

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	
			4

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
 Method Blank

Sample ID	MB	Batch ID: R17009	Test Code: SW6010A	Units: mg/L	Analysis Date 10/19/2005 10:06:30 A		Prep Date					
Client ID:			Run ID: ICP_051019A		SeqNo: 412770							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		ND	0.01									
Arsenic		ND	0.02									
Beryllium		ND	0.003									
Cadmium		ND	0.002									
Chromium		ND	0.006									
Copper		ND	0.006									
Lead		ND	0.005									
Nickel		0.0006294	0.01									J
Selenium		ND	0.02									
Silver		ND	0.005									
Thallium		ND	0.01									
Zinc		ND	0.05									

Qualifiers:

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

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

B - Analyte detected in the associated Method Blank

5

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0510135
 Project: AL-2 to EP-1 Week of 10-10-05

Sample ID	MB	Batch ID	R17009	Test Code	SW6010A	Units: mg/L	Analysis Date	10/19/2005 1:05:39 PM	Prep Date
Client ID:		Run ID:	ICP_051019A	PQL	SPK value	SPK Ref Val	SeqNo:	412806	
Analyte		Result					LowLimit	HighLimit	RPD Ref Val
							%REC		%RPD
								RPDLimit	Qual
Antimony		ND		0.01					
Arsenic		ND		0.02					
Beryllium		ND		0.003					
Cadmium		ND		0.002					
Chromium		ND		0.006					
Copper		ND		0.006					
Lead		ND		0.005					
Nickel		ND		0.01					
Selenium		ND		0.02					
Silver		ND		0.005					
Thallium		ND		0.01					
Zinc		ND		0.05					

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

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
 Work Order: 0510135
 Project: AL-2 to EP-1 Week of 10-10-05

Sample ID	MB-9015	Batch ID: 9015	Test Code: SW6010A	Units: mg/L	Analysis Date 10/24/2005 2:32:27 PM	Prep Date 10/21/2005					
Client ID:			Run ID: ICP_051024B		SeqNo: 414602						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	0.002731	0.05									J

J

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

Hall Environmental Analysis Laboratory

Date: 03-Nov-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co

Work Order: 0510135

Project: AL-2 to EP-1 Week of 10-10-05

Sample ID	BTEX Ics 100ng	Batch ID: R17025	Test Code: SW8021	Units: µg/L	Analysis Date	10/20/2005 9:45:18 PM	Prep Date				
Client ID:		Run ID:	PIDFID_051020A		SeqNo:	413190					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17.36	2.5	20	0	86.8	64.5	133	0			
Benzene	20.32	0.5	20	0	102	88.5	114	0			
Toluene	19.15	0.5	20	0	95.8	87.2	114	0			
Ethylbenzene	19.8	0.5	20	0	99.0	88.6	113	0			
Xylenes, Total	39.71	0.5	40	0	99.3	83.3	114	0			

Sample ID	LCS-8970	Batch ID: 8970	Test Code: SW8270C	Units: µg/L	Analysis Date	10/21/2005	Prep Date	10/17/2005			
Client ID:			Run ID: ELMO_051019B		SeqNo: 413453						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	83.66	10	100	0	83.7	11	123	0			
4-Chloro-3-methylphenol	155.3	20	200	0	77.6	15.4	119	0			
2-Chlorophenol	147.1	10	200	0	73.6	12.2	122	0			
1,4-Dichlorobenzene	65.28	10	100	0	65.3	16.9	100	0			
2,4-Dinitrotoluene	81.84	10	100	0	81.8	13	138	0			
N-Nitrosodi-n-propylamine	76.12	10	100	0	76.1	9.93	122	0			
4-Nitrophenol	69.32	50	200	0	34.7	-20.5	87.4	0			
Pentachlorophenol	140.7	50	200	0	70.3	-0.355	114	0			
Phenol	80.56	10	200	0	40.3	7.53	73.1	0			
Pyrene	81.62	15	100	0	81.6	12.6	140	0			
1,2,4-Trichlorobenzene	64.44	10	100	0	64.4	17.4	98.7	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co

Work Order: 0510135

Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID	LCSD-8970	Batch ID: 8970	Test Code: SW8270C	Units: µg/L	Analysis Date		10/21/2005		Prep Date	10/17/2005	
Client ID:			Run ID: ELMO_051019B		SeqNo:	413454					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HightLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	66.84	10	100	0	66.8	11	123	83.66	22.4	30.5	
4-Chloro-3-methylphenol	119.7	20	200	0	59.8	15.4	119	155.3	25.9	28.6	
2-Chlorophenol	112.7	10	200	0	56.3	12.2	122	147.1	26.5	107	
1,4-Dichlorobenzene	52.08	10	100	0	52.1	16.9	100	65.28	22.5	62.1	
2,4-Dinitrotoluene	67.34	10	100	0	67.3	13	138	81.84	19.4	14.7	R
N-Nitrosodi-n-propylamine	58.6	10	100	0	58.6	9.93	122	76.12	26.0	30.3	
4-Nitrophenol	55.8	50	200	0	27.9	12.5	87.4	69.32	21.6	36.3	
Pentachlorophenol	117.4	50	200	0	58.7	3.55	114	140.7	18.0	49	
Phenol	65.2	10	200	0	32.6	7.53	73.1	80.56	21.1	52.4	
Pyrene	68.92	15	100	0	68.9	12.6	140	81.62	16.9	16.3	R
1,2,4-Trichlorobenzene	49.52	10	100	0	49.5	17.4	98.7	64.44	26.2	36.4	

Sample ID	LCS-8972	Batch ID: 8972	Test Code: SW7470	Units: mg/L	Analysis Date	10/17/2005	Prep Date	10/17/2005			
Client ID:			Run ID: MI-LA254_051117A		SeqNo: 412257						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004663	0.0002	0.005	0	93.3	75.2	134	0			

Sample ID	LCSD-8972	Batch ID: 8972	Test Code: SW7470	Units: mg/L	Analysis Date	10/17/2005	Prep Date	10/17/2005			
Client ID:			Run ID: MI-LA254_051117A		SeqNo: 412275						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004783	0.0002	0.005	0	95.7	75.2	134	0.004663	2.54	0	

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

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

B - Analyte detected in the associated Method Blank
2

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Giant Refining Co

Work Order: 0510135

Project: AL-2 to EP-1 Week of 10-10-05

Sample ID	LCS	Batch ID: R17009	Test Code: SW6010A	Units: mg/L	Analysis Date	10/19/2005 10:09:29 A	Prep Date				
Client ID:			Run ID: ICP_051019A		SeqNo:	412771					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5133	0.01	0.5	0	103	80	120	0			
Arsenic	0.5158	0.02	0.5	0	103	80	120	0			
Beryllium	0.5064	0.003	0.5	0	101	80	120	0			
Cadmium	0.5122	0.002	0.5	0	102	80	120	0			
Chromium	0.5083	0.006	0.5	0	102	80	120	0			
Copper	0.5126	0.006	0.5	0	103	80	120	0			
Lead	0.5088	0.005	0.5	0	102	80	120	0			
Nickel	0.4863	0.01	0.5	0.0006294	97.1	80	120	0			
Selenium	0.4789	0.02	0.5	0	95.8	80	120	0			
Silver	0.5096	0.005	0.5	0	102	80	120	0			
Thallium	0.5354	0.01	0.5	0	107	80	120	0			
Zinc	0.5051	0.05	0.5	0	101	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 3

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID	LCSD	Batch ID: R17009	Test Code: SW6010A	Units: mg/L	Analysis Date	10/19/2005 10:12:45 A	Prep Date				
Client ID:		Run ID: ICP_051019A			SeqNo: 412772						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5041	0.01	0.5	0	101	80	120	0.5133	1.81	20	20
Arsenic	0.5024	0.02	0.5	0	100	80	120	0.5158	2.63	20	20
Beryllium	0.4999	0.003	0.5	0	100	80	120	0.5064	1.29	20	20
Cadmium	0.5055	0.002	0.5	0	101	80	120	0.5122	1.31	20	20
Chromium	0.5049	0.006	0.5	0	101	80	120	0.5083	0.677	20	20
Copper	0.5056	0.006	0.5	0	101	80	120	0.5126	1.38	20	20
Lead	0.5067	0.005	0.5	0	101	80	120	0.5088	0.418	20	20
Nickel	0.4806	0.01	0.5	0.0006294	96.0	80	120	0.4863	1.17	20	20
Selenium	0.4768	0.02	0.5	0	95.4	80	120	0.4789	0.447	20	20
Silver	0.5062	0.005	0.5	0	101	80	120	0.5096	0.671	20	20
Thallium	0.5428	0.01	0.5	0	109	80	120	0.5354	1.37	20	20
Zinc	0.4944	0.05	0.5	0	98.9	80	120	0.5051	2.14	20	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

4

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received:

10/14/2005

Work Order Number 0510135

Received by AT

Checklist completed by

[Signature]
Signature

10/14/05
Date

Matrix

Carrier name Client drop-off

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐ Not Shipped ☒
Custody seals intact on sample bottles?	Yes ☐	No ☒	N/A ☐
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
Container/Temp Blank temperature?	5°	4° C ± 2 Acceptable If given sufficient time to cool.	

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: dissolved metal sample 21/krad - preserved

in lab / AT 10/14/05

Corrective Action

per Steve
Collection 15 1430 not 845/AT

Client: Giant Refining
Company - Ciriga
Address: Route 3 Box 7
Gallup, NM 87301

Project Name: AL-2 to EP-1	Week of 10-10-2005
Project #:	

Project #:

Project Manager:

Phone #: 505 722 3833
Fax #: 505 722 0210

Number/Volume

HgCl_2	HNO_3
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HEAL No.

10/13/05	1430	H ₂ O	AL-2	SP-1
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1510135-1

Date:	10/14/05	Time:	0850	Relinquished By: (Signature)	<i>[Signature]</i>
Date:		Time:		Relinquished By: (Signature)	

Received By: (Signature)	10/14/65
Received By: (Signature)	

2580

**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

8270 (Semi-VOA)	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Remarks:	H578
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Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Friday, November 04, 2005 1:01 PM
To: Chavez, Carl J, EMNRD
Cc: Cobrain, Dave, NMENV
Subject: November 10th Ciniza site visit

Carl

You are on my list to contact today. Dave and I are unable to attend the Ciniza visit on November 10th due to a mandatory training that came up. We are confident that you will cover the areas of concern and provide information to us as needed. Our inspectors performed an inspection at Ciniza a few weeks ago. We had them look at the various areas of concern that were encountered during our September 8 visit and they said there may have been something on the water at the old API Separator but were not sure.

The areas of concern, which I am sure you will be viewing include the evaporation ponds to see if oil is still present on the water, the status of the evaporation ponds bank cleanup and the Old API Separator.

Let me know how the visit goes.

Thanks

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 428-2545
Fax: (505)-428-2567
hope.monzeglio@state.nm.us

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, November 04, 2005 1:56 PM
To: 'James Romero'; Ed Riege; Steve Morris
Cc: Price, Wayne, EMNRD; Powell, Richard, NMENV
Subject: November 10, 2005 Tentative Meeting Agenda

James:

Good afternoon. Please find below a tentative agenda for next Thursday. The NMED- HWB will not be attending the meeting.

Tentative Agenda

- 1) NPDES Stormwater Inspection (NMED- SWQB) ~ 10:15 a.m. to Noon and 12:30 p.m. to 2:30 p.m.
- 2) Follow-up from September 8, 2005 Inspection (NMEMNRD- OCD) ~ 2:30 p.m. to 5 p.m.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/>
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, November 03, 2005 9:52 AM
To: Monzeglio, Hope, NMENV
Cc: Price, Wayne, EMNRD; Steve Morris; 'James Romero'
Subject: Ciniza AL2 - EP1 Analytical Method Change from 8270 to 8310 & RR Lagoon Sampling

Hope:

Good morning. Steve Morris of Ciniza contacted me this morning with plans to switch analytical test methods on the above sampling from 8270 to 8310 (<http://www.epa.gov/epaoswer/hazwaste/test/pdfs/8310.pdf>). In general, we also noticed that the dilution factor of historical AL2 - EP1 analytical results were high and that detection limits exceeded standards. OCD concurs with HWB on the above change in order to evaluate analytical data results that will meet our data quality objectives.

Regarding the RR Lagoon sampling, we agree that a standard map to the appropriate scale is needed to display sample locations and depths along with corresponding analytical data results to verify that soil remediation is complete. This should be the standard for all contaminated soil excavations in the future and should be included in the final report.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
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(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, October 28, 2005 2:17 PM
To: 'James Romero'
Cc: Price, Wayne, EMNRD
Subject: RE: Stormwater

James:

From Wayne Price's October 21, 2005 e-mail, the due date for the stormwater issues plan is November 15, 2005. However, OCD has just clarified that all issues mentioned in today's e-mail and any others will need to be incorporated into a major modification of the discharge plan. Thanks.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/> (Pollution Prevention Guidance is under "Publications")

-----Original Message-----

From: James Romero [mailto:jromero@giant.com]
Sent: Friday, October 28, 2005 1:53 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Stormwater

Carl:

Thanks for the heads up, also, internally we are discussing options to address Wayne's October 21st email and will notify OCD by the Oct 15 deadline.

-----Original Message-----

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, October 28, 2005 12:26 PM
To: James Romero; Monzeglio, Hope, NMENV; Price, Wayne, EMNRD
Cc: Ed Riege
Subject: RE: Stormwater

James:

Pursuant to advice received from Wayne Price, hold off on a major modification to the discharge plan to incorporate all changes concerning the RR Lagoon, Old API Separator, New Separator issues, Stormwater and reporting issues so they can be done at one time. A major modification to the discharge plan will require public notice and a fee of \$8,400.

Per Wayne Price, OCD is anticipating a possible Compliance Order (CO) stemming from the September 08, 2005 Ciniza Refinery Inspection. OCD hopes to resolve all issues by requesting a major modification upon issuance of a CO including possible Civil penalties. However, issuance of a CO is not certain at this time.

On November 10, 2005, OCD/HWB is planning to visit the refinery and will be discussing the above issues. Also, Mr. Powell of the Surface Water Quality Bureau will be conducting an NPDES Stormwater Inspection, which will help to clarify all areas on the refinery property that is subject to stormwater regulations.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505
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Website: <http://www.emnrd.state.nm.us/ocd/> (Pollution Prevention Guidance is under "Publications")

-----Original Message-----

From: James Romero [mailto:jromero@giant.com]
Sent: Friday, October 28, 2005 11:57 AM
To: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV; Price, Wayne, EMNRD
Cc: Ed Riege
Subject: Stormwater

Carl:

Giant Ciniza is in the process of updating our stormwater plan to exclude certain areas (i.e., old api, process stormwater drains etc).
We'll also update the plan to include the stormwater control structures.
My question is, does this constitute a permit modification under our OCD permit? If so, what do you need from us to complete this?

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Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, October 28, 2005 1:26 PM
To: 'James Romero'; Monzeglio, Hope, NMENV; Price, Wayne, EMNRD
Cc: Ed Riege
Subject: RE: Stormwater

James:

Pursuant to advice received from Wayne Price, hold off on a major modification to the discharge plan to incorporate all changes concerning the RR Lagoon, Old API Separator, New Separator issues, Stormwater and reporting issues so they can be done at one time. A major modification to the discharge plan will require public notice and a fee of \$8,400.

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On November 10, 2005, OCD/HWB is planning to visit the refinery and will be discussing the above issues. Also, Mr. Powell of the Surface Water Quality Bureau will be conducting an NPDES Stormwater Inspection, which will help to clarify all areas on the refinery property that are subject to stormwater regulations.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/> (Pollution Prevention Guidance is under "Publications")

-----Original Message-----

From: James Romero [mailto:jromero@giant.com]
Sent: Friday, October 28, 2005 11:57 AM
To: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV; Price, Wayne, EMNRD
Cc: Ed Riege
Subject: Stormwater

Carl:

Giant Ciniza is in the process of updating our stormwater plan to exclude certain areas (i.e., old api, process stormwater drains etc). We'll also update the plan to include the stormwater control structures. My question is, does this constitute a permit modification under our OCD permit? If so, what do you need from us to complete this?

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Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Friday, October 28, 2005 11:11 AM
To: James Romero [jromero@giant.com]; eriege@giant.com
Cc: Cobrain, Dave, NMENV; Price, Wayne, EMNRD; Chavez, Carl J, EMNRD
Subject: AL-2 to EP-1 Sampling

James

To recap our phone call today (10/28/05) with Hall Environmental Analysis Laboratory: The phone call was to discuss the analytical results from AL-2 to EP-1 and the variations in the practical quantitation limit (PQL) and the dilution factors (DF). NMED was concerned the detection limits in the analytical results exceeded the regulatory limits. It was concluded that Hall provide an explanation in the Cover Letter to future analytical results indicating why dilution was used and why a lower dilution factor/limit could not be run.

NMED also agreed future effluent samples from AL-2 to EP-1 can be run with EPA Method 8310 instead of EPA Method 8270.

Thanks

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 428-2545
Fax: (505)-428-2567
hope.monzeglio@state.nm.us

10/28/2005

Chavez, Carl J, EMNRD

From: James Romero [jromero@giant.com]
Sent: Friday, October 28, 2005 11:07 AM
To: Monzeglio, Hope, NMENV; Price, Wayne, EMNRD; Foust, Denny, EMNRD; Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD
Cc: Ed Riege; Steve Morris; Johnny Sanchez
Subject: The following is an update for week 7



NOC Storm water
system.doc (6...

The following is an update for week 7

- 1) API Separator - The west bay will be closed and resealed this week. Seals will be tested prior to being put back into service.
- 2) A work order has been issued to excavate contaminated soil from spill at tank 232. All excavated soil will be stockpiled on plastic lining, bermed and soil samples taken for lab analysis. A remediation plan will be submitted to OCD/NMED
- 3) NMED Hazardous Waste Bureau (Compliance) conducted site inspection 10/26 and 10/27
- 4) Daily inspections of stormwater separator continue with no oil being observed
- 5) Weekly samples were taken from AP2 to EP1, and Stormwater Separator Effluent
- 6) Notice of Change for stormwater related issues has been issued (see attached)

<<NOC Storm water system.doc>>

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Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Tuesday, October 25, 2005 5:37 PM
To: Chavez, Carl J, EMNRD
Subject: RE: RR Lagoon Confirmatory Samples

From: Chavez, Carl J, EMNRD
Sent: Tue 10/25/2005 5:26 PM
To: Monzeglio, Hope, NMENV
Cc: Price, Wayne, EMNRD
Subject: RR Lagoon Confirmatory Samples

Hope:

Hi. A little crazy around here with rules promulgation and things. I had a chance to go over the sample results in comparison to the HWB's SSLs and TPH Guidance. The sample results appear to be below SSLs for Industrial Limits for organics and metals; however, there are some locations of elevated DRO, i.e., 3,800 mg/kg and 7000 mg/kg at the SE Wall Excavation from a sample collected on 8/19/05. Also DRO was 3,600 mg/kg on 11/18/04 and 6,300 mg/kg on 11/20/04 at SWMU. However, VOCs, etc. are very low.

You may want to ask James if additional sampling was conducted more recently in the above areas to confirm DRO levels below 2,200 mg/kg or if you think the levels are marginally above the DRO limits, then no additional sampling may be required. OCD defers to the HWB's call on this one. If you feel we're ready to receive the final report, please go ahead. Wayne and I will be down south for a couple of days and in on Friday.

Sorry for the delay. Thanks.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/>
(Pollution Prevention Guidance is under "Publications")

10/28/2005

Chavez, Carl J, EMNRD

From: Price, Wayne, EMNRD
Sent: Friday, October 21, 2005 2:41 PM
To: Chavez, Carl J, EMNRD
Subject: FW: Stormwater Issues

From: Price, Wayne, EMNRD
Sent: Fri 10/21/2005 2:14 PM
To: jromero@giant.com
Cc: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV; Erieger@giant.com
Subject: Stormwater Issues

Dear Mr. Romero:

OCD is extremely concerned about the issue of process water being discharged into the stormwater drains. This waste may even be F-listed hazardous waste. Therefore Giant is hereby ordered to investigate ways to upgrade the current stormwater plan and update the refinery process drains and additional treatment to treat process drain water from old API Separator.

Please provide this plan for OCD approval by November 15, 2005.

10/21/2005

Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Thursday, October 20, 2005 2:44 PM
To: eriege@giant.com; James Romero [jromero@giant.com]
Cc: Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV; Foust, Denny, EMNRD; Price, Wayne, EMNRD
Subject: Sampling AL2 - EP-1

NMED has reviewed the effluent discharge from Aeration Lagoon 2 to Evaporation Pond 1 analytical data from 8/9/05 – 9/29/05. NMED is modifying the analytical analysis to EPA Method 8021 (BTEX) + MTBE and priority pollutant metals (totals), and EPA Method 8015B Modified for Total Extractable Petroleum Hydrocarbons (TEPH).

Giant must still abide by the sampling schedule presented in the 8/22/05 email titled *Spill Sampling* that includes the following: "Giant must collect samples of effluent discharged from Aeration Lagoon 2 to Evaporation Pond 1 on a weekly basis until four weeks after the API Separator repair and monthly thereafter."

If you have questions please let me know.

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 428-2545
Fax: (505)-428-2567
hope.monzeglio@state.nm.us

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