SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

CCC

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DEC 2005
NMED Hazardous Waste Bureau

LABORATORY REPORT

Client
Giant Refining Company (Gallup)
Route 3, Box 7
Gallup, NM 87301

Order Number
0501210

Project Number
Pilot TC Eff.

Issued
Thursday, February 17, 2005

Total Number of Pages
7

Approved By:
Bassam Youssef
Laboratory Manager

NELAC Accreditation #E87688

A2LA ISO/IEC 17025 Accreditation #0724.01

"Analytical Integrity" · A2LA Accreditation #0724.01 · NELAP Certified
595 East Tallmadge Avenue · Akron, Ohio 44310 • Phone: 330-253-8211 · Fax: 330-253-4489
Web Site: www.settek.com

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Sample Summary

Client: Giant Refining Company (Gallup)
Order Number: 0501210

Laboratory ID	Client ID	Matrix	Sampling Date
0501210-01	Pilot T.C. Eff.	Liquid	2/8/05

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Report Narrative

Client: Giant Refining Company (Gallup)
Order Number: 0501210

No problems were encountered during analysis of this order number, except as noted.

The test results meet the requirements of the NELAC and A2LA standards, except where noted.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the client. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the client for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

February 17, 2005

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 2/8/05
Date Received: 2/10/05
Project #: Pilot TC Eff.
Client ID #: Pilot T.C. Eff.
Laboratory ID #: 0501210-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 2/14/05

TCLP Metals

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
Arsenic	0.50	<0.5	5.0
Barium	5.0	<5.0	100.0
Cadmium	0.10	<0.1	1.0
Chromium	0.20	<0.2	5.0
Lead	0.50	<0.5	5.0
Mercury	0.0020	<0.002	0.20
Selenium	0.50	<0.5	1.0
Silver	0.50	<0.5	5.0

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Laboratory ID #: 0501210-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 2/11/05

TCLP Volatiles

Parameter	Reporting Limit (mg/L)	Results (mg/L)	Regulatory Level (mg/L)
1,1-Dichloroethene	0.10	<0.1	0.70
1,2-Dichloroethane	0.10	<0.1	0.50
2-Butanone (MEK)	2.0	<2.0	200.0
Benzene	0.10	<0.1	0.50
Carbon tetrachloride	0.10	<0.1	0.50
Chlorobenzene	0.10	<0.1	100.0
Chloroform	0.10	<0.1	6.0
Tetrachloroethene	0.10	<0.1	0.70
Trichloroethene	0.10	<0.1	0.50
Vinyl Chloride	0.20	<0.2	0.20

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February 17, 2005

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Gallup, NM 87301

Date Collected: 2/8/05
Date Received: 2/10/05
Project #: Pilot TC Eff.
Client ID #: Pilot T.C. Eff.
Laboratory ID #: 0501210-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 2/14/05

TCLP BNA

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
1,4-Dichlorobenzene	0.10	<0.1	7.5
2,4,5-Trichlorophenol	0.25	<0.25	400.0
2,4,6--Trichlorophenol	0.25	<0.25	2.0
2,4-Dinitrotoluene	0.10	<0.1	0.13
Cresols	0.10	0.6	200.0
Hexachloro-1,3-butadiene	0.10	<0.1	0.50
Hexachlorobenzene	0.10	<0.1	0.13
Hexachloroethane	0.10	<0.1	3.0
Nitrobenzene	0.10	<0.1	2.0
Pentachlorophenol	0.25	<0.25	100.0
Pyridine	0.25	<0.25	5.0

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February 17, 2005

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Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 2/8/05
Date Received: 2/10/05
Project #: Pilot TC Eff.
Client ID #: Pilot T.C. Eff.
Laboratory ID #: 0501210-01
Matrix: Liquid
Analyst: SK

Parameter	Date of Analysis	Reporting Limit (mg/L)	Results (mg/L)	Method
Biochemical Oxygen Dema	2/11/05	5.0	3500.0	EPA 405.1

Sum[illegible] Environmental Technologies, In[illegible]

Cooler receipt form

Customer: Giant Refin.

Order Number: _____

Date Received: 2/10/05

Associated Order Numbers: _____ N/A

Time Received: 10:30

Number of Coolers/Boxes: _____ N/A

Shipper: FED EX UPS Airborne US Cargo US Postal Walk-in Pickup Other: _____

Packaging:	Peanuts	Bubble wrap	Paper	Foam	None	Sample ID	pH	Sample ID	pH
Tape on cooler/box			Y	N	N/A				
Custody Seals intact			Y	N	N/A				
C.O.C. in plastic			Y	N	N/A				
Ice___/Blue Ice___ present			Y	N	N/A				
Temperature:			35 °C		N/A				
C.O.C. filled out properly			Y	N	N/A				
Samples in separate bags			Y	N	N/A				
Sample containers intact			Y	N	N/A				
Label(s) complete (ID, date)			Y	N	N/A				
Label(s) agree with C.O.C.			Y	N	N/A				
Correct containers used			Y	N	N/A				
Preserved properly			Y	N	N/A				
Sufficient Sample			Y	N	N/A				
Bubbles absent from 40ml			Y	N	N/A				

If no, which ones with anomalies: _____

Was client called about anomalous samples Y N

Will client send new sample(s) Y N

Talked to _____ Date/Time _____

Logged in by: BN

Comments: _____

Rev. 5.1

Summit Environmental Technologies, Inc.
595 East Tallmadge Avenue
Akron, Ohio 44310 Tel: 330.253.8211 Fax: 330.253.4489

Analysis Request/Chain of Custody

For Summit Environmental Technologies, Inc. use only
Page 1 of 1.

SET No.

Client Name: Giant Refining Company	Project Name: Pilot T.C. Effluent
Client Address: Route 3 Box 7, Gallup, NM 87301	Project Address: ← Same
Client Phone No.: 505 722 3833	Report to: Steve Morris
Client Fax No.: 505 722 0210 — Please Fax Results ✓ ☐	PO #
Contact Person: Steve Morris	Quote No.
Sampled by: Steve Morris	Check if Ohio VAP samples ✓ ☐

Analytical Parameters and Methods

#	Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: S=Solid, L=Liquid, O=Oil, SL=Sludge, A=Air	Preservative	Number of Containers	TCLP Volatile Organics + Metals	BOD							
1	Pilot TC Effluent 1Q05	2/8/05	1500	X		L	NONE	3	X	X							

0501210-01

Relinquished by:	Date	Time	Received by:	Date	Time
[illegible]	2/9/05	0730			

Received in lab by:	Date	Time
Bachman	2/10/05	10:30

Rush Requested: _____ **Days**
Must be approved by lab manager

Notes/Comments: Use Care Handling Samples (Travel Center Wastewater)

White and yellow pages should accompany samples to the laboratory. The client retains the pink page.

GRCC

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

OCD split samples w/ Giant during 11/10/05 visit

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

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,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

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

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

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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

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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
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						Analyst: **JAT**
Petroleum Hydrocarbons, TR	61	2.0		mg/L	1	11/16/2005
EPA METHOD 8260B: VOLATILES						Analyst: **KTM**
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
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:
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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

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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
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:
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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						Analyst: **JAT**
Petroleum Hydrocarbons, TR	84	2.0		mg/L	1	11/16/2005
EPA METHOD 8260B: VOLATILES						Analyst: **KTM**
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:
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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
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

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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
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
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

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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
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

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R - RPD outside accepted recovery limits
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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

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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:

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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** 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									

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

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

QC SUMMARY REPORT
Method Blank

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

QC SUMMARY REPORT

Method Blank

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	16.6	150	0
Surr: 2-Fluorobiphenyl	70.68	0	100	0	70.7	19.6	134	0
Surr: 2-Fluorophenol	114.8	0	200	0	57.4	9.54	113	0
Surr: 4-Terphenyl-d14	88.34	0	100	0	88.3	22.7	145	0
Surr: Nitrobenzene-d5	67.28	0	100	0	67.3	14.6	134	0
Surr: Phenol-d5	73.12	0	200	0	36.6	10.7	80.3	0

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	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: NM Oil Conservation Division
Work Order: 0511114
Project: Ciniza 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									J
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

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

QC SUMMARY REPORT
Method Blank

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

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

QC SUMMARY REPORT

Method Blank

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

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

QC SUMMARY REPORT
Method Blank

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

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

QC SUMMARY REPORT

Method Blank

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	10	0	94.6	69.9	130	0
Surr: 4-Bromofluorobenzene	9.246	0	10	0	92.5	71.2	123	0
Surr: Dibromofluoromethane	8.632	0	10	0	86.3	73.9	134	0
Surr: Toluene-d8	9.426	0	10	0	94.3	81.9	122	0

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

Hall Environmental Analysis Laboratory

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 lcs** 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 lcs** 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

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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**
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: 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	SPK Ref Val	%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

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	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref 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 | 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: NM Oil Conservation Division
Work Order: 0511114
Project: Ciniza Refinery Gallup NM

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

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 SeqNo: 424427

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.5555	0.02	0.5	0	111	80	120	0.5574	0.354	20	
Antimony	0.5428	0.01	0.5	0	109	80	120	0.5415	0.247	20	
Arsenic	0.5374	0.02	0.5	0	107	80	120	0.5357	0.322	20	
Barium	0.5104	0.02	0.5	0.0006184	102	80	120	0.5119	0.298	20	
Beryllium	0.547	0.003	0.5	0	109	80	120	0.5461	0.158	20	
Boron	0.5294	0.04	0.5	0	106	80	120	0.5305	0.202	20	
Cadmium	0.5195	0.002	0.5	0	104	80	120	0.519	0.0933	20	
Calcium	53.82	1	50	0	108	80	120	52.35	2.78	20	
Chromium	0.5258	0.006	0.5	0	105	80	120	0.5269	0.224	20	
Cobalt	0.5305	0.006	0.5	0	106	80	120	0.5276	0.552	20	
Copper	0.5318	0.006	0.5	0.0005311	106	80	120	0.5351	0.610	20	
Iron	0.5127	0.05	0.5	0	103	80	120	0.5209	1.58	20	
Lead	0.5125	0.005	0.5	0	103	80	120	0.5096	0.576	20	
Magnesium	53.96	1	50	0	108	80	120	52.58	2.59	20	
Manganese	0.5191	0.002	0.5	0.0002601	104	80	120	0.521	0.376	20	
Molybdenum	0.5423	0.008	0.5	0	108	80	120	0.5406	0.303	20	
Nickel	0.4961	0.01	0.5	0	99.2	80	120	0.4969	0.171	20	
Potassium	57.18	1	50	0	114	80	120	55.65	2.72	20	
Selenium	0.523	0.05	0.5	0	105	80	120	0.5221	0.170	20	
Silver	0.527	0.005	0.5	0	105	80	120	0.529	0.388	20	
Sodium	57.6	1	50	0	115	80	120	56.07	2.68	20	
Thallium	0.5272	0.05	0.5	0	105	80	120	0.5173	1.90	20	
Vanadium	0.5357	0.05	0.5	0	107	80	120	0.5359	0.0319	20	
Zinc	0.5082	0.05	0.5	0.004426	101	80	120	0.5091	0.187	20	
Silica	5.537	1.1	5.35	0	104	80	120	5.457	1.47	20	

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

CLIENT: 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

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

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] (Signature) 11/11/05 (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? 1° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted | Date contacted: | Person contacted

Contacted by: | Regarding

Comments:

Corrective Action

CHAIN-OF-CUSTODY RECORD

QA / QC Package: Std ☑ Level 4 ☐
Other:

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

Client: NM Oil Conservation Div.

Address:

Santa Fe, NM 87505

Phone #: 505-476-3491

Fax #:

Project Name: Ciniza Refinery Gallup, NM

Project #:

Project Manager: Carl Chavez

Sampler: Wayne Price & Carl Chavez

Sample Temperature: ~50F 1°C

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative: $HgCl_2$	Preservative: HNO_3	Preservative: ~~HCl~~ CC	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, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	6010 / 7470 OCD List				Air Bubbles or Headspace (Y or N)
11/10/05	17:05	Hzo	OLD API		X		CC	0511114-1											✓						
11/10/05	17:21	H2O	" "																	✓					
11/10/05	17:25	"	" "			X															✓				
11/10/05	17:27	"	" "								CC ✓														
"	17:30	"	AL2 - EP1		X		CC	-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)
11/10/11/05	7:58	Carl Chavez	11/11/05 0758
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: Trip Blank - 4

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

LABORATORY REPORT

Client
Giant Refining Company (Gallup)
Route 3, Box 7
Gallup, NM 87301

Order Number
0505106

Project Number
Pilot TC Eff.

Issued
Tuesday, June 21, 2005

Total Number of Pages
7

Approved By :
Bassam Youssef
Laboratory Manager

NELAC Accreditation #E87688

A2LA ISO/IEC 17025 Accreditation #0724.01

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

2

Sample Summary

Client: Giant Refining Company (Gallup)
Order Number: 0505106

Laboratory ID	Client ID	Matrix	Sampling Date
0505106-01	2Q05	Liquid	6/9/05

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Report Narrative

Client: Giant Refining Company (Gallup)
Order Number: 0505106

No problems were encountered during analysis of this order number, except as noted.

The test results meet the requirements of the NELAC and A2LA standards, except where noted.
The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the client. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the client for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

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Analytical Laboratories

June 21, 2005

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 6/9/05
Date Received: 6/10/05
Project #: Pilot TC Eff.
Client ID #: 2Q05
Laboratory ID #: 0505106-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 6/14/05

TCLP Metals

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
Arsenic	0.50	<0.5	5.0
Barium	5.0	<5.0	100.0
Cadmium	0.10	<0.1	1.0
Chromium	0.20	<0.2	5.0
Lead	0.50	<0.5	5.0
Mercury	0.020	<0.02	0.20
Selenium	0.50	<0.5	1.0
Silver	0.50	<0.5	5.0

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Analytical Laboratories

5

June 21, 2005

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 6/9/05
Date Received: 6/10/05
Project #: Pilot TC Eff.
Client ID #: 2Q05
Laboratory ID #: 0505106-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 6/14/05

TCLP Volatiles

Parameter	Reporting Limit (mg/L)	Results (mg/L)	Regulatory Level (mg/L)
1,1-Dichloroethene	0.10	<0.1	0.70
1,2-Dichloroethane	0.10	<0.1	0.50
2-Butanone (MEK)	2.0	<2.0	200.0
Benzene	0.10	<0.1	0.50
Carbon Tetrachloride	0.10	<0.1	0.50
Chlorobenzene	0.10	<0.1	100.0
Chloroform	0.10	<0.1	6.0
Tetrachloroethene	0.10	<0.1	0.70
Trichloroethene	0.10	<0.1	0.50
Vinyl Chloride	0.20	<0.2	0.20

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Analytical Laboratories

6

June 21, 2005

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 6/9/05
Date Received: 6/10/05
Project #: Pilot TC Eff.
Client ID #: 2Q05
Laboratory ID #: 0505106-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 6/15/05

TCLP BNA

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
1,4-Dichlorobenzene	0.10	<0.1	7.5
2,4,5-Trichlorophenol	0.25	<0.25	400.0
2,4,6--Trichlorophenol	0.25	<0.25	2.0
2,4-Dinitrotoluene	0.10	<0.1	0.13
Cresols	5.0	<5.0	200.0
Hexachloro-1,3-butadiene	0.10	<0.1	0.50
Hexachlorobenzene	0.10	<0.1	0.13
Hexachloroethane	0.10	<0.1	3.0
Nitrobenzene	0.10	<0.1	2.0
Pentachlorophenol	0.25	<0.25	100.0
Pyridine	0.25	<0.25	5.0

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ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

7

June 21, 2005

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 6/9/05
Date Received: 6/10/05
Project #: Pilot TC Eff.
Client ID #: 2Q05
Laboratory ID #: 0505106-01
Matrix: Liquid
Analyst: BY

Parameter	Date of Analysis	Reporting Limit (mg/L)	Results (mg/L)	Method
Biochemical Oxygen Dema	6/11/05	5.0	2850.0	EPA 405.1

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
595 EAST TALLMADGE AVENUE
AKRON, OHIO 44310
TEL: 330/253-8211; FAX: 330/253-4489

CHAIN OF CUSTODY

A2LA CERTIFICATION #: 0724-01

s.e.t.

PROJECT NAME: Pilot TC Effluent PROJECT LOCATION: Giant - Ciniza Refinery PO#:

CLIENT NAME: Giant CLIENT ADDRESS: Route 3 Box 7 Gallup NM 87301

CONTACT PERSON: Steve Morris PHONE #: 505 722 3833 FAX #: 505 722 0210 SAMPLED BY: Steve Morris

#	SAMPLE ID#	MEDIA	TIME	DATE	BTEX 8020	GRO 8015M	DRO 8015M	TPH 418.1	TCLP METALS	TCLP VOCS	TCLP BNAS	TCLP PEST/HERB	OTHERS
1	Pilot TC Effluent 2Q05	H_2O	0900	6/9/05									TCLP Vols, Semivols and Metals BOD

0505106 01

SPECIAL INSTRUCTIONS: TCLP Vols, Semivols, + Metals - BOD

RELINQUISHED BY: SC Morris DATE: 6-8-05 RECEIVED BY: DATE:

RECEIVED AT THE LAB BY: Sandra Moore DATE: 6/10/05 930

6RCC

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

September 30, 2005

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

= old API Sep.

RE: Stormwater Separator Effluent Water

Order No.: 0509109

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 9/12/2005 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

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

Hall Environmental Analysis Laboratory

Date: *30-Sep-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	SW Sep Effluent
Lab Order:	0509109	**Collection Date:**	9/9/2005 11:30:00 AM
Project:	Stormwater Separator Effluent Water		
Lab ID:	0509109-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	2.1	0.50		mg/L	5	9/13/2005
Chloride	90	0.50		mg/L	5	9/13/2005
Phosphorus, Orthophosphate (As P)	2.6	2.5	H	mg/L	5	9/13/2005
Sulfate	2300	25		mg/L	50	9/16/2005
Nitrate (As N)+Nitrite (As N)	5.0	0.50		mg/L	5	9/15/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	1.9	1.0		mg/L	1	9/21/2005 12:09:57 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/21/2005 12:09:57 PM
Surr: DNOP	126	58-140		%REC	1	9/21/2005 12:09:57 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	3.0	0.25		mg/L	5	9/17/2005 2:18:49 AM
Surr: BFB	113	79.7-118		%REC	5	9/17/2005 2:18:49 AM
EPA METHOD 8260B: VOLATILES						Analyst: HLM
Benzene	82	2.0		µg/L	2	9/14/2005
Toluene	290	20		µg/L	20	9/13/2005
Ethylbenzene	35	2.0		µg/L	2	9/14/2005
Methyl tert-butyl ether (MTBE)	3.8	2.0		µg/L	2	9/14/2005
1,2,4-Trimethylbenzene	110	2.0		µg/L	2	9/14/2005
1,3,5-Trimethylbenzene	91	2.0		µg/L	2	9/14/2005
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	9/14/2005
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	9/14/2005
Naphthalene	42	4.0		µg/L	2	9/14/2005
1-Methylnaphthalene	110	8.0		µg/L	2	9/14/2005
2-Methylnaphthalene	99	8.0		µg/L	2	9/14/2005
Acetone	ND	20		µg/L	2	9/14/2005
Bromobenzene	ND	2.0		µg/L	2	9/14/2005
Bromochloromethane	ND	2.0		µg/L	2	9/14/2005
Bromodichloromethane	ND	2.0		µg/L	2	9/14/2005
Bromoform	ND	2.0		µg/L	2	9/14/2005
Bromomethane	ND	4.0		µg/L	2	9/14/2005
2-Butanone	ND	20		µg/L	2	9/14/2005
Carbon disulfide	ND	20		µg/L	2	9/14/2005
Carbon Tetrachloride	ND	2.0		µg/L	2	9/14/2005
Chlorobenzene	ND	2.0		µg/L	2	9/14/2005
Chloroethane	ND	4.0		µg/L	2	9/14/2005
Chloroform	ND	2.0		µg/L	2	9/14/2005
Chloromethane	ND	2.0		µg/L	2	9/14/2005
2-Chlorotoluene	ND	2.0		µg/L	2	9/14/2005
4-Chlorotoluene	ND	2.0		µg/L	2	9/14/2005

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: *30-Sep-05*

CLIENT: Giant Refining Co
Lab Order: 0509109
Project: Stormwater Separator Effluent Water
Lab ID: 0509109-01

Client Sample ID: SW Sep Effluent
Collection Date: 9/9/2005 11:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
cis-1,2-DCE	2.1	2.0		µg/L	2	9/14/2005
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	9/14/2005
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	9/14/2005
Dibromochloromethane	ND	2.0		µg/L	2	9/14/2005
Dibromomethane	ND	4.0		µg/L	2	9/14/2005
1,2-Dichlorobenzene	ND	2.0		µg/L	2	9/14/2005
1,3-Dichlorobenzene	ND	2.0		µg/L	2	9/14/2005
1,4-Dichlorobenzene	ND	2.0		µg/L	2	9/14/2005
Dichlorodifluoromethane	ND	2.0		µg/L	2	9/14/2005
1,1-Dichloroethane	ND	2.0		µg/L	2	9/14/2005
1,1-Dichloroethene	ND	2.0		µg/L	2	9/14/2005
1,2-Dichloropropane	ND	2.0		µg/L	2	9/14/2005
1,3-Dichloropropane	ND	2.0		µg/L	2	9/14/2005
2,2-Dichloropropane	ND	2.0		µg/L	2	9/14/2005
1,1-Dichloropropene	ND	2.0		µg/L	2	9/14/2005
Hexachlorobutadiene	ND	2.0		µg/L	2	9/14/2005
2-Hexanone	ND	20		µg/L	2	9/14/2005
Isopropylbenzene	14	2.0		µg/L	2	9/14/2005
4-Isopropyltoluene	13	2.0		µg/L	2	9/14/2005
4-Methyl-2-pentanone	ND	20		µg/L	2	9/14/2005
Methylene Chloride	ND	6.0		µg/L	2	9/14/2005
n-Butylbenzene	14	2.0		µg/L	2	9/14/2005
n-Propylbenzene	4.5	2.0		µg/L	2	9/14/2005
sec-Butylbenzene	8.9	2.0		µg/L	2	9/14/2005
Styrene	ND	2.0		µg/L	2	9/14/2005
tert-Butylbenzene	ND	2.0		µg/L	2	9/14/2005
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	9/14/2005
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	2	9/14/2005
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	9/14/2005
trans-1,2-DCE	ND	2.0		µg/L	2	9/14/2005
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	9/14/2005
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	9/14/2005
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	9/14/2005
1,1,1-Trichloroethane	ND	2.0		µg/L	2	9/14/2005
1,1,2-Trichloroethane	ND	2.0		µg/L	2	9/14/2005
Trichloroethene (TCE)	ND	2.0		µg/L	2	9/14/2005
Trichlorofluoromethane	ND	2.0		µg/L	2	9/14/2005
1,2,3-Trichloropropane	ND	4.0		µg/L	2	9/14/2005
Vinyl chloride	ND	2.0		µg/L	2	9/14/2005
Xylenes, Total	850	20		µg/L	20	9/13/2005
Surr: 1,2-Dichloroethane-d4	93.4	87.7-108		%REC	2	9/14/2005
Surr: 4-Bromofluorobenzene	104	88.4-125		%REC	2	9/14/2005

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: *30-Sep-05*

CLIENT: Giant Refining Co
Lab Order: 0509109
Project: Stormwater Separator Effluent Water
Lab ID: 0509109-01

Client Sample ID: SW Sep Effluent
Collection Date: 9/9/2005 11:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: Dibromofluoromethane	100	83.1-111		%REC	2	9/14/2005
Surr: Toluene-d8	97.1	85.9-109		%REC	2	9/14/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	ND	10		µg/L	1	9/15/2005
Acenaphthylene	ND	10		µg/L	1	9/15/2005
Aniline	ND	10		µg/L	1	9/15/2005
Anthracene	ND	10		µg/L	1	9/15/2005
Azobenzene	ND	10		µg/L	1	9/15/2005
Benz(a)anthracene	ND	15		µg/L	1	9/15/2005
Benzo(a)pyrene	ND	10		µg/L	1	9/15/2005
Benzo(b)fluoranthene	ND	10		µg/L	1	9/15/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/15/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	9/15/2005
Benzoic acid	ND	50		µg/L	1	9/15/2005
Benzyl alcohol	ND	20		µg/L	1	9/15/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/15/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	9/15/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	9/15/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	9/15/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/15/2005
Butyl benzyl phthalate	ND	15		µg/L	1	9/15/2005
Carbazole	ND	10		µg/L	1	9/15/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	9/15/2005
4-Chloroaniline	ND	20		µg/L	1	9/15/2005
2-Chloronaphthalene	ND	10		µg/L	1	9/15/2005
2-Chlorophenol	ND	10		µg/L	1	9/15/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	9/15/2005
Chrysene	ND	15		µg/L	1	9/15/2005
Di-n-butyl phthalate	ND	10		µg/L	1	9/15/2005
Di-n-octyl phthalate	ND	15		µg/L	1	9/15/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/15/2005
Dibenzofuran	ND	10		µg/L	1	9/15/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	9/15/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	9/15/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	9/15/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	9/15/2005
Diethyl phthalate	ND	10		µg/L	1	9/15/2005
Dimethyl phthalate	ND	10		µg/L	1	9/15/2005
2,4-Dichlorophenol	ND	10		µg/L	1	9/15/2005
2,4-Dimethylphenol	ND	10		µg/L	1	9/15/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	9/15/2005
2,4-Dinitrophenol	ND	50		µg/L	1	9/15/2005

Qualifiers:
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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-Sep-05*

CLIENT: Giant Refining Co
Lab Order: 0509109
Project: Stormwater Separator Effluent Water
Lab ID: 0509109-01

Client Sample ID: SW Sep Effluent
Collection Date: 9/9/2005 11:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dinitrotoluene	ND	10		µg/L	1	9/15/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	9/15/2005
Fluoranthene	ND	10		µg/L	1	9/15/2005
Fluorene	ND	10		µg/L	1	9/15/2005
Hexachlorobenzene	ND	10		µg/L	1	9/15/2005
Hexachlorobutadiene	ND	10		µg/L	1	9/15/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/15/2005
Hexachloroethane	ND	10		µg/L	1	9/15/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/15/2005
Isophorone	ND	10		µg/L	1	9/15/2005
2-Methylnaphthalene	ND	10		µg/L	1	9/15/2005
2-Methylphenol	ND	15		µg/L	1	9/15/2005
3+4-Methylphenol	ND	10		µg/L	1	9/15/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/15/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	9/15/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/15/2005
Naphthalene	ND	10		µg/L	1	9/15/2005
2-Nitroaniline	ND	50		µg/L	1	9/15/2005
3-Nitroaniline	ND	50		µg/L	1	9/15/2005
4-Nitroaniline	ND	20		µg/L	1	9/15/2005
Nitrobenzene	ND	10		µg/L	1	9/15/2005
2-Nitrophenol	ND	15		µg/L	1	9/15/2005
4-Nitrophenol	ND	50		µg/L	1	9/15/2005
Pentachlorophenol	ND	50		µg/L	1	9/15/2005
Phenanthrene	ND	10		µg/L	1	9/15/2005
Phenol	ND	10		µg/L	1	9/15/2005
Pyrene	ND	15		µg/L	1	9/15/2005
Pyridine	ND	30		µg/L	1	9/15/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/15/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/15/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	9/15/2005
Surr: 2,4,6-Tribromophenol	79.6	16.6-150		%REC	1	9/15/2005
Surr: 2-Fluorobiphenyl	67.4	19.6-134		%REC	1	9/15/2005
Surr: 2-Fluorophenol	44.4	9.54-113		%REC	1	9/15/2005
Surr: 4-Terphenyl-d14	57.4	22.7-145		%REC	1	9/15/2005
Surr: Nitrobenzene-d5	63.4	14.6-134		%REC	1	9/15/2005
Surr: Phenol-d6	29.1	10.7-80.3		%REC	1	9/15/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: MAP
Specific Conductance	5700	0.010		µmhos/cm	1	9/20/2005
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	9/13/2005

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

Hall Environmental Analysis Laboratory

Date: *30-Sep-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	SW Sep Effluent
Lab Order:	0509109	**Collection Date:**	9/9/2005 11:30:00 AM
Project:	Stormwater Separator Effluent Water		
Lab ID:	0509109-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	9/29/2005 11:05:29 AM
Barium	0.063	0.020		mg/L	1	9/29/2005 11:05:29 AM
Cadmium	ND	0.0020		mg/L	1	9/29/2005 11:05:29 AM
Calcium	58	1.0		mg/L	1	9/29/2005 11:05:29 AM
Chromium	0.0072	0.0060		mg/L	1	9/29/2005 11:05:29 AM
Lead	ND	0.0050		mg/L	1	9/29/2005 11:05:29 AM
Magnesium	14	1.0		mg/L	1	9/29/2005 11:05:29 AM
Potassium	6.2	1.0		mg/L	1	9/29/2005 11:05:29 AM
Selenium	ND	0.050		mg/L	1	9/29/2005 11:05:29 AM
Silver	ND	0.0050		mg/L	1	9/29/2005 11:05:29 AM
Sodium	1200	100		mg/L	100	9/29/2005 12:23:00 PM
EPA METHOD 150.1: PH						Analyst: MAP
pH	7.09	0.010		pH units	1	9/23/2005

Qualifiers:

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

GRCC

Sampling OLD API
NEW API
AL2-EP1

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

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

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511192
Project: Old & New API Sep Eff & AL-2-EP-1 SP.
Lab ID: 0511192-01

Client Sample ID: [redacted]
Collection Date: 11/16/2005 10:40:00 AM
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:
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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: [redacted]
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:
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B - Analyte detected in the associated Method Blank
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: [redacted]-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:
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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
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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 0511192 — Received by AT

Checklist completed by _____ Signature — 11/17/05 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? **6°** *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza

Address: Route 3, Box 7
Gallup, NM 87301

Phone #: 505-722-3833

Fax #: 505-722-0210

Project Name: Old and New API separator Effluents and AL-2 to EP-1 SPECIAL

Project #:

Project Manager: Steve Morris

Sampler: Steve Morris

Sample Temperature: 6

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative: $HgCl_2$	Preservative: HNO_3	Preservative:	HEAL No.	BTEX + MTBE (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (GRO/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
11-16-05	10:40A	H_2O	Old API Effluent					0511192-1	X		X														
"	10:45A	"	NEW API Effluent					-2	X		X														
"	10:50A	"	AL-2 to EP-1					-3	X		X														

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
11-17-05	1445	Steve Morris	11/17/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 1445

Remarks: RUSH