

GRCO 90



November 27, 1990

Route 3, Box 7
Gallup, New Mexico
87301

505
722-3833

SA Rec'd April 4, 1991

Richard Mitzelfelt
Director
New Mexico Environmental Improvement Division
Harold Runnels Building
1190 St. Francis Drive
Santa Fe, New Mexico 87504-0968

Re: Soil Pore-Moisture Monitoring

Dear Mr. Mitzelfelt:

As required by Module III, Section H.3., of Giant Refining Companies Hazardous Waste Facility Permit Number NMD-000333211-2, Giant is reporting the detection, sample collection and analytical results of liquids collected in the lysimeters at the permitted land treatment unit. All rainfall, pumping and analytical data is included on the attachments. The rainfall data is recorded from a rain gauge which has been installed near the entrance at the southeast corner of the land treatment unit.

Module III, section H.3.b. indicates the liquids shall be analyzed for the parameters specified in Table 3-2. Since there is no Table 3-2. in the permit, Giant analyzed the samples for the parameters in Table G-2.

If you have any questions, contact me at (505) 722-0217.

Sincerely,

Claud Rosendale
Claud Rosendale
Environmental Manager
Ciniza Refinery

CCR/sp

- List of Attachments
- Lysimeter Pumping and Rainfall
- Field Analytical
- Enseco Analytical (6 pages)
- Figure 2-1

NOTE: @ Module III, h.1, p.27:
 soil-pore liquid (lysimeters) must be compared
 to b.g. However, no b.g. exists for lysimeters.

@ Module III, #.3.d, p.26:
 If not lysimeter sample collected following a.s.
 precipitation event then must deter. proper function
 of lysimeter => HRMB has no record this
 has been done?

cc: attachments - Kim Bullerdick, Giant Industries Arizona, Inc.

LYSIMETER PUMPING AND RAINFALL

<u>DATE</u>	<u>RAINFALL"</u>	<u>LYSIMETER</u>	<u>VOLUME PUMPED (ml)</u>
7-02-90	0.13	-	-
7-06-90	2.25	-	-
7-10-90	0.20	1	5
7-12-90	0.05	-	-
7-13-90	0.12	-	-
7-16-90	0.30	-	-
7-18-90	0.06	-	-
7-24-90	0.50	-	-
8-14-90	0.28	-	-
8-15-90	0.85	-	-
8-16-90	0.80	-	-
8-21-90	0.48	-	-
8-28-90	0.24	-	-
9-04-90	0.06	-	-
9-20-90	0.36	-	-
9-24-90	0.74	-	-
9-28-90	0.05	-	-
10-02-90	0.20	-	-
10-03-90	-	1	4,983
	-	2	33,165
10-09-90	-	1	100
	-	2	2,900
10-16-90	-	1	50
	-	2	2,400
10-20-90	0.88	-	-
11-02-90	0.05	-	-
11-05-90	0.35	2	800
11-07-90	0.20	-	-
11-15-90	-	1	500
	-	2	600
11-20-90	-	2	350
11-26-90	0.30	2	300

FIELD ANALYTICAL

Sample Number: LYS #1

Sampled Oct. 3., 1990
Analyzed Oct. 3, 1990

<u>Parameter</u>	<u>Results</u>	<u>Units</u>
pH	7.10	units
Specific Conductance	7,900	umhos/cm

Sample Number : LYS #2

Sampled Oct. 3, 1990
Analyzed Oct. 3., 1990

<u>Parameter</u>	<u>Results</u>	<u>Units</u>
pH	6.90	units
Specific Conductance	10,110	umhos/cm

Volatile Organics
Target Compound List (TCL)
Method 8240

Client Name: Giant Refining
Client ID: LYS #1
Lab ID: 011645-0001-SA
Matrix: AQUEOUS
Authorized: 04 OCT 90

Sampled: 03 OCT 90
Prepared: 05 OCT 90

Received: 04 OCT 90
Analyzed: 08 OCT 90

Parameter	Result	Units	Reporting Limit
Acetone	40	ug/L	10
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
2-Butanone (MEK)	28	ug/L	10
Carbon disulfide	23	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
Dibromochloromethane	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	10
2-Hexanone	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
(MIBK)	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0
1,3-Dichlorobenzene	ND	ug/L	5.0
1,1,2 Trichloro-1,2,2-	ND	ug/L	5.0
trifluoroethane	ND	ug/L	5.0
1,2-Dibromoethane (EDB)	ND	ug/L	5.0
1,2-Dichlorobenzene	ND	ug/L	5.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Terry Riddle

Approved By: Jeff Lowry

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Client ID: LYS #1
Lab ID: 011645-0001-SA
Matrix: AQUEOUS
Authorized: 04 OCT 90

Sampled: 03 OCT 90
Prepared: 05 OCT 90

Received: 04 OCT 90
Analyzed: 08 OCT 90

Parameter	Result	Units	Reporting Limit
1,4-Dichlorobenzene	ND	ug/L	5.0
Surrogate	Recovery		
Toluene-d8	102	%	--
4-Bromofluorobenzene	100	%	--
1,2-Dichloroethane-d4	98	%	--

ND = Not detected
NA = Not applicable

Reported By: Terry Riddle

Approved By: Jeff Lowry

Metals

Total Metals

Client Name: Giant Refining
Client ID: LYS #1
Lab ID: 011645-0001-SA
Matrix: AQUEOUS
Authorized: 04 OCT 90

Sampled: 03 OCT 90
Prepared: See Below

Received: 04 OCT 90
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium	ND	mg/L	0.020	6010	18 OCT 90	21 OCT 90
Lead	ND	mg/L	0.010	7421	18 OCT 90	29 OCT 90

ND = Not detected
NA = Not applicable

Reported By: David Patterson

Approved By: John Laferty

Volatile Organics
Target Compound List (TCL)
Method 8240

Client Name: Giant Refining
Client ID: LYS #2
Lab ID: 011645-0002-SA
Matrix: AQUEOUS
Authorized: 04 OCT 90

Sampled: 03 OCT 90
Prepared: 05 OCT 90

Received: 04 OCT 90
Analyzed: 08 OCT 90

Parameter	Result	Units	Reporting Limit
Acetone	24	ug/L	10
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
2-Butanone (MEK)	75	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
Dibromochloromethane	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
2-Hexanone	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10
Styrene	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	9.8	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0
1,3-Dichlorobenzene	ND	ug/L	5.0
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/L	5.0
1,2-Dibromoethane (EDB)	ND	ug/L	5.0
1,2-Dichlorobenzene	ND	ug/L	5.0

(continued on following page)

ND = Not detected
NA = Not applicable

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Approved By: Jeff Lowry

Volatile Organics
Target Compound List (TCL)
Method 8240Client Name: Giant Refining
Client ID: LYS #2
Lab ID: 011645-0002-SA
Matrix: AQUEOUS
Authorized: 04 OCT 90Sampled: 03 OCT 90
Prepared: 05 OCT 90Received: 04 OCT 90
Analyzed: 08 OCT 90

Parameter	Result	Units	Reporting Limit
1,4-Dichlorobenzene	ND	ug/L	5.0
Surrogate	Recovery		
Toluene-d8	99	%	--
4-Bromofluorobenzene	99	%	--
1,2-Dichloroethane-d4	95	%	--

ND = Not detected
NA = Not applicable

Reported By: Terry Riddle

Approved By: Jeff Lowry

Metals**Total Metals**

Client Name: Giant Refining
Client ID: LYS #2
Lab ID: 011645-0002-SA
Matrix: AQUEOUS
Authorized: 04 OCT 90

Sampled: 03 OCT 90
Prepared: See Below

Received: 04 OCT 90
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium	ND	mg/L	0.020	6010	18 OCT 90	21 OCT 90
Lead	ND	mg/L	0.010	7421	18 OCT 90	29 OCT 90

ND = Not detected
NA = Not applicable

Reported By: David Patterson

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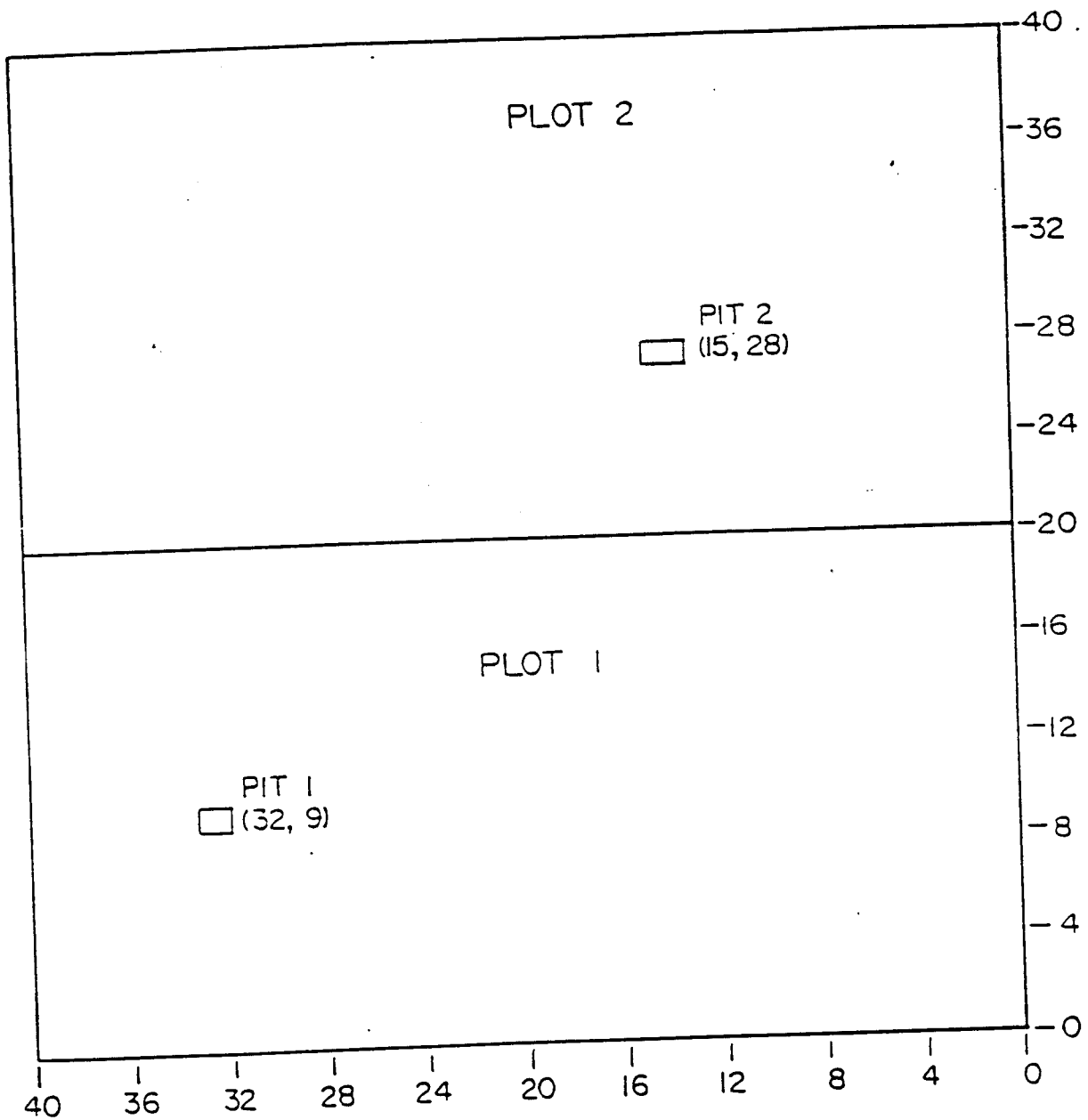


FIGURE 2-1. LOCATION OF SOIL CHARACTERIZATION/LYSIMETER INSTALLATION PITS FOR ACTIVE LAND TREATMENT PLOTS 1 AND 2.