

gfu



January 12, 1998

Mr. Benito J. Garcia, Bureau Chief
New Mexico Environmental Department
Hazardous and Radioactive Materials Bureau
2044 Galisteo
PO Box 26110
Santa Fe, New Mexico 87502

Route 3, Box 7
Gallup, New Mexico
87301

505.
722.3833

Dear Mr. Garcia:

SUBJECT: BI-MONTHLY AND SEMI-ANNUAL LAND TREATMENT SOIL SAMPLING FOR 1998.

In accordance with the requirements set out in Giant's Land Treatment Unit Characterization Plan and Hazardous Waste Facility Permit (#NMD 000333211-2) attached are copies of the analytical results for Giant's Bi-monthly and Semi-annual LTA soil sampling events. In reviewing these results, it has been determined that no hazardous waste contaminants have migrated downward into the Zone of Incorporation (ZOI) or Below the Treatment Zone (BTZ).

If there are any questions, please contact Dorinda Mancini or myself at (505) 722-3833.

Sincerely,

Stephen C. Morris, Environmental Specialist
Giant Refining Company
Ciniza Refinery

cc: w/o attachments:

Dick Platt, Refinery Manager

David Pavlich, Health Safety and Environmental Manager

American Environmental Network, Inc.

*Ciniza Background
Samples*

AEN I.D. 705350

May 29 1997

GIANT REFINING CO.
RT. 3 BOX 7
GALLUP NM 87301

Project Name BCKGRD FOR RCRA LTA
Project Number (none)

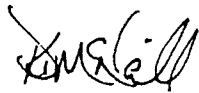
Attention: STEVE MORRIS

On 5/19/97 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze non-aq samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

pH analysis was performed by American Environmental Network (NM) Inc., Albuquerque, NM.

All other analyses were performed by American Environmental Network (FL) Inc., 11 East Olive Road, Pensacola, FL.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.



Kimberly D. McNeill
Project Manager



H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

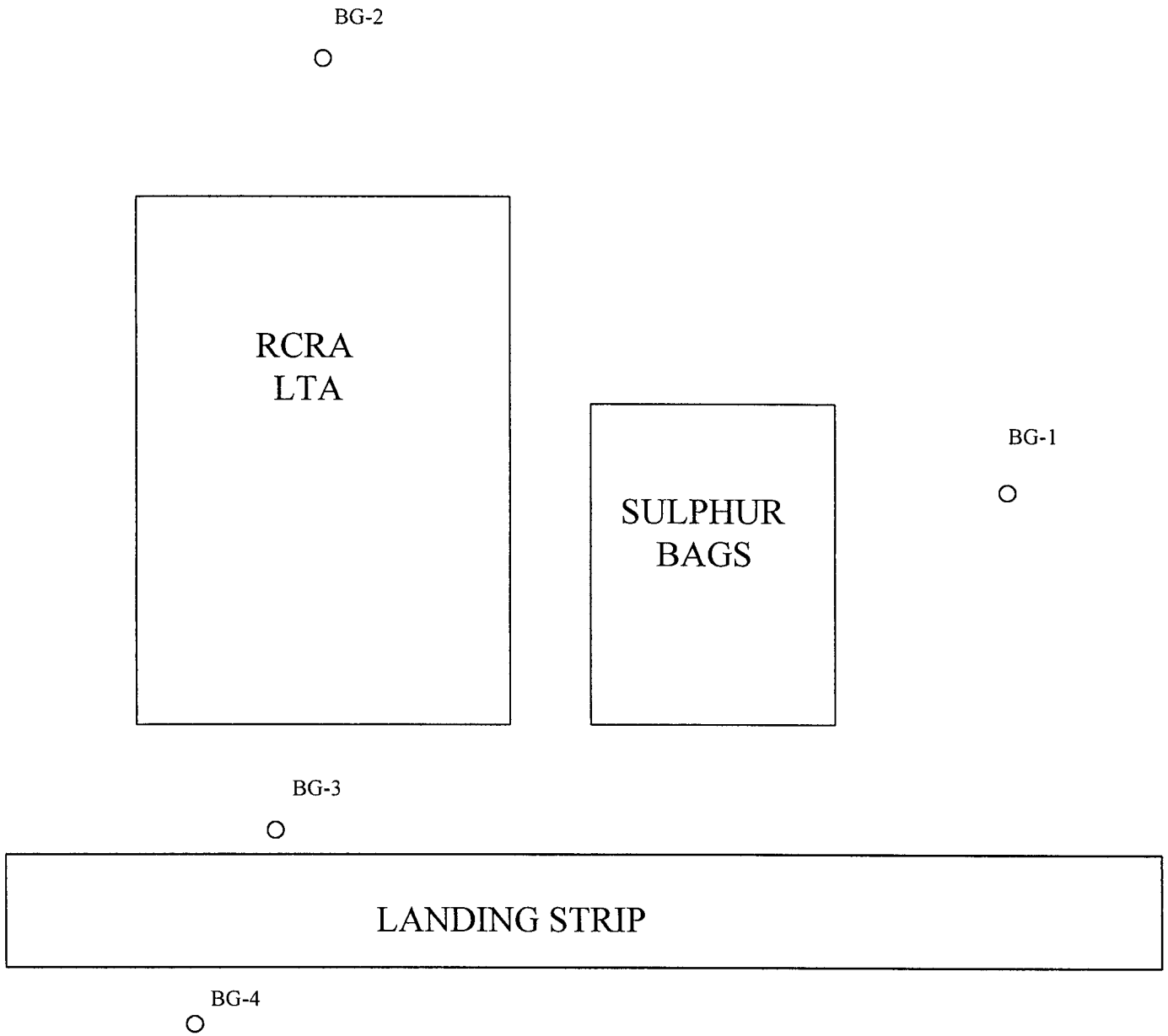
Enclosure

American Environmental Network Inc

CLIENT : GIANT REFINING CO. AEN I.D. : 705350
PROJECT # : (none) DATE RECEIVED : 5/19/97
PROJECT NAME : BCKGRD FOR RCRA LTA REPORT DATE : 5/29/97

AEN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	BG-1-51897	NA	5/18/97
02	BG-2-51897	NA	5/18/97
03	BG-3-51897	NA	5/18/97
04	BG-4-51897	NA	5/18/97

Background samples 5/18/97



GENERAL CHEMISTRY RESULTS

CLIENT : GIANT REFINING CO. AEN I.D. : 705350
PROJECT # : (none) DATE RECEIVED : 5/19/97
PROJECT NAME : BCKGRD FOR RCRA LTA

SAMPLE			DATE	DATE		
ID. #	CLIENT I.D.	MATRIX	SAMPLED	ANALYZED		
01	BG-1-51897	NON-AQ	5/18/97	5/23/97		
02	BG-2-51897	NON-AQ	5/18/97	5/23/97		
03	BG-3-51897	NON-AQ	5/18/97	5/23/97		
PARAMETER			UNITS	01	02	03
PH (SW846-9045B)			UNITS	8.79	9.04	8.94

CHEMIST NOTES:
N/A

GENERAL CHEMISTRY RESULTS

CLIENT : GIANT REFINING CO. AEN I.D. : 705350
PROJECT # : (none) DATE RECEIVED : 5/19/97
PROJECT NAME : BCKGRD FOR RCRA LTA

SAMPLE			DATE		DATE
ID. #	CLIENT I.D.	MATRIX	SAMPLED		ANALYZED
04	BG-4-51897	NON-AQ	5/18/97		5/23/97
PARAMETER			UNITS	04	
PH (SW846-9045B)			UNITS	8.70	

CHEMIST NOTES:
N/A

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : GIANT REFINING CO. AEN I.D. : 705350
 PROJECT # : (none) SAMPLE MATRIX : NON-AQ
 PROJECT NAME : BCKGRD FOR RCRA LTA

PARAMETER	UNITS	AEN I.D.	SAMPLE RESULT	DUP. RESULT	% RPD
PH	UNITS	705350-01	8.79	8.86	0.8

CHEMIST NOTES:
 N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

American Environmental Network Inc

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 705350
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 705350
Project Name: GIANT REFINING
Project Location: N/S
Test: Group of Single Wetchem
QcLevel: II

Parameter:	Unit:	Result:	R.L:	Batch:	Q:
Client ID: 705350-01			Lab ID: 001		
WALKLEY BLACK TOC	%	0.29	0.05	WTS016	
Comments:					
Client ID: 705350-02			Lab ID: 002		
WALKLEY BLACK TOC	%	0.58	0.05	WTS016	
Comments:					
Client ID: 705350-03			Lab ID: 003		
WALKLEY BLACK TOC	%	0.58	0.05	WTS016	
Comments:					
Client ID: 705350-04			Lab ID: 004		
WALKLEY BLACK TOC	%	0.48	0.05	WTS016	
Comments:					

American Environmental Network Inc

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 705350
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 705350
Project Name: GIANT REFINING
Project Location: N/S
Test: Group of Single Wetchem

Client ID:	Lab Matrix: ID:	Date/Time Sampled:	Date Received:
705350-01	001 SOIL	18-MAY-97 0915	20-MAY-97
705350-02	002 SOIL	18-MAY-97 0935	20-MAY-97
705350-03	003 SOIL	18-MAY-97 0950	20-MAY-97
705350-04	004 SOIL	18-MAY-97 1010	20-MAY-97

American Environmental Network Inc

"Method Report Summary"

Accession Number: 705350
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 705350
Project Name: GIANT REFINING
Project Location: N/S
Test: Group of Single Wetchem

Client Sample Id:	Parameter:	Unit:	Result:
705350-01	WALKLEY BLACK TOC	%	0.29
705350-02	WALKLEY BLACK TOC	%	0.58
705350-03	WALKLEY BLACK TOC	%	0.58
705350-04	WALKLEY BLACK TOC	%	0.48

American Environmental Network Inc

"WetChem Quality Control Report"

Parameter:	WALK TOC
Batch Id:	WTS016
Blank Result:	<0.05
Anal. Method:	WBTOC
Prep. Method:	N/A
Analysis Date:	23-MAY-97
Prep. Date:	23-MAY-97

Sample Duplication

Sample Dup:	705350-1
Rept Limit:	<0.05

Sample Result:	0.29
Dup Result:	0.29
Sample RPD:	0
Max RPD:	26
Dry Weight%	N/A

Matrix Spike

Sample Spiked:	705350-1
Rept Limit:	<0.05

Sample Result:	0.29
Spiked Result:	0.48
Spike Added:	0.26
% Recovery:	73
% Rec Limits:	59-127
Dry Weight%	N/A

ICV

ICV Result:	
True Result:	
% Recovery:	
% Rec Limits:	

LCS

LCS Result:	0.24
True Result:	0.26
% Recovery:	92
% Rec Limits:	80-120

American Environmental Network Inc

----- Common Footnotes WetChem -----

N/A = NOT APPLICABLE.
N/S = NOT SUBMITTED.
N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW AEN REPORTING LIMIT;
THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.
N/D = NOT DETECTED.
R = REACTIVE
T = TOTAL
G = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND
THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT
OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL".
Q = THE ANALYTICAL (POST-DISTILLATION) SPIKE IS REPORTED DUE TO PERCENT RECOVERY
BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DISTILLATION) SPIKE.
= ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE.
+ = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.
* = ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE. (DILUTION PRIOR
TO ANALYSIS)
@ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX. (DILUTION PRIOR TO
DIGESTION)
P = ANALYTICAL (POST DIGESTION) SPIKE.
I = DUPLICATE INJECTION.
& = AUTOMATED
F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
N/C+ = NOT CALCULABLE
H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE
ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING
LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. HOWEVER,
THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
NH= SAMPLE AND / OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT
AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN
REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
SAMPLE IS NON-HOMOGENEOUS.
(*) = DETECTION LIMITS RAISED DUE TO CLP METHOD NOT REQUIRING A CONCENTRATION STEP FOR CN.
(CA) = SEE CORRECTIVE ACTIONS FORM.
**= MATRIX INTERFERENCE
SW-846, 3rd Edition, latest EPA-approved edition.
EPA 600/4-79-020, Revised March 1983.
STANDARD METHODS, For the Examination of Water and Wastewater, latest EPA-approved edition.
NIOSH Manual of Analytical Methods, 4th Edition.
ANNUAL BOOK OF ASTM STANDARDS, VOLUMES 11.01 and 11.02, latest EPA-approved edition.
METHODS FOR THE DETERMINATION OF INORGANIC SUBSTANCES IN ENVIRONMENTAL SAMPLES,
EPA600/R-93/100, AUGUST 1993
AEN-PN USES THE MOST CURRENT PROMULGATED METHODS FROM THE REFERENCES LISTED ABOVE.
METHODS FOR SOIL ANALYSIS, PART 2, CHEMICAL AND MICROBIOLOGICAL PROPERTIES, 2ND EDITION.

1. COLIFORM. COLIFORM PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN
THE LOGARITHM OF COLONIES PER 100 MLS OF SAMPLE ON DUPLICATE PLATES.
2. PH. PH PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE
SAMPLE AND DUPLICATE ANALYSIS.
3. FLASHPOINT. FLASHPOINT PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN
THE SAMPLE AND DUPLICATE ANALYSIS.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION).
RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

DPH = DOLLY P. HWANG RB = REBECCA BROWN AB = ANDY BROTHERTON
JL = JAN LECLEAR NSB = NANCY S. BUTLER MM = MIKE MCKENZIE
ED = ESTHER DANTIN LV = LASSANDRA VON APPEN JTZ = JONATHAN T. ZIENTARSKI
PLD = PAULA L. DOUGHTY RH = RICKY HAGENDORFER

American Environmental Network Inc

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 705350
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 705350
Project Name: GIANT REFINING
Project Location: N/S
Test: RCRA METALS
QcLevel: II

Parameter:	Unit:	Result:	R.L:	Batch:	Q:
Client ID: 705350-01			Lab ID:001		
SILVER (6010)	MG/KG	ND	1	A6S054	
ARSENIC (6010)	MG/KG	ND	5	R6S054	
BARIUM (6010)	MG/KG	240	1	B6S054	
CADMIUM (6010)	MG/KG	ND	0.5	C6S054	
CHROMIUM (6010)	MG/KG	8	1	H6S054	
MERCURY (7471)	MG/KG	ND	0.02	M4S023	
LEAD (6010)	MG/KG	7	5	P6S054	
SELENIUM (6010)	MG/KG	ND	10	S6S054	

Comments:

Client ID: 705350-02			Lab ID:002		
SILVER (6010)	MG/KG	ND	1	A6S054	
ARSENIC (6010)	MG/KG	ND	5	R6S054	
BARIUM (6010)	MG/KG	240	1	B6S054	
CADMIUM (6010)	MG/KG	ND	0.5	C6S054	
CHROMIUM (6010)	MG/KG	13	1	H6S054	
MERCURY (7471)	MG/KG	ND	0.02	M4S023	
LEAD (6010)	MG/KG	8	5	P6S054	
SELENIUM (6010)	MG/KG	ND	10	S6S054	

Comments:

Client ID: 705350-03			Lab ID:003		
SILVER (6010)	MG/KG	ND	1	A6S054	
ARSENIC (6010)	MG/KG	ND	5	R6S054	
BARIUM (6010)	MG/KG	310	1	B6S054	
CADMIUM (6010)	MG/KG	ND	0.5	C6S054	
CHROMIUM (6010)	MG/KG	13	1	H6S054	
MERCURY (7471)	MG/KG	ND	0.02	M4S023	
LEAD (6010)	MG/KG	10	5	P6S054	
SELENIUM (6010)	MG/KG	ND	10	S6S054	

Comments:

Client ID: 705350-04			Lab ID:004		
SILVER (6010)	MG/KG	ND	1	A6S054	
ARSENIC (6010)	MG/KG	ND	5	R6S054	
BARIUM (6010)	MG/KG	240	1	B6S054	
CADMIUM (6010)	MG/KG	ND	0.5	C6S054	
CHROMIUM (6010)	MG/KG	13	1	H6S054	
MERCURY (7471)	MG/KG	ND	0.02	M4S023	
LEAD (6010)	MG/KG	7	5	P6S054	
SELENIUM (6010)	MG/KG	ND	10	S6S054	

Comments:

American Environmental Network Inc

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 705350
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 705350
Project Name: GIANT REFINING
Project Location: N/S
Test: RCRA METALS

Client Id:	Lab Matrix: Id:	Date/Time Sampled:	Date Received:
705350-01	001 SOIL	18-MAY-97 0915	20-MAY-97
705350-02	002 SOIL	18-MAY-97 0935	20-MAY-97
705350-03	003 SOIL	18-MAY-97 0950	20-MAY-97
705350-04	004 SOIL	18-MAY-97 1010	20-MAY-97

American Environmental Network Inc

"Method Report Summary"

Accession Number: 705350
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 705350
Project Name: GIANT REFINING
Project Location: N/S
Test: RCRA METALS

Client Sample Id:	Parameter:	Unit:	Result:
705350-01	BARIUM (6010)	MG/KG	240
	CHROMIUM (6010)	MG/KG	8
	LEAD (6010)	MG/KG	7
705350-02	BARIUM (6010)	MG/KG	240
	CHROMIUM (6010)	MG/KG	13
	LEAD (6010)	MG/KG	8
705350-03	BARIUM (6010)	MG/KG	310
	CHROMIUM (6010)	MG/KG	13
	LEAD (6010)	MG/KG	10
705350-04	BARIUM (6010)	MG/KG	240
	CHROMIUM (6010)	MG/KG	13
	LEAD (6010)	MG/KG	7

American Environmental Network Inc

"Metals Quality Control Report"

Parameter:	SILVER	ARSENIC	BARIUM	CADMIUM	CHROMIUM	MERCURY
Batch Id:	A6S054	R6S054	B6S054	C6S054	H6S054	M4S023
Blank Result:	<1	<5	<1	<0.5	<1	<0.02
Anal. Method:	6010	6010	6010	6010	6010	7471
Prep. Method:	3050	3050	3050	3050	3050	7471
Analysis Date:	22-MAY-97	22-MAY-97	22-MAY-97	22-MAY-97	22-MAY-97	23-MAY-97
Prep. Date:	21-MAY-97	21-MAY-97	21-MAY-97	21-MAY-97	21-MAY-97	23-MAY-97

Sample Duplication

Sample Dup:	705350-1	705350-1	705350-1	705350-1	705350-1	705350-3
Rept Limit:	<1	<5	<1	<0.5	<1	<0.02
Sample Result:	160	180	440	180	200	0.40
Dup Result:	170	190	480	180	210	0.39
Sample RPD:	6	5	9	0	5	3
Max RPD:	20	20	20	20	20	20
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	705350-1	705350-1	705350-1	705350-1	705350-1	705350-3
Rept Limit:	<1	<5	<1	<0.5	<1	<0.02
Sample Result:	<1	<5	240	<0.5	8	<0.02
Spiked Result:	160	180	440	180	200	0.40
Spike Added:	200	200	200	200	200	0.42
% Recovery:	80	90	100	90	96	95
% Rec Limits:	75-125	75-125	75-125	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

ICV

ICV Result:	2.5	4.9	5.0	4.8	5.0	0.0044
True Result:	2.5	5.0	5.0	5.0	5.0	0.0040
% Recovery:	100	98	100	96	100	110
% Rec Limits:	90-110	90-110	90-110	90-110	90-110	80-120

LCS

LCS Result:	130	100	180	86	140	2.83
True Result:	117	103	170	88.8	133	2.86
% Recovery:	111	97	106	97	105	99
% Rec Limits:	72-178	71-129	74-126	75-125	78-122	64-135

American Environmental Network Inc

"Metals Quality Control Report"

Parameter:	LEAD	SELENIUM
Batch Id:	P6S054	S6S054
Blank Result:	<5	<10
Anal. Method:	6010	6010
Prep. Method:	3050	3050
Analysis Date:	22-MAY-97	22-MAY-97
Prep. Date:	21-MAY-97	21-MAY-97

Sample Duplication

Sample Dup:	705350-1	705350-1
Rept Limit:	<5	<10
Sample Result:	190	190
Dup Result:	200	200
Sample RPD:	5	5
Max RPD:	20	20
Dry Weight%	N/A	N/A

Matrix Spike

Sample Spiked:	705350-1	705350-1
Rept Limit:	<5	<10
Sample Result:	7	<10
Spiked Result:	190	190
Spike Added:	200	200
% Recovery:	92	95
% Rec Limits:	75-125	75-125
Dry Weight%	N/A	N/A

ICV

ICV Result:	5.0	5.1
True Result:	5.0	5.0
% Recovery:	100	102
% Rec Limits:	90-110	90-110

LCS

LCS Result:	83	140
True Result:	86.4	129
% Recovery:	96	109
% Rec Limits:	67-133	73-128

"Quality Control Comments"

Batch Id: Comments:

A6S054	ANALYST: GJ	
A6S054	The results reported under "Sample Duplication" are the MS/MSD.	
R6S054	ANALYST: GJ	
R6S054	The results reported under "Sample Duplication" are the MS/MSD.	
B6S054	ANALYST: GJ	
B6S054	The results reported under "Sample Duplication" are the MS/MSD.	
C6S054	ANALYST: GJ	
C6S054	The results reported under "Sample Duplication" are the MS/MSD.	
H6S054	ANALYST: GJ	
H6S054	The results reported under "Sample Duplication" are the MS/MSD.	
M4S023	ANALYST: LV	
M4S023	The results reported under "Sample Duplication" are the MS/MSD.	
P6S054	ANALYST: GJ	
P6S054	The results reported under "Sample Duplication" are the MS/MSD.	
S6S054	ANALYST: GJ	
S6S054	The results reported under "Sample Duplication" are the MS/MSD.	

American Environmental Network Inc

----- Common Footnotes Metals -----

N/A = NOT APPLICABLE.
N/S = NOT SUBMITTED.
N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW ATI REPORTING LIMIT;
THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.
N/D = NOT DETECTED.
DISS. OR D = DISSOLVED
T & D = TOTAL AND DISSOLVED
R = REACTIVE
T = TOTAL
G = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X ATI REPORTING LIMIT AND
THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT
OR BELOW ATI REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL".
Q = THE ANALYTICAL (POST-DIGESTION) SPIKE IS REPORTED DUE TO PERCENT RECOVERY
BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DIGESTION) SPIKE.
= ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE.
+ = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.
* = ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE. (DILUTION PRIOR
TO ANALYSIS)
@ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX. (DILUTION PRIOR TO
DIGESTION)
P = ANALYTICAL (POST DIGESTION) SPIKE.
I = DUPLICATE INJECTION.
& = AUTOMATED
F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
N/C+ = NOT CALCULABLE
N/C* = NOT CALCULABLE; SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X ATI REPORTING LIMIT AND THE
ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE ATI REPORTING
LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. HOWEVER,
THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
NH= SAMPLE AND / OR DUPLICATE RESULT IS BELOW 5 X ATI REPORTING LIMIT
AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE ATI
REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
SAMPLE IS NON-HOMOGENEOUS.
J = (FLORIDA DEP 'J' FLAG) - MATRIX SPIKE AND POST SPIKE RECOVERY IS OUT OF
THE ACCEPTABLE RANGE. SEE OUT OF CONTROL EVENTS FORM.
U = (FLORIDA DEP 'U' FLAG) - THE COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.
S = METHOD OF STANDARD ADDITIONS (MSA) WAS PERFORMED ON THIS SAMPLE.

FROM ANALYSIS REPORT:
RL= REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES.
Q= QUALIFIER (FOOTNOTE)

FROM QUALITY CONTROL REPORT:
RPD= RELATIVE PERCENT DEVIATION.
RPT LIMIT= REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES.

NOTE: THE UNITS REPORTED ON THE QUALITY CONTROL REPORT ARE REPORTED ON AN AS
RUN BASIS.

SW-846, 3rd Edition, latest revision.
EPA 600/4-79-020, Revised March 1983.
NIOSH Manual of Analytical Methods, 4th Edition.
Standard Methods For the Examination of Water and Wastewater, 18th Edition, 1992.
Methods For the Determination of Metals in Environmental Samples - Supplement I,
EPA 600/R-94-111, May 1994.

GJ = GARY JACOBS
JLH = JAMES L. HERED
CD = CHRISTY DRAPER
JR = JOHN REED
LV = LASSANDRA VON APPEN



American Environmental Network (Arizona), Inc.

Background for RCRA LTA

CHAIN OF CUSTODY

DATE 5-18-97 PAGE 1 OF 1

AEN LAB I.D.

705350

REPORT: Attn. to:

COMPANY: GIANT Refining Co.
 ADDRESS: Rt 3 Box 7 Gallup NM 87301
 PHONE: 505 722 0258
 FAX: 505 722 0210
 BILL TO: SAME
 COMPANY:
 ADDRESS:

ANALYSIS REQUEST

COMPOSITE OR GRAB	RCRA Metals by Total Digestion		RCRA Metals by TCLP (1311)		PH	Total Organic Carbons		Volatile Organics GC/MS (610/8310)	Semi-Volatiles GC/MS (624/8240/8260)	Herbicides (615/8150/515)	Pesticides/PCB (608/8080/505/508)	Volatiles 502.2 (SDWA/UST)	Aromatic Hydrocarbons (602/8020)	Chlorinated Hydrocarbons (601/8010)	BTX/EMTBE (8020/602)	(BLS-191) Diesel (M8015) Gas	(MOD 8015) Fuel Fingerprint	Petroleum Hydrocarbons (418:1)	NUMBER OF CONTAINERS	
	NO. CONTAINERS	DATE	TIME	MATRIX		LAB ID														

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
BG-1-51897	5/18/97	0915	Soil	01
BG-2-51897	"	0935	"	02
BG-3-51897	"	0950	"	03
BG-4-51897	"	1010	"	04

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT INFORMATION	SAMPLE RECEIPT
PROJ. NO.: PROJ. NAME: P.O. NO.: SHIPPED VIA:	<input type="checkbox"/> UST (72 hr. ext.) <input type="checkbox"/> NPDES <input type="checkbox"/> SDWA <input checked="" type="checkbox"/> RCRA <input type="checkbox"/> OTHER NO. CONTAINERS: <u>8</u> CUSTODY SEALS: <u>Y/N/NA</u> RECEIVED INTACT: <u>Y/N/NA</u> RECEIVED ICE: <u>20</u> <u>Y/N/NA</u>

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: <u>Steve Morris</u> Time: <u>0850</u> Printed Name: <u>Steve Morris</u> Date: <u>5/19/97</u> Company: _____ Phone: _____	Signature: _____ Time: _____ Printed Name: _____ Date: _____ Company: _____	Signature: _____ Time: _____ Printed Name: _____ Date: _____ Company: _____

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) 24hr 48hr 72hr 1 WEEK (NORMAL) 2 WEEKS

Comments: Results need Tues 27th 1st thing in the AM

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: (LAB) 3.
Signature: _____ Time: _____ Printed Name: _____ Date: _____ Company: _____	Signature: _____ Time: _____ Printed Name: _____ Date: _____ Company: _____	Signature: <u>Kim McNeil</u> Time: <u>750</u> Printed Name: <u>Kim McNeil</u> Date: <u>5/19</u> Company: <u>American Environmental Network</u>

American Environmental Network of Florida

PROJECT SAMPLE INSPECTION FORM

Lab Accession #: 705350

Date Received: 20-May-97

- | | |
|---|---|
| <p>1. Was there a Chain of Custody? <input checked="" type="radio"/> Yes No⁺</p> <p>2. Was Chain of Custody properly filled out and relinquished? <input checked="" type="radio"/> Yes No⁺</p> <p>3. Were samples received cold? <input checked="" type="radio"/> Yes No⁺ N/A
(Criteria: 1° - 4°C: AEN-SOP 1055)</p> <p>4. Were all samples properly labeled and identified? <input checked="" type="radio"/> Yes No⁺</p> <p>5. Did samples require splitting? Yes⁺ <input checked="" type="radio"/> No
Req By: PM Client Other⁺</p> <p>6. Were samples received in proper containers for analysis requested? <input checked="" type="radio"/> Yes No⁺</p> <p>7. Were all sample containers received intact? <input checked="" type="radio"/> Yes No⁺</p> | <p>8. Were samples checked for preservative? (Check pH of all H₂O requiring preservative except VOA vials that require zero headspace)⁺ Yes No⁺ <input checked="" type="radio"/> N/A</p> <p>9. Is there sufficient volume for analysis requested? <input checked="" type="radio"/> Yes No⁺</p> <p>10. Were samples received within Holding Time? (REFER TO AEN-SOP 1040) <input checked="" type="radio"/> Yes No⁺</p> <p>11. Is Headspace visible > ¼" in diameter in VOA vials? * If any headspace is evident, comment in out-of-control section. Yes⁺ No <input checked="" type="radio"/> N/A</p> <p>12. If sent, were matrix spike bottles returned? Yes No⁺ <input checked="" type="radio"/> N/A</p> <p>13. Was Project Manager notified of problems? (initials: _____) Yes No⁺ <input checked="" type="radio"/> N/A</p> |
|---|---|

Airbill Number(s): 185 9358 593

Shipped By: FedEx

Cooler Number(s): N/A

Shipping Charges: N/A

Cooler Weight(s): N/A

Cooler Temp(s) (°C): 4°C
CK 1
(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

(USE BACK OF PSIFFOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: S. Kitt Date: 20-May-97 Logged By: S. Kitt Date: 20-May-97

- ◆ Note all Out-of-Control and/or questionable events on Comment Section of this form.
- ◆ Note who requested the splitting of samples on the Comment Section of this form.
- + All preservatives for the State of North Carolina, the State of New York, and other requested samples are to be recorded on the sheet provided to record pH results (AEN-SOP 938, section 2.2.9).
- * According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, AEN makes it policy to record any headspace as out-of-control (AEN-SOP 938, section 2.2.12).