GW - 40

MONITORING REPORTS

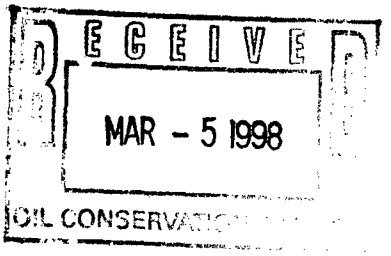
DATE: 1997 - 1995

GIANT
INDUSTRIES, INC.

111 Road 4990
Bloomfield, New Mexico 87413

505
632.8006

February 5, 1998



Mr. William Olson
Hydrogeologist
New Mexico Oil Conservation Division
Environmental Bureau
P. O. Box 2088
Santa Fe, NM 87504-2088

Dear Mr. Olson:

Enclosed you will find the annual report for Giant Refining Company's Bloomfield Refinery for 1997.

Please contact me if you have any questions.

Sincerely,

Tim Kinney
Remediation Project Manager

/dm

Enclosure

cc w/enc.: Mike Hardy-Giant
Kim Bullerdick-Giant
Jacque Cumbie-Giant
Stephanie Odell-BLM
Maura Hanning-EID
Chris Shuey-SWRIC
Jim Durrett-SJC
Herbert Gorrod-EPA
Denny Foust-OCD

ANNUAL DATA REPORT

GIANT BLOOMFIELD REFINERY

1997

Prepared By:

GIANT REFINING COMPANY
5764 U. S. Highway 64
Farmington, NM 87401
(505) 632-8006
FAX (505) 632-4021

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INTRODUCTION AND SUMMARY
ANNUAL REPORT
1997

INTRODUCTION

Tank 22 is being used for intermediate water storage. All water is treated by the carbon filter unit exclusively.

SUMMARY

Section 2

Section 2 contains a summary of the annual analytical results. Raw data, as received from the laboratory, is available on request as a supplement to the quarterly report.

Section 3

Potentiometric surface maps, as well as the adjusted water surface elevation and product thickness for each well, are included in Section 3.

Section 4

Section 4 illustrates the volume history for the year. Total volume pumped from each well, as well as current tank volumes and the reinjection volume, is reported. Additional detail, on a weekly basis, is also available if desired.

SECTION 2

The following pages show the annual analytical data for the Giant Refining Remediation Project. The data is broken down into units as described below.

	Unit of Measure
Total dissolved solids (180)	mg/l
Total dissolved solids (calc)	mg/l
Total alkalinity as CaCO3	mg/l
Total hardness as CaCO3	mg/l
Bicarbonate as HCO3	mg/l
Carbonate as CO3	mg/l
Chloride	mg/l
Sulfate	mg/l
Calcium	mg/l
Magnesium	mg/l
Potassium	mg/l
Sodium	mg/l

The remainder of the data is measured in ug/l.

GIANT INDUSTRIES, INC.
ONSITE REMEDIATION PROJECT
QUARTERLY ANALYTICAL DATA SUMMARY
1997

SYSTEM EFFLUENT							
	JAN	*APR*	*JUN*	*JUL*	*AUG*	*OCT*	*DEC*
Lab pH	7.1	7		7.1		7	
Lab Conductivity @25 C	3450	3350		3240		3250	
Total Dissolved Solids @ 180 C	2760	2784		2710		2580	
Total Dissolved Solids (Calc)	2726	---		---		---	
Total Alkalinity as CaCO3	364	349		397		411	
Total Hardness as CaCO3	1130	1142		1030		1250	
Bicarbonate as HCO3	444	426		484		501	
Carbonate as CO3	ND	ND		ND		ND	
Hydroxide	ND	ND		ND		ND	
Chloride	174	153		189		147	
Sulfate	1432	1490		1290		1310	
Calcium	392	400		358		443	
Magnesium	36.8	34.9		33.4		34.4	
Potassium	4.3	4.27		2.74		2.3	
Sodium	469	422		402		315	
HALOCARBONS							
Bromodichloromethane	ND	ND				ND	
Bromoform	ND	ND				ND	
Bromomethane	ND	ND				ND	
Carbon Tetrachloride	ND	ND				ND	
Chloroethane	ND	ND				ND	
Chloroform	ND	ND				ND	
Chloromethane	ND	ND				ND	
Dibromochloromethane	ND	ND				ND	
1,2-Dibromoethane (EDB)	ND	ND				ND	
1,2-Dichlorobenzene	ND	ND				ND	
1,3-Dichlorobenzene	ND	ND				ND	
1,4-Dichlorobenzene	ND	ND				ND	
1,1-Dichloroethane	ND	ND				ND	
1,2-Dichloroethane (EDC)	ND	0.5				ND	
1,1-Dichloroethene	ND	ND				ND	
cis-1,2-Dichloroethene	0.6	0.7				ND	
trans-1,2-Dichloroethene	ND	ND				ND	
1,2-Dichloropropane	ND	ND				ND	
cis-1,3-Dichloropropene	ND	ND				ND	
trans-1,3-Dichloropropene	ND	ND				ND	
Methylene Chloride	ND	ND				ND	
1,1,2,2-Tetrachloroethane	ND	ND				ND	
Tetrachlorethene	ND	ND				ND	
1,1,1-Trichloroethane	ND	ND				ND	
1,1,2-Trichloroethane	ND	ND				ND	

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Trichloroethene	ND	ND				ND	
Trichlorofluoromethane	ND	ND				ND	
Vinyl Chloride	ND	ND				ND	
AROMATICS							
Benzene	2.3	4.5				ND	
Chlorobenzene	ND	ND				ND	
1,2-Dichlorobenzene	ND	ND				ND	
1,3-Dichlorobenzene	ND	ND				ND	
1,4-Dichlorobenzene	ND	ND				ND	
Ethylbenzene	ND	1.9				ND	
Methyl-t-Butyl Ether	ND	ND				ND	
Toluene	ND	ND				ND	
Total Xylenes	ND	5.7				ND	
SYSTEM INFLUENT							
Lab pH	7.2	7.2		7.1		6.9	
Lab Conductivity @25 C	3430	3220		3260		3270	
Total Dissolved Solids @ 180 C	2800	2814		2730		2600	
Total Dissolved Solids (Calc)	2737	---		---		---	
Total Alkalinity as CaCO3	382	374		403		407	
Total Hardness as CaCO3	1105	1132		987		1240	
Bicarbonate as HCO3	465	456		492		496	
Carbonate as CO3	ND	ND		ND		ND	
Hydroxide	ND	ND		ND		ND	
Chloride	174	157		148		159	
Sulfate	1432	1494		1330		1330	
Calcium	383	396		340		441	
Magnesium	36.2	34.7		33.7		33.9	
Potassium	3.52	4.21		2.8		4.6	
Sodium	479	422		407		334	
HALOCARBONS							
Bromodichloromethane	ND	ND				ND	
Bromoform	ND	ND				ND	
Bromomethane	ND	ND				ND	
Carbon Tetrachloride	ND	ND				ND	
Chloroethane	ND	ND				ND	
Chloroform	ND	ND				ND	
Chloromethane	ND	ND				ND	
Dibromochloromethane	ND	ND				ND	
1,2-Dibromoethane (EDB)	ND	ND				ND	
1,2-Dichlorobenzene	ND	ND				ND	
1,3-Dichlorobenzene	ND	ND				ND	
1,4-Dichlorobenzene	ND	ND				ND	
1,1-Dichloroethane	ND	ND				ND	
1,2-Dichloroethane (EDC)	ND	0.5				ND	
1,1-Dichloroethene	ND	ND				ND	

	JAN	APR	JUN	JUL	AUG	OCT	DEC
cis-1,2-Dichloroethene	1.4	1.1				0.2	
trans-1,2-Dichloroethene	ND	ND				ND	
1,2-Dichloropropane	ND	ND				ND	
cis-1,3-Dichloropropene	ND	ND				ND	
trans-1,3-Dichloropropene	ND	ND				ND	
Methylene Chloride	ND	ND				ND	
1,1,2,2-Tetrachloroethane	ND	ND				ND	
Tetrachlorethene	ND	ND				ND	
1,1,1-Trichloroethane	ND	ND				ND	
1,1,2-Trichloroethane	ND	ND				ND	
Trichloroethene	ND	ND				ND	
Trichlorofluoromethane	ND	ND				ND	
Vinyl Chloride	ND	ND				ND	
AROMATICS							
Benzene	6.8	4.1				1.7	
Chlorobenzene	ND	ND				ND	
1,2-Dichlorobenzene	ND	ND				ND	
1,3-Dichlorobenzene	ND	ND				ND	
1,4-Dichlorobenzene	ND	ND				ND	
Ethylbenzene	15	4.3				ND	
Methyl-t-Butyl Ether	ND	ND				ND	
Toluene	ND	ND				ND	
Total Xylenes	17	6				ND	
GRW-3							
Lab pH	6.9						
Lab Conductivity @25 C	3260						
Total Dissolved Solids @ 180 C	2070						
Total Dissolved Solids (Calc)	2207						
Total Alkalinity as CaCO3	848						
Total Hardness as CaCO3	584						
Bicarbonate as HCO3	1035						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	313						
Sulfate	556						
Calcium	193						
Magnesium	24.7						
Potassium	2.35						
Sodium	610						
HALOCARBONS							
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
Carbon Tetrachloride	ND						
Chloroethane	ND						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Chloroform	ND						
Chloromethane	ND						
Dibromochloromethane	ND						
1,2-Dibromoethane (EDB)	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
1,1-Dichloroethane	ND						
1,2-Dichloroethane (EDC)	ND						
1,1-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Methylene Chloride	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachlorethene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Trichlorofluoromethane	ND						
Vinyl Chloride	ND						
AROMATICS							
Benzene	1						
Chlorobenzene	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
Ethylbenzene	1.1						
Methyl-t-Butyl Ether	ND						
Toluene	0.5						
Total Xylenes	5.5						
GRW-6							
Lab pH	6.9						
Lab Conductivity @25 C	3850						
Total Dissolved Solids @ 180 C	2830						
Total Dissolved Solids (Calc)	2886						
Total Alkalinity as CaCO3	633						
Total Hardness as CaCO3	1020						
Bicarbonate as HCO3	772						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	304						
Sulfate	1181						
Calcium	340						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Magnesium	41.4						
Potassium	3.52						
Sodium	635						
HALOCARBONS							
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
Carbon Tetrachloride	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
Dibromochloromethane	ND						
1,2-Dibromoethane (EDB)	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
1,1-Dichloroethane	0.3						
1,2-Dichloroethane (EDC)	2						
1,1-Dichloroethene	ND						
cis-1,2-Dichloroethene	0.3						
trans-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Methylene Chloride	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachlorethene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Trichlorofluoromethane	ND						
Vinyl Chloride	ND						
AROMATICS							
Benzene	ND						
Chlorobenzene	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
Ethylbenzene	ND						
Methyl-t-Butyl Ether	ND						
Toluene	ND						
Total Xylenes	ND						
GRW-13							
Lab pH	7						
Lab Conductivity @25 C	4160						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Total Dissolved Solids @ 180 C	3330						
Total Dissolved Solids (Calc)	3264						
Total Alkalinity as CaCO3	223						
Total Hardness as CaCO3	1120						
Bicarbonate as HCO3	273						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	336						
Sulfate	1732						
Calcium	403						
Magnesium	27.7						
Potassium	6.26						
Sodium	625						
HALOCARBONS							
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
Carbon Tetrachloride	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
Dibromochloromethane	ND						
1,2-Dibromoethane (EDB)	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
1,1-Dichloroethane	ND						
1,2-Dichloroethane (EDC)	ND						
1,1-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Methylene Chloride	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachlorethene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Trichlorofluoromethane	ND						
Vinyl Chloride	ND						
AROMATICS							
Benzene	ND						
Chlorobenzene	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
1,4-Dichlorobenzene	ND						
Ethylbenzene	ND						
Methyl-t-Butyl Ether	ND						
Toluene	ND						
Total Xylenes	ND						
GBR-15							
Lab pH	7.1						
Lab Conductivity @25 C	3890						
Total Dissolved Solids @ 180 C	2960						
Total Dissolved Solids (Calc)	2892						
Total Alkalinity as CaCO3	349						
Total Hardness as CaCO3	1087						
Bicarbonate as HCO3	426						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	383						
Sulfate	1313						
Calcium	388						
Magnesium	29.2						
Potassium	5.08						
Sodium	565						
HALOCARBONS							
Bromodichloromethane	ND			ND			
Bromoform	ND			ND			
Bromomethane	ND			ND			
Carbon Tetrachloride	ND			ND			
Chloroethane	ND			ND			
Chloroform	ND			ND			
Chloromethane	ND			ND			
Dibromochloromethane	ND			ND			
1,2-Dibromoethane (EDB)	ND			ND			
1,2-Dichlorobenzene	0.5			ND			
1,3-Dichlorobenzene	ND			ND			
1,4-Dichlorobenzene	ND			ND			
1,1-Dichloroethane	ND			ND			
1,2-Dichloroethane (EDC)	5.8			6.6			
1,1-Dichloroethene	ND			ND			
cis-1,2-Dichloroethene	ND			ND			
trans-1,2-Dichloroethene	ND			ND			
1,2-Dichloropropane	ND			ND			
cis-1,3-Dichloropropene	ND			ND			
trans-1,3-Dichloropropene	ND			ND			
Methylene Chloride	ND			ND			
1,1,2,2-Tetrachloroethane	ND			ND			
Tetrachlorethene	ND			ND			

	JAN	APR	JUN	JUL	AUG	OCT	DEC
1,1,1-Trichloroethane	ND			ND			
1,1,2-Trichloroethane	ND			ND			
Trichloroethene	ND			ND			
Trichlorofluoromethane	ND			ND			
Vinyl Chloride	ND			ND			
AROMATICS							
Benzene	ND			ND			
Chlorobenzene	ND			ND			
1,2-Dichlorobenzene	ND			ND			
1,3-Dichlorobenzene	ND			ND			
1,4-Dichlorobenzene	ND			ND			
Ethylbenzene	ND			ND			
Methyl-t-Butyl Ether	ND			ND			
Toluene	ND			ND			
Total Xylenes	0.8			ND			
GBR-17							
Lab pH			7.1				7.1
Lab Conductivity @25 C			2640				2390
Total Dissolved Solids @ 180 C			2272				2060
Total Dissolved Solids (Calc)			2056				---
Total Alkalinity as CaCO3			199				217
Total Hardness as CaCO3			866				921
Bicarbonate as HCO3			242				265
Carbonate as CO3			ND				ND
Hydroxide			ND				ND
Chloride			51.7				48
Sulfate			3.52				5.48
Nitrate as Nitrogen			1259				1220
Calcium			307				334
Magnesium			24.2				21.1
Potassium			ND				ND
Sodium			291				297
HALOCARBONS							
Bromodichloromethane			ND				ND
Bromoform			ND				ND
Bromomethane			ND				ND
Carbon Tetrachloride			ND				ND
Chloroethane			ND				ND
Chloroform			ND				ND
Chloromethane			ND				ND
Dibromochloromethane			ND				ND
1,2-Dibromoethane (EDB)			ND				ND
1,2-Dichlorobenzene			ND				ND
1,3-Dichlorobenzene			ND				ND
1,4-Dichlorobenzene			ND				ND

	JAN	APR	JUN	JUL	AUG	OCT	DEC
1,1-Dichloroethane			ND				ND
1,2-Dichloroethane (EDC)			0.6				ND
1,1-Dichloroethene			ND				ND
cis-1,2-Dichloroethene			ND				ND
trans-1,2-Dichloroethene			ND				ND
1,2-Dichloropropane			ND				ND
cis-1,3-Dichloropropene			ND				ND
trans-1,3-Dichloropropene			ND				ND
Methylene Chloride			ND				ND
1,1,2,2-Tetrachloroethane			ND				ND
Tetrachlorethene			ND				ND
1,1,1-Trichloroethane			ND				ND
1,1,2-Trichloroethane			ND				ND
Trichloroethene			ND				ND
Trichlorofluoromethane			ND				ND
Vinyl Chloride			ND				ND
AROMATICS							
Benzene			1.1				ND
Chlorobenzene			ND				ND
1,2-Dichlorobenzene			ND				ND
1,3-Dichlorobenzene			ND				ND
1,4-Dichlorobenzene			ND				ND
Ethylbenzene			0.7				ND
Methyl-t-Butyl Ether			ND				ND
Toluene			ND				ND
Total Xylenes			1.3				ND
GBR-24D							
Lab pH	7.7						
Lab Conductivity @25 C	4010						
Total Dissolved Solids @ 180 C	3280						
Total Dissolved Solids (Calc)	3226						
Total Alkalinity as CaCO3	301						
Total Hardness as CaCO3	1543						
Bicarbonate as HCO3	367						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	392						
Sulfate	1625						
Calcium	504						
Magnesium	69.5						
Potassium	3.52						
Sodium	451						
HALOCARBONS							
Bromodichloromethane	ND						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Bromoform	ND						
Bromomethane	ND						
Carbon Tetrachloride	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
Dibromochloromethane	ND						
1,2-Dibromoethane (EDB)	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
1,1-Dichloroethane	ND						
1,2-Dichloroethane (EDC)	9.8						
1,1-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Methylene Chloride	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachlorethene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Trichlorofluoromethane	ND						
Vinyl Chloride	ND						
AROMATICS							
Benzene	ND						
Chlorobenzene	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
Ethylbenzene	ND						
Methyl-t-Butyl Ether	ND						
Toluene	ND						
Total Xylenes	ND						
GBR-30							
Lab pH	7						
Lab Conductivity @25 C	3440						
Total Dissolved Solids @ 180 C	2770						
Total Dissolved Solids (Calc)	2814						
Total Alkalinity as CaCO3	442						
Total Hardness as CaCO3	1106						
Bicarbonate as HCO3	539						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	189						
Sulfate	1448						
Calcium	382						
Magnesium	37.3						
Potassium	3.52						
Sodium	489						
HALOCARBONS							
Bromodichloromethane	ND			ND			
Bromoform	ND			ND			
Bromomethane	ND			ND			
Carbon Tetrachloride	ND			ND			
Chloroethane	ND			ND			
Chloroform	ND			ND			
Chloromethane	ND			ND			
Dibromochloromethane	ND			ND			
1,2-Dibromoethane (EDB)	ND			ND			
1,2-Dichlorobenzene	ND			ND			
1,3-Dichlorobenzene	ND			ND			
1,4-Dichlorobenzene	ND			ND			
1,1-Dichloroethane	ND			ND			
1,2-Dichloroethane (EDC)	ND			ND			
1,1-Dichloroethene	ND			ND			
cis-1,2-Dichloroethene	ND			ND			
trans-1,2-Dichloroethene	ND			ND			
1,2-Dichloropropane	ND			ND			
cis-1,3-Dichloropropene	ND			ND			
trans-1,3-Dichloropropene	ND			ND			
Methylene Chloride	ND			ND			
1,1,2,2-Tetrachloroethane	ND			ND			
Tetrachlorethene	ND			ND			
1,1,1-Trichloroethane	ND			ND			
1,1,2-Trichloroethane	ND			ND			
Trichloroethene	ND			ND			
Trichlorofluoromethane	ND			ND			
Vinyl Chloride	ND			ND			
AROMATICS							
Benzene	ND			ND			
Chlorobenzene	ND			ND			
1,2-Dichlorobenzene	ND			ND			
1,3-Dichlorobenzene	ND			ND			
1,4-Dichlorobenzene	ND			ND			
Ethylbenzene	ND			ND			
Methyl-t-Butyl Ether	ND			ND			
Toluene	ND			ND			
Total Xylenes	ND			ND			

	JAN	APR	JUN	JUL	AUG	OCT	DEC
GBR-31							
HALOCARBONS							
Bromodichloromethane	ND	ND		ND		ND	
Bromoform	ND	ND		ND		ND	
Bromomethane	ND	ND		ND		ND	
Carbon Tetrachloride	ND	ND		ND		ND	
Chloroethane	ND	ND		ND		ND	
Chloroform	ND	ND		ND		ND	
Chloromethane	ND	ND		ND		ND	
Dibromochloromethane	ND	ND		ND		ND	
1,2-Dibromoethane (EDB)	ND	ND		ND		ND	
1,2-Dichlorobenzene	ND	ND		ND		ND	
1,3-Dichlorobenzene	ND	ND		ND		ND	
1,4-Dichlorobenzene	ND	ND		ND		ND	
1,1-Dichloroethane	ND	ND		ND		ND	
1,2-Dichloroethane (EDC)	ND	ND		ND		ND	
1,1-Dichloroethene	ND	ND		ND		ND	
cis-1,2-Dichloroethene	0.3	1.5		ND		ND	
trans-1,2-Dichloroethene	ND	ND		ND		ND	
1,2-Dichloropropane	ND	ND		ND		ND	
cis-1,3-Dichloropropene	ND	ND		ND		ND	
trans-1,3-Dichloropropene	ND	ND		ND		ND	
Methylene Chloride	ND	ND		ND		ND	
1,1,2,2-Tetrachloroethane	ND	ND		ND		ND	
Tetrachlorethene	ND	ND		ND		ND	
1,1,1-Trichloroethane	ND	ND		ND		ND	
1,1,2-Trichloroethane	ND	ND		ND		ND	
Trichloroethene	ND	ND		ND		ND	
Trichlorofluoromethane	ND	ND		ND		ND	
Vinyl Chloride	ND	ND		ND		ND	
AROMATICS							
Benzene	ND	0.6		ND		ND	
Chlorobenzene	ND	ND		ND		ND	
1,2-Dichlorobenzene	ND	ND		ND		ND	
1,3-Dichlorobenzene	ND	ND		ND		ND	
1,4-Dichlorobenzene	ND	ND		ND		ND	
Ethylbenzene	ND	ND		ND		ND	
Methyl-t-Butyl Ether	ND	ND		ND		ND	
Toluene	ND	ND		ND		ND	
Total Xylenes	ND	0.5		ND		ND	
GBR-32							
Lab pH			6.9			7.1	
Lab Conductivity @25 C			6350			5400	
Total Dissolved Solids @ 180 C			4984			4390	
Total Dissolved Solids (Calc)			4685			---	

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Total Alkalinity as CaCO3			247			300	
Total Hardness as CaCO3			1789			1720	
Bicarbonate as HCO3			301			365	
Carbonate as CO3			ND			ND	
Hydroxide			ND			ND	
Chloride			912			673	
Nitrogen-Nitrate			14.1			9.36	
Sulfate			2037			1900	
Calcium			615			603	
Magnesium			61.8			52.3	
Potassium			3.78			ND	
Sodium			893			797	
HALOCARBONS							
Bromodichloromethane							ND
Bromoform							ND
Bromomethane							ND
Carbon Tetrachloride							ND
Chloroethane							2.9
Chloroform							ND
Chloromethane							ND
Dibromochloromethane							ND
1,2-Dibromoethane (EDB)							ND
1,2-Dichlorobenzene							ND
1,3-Dichlorobenzene							ND
1,4-Dichlorobenzene							ND
1,1-Dichloroethane							0.4
1,2-Dichloroethane (EDC)							ND
1,1-Dichloroethene							ND
cis-1,2-Dichloroethene							32 (D5)
trans-1,2-Dichloroethene							ND
1,2-Dichloropropane							ND
cis-1,3-Dichloropropene							ND
trans-1,3-Dichloropropene							ND
Methylene Chloride							ND
1,1,2,2-Tetrachloroethane							ND
Tetrachlorethene							5.4
1,1,1-Trichloroethane							ND
1,1,2-Trichloroethane							ND
Trichloroethene							2.8
Trichlorofluoromethane							ND
Vinyl Chloride							ND
AROMATICS							
Benzene							ND
Chlorobenzene							ND
1,2-Dichlorobenzene							ND
1,3-Dichlorobenzene							ND
1,4-Dichlorobenzene							ND
Ethylbenzene							ND

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Methyl-t-Butyl Ether							ND
Toluene							ND
Total Xylenes							ND
GBR-42							
HALOCARBONS							
Bromodichloromethane			ND				
Bromoform			ND				
Bromomethane			ND				
Carbon Tetrachloride			ND				
Chloroethane			ND				
Chloroform			1.5				
Chloromethane			ND				
Dibromochloromethane			ND				
1,2-Dibromoethane (EDB)			ND				
1,2-Dichlorobenzene			ND				
1,3-Dichlorobenzene			ND				
1,4-Dichlorobenzene			ND				
1,1-Dichloroethane			ND				
1,2-Dichloroethane (EDC)			ND				
1,1-Dichloroethene			ND				
cis-1,2-Dichloroethene			19				
trans-1,2-Dichloroethene			ND				
1,2-Dichloropropane			ND				
cis-1,3-Dichloropropene			ND				
trans-1,3-Dichloropropene			ND				
Methylene Chloride			ND				
1,1,2,2-Tetrachloroethane			ND				
Tetrachlorethene			1.3				
1,1,1-Trichloroethane			ND				
1,1,2-Trichloroethane			ND				
Trichloroethene			0.7				
Trichlorofluoromethane			ND				
Vinyl Chloride			ND				
AROMATICS							
Benzene			ND				
Chlorobenzene			ND				
1,2-Dichlorobenzene			ND				
1,3-Dichlorobenzene			ND				
1,4-Dichlorobenzene			ND				
Ethylbenzene			ND				
Methyl-t-Butyl Ether			ND				
Toluene			ND				
Total Xylenes			ND				
GBR-48							

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Lab pH			7				7.1
Lab Conductivity @25 C			5390				3000
Total Dissolved Solids @ 180 C			4514				2500
Total Dissolved Solids (Calc)			4078				---
Total Alkalinity as CaCO3			189				230
Total Hardness as CaCO3			1450				873
Bicarbonate as HCO3			230				281
Carbonate as CO3			ND				ND
Hydroxide			ND				ND
Chloride			570				246
Nitrogen - Nitrate			23.1				13.3
Sulfate			2095				1260
Calcium			499				308
Magnesium			50.1				25.5
Potassium			2.34				0.5
Sodium			727				514
HALOCARBONS							
Bromodichloromethane			ND				ND
Bromoform			ND				ND
Bromomethane			ND				ND
Carbon Tetrachloride			ND				ND
Chloroethane			ND				ND
Chloroform			0.5				ND
Chloromethane			ND				ND
Dibromochloromethane			ND				ND
1,2-Dibromoethane (EDB)			ND				ND
1,2-Dichlorobenzene			ND				ND
1,3-Dichlorobenzene			ND				ND
1,4-Dichlorobenzene			ND				ND
1,1-Dichloroethane			ND				0.3
1,2-Dichloroethane (EDC)			ND				ND
1,1-Dichloroethene			ND				ND
cis-1,2-Dichloroethene			18				8.3
trans-1,2-Dichloroethene			ND				ND
1,2-Dichloropropane			ND				ND
cis-1,3-Dichloropropene			ND				ND
trans-1,3-Dichloropropene			ND				ND
Methylene Chloride			ND				ND
1,1,2,2-Tetrachloroethane			ND				ND
Tetrachlorethene			3.1				4.3
1,1,1-Trichloroethane			ND				ND
1,1,2-Trichloroethane			ND				ND
Trichloroethene			1.6				2.1
Trichlorofluoromethane			ND				ND
Vinyl Chloride			ND				ND
AROMATICS							

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Benzene			ND				ND
Chlorobenzene			ND				ND
1,2-Dichlorobenzene			ND				ND
1,3-Dichlorobenzene			ND				ND
1,4-Dichlorobenzene			ND				ND
Ethylbenzene			ND				ND
Methyl-t-Butyl Ether			ND				ND
Toluene			ND				ND
Total Xylenes			ND				ND
GBR-49							
Lab pH			7.4				7.5
Lab Conductivity @25 C			4530				3960
Total Dissolved Solids @ 180 C			3781				3360
Total Dissolved Solids (Calc)			3469				---
Total Alkalinity as CaCO3			221				268
Total Hardness as CaCO3			1389				1370
Bicarbonate as HCO3			270				326
Carbonate as CO3			ND				ND
Hydroxide			ND				ND
Chloride			407				290
Nitrogen - Nitrate			3.57				1.18
Sulfate			1790				1800
Calcium			484				486
Magnesium			44.1				38.5
Potassium			5.11				0.5
Sodium			603				634
HALOCARBONS							
Bromodichloromethane			ND				ND
Bromoform			ND				ND
Bromomethane			ND				ND
Carbon Tetrachloride			ND				ND
Chloroethane			ND				ND
Chloroform			1.2				2.1
Chloromethane			ND				ND
Dibromochloromethane			ND				ND
1,2-Dibromoethane (EDB)			ND				ND
1,2-Dichlorobenzene			ND				ND
1,3-Dichlorobenzene			ND				ND
1,4-Dichlorobenzene			ND				ND
1,1-Dichloroethane			ND				0.4
1,2-Dichloroethane (EDC)			ND				ND
1,1-Dichloroethene			ND				ND
cis-1,2-Dichloroethene			33 (D5)				41 (D5)
trans-1,2-Dichloroethene			ND				ND
1,2-Dichloropropane			ND				ND

	JAN	APR	JUN	JUL	AUG	OCT	DEC
cis-1,3-Dichloropropene			ND				1.1
trans-1,3-Dichloropropene			ND				ND
Methylene Chloride			ND				ND
1,1,2,2-Tetrachloroethane			ND				ND
Tetrachlorethene			1.1				5.2
1,1,1-Trichloroethane			ND				ND
1,1,2-Trichloroethane			ND				ND
Trichloroethene			0.9				2.7
Trichlorofluoromethane			ND				ND
Vinyl Chloride			ND				ND
AROMATICS							
Benzene			ND				ND
Chlorobenzene			ND				ND
1,2-Dichlorobenzene			ND				ND
1,3-Dichlorobenzene			ND				ND
1,4-Dichlorobenzene			ND				ND
Ethylbenzene			ND				ND
Methyl-t-Butyl Ether			ND				ND
Toluene			ND				ND
Total Xylenes			ND				ND
GBR-50							
Lab pH			7.1				7.1
Lab Conductivity @25 C			3220				3350
Total Dissolved Solids @ 180 C			2870				2990
Total Dissolved Solids (Calc)			2628				---
Total Alkalinity as CaCO3			195				212
Total Hardness as CaCO3			1039				1290
Bicarbonate as HCO3			237				259
Carbonate as CO3			ND				ND
Hydroxide			ND				ND
Chloride			45.4				162
Nitrogen - Nitrate			0.94				5.25
Sulfate			1675				1690
Calcium			369				468
Magnesium			28.6				30.3
Potassium			1.11				ND
Sodium			391				449
HALOCARBONS							
Bromodichloromethane			ND				ND
Bromoform			ND				ND
Bromomethane			ND				ND
Carbon Tetrachloride			ND				ND
Chloroethane			ND				ND
Chloroform			ND				ND

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Chloromethane			ND				ND
Dibromochloromethane			ND				ND
1,2-Dibromoethane (EDB)			ND				ND
1,2-Dichlorobenzene			ND				ND
1,3-Dichlorobenzene			ND				ND
1,4-Dichlorobenzene			ND				ND
1,1-Dichloroethane			ND				ND
1,2-Dichloroethane (EDC)			0.5				ND
1,1-Dichloroethene			ND				ND
cis-1,2-Dichloroethene			4.2				1
trans-1,2-Dichloroethene			ND				ND
1,2-Dichloropropane			ND				ND
cis-1,3-Dichloropropene			ND				ND
trans-1,3-Dichloropropene			ND				ND
Methylene Chloride			ND				ND
1,1,2,2-Tetrachloroethane			ND				ND
Tetrachlorethene			1.5				0.8
1,1,1-Trichloroethane			ND				ND
1,1,2-Trichloroethane			ND				ND
Trichloroethene			ND				ND
Trichlorofluoromethane			ND				ND
Vinyl Chloride			ND				ND
AROMATICS							
Benzene			ND				ND
Chlorobenzene			ND				ND
1,2-Dichlorobenzene			ND				ND
1,3-Dichlorobenzene			ND				ND
1,4-Dichlorobenzene			ND				ND
Ethylbenzene			ND				ND
Methyl-t-Butyl Ether			ND				ND
Toluene			ND				ND
Total Xylenes			ND				ND
GBR-51							
Lab pH	7.2						
Lab Conductivity @25 C	2820						
Total Dissolved Solids @ 180 C	2450						
Total Dissolved Solids (Calc)	2376						
Total Alkalinity as CaCO3	251						
Total Hardness as CaCO3	1087						
Bicarbonate as HCO3	306						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	57.6						
Sulfate	1420						
Calcium	381						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Magnesium	32.8						
Potassium	1.17						
Sodium	333						
HALOCARBONS							
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
Carbon Tetrachloride	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
Dibromochloromethane	ND						
1,2-Dibromoethane (EDB)	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
1,1-Dichloroethane	ND						
1,2-Dichloroethane (EDC)	ND						
1,1-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Methylene Chloride	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachlorethene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Trichlorofluoromethane	ND						
Vinyl Chloride	ND						
AROMATICS							
Benzene	ND						
Chlorobenzene	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
Ethylbenzene	ND						
Methyl-t-Butyl Ether	ND						
Toluene	ND						
Total Xylenes	ND						
GBR-52							
Lab pH	7						
Lab Conductivity @25 C	3090						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Total Dissolved Solids @ 180 C	2750						
Total Dissolved Solids (Calc)	2619						
Total Alkalinity as CaCO3	201						
Total Hardness as CaCO3	1263						
Bicarbonate as HCO3	245						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	48.8						
Sulfate	1650						
Calcium	447						
Magnesium	36.1						
Potassium	1.56						
Sodium	315						
HALOCARBONS							
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
Carbon Tetrachloride	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
Dibromochloromethane	ND						
1,2-Dibromoethane (EDB)	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
1,1-Dichloroethane	ND						
1,2-Dichloroethane (EDC)	ND						
1,1-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Methylene Chloride	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachlorethene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Trichlorofluoromethane	ND						
Vinyl Chloride	ND						
AROMATICS							
Benzene	ND						
Chlorobenzene	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
1,4-Dichlorobenzene	ND						
Ethylbenzene	ND						
Methyl-t-Butyl Ether	ND						
Toluene	ND						
Total Xylenes	ND						
SHS-3							
Lab pH	6.5						
Lab Conductivity @25 C	4310						
Total Dissolved Solids @ 180 C	3850						
Total Dissolved Solids (Calc)	3725						
Total Alkalinity as CaCO3	208						
Total Hardness as CaCO3	1774						
Bicarbonate as HCO3	254						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	320						
Sulfate	2144						
Calcium	586						
Magnesium	76.1						
Potassium	8.6						
Sodium	465						
HALOCARBONS							
Bromodichloromethane	ND				ND		
Bromoform	ND				ND		
Bromomethane	ND				ND		
Carbon Tetrachloride	ND				ND		
Chloroethane	ND				ND		
Chloroform	ND				ND		
Chloromethane	ND				ND		
Dibromochloromethane	ND				ND		
1,2-Dibromoethane (EDB)	ND				ND		
1,2-Dichlorobenzene	ND				ND		
1,3-Dichlorobenzene	ND				ND		
1,4-Dichlorobenzene	ND				ND		
1,1-Dichloroethane	ND				ND		
1,2-Dichloroethane (EDC)	ND				ND		
1,1-Dichloroethene	ND				ND		
cis-1,2-Dichloroethene	ND				ND		
trans-1,2-Dichloroethene	ND				ND		
1,2-Dichloropropane	ND				ND		
cis-1,3-Dichloropropene	ND				ND		
trans-1,3-Dichloropropene	ND				ND		
Methylene Chloride	ND				ND		
1,1,2,2-Tetrachloroethane	ND				ND		
Tetrachlorethene	ND				ND		

	JAN	APR	JUN	JUL	AUG	OCT	DEC
1,1,1-Trichloroethane	ND				ND		
1,1,2-Trichloroethane	ND				ND		
Trichloroethene	ND				ND		
Trichlorofluoromethane	ND				ND		
Vinyl Chloride	ND				ND		
AROMATICS							
Benzene	ND				ND		
Chlorobenzene	ND				ND		
1,2-Dichlorobenzene	ND				ND		
1,3-Dichlorobenzene	ND				ND		
1,4-Dichlorobenzene	ND				ND		
Ethylbenzene	ND				ND		
Methyl-t-Butyl Ether	ND				ND		
Toluene	ND				ND		
Total Xylenes	ND				ND		
SHS-4							
Lab pH	7						
Lab Conductivity @25 C	3160						
Total Dissolved Solids @ 180 C	2890						
Total Dissolved Solids (Calc)	2734						
Total Alkalinity as CaCO3	251						
Total Hardness as CaCO3	1312						
Bicarbonate as HCO3	306						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	43.2						
Sulfate	1728						
Calcium	463						
Magnesium	38.3						
Potassium	0.78						
Sodium	310						
HALOCARBONS							
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
Carbon Tetrachloride	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
Dibromochloromethane	ND						
1,2-Dibromoethane (EDB)	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
1,1-Dichloroethane	ND						
1,2-Dichloroethane (EDC)	ND						
1,1-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Methylene Chloride	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachlorethene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Trichlorofluoromethane	ND						
Vinyl Chloride	ND						
AROMATICS							
Benzene	ND						
Chlorobenzene	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
Ethylbenzene	ND						
Methyl-t-Butyl Ether	ND						
Toluene	ND						
Total Xylenes	ND						
SHS-6							
Lab pH	7						
Lab Conductivity @25 C	2940						
Total Dissolved Solids @ 180 C	2440						
Total Dissolved Solids (Calc)	2422						
Total Alkalinity as CaCO3	238						
Total Hardness as CaCO3	1101						
Bicarbonate as HCO3	291						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	61.9						
Sulfate	1457						
Calcium	391						
Magnesium	30.4						
Potassium	2.74						
Sodium	336						
HALOCARBONS							
Bromodichloromethane	ND						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Bromoform	ND						
Bromomethane	ND						
Carbon Tetrachloride	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
Dibromochloromethane	ND						
1,2-Dibromoethane (EDB)	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
1,1-Dichloroethane	ND						
1,2-Dichloroethane (EDC)	ND						
1,1-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Methylene Chloride	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachlorethene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Trichlorofluoromethane	ND						
Vinyl Chloride	ND						
AROMATICS							
Benzene	ND						
Chlorobenzene	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,4-Dichlorobenzene	ND						
Ethylbenzene	ND						
Methyl-t-Butyl Ether	ND						
Toluene	ND						
Total Xylenes	ND						
SHS-10							
Lab pH	7						
Lab Conductivity @25 C	3260						
Total Dissolved Solids @ 180 C	2650						
Total Dissolved Solids (Calc)	2646						
Total Alkalinity as CaCO3	331						
Total Hardness as CaCO3	1146						
Bicarbonate as HCO3	404						
Carbonate as CO3	ND						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Hydroxide	ND						
Chloride	172						
Sulfate	1416						
Calcium	357						
Magnesium	62						
Potassium	9.78						
Sodium	431						
HALOCARBONS							
Bromodichloromethane	ND	ND			ND	ND	
Bromoform	ND	ND			ND	ND	
Bromomethane	ND	ND			ND	ND	
Carbon Tetrachloride	ND	ND			ND	ND	
Chloroethane	ND	ND			ND	ND	
Chloroform	ND	ND			ND	ND	
Chloromethane	ND	ND			ND	ND	
Dibromochloromethane	0.3	ND			ND	ND	
1,2-Dibromoethane (EDB)	ND	ND			ND	ND	
1,2-Dichlorobenzene	ND	ND			ND	ND	
1,3-Dichlorobenzene	ND	ND			ND	ND	
1,4-Dichlorobenzene	ND	ND			ND	ND	
1,1-Dichloroethane	ND	ND			ND	ND	
1,2-Dichloroethane (EDC)	ND	ND			ND	ND	
1,1-Dichloroethene	ND	ND			ND	ND	
cis-1,2-Dichloroethene	ND	ND			ND	ND	
trans-1,2-Dichloroethene	ND	ND			ND	ND	
1,2-Dichloropropane	ND	ND			ND	ND	
cis-1,3-Dichloropropene	ND	ND			ND	ND	
trans-1,3-Dichloropropene	ND	ND			ND	ND	
Methylene Chloride	ND	ND			ND	ND	
1,1,2,2-Tetrachloroethane	ND	ND			ND	ND	
Tetrachlorethene	ND	ND			ND	ND	
1,1,1-Trichloroethane	ND	ND			ND	ND	
1,1,2-Trichloroethane	0.2	ND			ND	ND	
Trichloroethene	0.5	ND			ND	ND	
Trichlorofluoromethane	ND	ND			ND	ND	
Vinyl Chloride	ND	ND			ND	ND	
AROMATICS							
Benzene	ND	1.6			ND	ND	
Chlorobenzene	ND	ND			ND	ND	
1,2-Dichlorobenzene	ND	ND			ND	ND	
1,3-Dichlorobenzene	ND	ND			ND	ND	
1,4-Dichlorobenzene	ND	ND			ND	ND	
Ethylbenzene	ND	ND			ND	ND	
Methyl-t-Butyl Ether	ND	ND			ND	ND	
Toluene	ND	1			ND	ND	
Total Xylenes	0.5	1.2			ND	ND	

	JAN	APR	JUN	JUL	AUG	OCT	DEC
SHS-12							
Lab pH	7.1						
Lab Conductivity @25 C	3550						
Total Dissolved Solids @ 180 C	2730						
Total Dissolved Solids (Calc)	2805						
Total Alkalinity as CaCO3	349						
Total Hardness as CaCO3	966						
Bicarbonate as HCO3	426						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	248						
Sulfate	1407						
Calcium	340						
Magnesium	28.3						
Potassium	1.96						
Sodium	570						
HALOCARBONS							
Bromodichloromethane	ND	ND			ND	ND	
Bromoform	ND	ND			ND	ND	
Bromomethane	ND	ND			ND	ND	
Carbon Tetrachloride	ND	ND			ND	ND	
Chloroethane	ND	ND			ND	ND	
Chloroform	ND	ND			ND	ND	
Chloromethane	ND	ND			ND	ND	
Dibromochloromethane	0.3	ND			ND	ND	
1,2-Dibromoethane (EDB)	ND	ND			ND	ND	
1,2-Dichlorobenzene	ND	ND			ND	ND	
1,3-Dichlorobenzene	ND	ND			ND	ND	
1,4-Dichlorobenzene	ND	ND			ND	ND	
1,1-Dichloroethane	ND	ND			ND	ND	
1,2-Dichloroethane (EDC)	ND	ND			ND	ND	
1,1-Dichloroethene	ND	ND			ND	ND	
cis-1,2-Dichloroethene	1.3	0.9			ND	ND	
trans-1,2-Dichloroethene	ND	ND			ND	ND	
1,2-Dichloropropane	ND	ND			ND	ND	
cis-1,3-Dichloropropene	ND	ND			ND	ND	
trans-1,3-Dichloropropene	ND	ND			ND	ND	
Methylene Chloride	ND	ND			ND	ND	
1,1,2,2-Tetrachloroethane	ND	ND			ND	ND	
Tetrachlorethene	ND	ND			ND	ND	
1,1,1-Trichloroethane	ND	ND			ND	ND	
1,1,2-Trichloroethane	0.2	ND			ND	ND	
Trichloroethene	0.8	ND			ND	ND	
Trichlorofluoromethane	ND	ND			ND	ND	
Vinyl Chloride	ND	ND			ND	ND	
AROMATICS							

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Benzene	ND	ND			ND	ND	
Chlorobenzene	ND	ND			ND	ND	
1,2-Dichlorobenzene	ND	ND			ND	ND	
1,3-Dichlorobenzene	ND	ND			ND	ND	
1,4-Dichlorobenzene	ND	ND			ND	ND	
Ethylbenzene	ND	ND			ND	ND	
Methyl-t-Butyl Ether	ND	ND			ND	ND	
Toluene	ND	ND			ND	ND	
Total Xylenes	ND	ND			ND	ND	
SHS-13							
Lab pH	7						
Lab Conductivity @25 C	4290						
Total Dissolved Solids @ 180 C	3510						
Total Dissolved Solids (Calc)	3612						
Total Alkalinity as CaCO3	633						
Total Hardness as CaCO3	1666						
Bicarbonate as HCO3	772						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	275						
Sulfate	1765						
Calcium	568						
Magnesium	60.5						
Potassium	2.74						
Sodium	561						
HALOCARBONS							
Bromodichloromethane	ND	ND			ND	ND	
Bromoform	0.9	ND			ND	ND	
Bromomethane	ND	ND			ND	ND	
Carbon Tetrachloride	ND	ND			ND	ND	
Chloroethane	ND	ND			ND	ND	
Chloroform	ND	ND			ND	ND	
Chloromethane	ND	ND			ND	ND	
Dibromochloromethane	0.5	ND			ND	ND	
1,2-Dibromoethane (EDB)	0.7	ND			ND	ND	
1,2-Dichlorobenzene	ND	ND			ND	ND	
1,3-Dichlorobenzene	ND	ND			ND	ND	
1,4-Dichlorobenzene	ND	ND			ND	ND	
1,1-Dichloroethane	ND	ND			ND	ND	
1,2-Dichloroethane (EDC)	4.8	3.7			2.1	2.8	
1,1-Dichloroethene	ND	ND			ND	ND	
cis-1,2-Dichloroethene	ND	ND			ND	ND	
trans-1,2-Dichloroethene	ND	ND			ND	ND	
1,2-Dichloropropane	ND	ND			ND	ND	
cis-1,3-Dichloropropene	ND	ND			ND	ND	
trans-1,3-Dichloropropene	ND	ND			ND	ND	

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Methylene Chloride	ND	ND			ND	ND	
1,1,2,2-Tetrachloroethane	ND	ND			ND	ND	
Tetrachlorethene	ND	ND			ND	ND	
1,1,1-Trichloroethane	ND	ND			ND	ND	
1,1,2-Trichloroethane	0.5	ND			ND	ND	
Trichloroethene	0.6	ND			ND	ND	
Trichlorofluoromethane	ND	ND			ND	ND	
Vinyl Chloride	ND	ND			ND	ND	
AROMATICS							
Benzene	ND	ND			ND	ND	
Chlorobenzene	ND	ND			ND	ND	
1,2-Dichlorobenzene	ND	ND			ND	ND	
1,3-Dichlorobenzene	ND	ND			ND	ND	
1,4-Dichlorobenzene	ND	ND			ND	ND	
Ethylbenzene	ND	ND			ND	ND	
Methyl-t-Butyl Ether	ND	ND			ND	ND	
Toluene	ND	ND			ND	ND	
Total Xylenes	ND	ND			ND	ND	
SHS-15							
Lab pH	6.9						
Lab Conductivity @25 C	2610						
Total Dissolved Solids @ 180 C	2180						
Total Dissolved Solids (Calc)	2081						
Total Alkalinity as CaCO3	289						
Total Hardness as CaCO3	1142						
Bicarbonate as HCO3	352						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	76.7						
Sulfate	1193						
Calcium	396						
Magnesium	37.5						
Potassium	1.56						
Sodium	203						
HALOCARBONS							
Bromodichloromethane	ND				ND		
Bromoform	ND				ND		
Bromomethane	ND				ND		
Carbon Tetrachloride	ND				ND		
Chloroethane	ND				ND		
Chloroform	1.2				2.7		
Chloromethane	ND				ND		
Dibromochloromethane	ND				ND		
1,2-Dibromoethane (EDB)	ND				ND		

	JAN	APR	JUN	JUL	AUG	OCT	DEC
1,2-Dichlorobenzene	ND				ND		
1,3-Dichlorobenzene	ND				ND		
1,4-Dichlorobenzene	ND				ND		
1,1-Dichloroethane	ND				ND		
1,2-Dichloroethane (EDC)	ND				ND		
1,1-Dichloroethene	ND				ND		
cis-1,2-Dichloroethene	ND				ND		
trans-1,2-Dichloroethene	ND				ND		
1,2-Dichloropropane	ND				ND		
cis-1,3-Dichloropropene	ND				ND		
trans-1,3-Dichloropropene	ND				ND		
Methylene Chloride	ND				ND		
1,1,2,2-Tetrachloroethane	ND				ND		
Tetrachlorethene	ND				ND		
1,1,1-Trichloroethane	ND				ND		
1,1,2-Trichloroethane	ND				ND		
Trichloroethene	ND				ND		
Trichlorofluoromethane	ND				ND		
Vinyl Chloride	ND				ND		
AROMATICS							
Benzene	ND				ND		
Chlorobenzene	ND				ND		
1,2-Dichlorobenzene	ND				ND		
1,3-Dichlorobenzene	ND				ND		
1,4-Dichlorobenzene	ND				ND		
Ethylbenzene	ND				ND		
Methyl-t-Butyl Ether	ND				ND		
Toluene	ND				ND		
Total Xylenes	ND				ND		
SHS-16							
Lab pH	6.9						
Lab Conductivity @25 C	2820						
Total Dissolved Solids @ 180 C	2430						
Total Dissolved Solids (Calc)	2330						
Total Alkalinity as CaCO3	289						
Total Hardness as CaCO3	1244						
Bicarbonate as HCO3	352						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	43.6						
Sulfate	1395						
Calcium	423						
Magnesium	45.9						
Potassium	1.56						
Sodium	248						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
HALOCARBONS							
Bromodichloromethane	ND	ND			ND	ND	
Bromoform	ND	ND			ND	ND	
Bromomethane	ND	ND			ND	ND	
Carbon Tetrachloride	ND	ND			ND	ND	
Chloroethane	ND	ND			ND	ND	
Chloroform	ND	ND			ND	ND	
Chloromethane	ND	ND			ND	ND	
Dibromochloromethane	ND	ND			ND	ND	
1,2-Dibromoethane (EDB)	ND	ND			ND	ND	
1,2-Dichlorobenzene	ND	ND			ND	ND	
1,3-Dichlorobenzene	ND	ND			ND	ND	
1,4-Dichlorobenzene	ND	ND			ND	ND	
1,1-Dichloroethane	ND	ND			ND	ND	
1,2-Dichloroethane (EDC)	ND	ND			ND	ND	
1,1-Dichloroethene	ND	ND			ND	ND	
cis-1,2-Dichloroethene	ND	ND			ND	ND	
trans-1,2-Dichloroethene	ND	ND			ND	ND	
1,2-Dichloropropane	ND	ND			ND	ND	
cis-1,3-Dichloropropene	ND	ND			ND	ND	
trans-1,3-Dichloropropene	ND	ND			ND	ND	
Methylene Chloride	ND	ND			ND	ND	
1,1,2,2-Tetrachloroethane	ND	ND			ND	ND	
Tetrachlorethene	ND	ND			ND	ND	
1,1,1-Trichloroethane	ND	ND			ND	ND	
1,1,2-Trichloroethane	ND	ND			ND	ND	
Trichloroethene	ND	ND			ND	ND	
Trichlorofluoromethane	ND	ND			ND	ND	
Vinyl Chloride	ND	ND			ND	ND	
AROMATICS							
Benzene	ND	ND			ND	ND	
Chlorobenzene	ND	ND			ND	ND	
1,2-Dichlorobenzene	ND	ND			ND	ND	
1,3-Dichlorobenzene	ND	ND			ND	ND	
1,4-Dichlorobenzene	ND	ND			ND	ND	
Ethylbenzene	ND	ND			ND	ND	
Methyl-t-Butyl Ether	ND	ND			ND	ND	
Toluene	ND	ND			ND	ND	
Total Xylenes	ND	ND			ND	ND	
SHS-17							
Lab pH	7.1						
Lab Conductivity @25 C	3750						
Total Dissolved Solids @ 180 C	3160						
Total Dissolved Solids (Calc)	2850						
Total Alkalinity as CaCO3	276						
Total Hardness as CaCO3	1205						

	JAN	APR	JUN	JUL	AUG	OCT	DEC
Bicarbonate as HCO3	337						
Carbonate as CO3	ND						
Hydroxide	ND						
Chloride	191						
Sulfate	1576						
Calcium	402						
Magnesium	48.8						
Potassium	2.35						
Sodium	464						
HALOCARBONS							
Bromodichloromethane	ND	ND			ND	ND	
Bromoform	ND	ND			ND	ND	
Bromomethane	ND	ND			ND	ND	
Carbon Tetrachloride	ND	ND			ND	ND	
Chloroethane	ND	ND			ND	ND	
Chloroform	ND	ND			ND	ND	
Chloromethane	ND	ND			ND	ND	
Dibromochloromethane	ND	ND			ND	ND	
1,2-Dibromoethane (EDB)	ND	ND			ND	ND	
1,2-Dichlorobenzene	ND	ND			ND	ND	
1,3-Dichlorobenzene	ND	ND			ND	ND	
1,4-Dichlorobenzene	ND	ND			ND	ND	
1,1-Dichloroethane	ND	ND			ND	ND	
1,2-Dichloroethane (EDC)	ND	ND			ND	ND	
1,1-Dichloroethene	ND	ND			ND	ND	
cis-1,2-Dichloroethene	ND	ND			ND	ND	
trans-1,2-Dichloroethene	ND	ND			ND	ND	
1,2-Dichloropropane	ND	ND			ND	ND	
cis-1,3-Dichloropropene	ND	ND			ND	ND	
trans-1,3-Dichloropropene	ND	ND			ND	ND	
Methylene Chloride	ND	ND			ND	ND	
1,1,2,2-Tetrachloroethane	ND	ND			ND	ND	
Tetrachlorethene	ND	ND			ND	ND	
1,1,1-Trichloroethane	ND	ND			ND	ND	
1,1,2-Trichloroethane	ND	ND			ND	ND	
Trichloroethene	ND	ND			ND	ND	
Trichlorofluoromethane	ND	ND			ND	ND	
Vinyl Chloride	ND	ND			ND	ND	
AROMATICS							
Benzene	ND	ND			ND	ND	
Chlorobenzene	ND	ND			ND	ND	
1,2-Dichlorobenzene	ND	ND			ND	ND	
1,3-Dichlorobenzene	ND	ND			ND	ND	
1,4-Dichlorobenzene	ND	ND			ND	ND	
Ethylbenzene	ND	ND			ND	ND	
Methyl-t-Butyl Ether	ND	ND			ND	ND	
Toluene	ND	ND			ND	ND	
Total Xylenes	ND	ND			ND	ND	

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE

JANUARY, 1997

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
GRW-1	5394.30	62.07	62.07	0.00	5332.23
GRW-2	5391.28	48.49	48.49	0.00	5342.79
GRW-3	5388.77	51.32	51.32	0.00	5337.45
GRW-4	5390.02	50.65	50.65	0.00	5339.37
GRW-5	5390.56	51.10	51.10	0.00	5339.46
GRW-6	5390.81	51.10	51.10	0.00	5339.71
GRW-10	5395.02	57.85	57.85	0.00	5337.17
GRW-11	5397.85	52.57	52.57	0.00	5345.28
GRW-12	5397.24	43.40	43.40	0.00	5353.84
GRW-13	5396.90	56.80	56.80	0.00	5340.10
GBR-5	5395.07	38.70	38.28	0.42	5356.71
GBR-6	5395.70	61.50	61.50	0.00	5334.20
GBR-7	5395.85	31.19	31.18	0.01	5364.67
GBR-8	5390.50	43.52	43.52	0.00	5346.98
GBR-9	5389.92	47.85	47.85	0.00	5342.07
GBR-10	5390.57	42.44	42.44	0.00	5348.13
GBR-11	5389.43	42.85	42.83	0.02	5346.60
GBR-13	5393.04	41.72	41.72	0.00	5351.32
GBR-15	5397.99	42.20	42.20	0.00	5355.79
GBR-18	5421.68	31.02	31.02	0.00	5390.66
GBR-19	5393.83	42.43	41.27	1.16	5352.33
GBR-20	5393.47	39.89	39.80	0.09	5353.65
GBR-21S	5400.65	19.86	19.86	0.00	5380.79
GBR-21D	5400.19	32.70	32.70	0.00	5367.49
GBR-22	5395.91	38.11	38.10	0.01	5357.81
GBR-23	5403.72	22.76	22.75	0.01	5378.99
GBR-24S	5396.08	24.74	24.74	0.00	5364.72
GBR-24D	5396.77	31.36	31.36	0.00	5365.41
GBR-25	5396.72	32.07	32.07	0.00	5364.65
GBR-26	5395.59	38.24	38.24	0.00	5357.35
GBR-30	5396.58	34.73	34.73	0.00	5361.85
GBR-31	5394.86	37.20	37.20	0.00	5357.66
GBR-33	5396.28	40.25	40.25	0.00	5356.03
GBR-34	5394.00	38.45	37.60	0.85	5356.23
GBR-35	5393.66	37.90	37.57	0.33	5356.02
GBR-39	5397.55	0.00	0.00	0.00	5397.55
GBR-40	5400.76	29.26	29.26	0.00	5371.50
GBR-41	5396.35	22.88	22.88	0.00	5373.47
GBR-51	5389.68	42.75	42.75	0.00	5346.93
GBR-52	5387.74	41.30	41.30	0.00	5346.44

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE
JANUARY, 1997

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
SHS-1	5383.54	42.57	42.45	0.12	5341.07
SHS-2	5381.66	36.70	36.70	0.00	5344.96
SHS-3	5383.33	36.50	36.50	0.00	5346.83
SHS-4	5383.62	42.40	42.40	0.00	5341.22
SHS-5	5378.36	39.34	39.34	0.00	5339.02
SHS-6	5378.17	39.60	39.60	0.00	5338.57
SHS-7	5375.89	48.45	48.45	0.00	5327.44
SHS-8	5380.25	39.99	39.99	0.00	5340.26
SHS-9	5380.79	40.91	40.85	0.06	5339.93
SHS-10	5373.80	37.15	37.15	0.00	5336.65
SHS-12	5373.94	40.65	40.65	0.00	5333.29
SHS-13	5367.81	37.53	37.53	0.00	5330.28
SHS-14	5367.07	45.36	45.36	0.00	5321.71
SHS-15	5366.21	34.20	34.20	0.00	5332.01
SHS-16	5362.58	32.10	32.10	0.00	5330.48
SHS-17	5364.35	34.16	34.16	0.00	5330.19
SHS-18	5373.64	40.90	40.76	0.14	5332.85

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE

APRIL, 1997

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
GRW-1	5394.30	62.53	62.53	0.00	5331.77
GRW-2	5391.28	47.65	47.65	0.00	5343.63
GRW-3	5388.77	50.00	50.00	0.00	5338.77
GRW-4	5390.02	54.45	54.45	0.00	5335.57
GRW-5	5390.56	47.26	47.26	0.00	5343.30
GRW-6	5390.81	58.10	58.10	0.00	5332.71
GRW-10	5395.02	53.26	53.26	0.00	5341.76
GRW-11	5397.85	63.00	63.00	0.00	5334.85
GRW-12	5397.24	44.48	44.48	0.00	5352.76
GRW-13	5396.90	53.73	53.73	0.00	5343.17
GBR-5	5395.07	29.02	28.74	0.28	5366.27
GBR-6	5395.70	58.10	58.10	0.00	5337.60
GBR-7	5395.85	32.28	31.65	0.63	5364.07
GBR-8	5390.50	44.15	43.82	0.33	5346.61
GBR-9	5389.92	49.18	49.18	0.00	5340.74
GBR-10	5390.57	42.45	42.45	0.00	5348.12
GBR-11	5389.43	43.60	43.07	0.53	5346.25
GBR-13	5393.04	42.06	42.06	0.00	5350.98
GBR-15	5397.99	42.05	42.05	0.00	5355.94
GBR-18	5421.68	31.26	31.26	0.00	5390.42
GBR-19	5393.83	43.50	41.45	2.05	5351.97
GBR-20	5393.47	41.10	40.29	0.81	5353.02
GBR-21S	5400.65	19.92	19.90	0.02	5380.75
GBR-21D	5400.19	36.38	36.38	0.00	5363.81
GBR-22	5395.91	38.84	38.74	0.10	5357.15
GBR-23	5403.72	23.07	23.07	0.00	5378.53
GBR-24S	5396.08	25.19	25.19	0.00	5364.52
GBR-24D	5396.77	31.56	31.56	0.00	5365.21
GBR-25	5396.72	32.67	32.67	0.00	5364.05
GBR-26	5395.59	38.02	38.02	0.00	5357.57
GBR-30	5396.58	34.45	34.45	0.00	5362.13
GBR-31	5394.86	37.27	37.27	0.00	5357.59
GBR-33	5396.28	39.13	39.13	0.00	5357.15
GBR-34	5394.00	38.54	37.65	0.89	5356.17
GBR-35	5393.66	39.74	37.70	2.04	5355.55
GBR-39	5397.55	0.00	0.00	0.00	5397.55
GBR-40	5400.76	30.10	30.10	0.00	5370.66
GBR-41	5396.35	22.59	22.59	0.00	5373.76
GBR-51	5389.68	42.90	42.90	0.00	5346.78
GBR-52	5387.74	41.45	41.45	0.00	5346.29

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE
APRIL, 1997

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
SHS-1	5383.54	42.35	42.35	0.00	5341.19
SHS-2	5381.66	36.49	36.49	0.00	5345.17
SHS-3	5383.33	38.23	38.23	0.00	5345.10
SHS-4	5383.62	42.33	42.33	0.00	5341.29
SHS-5	5378.36	39.14	39.14	0.00	5339.22
SHS-6	5378.17	39.42	39.42	0.00	5338.75
SHS-7	5375.89	38.91	38.91	0.00	5336.98
SHS-8	5380.25	38.92	38.92	0.00	5341.33
SHS-9	5380.79	45.14	45.14	0.00	5335.65
SHS-10	5373.80	36.53	36.53	0.00	5337.27
SHS-12	5373.94	40.20	40.20	0.00	5333.74
SHS-13	5367.81	38.81	38.81	0.00	5329.00
SHS-14	5367.07	44.17	44.17	0.00	5322.90
SHS-15	5366.21	33.70	33.70	0.00	5332.51
SHS-16	5362.58	31.62	31.62	0.00	5330.96
SHS-17	5364.35	33.57	33.57	0.00	5330.78
SHS-18	5373.64	40.18	40.18	0.00	5333.46

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE

JULY, 1997

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
GRW-1	5394.30	61.46	61.46	0.00	5332.84
GRW-2	5391.28	46.34	46.34	0.00	5344.94
GRW-3	5388.77	45.46	45.42	0.04	5343.34
GRW-4	5390.02	55.20	55.20	0.00	5334.82
GRW-5	5390.56	66.40	66.40	0.00	5324.16
GRW-6	5390.81	49.13	49.13	0.00	5341.68
GRW-10	5395.02	53.36	53.36	0.00	5341.66
GRW-11	5397.85	49.57	49.57	0.00	5348.28
GRW-12	5397.24	39.73	39.73	0.00	5357.51
GRW-13	5396.90	40.40	40.40	0.00	5356.50
GBR-5	5395.07	27.70	27.70	0.00	5367.37
GBR-6	5395.70	58.15	58.15	0.00	5337.55
GBR-7	5395.85	31.30	30.66	0.64	5365.06
GBR-8	5390.50	43.10	43.10	0.00	5347.40
GBR-9	5389.92	48.16	48.16	0.00	5341.76
GBR-10	5390.57	42.45	42.45	0.00	5348.12
GBR-11	5389.43	42.89	42.49	0.40	5346.86
GBR-13	5393.04	41.15	41.15	0.00	5351.89
GBR-15	5397.99	39.57	39.57	0.00	5358.42
GBR-18	5421.68	32.25	32.25	0.00	5389.43
GBR-19	5393.83	42.53	40.79	1.74	5352.69
GBR-20	5393.47	40.50	39.74	0.76	5353.58
GBR-21S	5400.65	20.09	20.09	0.00	5380.56
GBR-21D	5400.19	34.53	34.53	0.00	5365.66
GBR-22	5395.91	38.11	38.05	0.06	5357.85
GBR-23	5403.72	23.23	23.23	0.00	5379.02
GBR-24S	5396.08	24.70	24.70	0.00	5365.70
GBR-24D	5396.77	30.38	30.38	0.00	5366.39
GBR-25	5396.72	32.62	32.62	0.00	5364.10
GBR-26	5395.59	36.33	36.33	0.00	5359.26
GBR-30	5396.58	34.24	34.24	0.00	5362.34
GBR-31	5394.86	36.68	36.68	0.00	5358.18
GBR-33	5396.28	39.72	39.72	0.00	5356.56
GBR-34	5394.00	37.20	37.18	0.02	5356.82
GBR-35	5393.66	37.45	37.43	0.02	5356.23
GBR-39	5397.55	38.65	38.65	0.00	5358.90
GBR-40	5400.76	28.96	28.96	0.00	5371.80
GBR-41	5396.35	22.20	22.20	0.00	5374.15
GBR-51	5389.68	42.31	42.31	0.00	5347.37
GBR-52	5387.74	40.83	40.83	0.00	5346.91

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE
JULY, 1997

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
SHS-1	5383.54	42.25	42.10	0.15	5341.41
SHS-2	5381.66	37.70	37.70	0.00	5343.96
SHS-3	5383.33	35.85	35.85	0.00	5347.48
SHS-4	5383.62	42.04	42.04	0.00	5341.58
SHS-5	5378.36	39.00	39.00	0.00	5339.36
SHS-6	5378.17	39.26	39.26	0.00	5338.91
SHS-7	5375.89	45.90	45.90	0.00	5329.99
SHS-8	5380.25	42.15	39.10	3.05	5340.54
SHS-9	5380.79	44.20	44.20	0.00	5336.59
SHS-10	5373.80	37.09	37.09	0.00	5336.71
SHS-12	5373.94	40.20	40.20	0.00	5333.74
SHS-13	5367.81	36.81	36.81	0.00	5331.00
SHS-14	5367.07	45.84	45.84	0.00	5321.23
SHS-15	5366.21	33.96	33.96	0.00	5332.25
SHS-16	5362.58	31.73	31.73	0.00	5330.85
SHS-17	5364.35	33.65	33.65	0.00	5330.70
SHS-18	5373.64	40.30	40.25	0.05	5333.38

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE

OCTOBER, 1997

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
GRW-1	5394.30	61.14	61.14	0.00	5333.16
GRW-2	5391.28	44.90	44.90	0.00	5346.38
GRW-3	5388.77	53.74	53.74	0.00	5335.03
GRW-4	5390.02	55.82	55.82	0.00	5334.20
GRW-5	5390.56	60.25	60.25	0.00	5330.31
GRW-6	5390.81	51.78	51.78	0.00	5339.03
GRW-10	5395.02	54.42	54.42	0.00	5340.60
GRW-11	5397.85	51.15	51.15	0.00	5346.70
GRW-12	5397.24	44.93	44.93	0.00	5352.31
GRW-13	5396.90	50.76	50.76	0.00	5346.14
GBR-5	5395.07	27.87	27.85	0.02	5367.22
GBR-6	5395.70	59.90	59.90	0.00	5335.80
GBR-7	5395.85	31.58	30.90	0.68	5364.81
GBR-8	5390.50	42.53	42.53	0.00	5347.97
GBR-9	5389.92	48.35	48.35	0.00	5341.57
GBR-10	5390.57	42.45	42.45	0.00	5348.12
GBR-11	5389.43	42.90	42.00	0.90	5347.25
GBR-13	5393.04	40.61	40.61	0.00	5352.43
GBR-15	5397.99	39.98	39.98	0.00	5358.01
GBR-18	5421.68	32.30	32.30	0.00	5389.38
GBR-19	5393.83	41.41	40.41	1.00	5353.22
GBR-20	5393.47	39.77	39.77	0.00	5353.70
GBR-21S	5400.65	21.25	21.25	0.00	5379.40
GBR-21D	5400.19	30.27	30.27	0.00	5369.92
GBR-22	5395.91	37.51	37.47	0.04	5358.43
GBR-23	5403.72	23.62	23.62	0.00	5377.04
GBR-24S	5396.08	26.68	26.68	0.00	5365.74
GBR-24D	5396.77	30.34	30.34	0.00	5366.43
GBR-25	5396.72	32.45	32.45	0.00	5364.27
GBR-26	5395.59	35.90	35.90	0.00	5359.69
GBR-30	5396.58	34.17	34.17	0.00	5362.41
GBR-31	5394.86	36.35	36.35	0.00	5358.51
GBR-33	5396.28	33.27	33.27	0.00	5363.01
GBR-34	5394.00	36.83	36.81	0.02	5357.19
GBR-35	5393.66	36.79	36.79	0.00	5356.87
GBR-39	5397.55	38.13	38.13	0.00	5359.42
GBR-40	5400.76	30.01	30.01	0.00	5370.75
GBR-41	5396.35	23.44	23.44	0.00	5372.91
GBR-51	5389.68	41.83	41.83	0.00	5347.85
GBR-52	5387.74	40.35	40.35	0.00	5347.39

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE
OCTOBER, 1997

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
SHS-1	5383.54	41.93	41.80	0.13	5341.71
SHS-2	5381.66	40.02	40.02	0.00	5341.64
SHS-3	5383.33	36.07	36.07	0.00	5347.26
SHS-4	5383.62	41.90	41.90	0.00	5341.72
SHS-5	5378.36	38.85	38.85	0.00	5339.51
SHS-6	5378.17	39.05	39.05	0.00	5339.12
SHS-7	5375.89	48.50	48.50	0.00	5327.39
SHS-8	5380.25	41.60	38.95	2.65	5340.77
SHS-9	5380.79	42.80	42.80	0.00	5337.99
SHS-10	5373.80	37.15	37.15	0.00	5336.65
SHS-12	5373.94	40.26	40.26	0.00	5333.68
SHS-13	5367.81	36.95	36.95	0.00	5330.86
SHS-14	5367.07	45.40	45.40	0.00	5321.67
SHS-15	5366.21	33.00	33.00	0.00	5333.21
SHS-16	5362.58	31.80	31.80	0.00	5330.78
SHS-17	5364.35	33.77	33.77	0.00	5330.58
SHS-18	5373.64	40.53	40.53	0.00	5333.11

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
VOLUME CHANGE

1997

Tank Number	Beginning Volume	Ending Volume	Net Change
102	12,221	9,508	(2,713)
106	8,010	8,010	0
21	229,768	230,133	365
22	228,204	246,237	18,033
Total Net Volume Change			15,685

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
RECOVERY WELL
VOLUME TABULATION

1997

Well	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
GRW-1	20,430	27,920	40,030	38,704	127,084
GRW-2	12,360	8,730	20,930	7,162	49,182
GRW-3	23,240	18,820	31,560	36,680	110,300
GRW-4	73,420	96,180	104,850	93,646	368,096
GRW-5	80,690	75,430	125,130	124,800	406,050
GRW-6	29,850	51,190	85,200	86,760	253,000
GRW-9	20,620	30,020	34,690	17,010	102,340
GRW-10	367,360	611,000	589,280	637,830	2,205,470
GRW-11	88,690	127,260	95,600	92,120	403,670
GRW-12	7,150	4,500	740	13,530	25,920
GRW-13	23,160	20,780	19,260	17,990	81,190
SHS-7	32,389	20,684	67,352	61,471	181,896
SHS-9	6,928	4,177	11,231	10,879	33,215
SHS-14	241,407	418,401	467,378	436,650	1,563,836
SHS-18	599	650	665	619	2,533
TOTAL VOLUME PUMPED IN GALLONS					5,913,782

GIANT
INDUSTRIES, INC.

111 Road 4990
Bloomfield, New Mexico 87413

505
632.8006

February 5, 1998

Mr. William Olson
Hydrogeologist
New Mexico Oil Conservation Division
Environmental Bureau
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Mr. Olson:

Enclosed you will find four potentiometric surface maps for 1997 which I failed to enclose in the Annual Report for Bloomfield Refinery. I apologize for this error.

Sincerely,

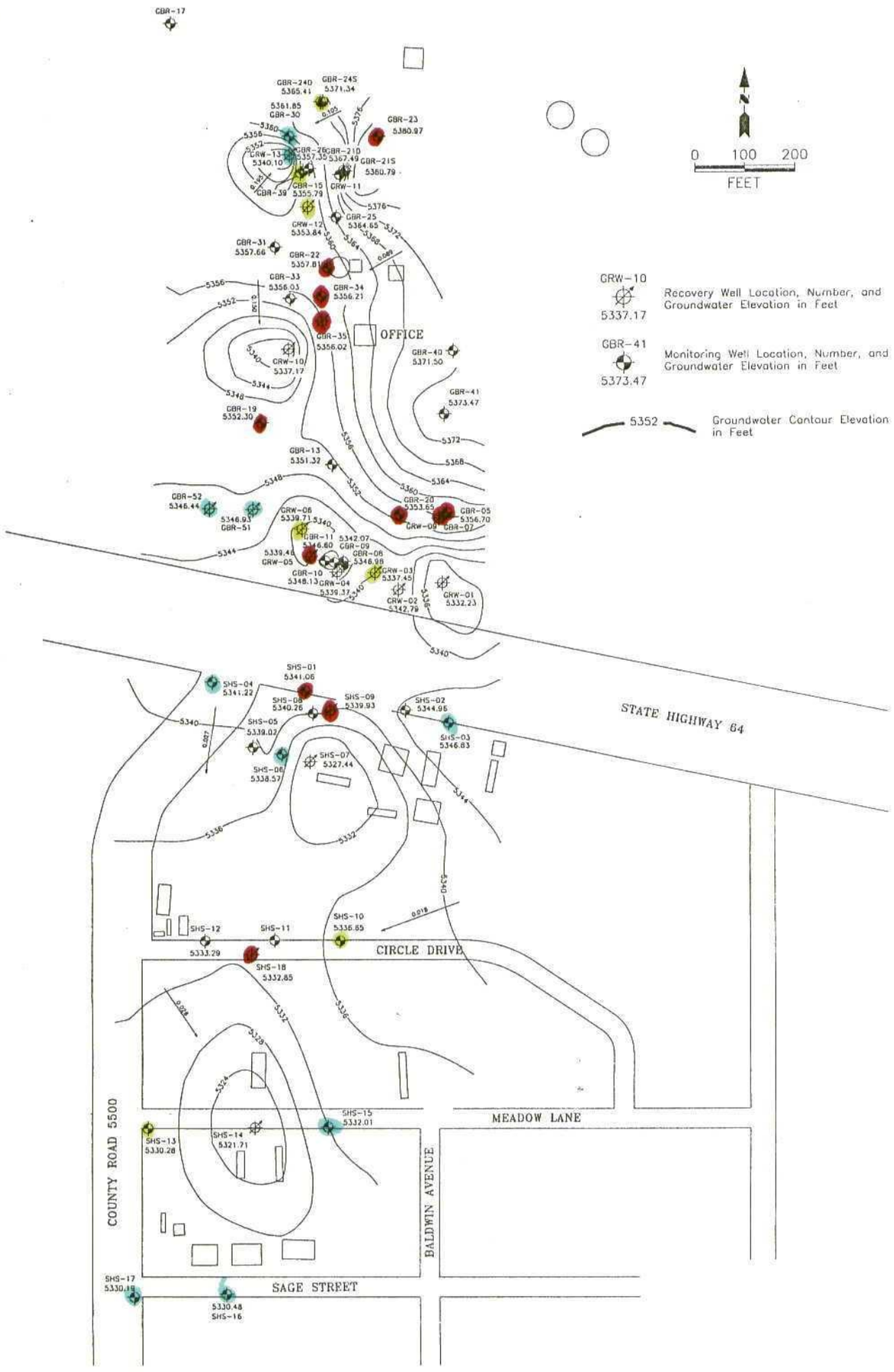
Deanna Miller

Deanna Miller
Administrative Manager
Giant Transportation

/dm

Enclosures

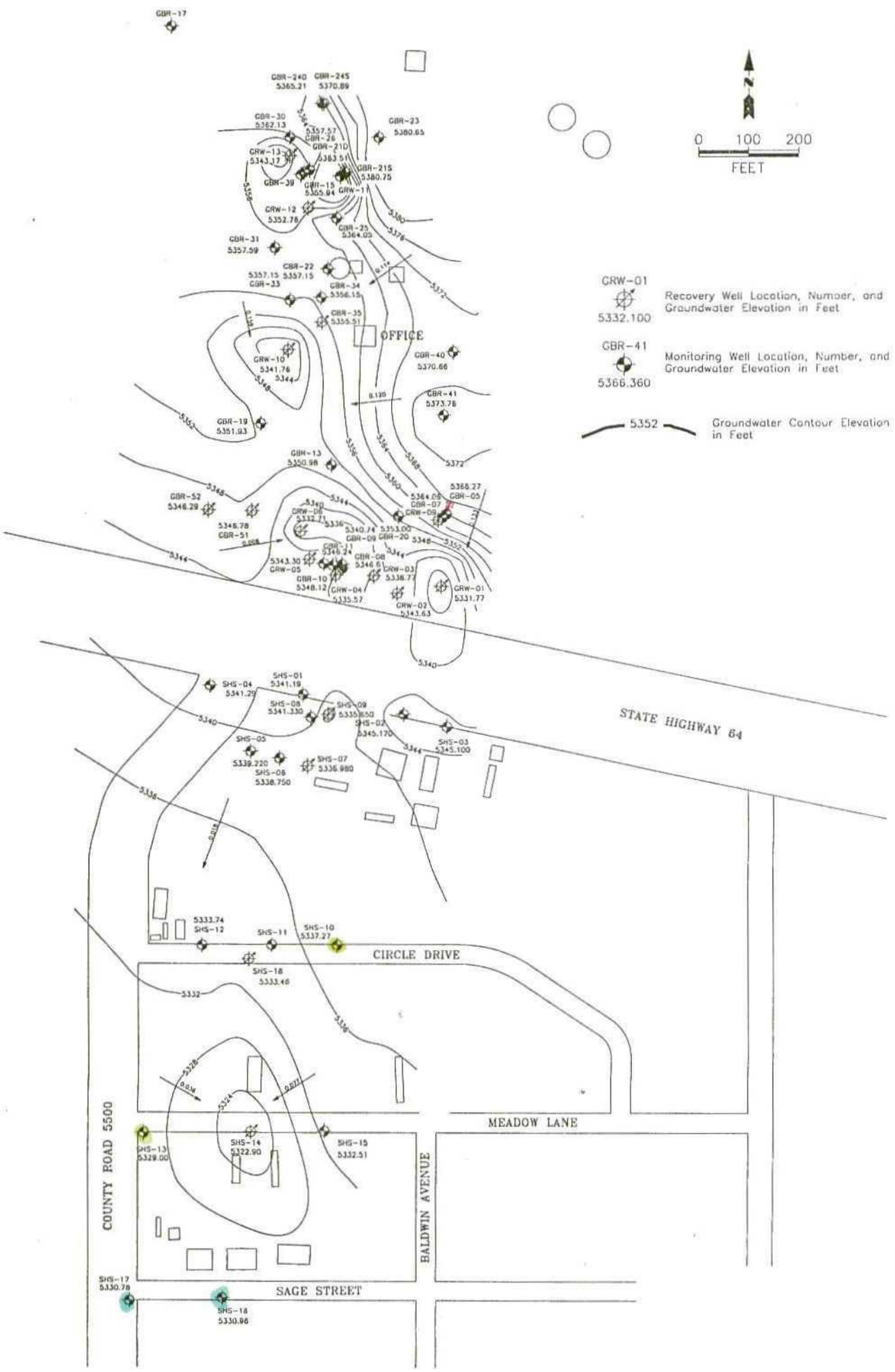
cc w/enc.: Mike Hardy-Giant
Kim Bullerdick-Giant
Jacque Cumbie-Giant
Stephanie Odell-BLM
Maura Hanning-EID
Chris Shuey-SWRIC
Jim Durrett-SJC
Herbert Gorrod-EPA
Denny Foust-OCD



PHILIP ENVIRONMENTAL

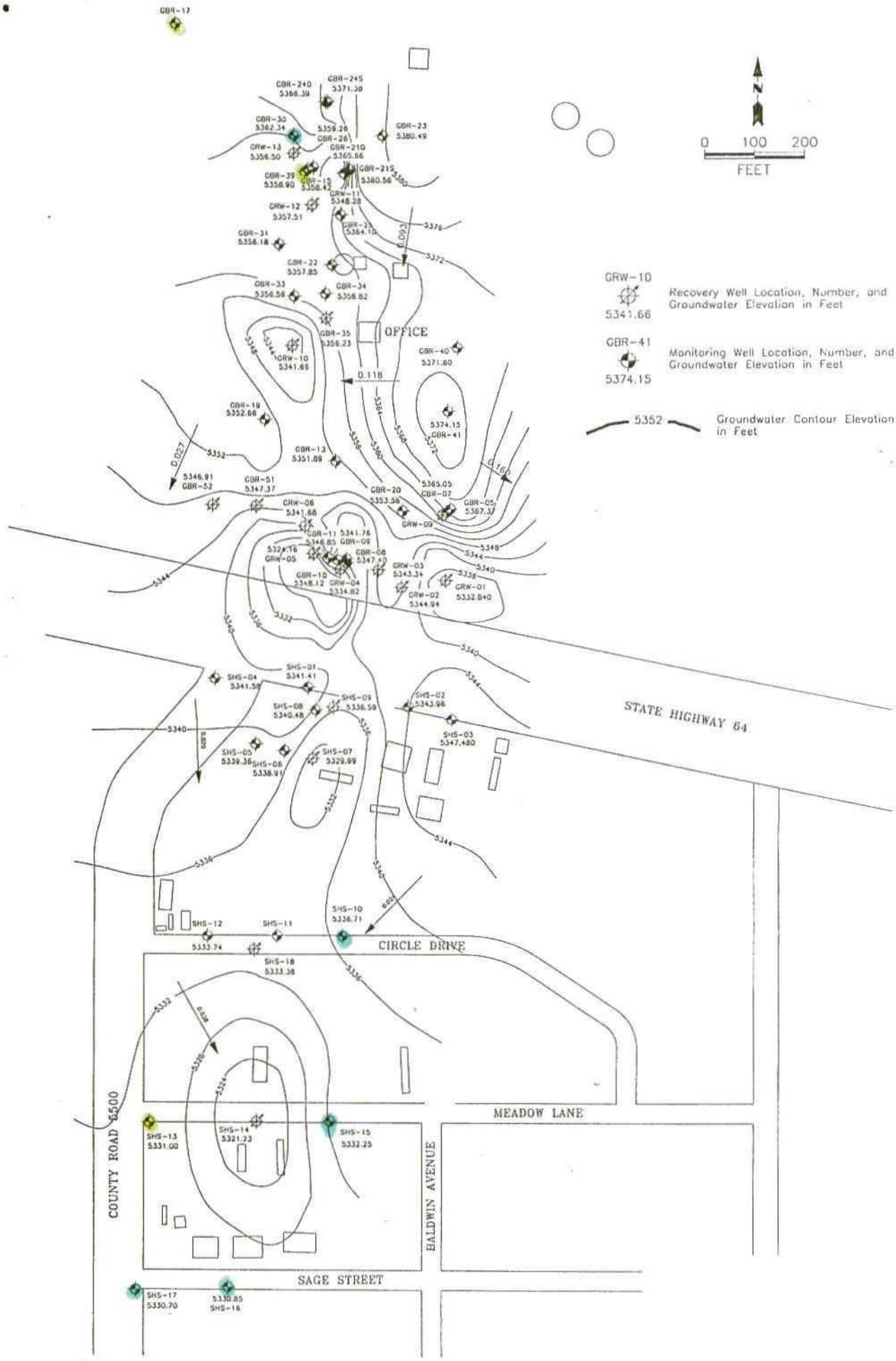
TITLE:
Equivalent Groundwater Elevation Contours
January 1997

DWN: MRC	DES.: CC	PROJECT NO.: 14111	
CHKD:	APPD:		
DATE: 02/03/98	REV.: A	FIGURE NO.: Figure 1	



PHILIP ENVIRONMENTAL

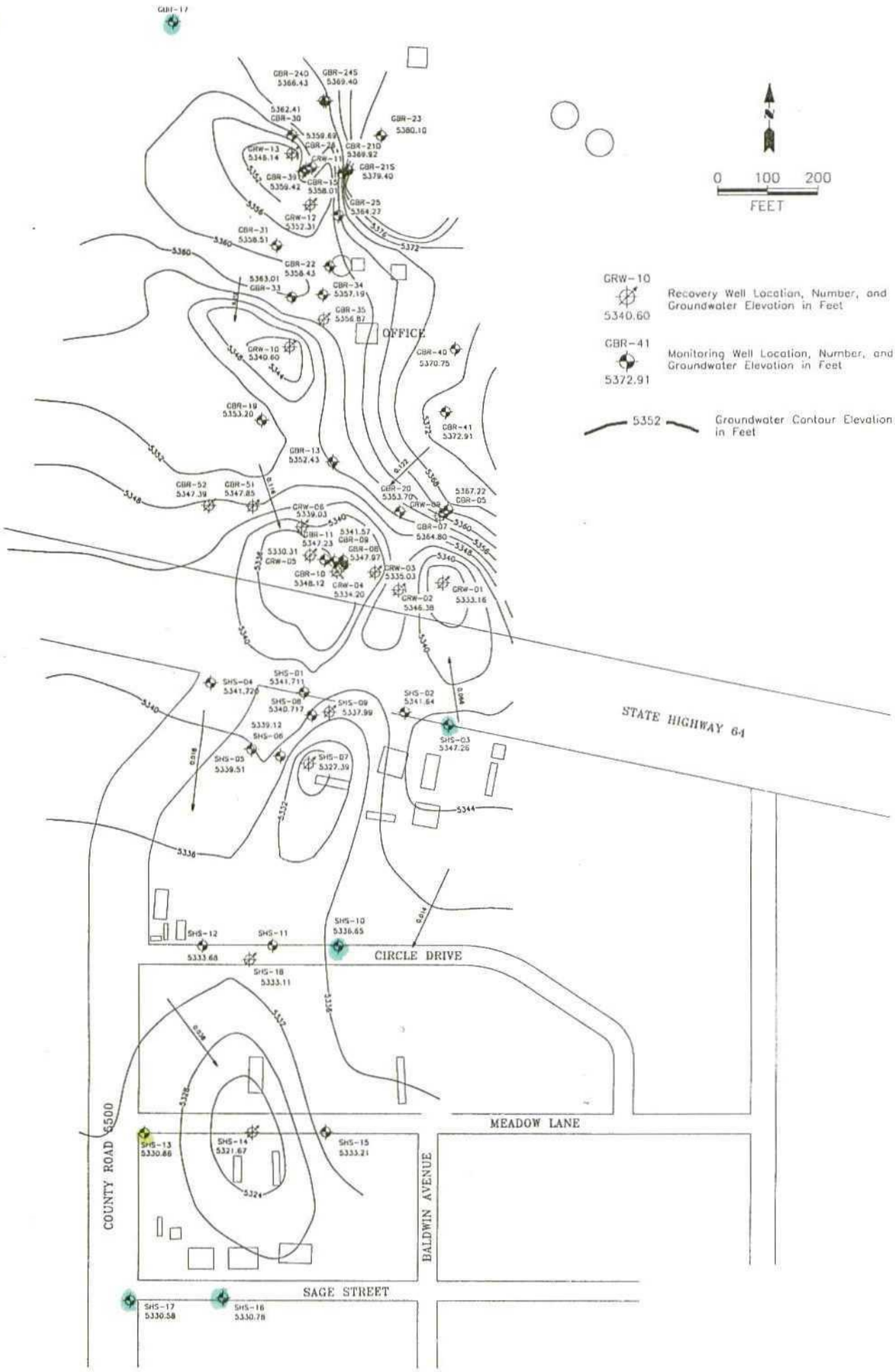
TITLE: Equivalent Groundwater Elevation Contours April 1997	DWN: MRC	DES.: CC	PROJECT NO.: 14111
	CHKD:	APPD:	FIGURE NO.: Figure 2
	DATE: 03/03/98	REV.: A	



PHILIP ENVIRONMENTAL

TITLE:
Equivalent Groundwater Elevation Contours
July 1997

DWN:	DES.:	PROJECT NO.:
MRC	CC	14111
CHKD:	APPD:	FIGURE NO.:
DATE: 03/03/98	REV.: A	Figure 3



PHILIP ENVIRONMENTAL

TITLE:
Equivalent Groundwater Elevation Contours
October 1997

DWN:	DES.:	PROJECT NO.:
MRC	CC	14111
CHKD:	APPD:	FIGURE NO.:
DATE: 03/03/97	REV.: A	Figure 4

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
TOTAL VOLUME SUMMARY

1997

Total Volume Of Water Recovered	5,913,782
Net Change In Storage Volume	15,685
Total Water Treated And Pumped To The Infiltration Gallery	5,898,097

GIANT
TRANSPORTATION

5764 US Highway 64
Farmington, New Mexico
87401

505-632-8006

August 1, 1996

Mr. William Olson
Hydrogeologist
New Mexico Oil Conservation Division
Environmental Bureau
P. O. Box 2088
Santa Fe, NM 87504-2088

Dear Mr. Olson:

I have enclosed additions to Section 2 of Giant Refinery's first quarter of 1996 report showing the analytical results for the offsite wells. These results were inadvertently left out of the original report.

Please contact me if you have any questions.

Sincerely,

Deanna Miller

Deanna Miller
Administrative Manager

/dm

Enclosure

cc w/enc.: Mike Hardy-Giant
Kim Bullerdick-Giant
Jacque Cumbie-Giant
Stephanie Odell-BLM
Maura Hanning-EID
Chris Shuey-SWRIC
Jim Durrett-SJC
Herbert Gorrod-EPA
Denny Foust-OCD

SHS-10

HALOCARBONS

	April
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-12

HALOCARBONS	April
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	0.6
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-13

HALOCARBONS

	April
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	0.3
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	5.2
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-16

HALOCARBONS

	April
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-17

HALOCARBONS	April
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

QUARTERLY DATA REPORT

GIANT BLOOMFIELD REFINERY

FIRST QUARTER, 1996

Prepared By:

GIANT REFINING COMPANY
5764 U. S. Highway 64
Farmington, NM 87401
(505) 632-8006
FAX (505) 632-4025

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY
QUARTERLY REPORT
FIRST QUARTER, 1996

INTRODUCTION

Tank 22 is being used for intermediate water storage. All water is treated by the carbon filter unit exclusively.

SUMMARY

Section 2

Section 2 contains a summary of the quarterly analytical results. Raw data, as received from the laboratory, is available on request as a supplement to the quarterly report.

Section 3

A quarterly potentiometric surface map, as well as the adjusted water surface elevation and product thickness for each well, is included in Section 3.

Section 4

Section 4 illustrates the volume history for the quarter. Total volume pumped from each well, as well as current tank volumes and the reinjection volume, is reported. Additional detail, on a weekly basis, is also available if desired.

SECTION 2

The following pages show the quarterly analytical data for the Giant Refining Remediation Project. The data is broken down into units as described below.

	Unit of Measure
Total dissolved solids (180)	mg/l
Total dissolved solids (calc)	mg/l
Total alkalinity as CaCO3	mg/l
Total hardness as CaCO3	mg/l
Bicarbonate as HCO3	mg/l
Carbonate as CO3	mg/l
Chloride	mg/l
Sulfate	mg/l
Calcium	mg/l
Magnesium	mg/l
Potassium	mg/l
Sodium	mg/l

The remainder of the data is measured in ug/l.

GIANT INDUSTRIES
ONSITE REMEDIATION PROJECT
QUARTERLY ANALYTICAL DATA SUMMARY
FIRST QUARTER, 1996

SYSTEM EFFLUENT

HALOCARBONS

	January	March
Bromodichloromethane	ND	ND
Bromoform	ND	ND
Bromomethane	ND	ND
Carbon Tetrachloride	ND	ND
Chloroethane	ND	ND
Chloroform	ND	ND
Chloromethane	ND	ND
Dibromochloromethane	ND	ND
1,2-Dibromoethane (EDB)	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane (EDC)	ND	ND
1,1-Dichloroethene	ND	ND
cis-1,2-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Methylene Chloride	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachlorethene	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane	ND	ND
Vinyl Chloride	ND	ND
AROMATICS		
Benzene	8.8	3.0
Chlorobenzene	ND	ND
1,2-Dichlorobenzene		ND
1,3-Dichlorobenzene		ND
1,4-Dichlorobenzene		ND
Ethylbenzene	9.9	0.9
Methyl-t-Butyl Ether	ND	ND
Toluene	ND	ND
Total Xylenes	18	0.5

SYSTEM EFFLUENT (C'T'D)

POLYNUCLEAR AROMATIC HYDROCARBONS

	January	March
Naphthalene	1.4	ND
Acenaphthylene	ND	ND
1-Methylnaphthalene	3	ND
2-Methylnaphthalene	1.5	ND
Acenaphthene	ND	ND
Fluorene	0.15	ND
Phenanthrene	0.17	ND
Anthracene	ND	ND
Fluoranthene	ND	ND
Pyrene	ND	ND
Benzo(a)anthracene	ND	ND
Chrysene	ND	ND
Benzo(b)fluoranthrene	ND	ND
Benzo(k)fluoranthrene	ND	ND
Benzo(a)pyrene	ND	ND
Dibenzo(a,h)anthracene	ND	ND
Benzo(g,h,i)perylene	ND	ND
Indeno(1,2,3-c,d)pyrene	ND	ND

SYSTEM INFLUENT

HALOCARBONS

	January	February	March
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon Tetrachloride	ND		
Chloroethane	ND		
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane (EDC)	ND		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene Chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachlorethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl Chloride	ND		

AROMATICS

Benzene	33		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Ethylbenzene	64		
Methyl-t-Butyl Ether	ND		
Toluene	ND		
Total Xylenes	120		

SYSTEM INFLUENT (C'T'D)

POLYNUCLEAR AROMATIC HYDROCARBONS

	January
Naphthalene	17
Acenaphthylene	ND
1-Methylnaphthalene	33
2-Methylnaphthalene	26
Acenaphthene	ND
Fluorene	3.2
Phenanthrene	3.8
Anthracene	ND
Fluoranthene	1.4
Pyrene	ND
Benzo(a)anthracene	ND
Chrysene	ND
Benzo(b)fluoranthrene	ND
Benzo(k)fluoranthrene	ND
Benzo(a)pyrene	ND
Dibenzo(a,h)anthracene	ND
Benzo(g,h,i)perylene	ND
Indeno(1,2,3-c,d)pyrene	ND

RW-3

HALOCARBONS	January
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

RW-3

POLYNUCLEAR AROMATIC HYDROCARBONS

	January
Naphthalene	ND
Acenaphthylene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	0.74 J
Acenaphthene	ND
Fluorene	0.26
Phenanthrene	0.15
Anthracene	ND
Fluoranthene	0.077 J
Pyrene	ND
Benzo(a)anthracene	ND
Chrysene	ND
Benzo(b)fluoranthrene	ND
Benzo(k)fluoranthrene	ND
Benzo(a)pyrene	ND
Dibenzo(a,h)anthracene	ND
Benzo(g,h,i)perylene	ND
Indeno(1,2,3-c,d)pyrene	ND

RW-6

HALOCARBONS

	January
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	0.3
1,2-Dichloroethane (EDC)	2.4
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	0.6
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	<0.2 D(1)
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

RW-6 (C'T'D')

POLYNUCLEAR AROMATIC HYDROCARBONS

	January
Naphthalene	ND
Acenaphthylene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	3.1
Acenaphthene	ND
Fluorene	0.26
Phenanthrene	ND
Anthracene	ND
Fluoranthene	ND
Pyrene	0.12
Benzo(a)anthracene	ND
Chrysene	ND
Benzo(b)fluoranthrene	ND
Benzo(k)fluoranthrene	ND
Benzo(a)pyrene	ND
Dibenzo(a,h)anthracene	ND
Benzo(g,h,i)perylene	ND
Indeno(1,2,3-c,d)pyrene	ND

RW-13

HALOCARBONS

	January
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	6.0
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	0.4
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

RW-13 (C'T'D)

POLYNUCLEAR AROMATIC HYDROCARBONS

	January
Naphthalene	ND
Acenaphthylene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND
Acenaphthene	ND
Fluorene	ND
Phenanthrene	ND
Anthracene	ND
Fluoranthene	ND
Pyrene	ND
Benzo(a)anthracene	ND
Chrysene	ND
Benzo(b)fluoranthrene	ND
Benzo(k)fluoranthrene	ND
Benzo(a)pyrene	ND
Dibenzo(a,h)anthracene	ND
Benzo(g,h,i)perylene	ND
Indeno(1,2,3-c,d)pyrene	ND

GBR-15

HALOCARBONS

	January
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	0.7
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	6.4
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	0.7
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	0.7

GBR-24D

HALOCARBONS

	January
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	0.6
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	2.6
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

GBR-24D (C'T'D)

POLYNUCLEAR AROMATIC HYDROCARBONS

	January
Naphthalene	ND
Acenaphthylene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND
Acenaphthene	ND
Fluorene	0.85
Phenanthrene	0.33
Anthracene	ND
Fluoranthene	0.18
Pyrene	ND
Benzo(a)anthracene	ND
Chrysene	0.040 J
Benzo(b)fluoranthrene	ND
Benzo(k)fluoranthrene	ND
Benzo(a)pyrene	ND
Dibenzo(a,h)anthracene	ND
Benzo(g,h,i)perylene	ND
Indeno(1,2,3-c,d)pyrene	ND

GBR-31

HALOCARBONS

	January
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

GBR-31 (C'T'D')

POLYNUCLEAR AROMATIC HYDROCARBONS

	January
Naphthalene	ND
Acenaphthylene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND
Acenaphthene	ND
Fluorene	ND
Phenanthrene	ND
Anthracene	ND
Fluoranthene	ND
Pyrene	ND
Benzo(a)anthracene	ND
Chrysene	ND
Benzo(b)fluoranthrene	ND
Benzo(k)fluoranthrene	ND
Benzo(a)pyrene	ND
Dibenzo(a,h)anthracene	ND
Benzo(g,h,i)perylene	ND
Indeno(1,2,3-c,d)pyrene	ND

GBR-30

POLYNUCLEAR AROMATIC HYDROCARBONS

	January
Naphthalene	ND
Acenaphthylene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND
Acenaphthene	ND
Fluorene	ND
Phenanthrene	ND
Anthracene	ND
Fluoranthene	ND
Pyrene	ND
Benzo(a)anthracene	ND
Chrysene	ND
Benzo(b)fluoranthrene	ND
Benzo(k)fluoranthrene	ND
Benzo(a)pyrene	ND
Dibenzo(a,h)anthracene	ND
Benzo(g,h,i)perylene	ND
Indeno(1,2,3-c,d)pyrene	ND

GBR-51

HALOCARBONS

	January
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

GBR-52

HALOCARBONS

	January
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

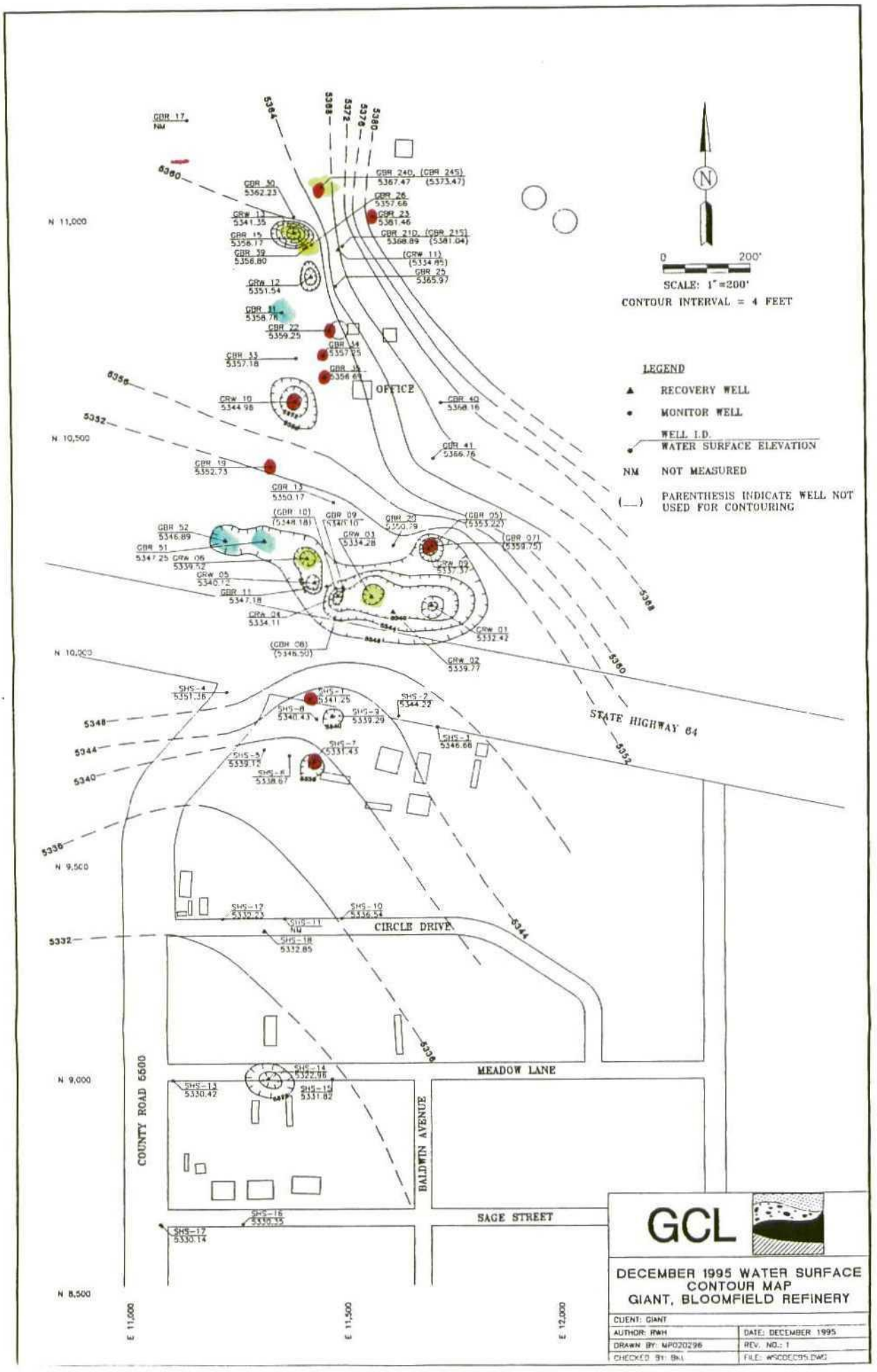
AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

GBR 52 (C'T'D')

POLYNUCLEAR AROMATIC HYDROCARBONS

	January
Naphthalene	ND
Acenaphthylene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND
Acenaphthene	ND
Fluorene	ND
Phenanthrene	ND
Anthracene	ND
Fluoranthene	ND
Pyrene	ND
Benzo(a)anthracene	ND
Chrysene	ND
Benzo(b)fluoranthrene	ND
Benzo(k)fluoranthrene	ND
Benzo(a)pyrene	ND
Dibenzo(a,h)anthracene	ND
Benzo(g,h,i)perylene	ND
Indeno(1,2,3-c,d)pyrene	ND


N
0
200'
SCALE: 1"=200'
CONTOUR INTERVAL = 4 FEET
LEGEND
RECOVERY WELL
MONITOR WELL
WELL I.D.
WATER SURFACE ELEVATION
NM NOT MEASURED
( ) PARENTHESIS INDICATE WELL NOT USED FOR CONTOURING
OFFICE
STATE HIGHWAY 64
CIRCLE DRIVE
MEADOW LANE
SAGE STREET
COUNTY ROAD 6500
BALDWIN AVENUE
N 11,000
N 10,500
N 10,000
N 9,500
N 9,000
N 8,500
E 11,000
E 11,500
E 12,000
GCL
DECEMBER 1995 WATER SURFACE CONTOUR MAP
GIANT, BLOOMFIELD REFINERY
CLIENT: GIANT
AUTHOR: RWH
DATE: DECEMBER 1995
DRAWN BY: MP020296
REV. NO.: 1
CHECKED BY: BH
FILE: WSCDEC95.DWG

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE

DECEMBER, 1995

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
GRW-1	5394.30	61.88	61.88	0.00	5332.42
GRW-2	5391.28	51.51	51.51	0.00	5339.77
GRW-3	5388.77	54.49	54.49	0.00	5334.28
GRW-4	5390.02	55.91	55.91	0.00	5334.11
GRW-5	5390.56	50.44	50.44	0.00	5340.12
GRW-6	5390.81	51.29	51.29	0.00	5339.52
GRW-10	5395.02	54.40	49.00	5.40	5344.94
GRW-11	5397.85	63.00	63.00	0.00	5334.85
GRW-12	5397.24	45.70	45.70	0.00	5351.54
GRW-13	5396.90	55.55	55.55	0.00	5341.35
GBR-5	5395.07	43.50	41.44	2.06	5353.22
GBR-6	5395.70	58.33	58.33	0.00	5337.37
GBR-7	5395.85	36.80	35.93	0.87	5359.75
GBR-8	5390.50	44.01	44.00	0.01	5346.50
GBR-9	5389.92	49.82	49.82	0.00	5340.10
GBR-10	5390.57	42.39	42.39	0.00	5348.18
GBR-11	5389.43	42.25	42.25	0.00	5347.18
GBR-13	5393.04	42.87	42.87	0.00	5350.17
GBR-15	5397.99	41.82	41.82	0.00	5356.17
GBR-18	5421.68	30.59	30.59	0.00	5391.09
GBR-19	5393.83	42.60	40.73	1.87	5352.73
GBR-20	5393.47	42.68	42.68	0.00	5350.79
GBR-21S	5400.65	19.60	19.60	0.00	5381.05
GBR-21D	5400.19	31.30	31.30	0.00	5368.89
GBR-22	5395.91	36.90	36.60	0.30	5359.25
GBR-23	5403.72	22.28	22.26	0.02	5381.14
GBR-24S	5396.08	22.63	22.60	0.03	5366.80
GBR-24D	5396.77	29.30	29.30	0.00	5367.47
GBR-25	5396.72	30.75	30.75	0.00	5365.97
GBR-26	5395.59	37.93	37.93	0.00	5357.66
GBR-30	5396.58	34.35	34.35	0.00	5362.23
GBR-31	5394.86	36.10	36.10	0.00	5358.76
GBR-33	5396.28	39.10	39.10	0.00	5357.18
GBR-34	5394.00	37.95	36.45	1.50	5357.25
GBR-35	5393.66	38.50	36.60	1.90	5356.68
GBR-39	5397.55	40.75	40.75	0.00	5356.80
GBR-40	5400.76	32.60	32.60	0.00	5368.16
GBR-41	5396.35	29.59	29.59	0.00	5366.76
GBR-51	5389.68	42.43	42.43	0.00	5347.25
GBR-52	5387.74	40.85	40.85	0.00	5346.89

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE
DECEMBER, 1995

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
SHS-1	5383.54	42.40	42.26	0.14	5341.25
SHS-2	5381.66	37.44	37.44	0.00	5344.22
SHS-3	5383.33	36.67	36.67	0.00	5346.66
SHS-4	5383.62	32.26	32.26	0.00	5351.36
SHS-5	5378.36	39.24	39.24	0.00	5339.12
SHS-6	5378.17	39.50	39.50	0.00	5338.67
SHS-7	5375.89	44.50	44.45	0.05	5331.43
SHS-8	5380.25	39.82	39.82	0.00	5340.43
SHS-9	5380.79	41.50	41.50	0.00	5339.29
SHS-10	5373.80	37.26	37.26	0.00	5336.54
SHS-12	5373.94	41.71	41.71	0.00	5332.23
SHS-13	5367.81	37.39	37.39	0.00	5330.42
SHS-14	5367.07	44.11	44.11	0.00	5322.96
SHS-15	5366.21	34.39	34.39	0.00	5331.82
SHS-16	5362.58	32.23	32.23	0.00	5330.35
SHS-17	5364.35	34.21	34.21	0.00	5330.14
SHS-18	5373.64	40.79	40.79	0.00	5332.85

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY VOLUME CHANGE

FIRST QUARTER, 1996

Tank Number	Beginning Volume	Ending Volume	Net Change
102	13,733	11,691	(2,042)
106	8,010	8,010	0
21	67,472	67,472	0
22	265,008	212,927	(52,081)
Total Net Volume Change			(54,123)

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY RECOVERY WELL
VOLUME TABULATION

FIRST QUARTER, 1996

Well	Month #1	Month #2	Month #3	Total
GRW-1	6,740	6,890	5,090	18,720
GRW-2	11,320	12,340	2,810	26,470
GRW-3	8,260	5,770	9,170	23,200
GRW-4	10,090	13,510	12,190	35,790
GRW-5	10	13,630	25,030	38,670
GRW-6	5,480	14,530	10,930	30,940
GRW-9	1,020	960	1,440	3,420
GRW-10	277,830	268,270	252,490	798,590
GRW-11	62,760	67,510	37,640	167,910
GRW-12	4,230	7,620	6,500	18,350
GRW-13	8,680	9,640	7,500	25,820
SHS-7	7,027	3,347	121	10,495
SHS-9	6,522	6,893	5,355	18,770
SHS-14	154,451	183,648	146,617	484,716
SHS-18	722	399	286	1,407
TOTAL VOLUME PUMPED IN GALLONS				1,703,268

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
TOTAL VOLUME SUMMARY

FIRST QUARTER, 1996

Total Volume Of Water Recovered	1,703,268
Net Change In Storage Volume	(54,123)
Total Water Treated And Pumped To The Infiltration Gallery	1,757,391

GIANT
TRANSPORTATION

5764 US Highway 64
Farmington, New Mexico
87401

505-632-8006

October 31, 1996

Mr. William Olson
Hydrogeologist
New Mexico Oil Conservation Division
Environmental Bureau
P. O. Box 2088
Santa Fe, NM 87504-2088

Dear Mr. Olson:

Enclosed you will find the quarterly report for Giant Refining Company's Bloomfield Refinery for the third quarter of 1996.

Please contact me if you have any questions.

Sincerely,

Tim Kinney
Remediation Project Manager

/dm

Enclosure

cc w/enc.: Mike Hardy-Giant
Kim Bullerdick-Giant
Jacque Cumbie-Giant
Stephanie Odell-BLM
Maura Hanning-EID
Chris Shuey-SWRIC
Jim Durrett-SJC
Herbert Gorrod-EPA
Denny Foust-OCD

QUARTERLY DATA REPORT

GIANT BLOOMFIELD REFINERY

THIRD QUARTER, 1996

Prepared By:

GIANT REFINING COMPANY
5764 U. S. Highway 64
Farmington, NM 87401
(505) 632-8006
FAX (505) 632-4025

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY
QUARTERLY REPORT
THIRD QUARTER, 1996

INTRODUCTION

Tank 22 is being used for intermediate water storage. All water is treated by the carbon filter unit exclusively.

SUMMARY

Section 2

Section 2 contains a summary of the quarterly analytical results. Raw data, as received from the laboratory, is available on request as a supplement to the quarterly report.

Section 3

A quarterly potentiometric surface map, as well as the adjusted water surface elevation and product thickness for each well, is included in Section 3.

Section 4

Section 4 illustrates the volume history for the quarter. Total volume pumped from each well, as well as current tank volumes and the reinjection volume, is reported. Additional detail, on a weekly basis, is also available if desired.

SECTION 2

The following pages show the quarterly analytical data for the Giant Refining Remediation Project. The data is broken down into units as described below.

	Unit of Measure
Total dissolved solids (180)	mg/l
Total dissolved solids (calc)	mg/l
Total alkalinity as CaCO3	mg/l
Total hardness as CaCO3	mg/l
Bicarbonate as HCO3	mg/l
Carbonate as CO3	mg/l
Chloride	mg/l
Sulfate	mg/l
Calcium	mg/l
Magnesium	mg/l
Potassium	mg/l
Sodium	mg/l

The remainder of the data is measured in ug/l.

GIANT INDUSTRIES
ONSITE REMEDIATION PROJECT
QUARTERLY ANALYTICAL DATA SUMMARY
THIRD QUARTER, 1996

SYSTEM EFFLUENT

	JULY
Lab pH	7.1
Lab Conductivity @25 C	3150
Total Dissolved Solids @ 180 C	2700
Total Dissolved Solids (Calc)	2576
Total Alkalinity as CaCO3	392
Total Hardness as CaCO3	1082
Bicarbonate as HCO3	478
Carbonate as CO3	ND
Hydroxide	ND
Chloride	178
Sulfate	1350
Calcium	379
Magnesium	32.8
Potassium	2.74
Sodium	403

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	0.3
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND

Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	2.3
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SYSTEM INFLUENT

	JULY
Lab pH	7.2
Lab Conductivity @25 C	3170
Total Dissolved Solids @ 180 C	2650
Total Dissolved Solids (Calc)	2616
Total Alkalinity as CaCO3	390
Total Hardness as CaCO3	1099
Bicarbonate as HCO3	476
Carbonate as CO3	ND
Hydroxide	ND
Chloride	180
Sulfate	1360
Calcium	385
Magnesium	33.9
Potassium	3.13
Sodium	419

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND

1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	0.5
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	0.8
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	34
Methyl-t-Butyl Ether	ND
Toluene	0.5
Total Xylenes	25

GBR-15

HALOCARBONS

	JULY
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	7.7
1,1-Dichloroethene	ND

cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	0.8
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	0.5
Total Xylenes	2

GBR-17

	JULY
Lab pH	ND
Lab Conductivity @25 C	ND
Total Dissolved Solids @ 180 C	ND
Total Dissolved Solids (Calc)	ND
Total Alkalinity as CaCO3	ND
Total Hardness as CaCO3	ND
Bicarbonate as HCO3	ND
Carbonate as CO3	ND
Hydroxide	ND
Chloride	ND
Sulfate	ND
Calcium	ND
Magnesium	ND
Potassium	ND
Sodium	ND

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND

Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

GBR-24D

HALOCARBONS

	JULY
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND

1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	1.5
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	2.4
Methyl-t-Butyl Ether	ND
Toluene	0.6
Total Xylenes	0.7

GBR-30

HALOCARBONS

	JULY
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND

1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

GBR-31

HALOCARBONS

	JULY
Bromodichloromethane	ND
Bromoform	ND

Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

GBR-32

	JULY
Lab pH	ND
Lab Conductivity @25 C	ND
Total Dissolved Solids @ 180 C	ND
Total Dissolved Solids (Calc)	ND
Total Alkalinity as CaCO3	ND
Total Hardness as CaCO3	ND
Bicarbonate as HCO3	ND
Carbonate as CO3	ND
Hydroxide	ND
Chloride	ND
Sulfate	ND
Calcium	ND
Magnesium	ND
Potassium	ND
Sodium	ND

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND

Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

GBR-48

	JULY
Lab pH	ND
Lab Conductivity @25 C	ND
Total Dissolved Solids @ 180 C	ND
Total Dissolved Solids (Calc)	ND
Total Alkalinity as CaCO3	ND
Total Hardness as CaCO3	ND
Bicarbonate as HCO3	ND

Carbonate as CO3	ND
Hydroxide	ND
Chloride	ND
Sulfate	ND
Calcium	ND
Magnesium	ND
Potassium	ND
Sodium	ND

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND

Toluene	ND
Total Xylenes	ND

GBR-49

	JULY
Lab pH	ND
Lab Conductivity @25 C	ND
Total Dissolved Solids @ 180 C	ND
Total Dissolved Solids (Calc)	ND
Total Alkalinity as CaCO3	ND
Total Hardness as CaCO3	ND
Bicarbonate as HCO3	ND
Carbonate as CO3	ND
Hydroxide	ND
Chloride	ND
Sulfate	ND
Calcium	ND
Magnesium	ND
Potassium	ND
Sodium	ND

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND

Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

GBR-50

	JULY
Lab pH	ND
Lab Conductivity @25 C	ND
Total Dissolved Solids @ 180 C	ND
Total Dissolved Solids (Calc)	ND
Total Alkalinity as CaCO3	ND
Total Hardness as CaCO3	ND
Bicarbonate as HCO3	ND
Carbonate as CO3	ND
Hydroxide	ND
Chloride	ND
Sulfate	ND
Calcium	ND
Magnesium	ND
Potassium	ND
Sodium	ND

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND

cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-10

HALOCARBONS

	JULY
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND

cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-12

HALOCARBONS

	JULY
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-15

HALOCARBONS

	JULY
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-16

HALOCARBONS

	JULY
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND

Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-17

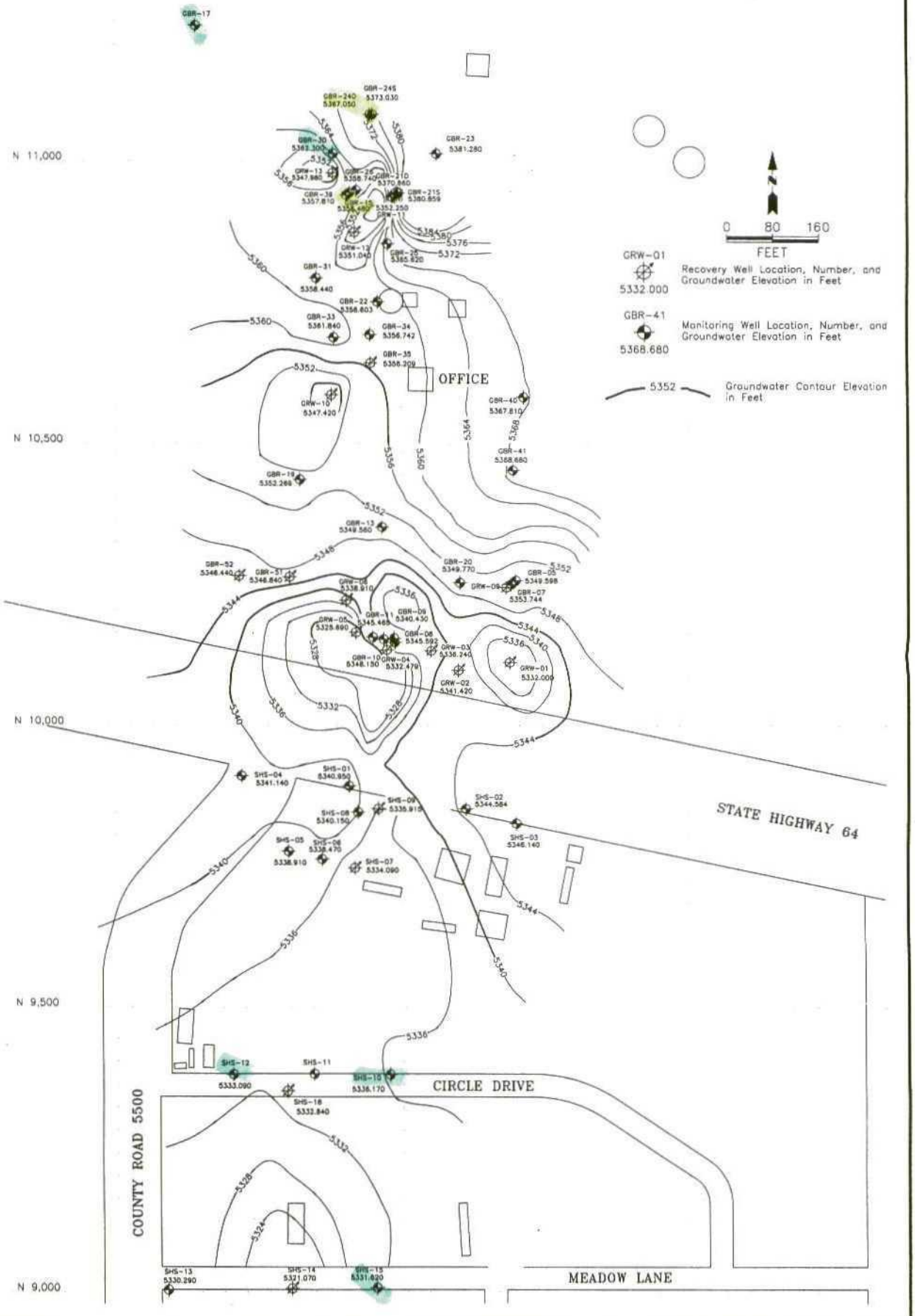
HALOCARBONS

	JULY
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND

Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND



PHILIP ENVIRONMENTAL

TITLE:
Equivalent Groundwater Elevation Contours
July 1996

DWN: MRC	DES.:	PROJECT NO.: 14111
CHKD:	APPD:	
DATE: 08/05/96	REV.: B	FIGURE NO.: Figure 2

G:\GIANT\HYDRO\MAPS\ALL-0796.DWG

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE

JULY, 1996

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
GRW-1	5394.30	62.30	62.30	0.00	5332.00
GRW-2	5391.28	49.86	49.86	0.00	5341.42
GRW-3	5388.77	52.53	52.53	0.00	5336.24
GRW-4	5390.02	57.58	57.53	0.05	5332.48
GRW-5	5390.56	64.87	64.87	0.00	5325.69
GRW-6	5390.81	51.90	51.90	0.00	5338.91
GRW-10	5395.02	47.60	47.60	0.00	5347.42
GRW-11	5397.85	45.60	45.60	0.00	5352.25
GRW-12	5397.24	46.20	46.20	0.00	5351.04
GRW-13	5396.90	48.92	48.92	0.00	5347.98
GBR-5	5395.07	45.55	45.45	0.10	5349.60
GBR-6	5395.70	59.95	59.95	0.00	5335.75
GBR-7	5395.85	42.48	42.00	0.48	5353.75
GBR-8	5390.50	46.00	44.60	1.40	5345.62
GBR-9	5389.92	49.49	49.49	0.00	5340.43
GBR-10	5390.57	42.42	42.42	0.00	5348.15
GBR-11	5389.43	44.62	43.78	0.84	5345.48
GBR-13	5393.04	43.87	43.37	0.50	5349.57
GBR-15	5397.99	39.51	39.51	0.00	5358.48
GBR-18	5421.68	31.12	31.12	0.00	5390.56
GBR-19	5393.83	42.77	41.22	1.55	5352.30
GBR-20	5393.47	43.70	43.70	0.00	5349.77
GBR-21S	5400.65	19.83	19.78	0.05	5380.86
GBR-21D	5400.19	29.53	29.53	0.00	5370.66
GBR-22	5395.91	38.75	36.90	1.85	5358.64
GBR-23	5403.72	22.44	22.44	0.00	5380.67
GBR-24S	5396.08	23.05	23.05	0.00	5366.36
GBR-24D	5396.77	29.72	29.72	0.00	5367.05
GBR-25	5396.72	31.10	31.10	0.00	5365.62
GBR-26	5395.59	36.85	36.85	0.00	5358.74
GBR-30	5396.58	34.28	34.28	0.00	5362.30
GBR-31	5394.86	36.42	36.42	0.00	5358.44
GBR-33	5396.28	34.44	34.44	0.00	5361.84
GBR-34	5394.00	38.60	36.88	1.72	5356.78
GBR-35	5393.66	38.98	37.02	1.96	5356.25
GBR-39	5397.55	39.74	39.74	0.00	5357.81
GBR-40	5400.76	32.95	32.95	0.00	5367.81
GBR-41	5396.35	27.67	27.67	0.00	5368.68
GBR-51	5389.68	42.84	42.84	0.00	5346.84
GBR-52	5387.74	41.30	41.30	0.00	5346.44

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE
JULY, 1996

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
SHS-1	5383.54	42.73	42.55	0.18	5340.95
SHS-2	5381.66	37.38	36.99	0.39	5344.59
SHS-3	5383.33	37.19	37.19	0.00	5346.14
SHS-4	5383.62	42.48	42.48	0.00	5341.14
SHS-5	5378.36	39.45	39.45	0.00	5338.91
SHS-6	5378.17	39.70	39.70	0.00	5338.47
SHS-7	5375.89	41.80	41.80	0.00	5334.09
SHS-8	5380.25	40.10	40.10	0.00	5340.15
SHS-9	5380.79	44.93	44.86	0.07	5335.92
SHS-10	5373.80	37.63	37.63	0.00	5336.17
SHS-12	5373.94	40.85	40.85	0.00	5333.09
SHS-13	5367.81	37.52	37.52	0.00	5330.29
SHS-14	5367.07	46.00	46.00	0.00	5321.07
SHS-15	5366.21	34.59	34.59	0.00	5331.62
SHS-16	5362.58	32.33	32.33	0.00	5330.25
SHS-17	5364.35	34.25	34.25	0.00	5330.10
SHS-18	5373.64	40.80	40.80	0.00	5332.84

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY VOLUME CHANGE

THIRD QUARTER, 1996

Tank Number	Beginning Volume	Ending Volume	Net Change
102	12,916	9,944	2,972
106	8,010	8,010	0
21	230,133	230,133	0
22	252,739	254,334	(1,595)
Total Net Volume Change			1,377

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY RECOVERY WELL
VOLUME TABULATION

THIRD QUARTER, 1996

Well	Month #1	Month #2	Month #3	Total
GRW-1	4,580	6,330	6,060	16,970
GRW-2	5,124	6,550	5,600	17,274
GRW-3	7,920	10,160	8,490	26,570
GRW-4	14,410	19,960	21,060	55,430
GRW-5	20,210	29,080	15,520	64,810
GRW-6	10,440	13,620	6,960	31,020
GRW-9	1,770	4,250	4,050	10,070
GRW-10	241,090	246,350	155,860	643,300
GRW-11	20,000	22,000	8,180	50,180
GRW-12	3,730	3,860	4,010	11,600
GRW-13	4,910	6,380	530	11,820
SHS-7	1,629	7,873	12,265	21,767
SHS-9	3,928	4,665	3,570	12,163
SHS-14	118,860	167,187	135,454	421,501
SHS-18	283	376	250	909
TOTAL VOLUME PUMPED IN GALLONS				1,395,384

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
TOTAL VOLUME SUMMARY

THIRD QUARTER, 1996

Total Volume Of Water Recovered	1,395,384
Net Change In Storage Volume	1,377
Total Water Treated And Pumped To The Infiltration Gallery	1,394,007

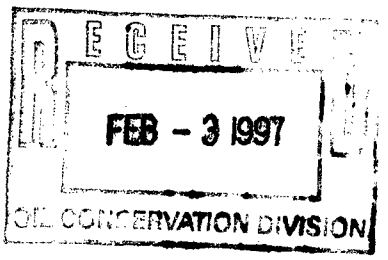
GIANT
TRANSPORTATION

5764 US Highway 64
Farmington, New Mexico
87401

505-632-8006

January 27, 1997

Mr. William Olson
Hydrogeologist
New Mexico Oil Conservation Division
Environmental Bureau
P. O. Box 2088
Santa Fe, NM 87504-2088



Dear Mr. Olson:

Enclosed you will find the quarterly report for Giant Refining Company's Bloomfield Refinery for the fourth quarter of 1996. As we agreed, Giant will begin submitting reports on an annual, rather than quarterly, basis effective in 1997.

Please contact me if you have any questions.

Sincerely,

Tim Kinney
Remediation Project Manager

/dm

Enclosure

cc w/enc.: Mike Hardy-Giant
Kim Bullerdick-Giant
Jacque Cumbie-Giant
Stephanie Odell-BLM
Maura Hanning-EID
Chris Shuey-SWRIC
Jim Durrett-SJC
Herbert Gorrod-EPA
Denny Foust-OCD

QUARTERLY DATA REPORT

GIANT BLOOMFIELD REFINERY

FOURTH QUARTER, 1996

Prepared By:

GIANT REFINING COMPANY
5764 U. S. Highway 64
Farmington, NM 87401
(505) 632-8006
FAX (505) 632-4025

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY
QUARTERLY REPORT
FOURTH QUARTER, 1996

INTRODUCTION

Tank 22 is being used for intermediate water storage. All water is treated by the carbon filter unit exclusively.

SUMMARY

Section 2

Section 2 contains a summary of the quarterly analytical results. Raw data, as received from the laboratory, is available on request as a supplement to the quarterly report.

Section 3

A quarterly potentiometric surface map, as well as the adjusted water surface elevation and product thickness for each well, is included in Section 3.

Section 4

Section 4 illustrates the volume history for the quarter. Total volume pumped from each well, as well as current tank volumes and the reinjection volume, is reported. Additional detail, on a weekly basis, is also available if desired.

SECTION 2

The following pages show the quarterly analytical data for the Giant Refining Remediation Project. The data is broken down into units as described below.

	Unit of Measure
Total dissolved solids (180)	mg/l
Total dissolved solids (calc)	mg/l
Total alkalinity as CaCO3	mg/l
Total hardness as CaCO3	mg/l
Bicarbonate as HCO3	mg/l
Carbonate as CO3	mg/l
Chloride	mg/l
Sulfate	mg/l
Calcium	mg/l
Magnesium	mg/l
Potassium	mg/l
Sodium	mg/l

The remainder of the data is measured in ug/l.

GIANT INDUSTRIES
ONSITE REMEDIATION PROJECT
QUARTERLY ANALYTICAL DATA SUMMARY
FOURTH QUARTER, 1996

SYSTEM EFFLUENT

	OCT
Lab pH	7.1
Lab Conductivity @25 C	3380
Total Dissolved Solids @ 180 C	2790
Total Dissolved Solids (Calc)	2645
Total Alkalinity as CaCO3	385
Total Hardness as CaCO3	1038
Bicarbonate as HCO3	469
Carbonate as CO3	ND
Hydroxide	ND
Chloride	177
Sulfate	1420
Calcium	361
Magnesium	33.5
Potassium	2.74
Sodium	421

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	0.4
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND

1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	1.6
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SYSTEM INFLUENT

Lab pH	7.2
Lab Conductivity @25 C	3400
Total Dissolved Solids @ 180 C	2790
Total Dissolved Solids (Calc)	2704
Total Alkalinity as CaCO3	372
Total Hardness as CaCO3	1015
Bicarbonate as HCO3	454
Carbonate as CO3	ND
Hydroxide	ND
Chloride	187
Sulfate	1490
Calcium	352
Magnesium	33.2
Potassium	2.35
Sodium	416

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND

cis-1,2-Dichloroethene	0.7
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	5.6
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	6
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	1.5

GBR-17

Lab pH	7.1
Lab Conductivity @25 C	2610
Total Dissolved Solids @ 180 C	2200
Total Dissolved Solids (Calc)	2166
Total Alkalinity as CaCO3	210
Total Hardness as CaCO3	942
Bicarbonate as HCO3	257
Carbonate as CO3	ND
Hydroxide	ND
Chloride	55.5
Sulfate	1300
Nitrate as Nitrogen	4.13
Calcium	334
Magnesium	26.1
Potassium	0.78
Sodium	319

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND

Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	6.5
Toluene	ND
Total Xylenes	ND

GBR-31

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	1.9
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

GBR-32

Lab pH	6.9
Lab Conductivity @25 C	3170
Total Dissolved Solids @ 180 C	4760
Total Dissolved Solids (Calc)	4655
Total Alkalinity as CaCO3	255
Total Hardness as CaCO3	1712
Bicarbonate as HCO3	311
Carbonate as CO3	ND
Hydroxide	ND
Chloride	870
Sulfate	2081
Nitrate as Nitrogen	15.4
Calcium	589

Magnesium	58.9
Potassium	3.52
Sodium	885

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	2.1
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	0.6
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	41 D(5)
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	0.2
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	5.8
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	3.6
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	8.1
Toluene	ND
Total Xylenes	ND

GBR-45

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	1.1
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	0.5
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	45 D(5)
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	0.5
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	3.2
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	2
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	10
Toluene	ND
Total Xylenes	ND

GBR-48

Lab pH	6.8
Lab Conductivity @25 C	5880
Total Dissolved Solids @ 180 C	4590
Total Dissolved Solids (Calc)	4543
Total Alkalinity as CaCO3	195
Total Hardness as CaCO3	1585
Bicarbonate as HCO3	238
Carbonate as CO3	ND
Hydroxide	ND
Chloride	732
Sulfate	2242
Nitrate as Nitrogen	20.1
Calcium	543
Magnesium	55.8
Potassium	4.3
Sodium	829

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	1
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	0.4
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	24 D(5)
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	3.9
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	2.4
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	3.8
Toluene	ND
Total Xylenes	ND

GBR-49

Lab pH	7.2
Lab Conductivity @25 C	4280
Total Dissolved Solids @ 180 C	3500
Total Dissolved Solids (Calc)	3474
Total Alkalinity as CaCO3	317
Total Hardness as CaCO3	1329
Bicarbonate as HCO3	386
Carbonate as CO3	ND
Hydroxide	ND
Chloride	347
Sulfate	1844
Nitrate as Nitrogen	2.79
Calcium	462
Magnesium	42.9
Potassium	3.13
Sodium	582

GBR-50

Lab pH	7.1
Lab Conductivity @25 C	3210
Total Dissolved Solids @ 180 C	2760
Total Dissolved Solids (Calc)	2793
Total Alkalinity as CaCO3	261
Total Hardness as CaCO3	1075
Bicarbonate as HCO3	318
Carbonate as CO3	ND
Hydroxide	ND
Chloride	53.5
Sulfate	1746
Nitrate as Nitrogen	1.12
Calcium	382
Magnesium	29.9
Potassium	1.56
Sodium	422

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	5.5
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	2.1
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	0.3
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	2.9
Toluene	ND
Total Xylenes	ND

SHS-10

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	0.7

SHS-12

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	1.7
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-13

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	0.2
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	4.4
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

SHS-16

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND

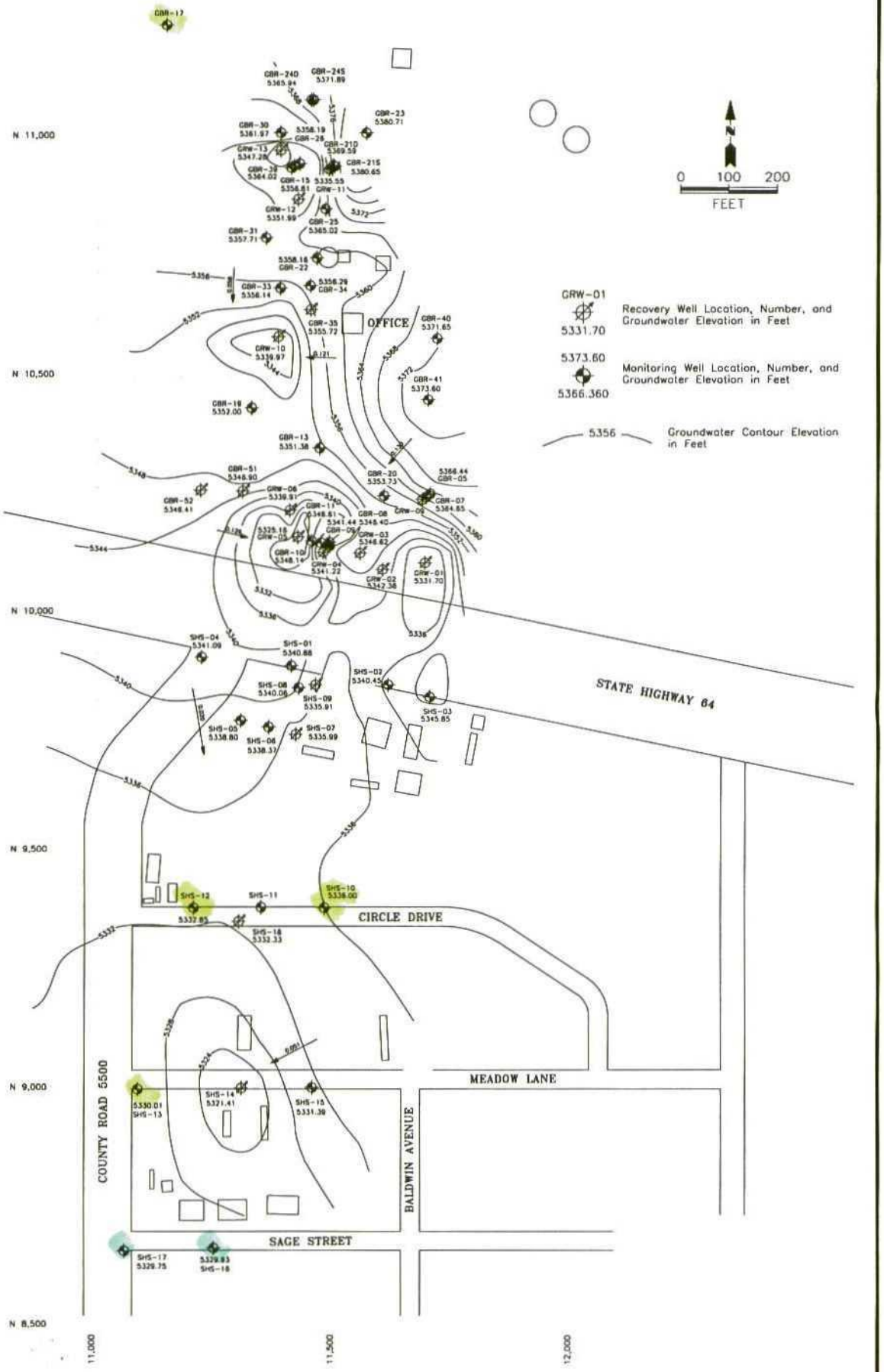
SHS-17

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachlorethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Methyl-t-Butyl Ether	ND
Toluene	ND
Total Xylenes	ND



PHILIP ENVIRONMENTAL

TITLE:
Equivalent Groundwater Elevation Contours
October 1996

DWN:	DES.:	PROJECT NO.:
MRC	CC	14111
CHKD:	APPD:	FIGURE NO.:
DATE: 01/16/97	REV.: A	Figure 1

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GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE

OCTOBER, 1996

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
GRW-1	5394.30	62.60	62.60	0.00	5331.70
GRW-2	5391.28	48.90	48.90	0.00	5342.38
GRW-3	5388.77	42.15	42.15	0.00	5346.62
GRW-4	5390.02	48.80	48.80	0.00	5341.22
GRW-5	5390.56	65.40	65.40	0.00	5325.16
GRW-6	5390.81	50.90	50.90	0.00	5339.91
GRW-10	5395.02	55.05	55.05	0.00	5339.97
GRW-11	5397.85	62.30	62.30	0.00	5335.55
GRW-12	5397.24	45.25	45.25	0.00	5351.99
GRW-13	5396.90	49.62	49.62	0.00	5347.28
GBR-5	5395.07	28.58	28.80	-0.22	5366.31
GBR-6	5395.70	58.30	58.30	0.00	5337.40
GBR-7	5395.85	31.20	31.20	0.00	5364.65
GBR-8	5390.50	44.10	44.10	0.00	5346.40
GBR-9	5389.92	48.48	48.48	0.00	5341.44
GBR-10	5390.57	42.43	42.43	0.00	5348.14
GBR-11	5389.43	43.99	42.49	1.50	5346.64
GBR-13	5393.04	41.66	41.66	0.00	5351.38
GBR-15	5397.99	41.18	41.18	0.00	5356.81
GBR-18	5421.68	31.43	31.43	0.00	5390.25
GBR-19	5393.83	43.95	41.23	2.72	5352.06
GBR-20	5393.47	39.94	39.94	0.00	5353.53
GBR-21S	5400.65	20.01	20.00	0.01	5380.65
GBR-21D	5400.19	30.60	30.60	0.00	5369.59
GBR-22	5395.91	38.45	37.55	0.90	5358.18
GBR-23	5403.72	23.01	23.01	0.00	5379.53
GBR-24S	5396.08	24.19	24.19	0.00	5365.25
GBR-24D	5396.77	30.83	30.83	0.00	5365.94
GBR-25	5396.72	31.70	31.70	0.00	5365.02
GBR-26	5395.59	37.40	37.40	0.00	5358.19
GBR-30	5396.58	34.61	34.61	0.00	5361.97
GBR-31	5394.86	37.15	37.15	0.00	5357.71
GBR-33	5396.28	40.14	40.14	0.00	5356.14
GBR-34	5394.00	38.45	37.50	0.95	5356.31
GBR-35	5393.66	39.61	37.47	2.14	5355.76
GBR-39	5397.55	33.53	33.53	0.00	5364.02
GBR-40	5400.76	29.11	29.11	0.00	5371.65
GBR-41	5396.35	22.75	22.75	0.00	5373.60
GBR-51	5389.68	42.78	42.78	0.00	5346.90
GBR-52	5387.74	41.33	41.33	0.00	5346.41

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE
OCTOBER, 1996
Page 2

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
SHS-1	5383.54	42.80	42.62	0.18	5340.88
SHS-2	5381.66	41.60	41.10	0.50	5340.46
SHS-3	5383.33	37.48	37.48	0.00	5345.85
SHS-4	5383.62	42.53	42.53	0.00	5341.09
SHS-5	5378.36	39.56	39.56	0.00	5338.80
SHS-6	5378.17	39.80	39.80	0.00	5338.37
SHS-7	5375.89	39.90	39.90	0.00	5335.99
SHS-8	5380.25	40.19	40.19	0.00	5340.06
SHS-9	5380.79	44.88	44.88	0.00	5335.91
SHS-10	5373.80	37.80	37.80	0.00	5336.00
SHS-12	5373.94	41.09	41.09	0.00	5332.85
SHS-13	5367.81	37.80	37.80	0.00	5330.01
SHS-14	5367.07	45.66	45.66	0.00	5321.41
SHS-15	5366.21	34.82	34.82	0.00	5331.39
SHS-16	5362.58	32.65	32.65	0.00	5329.93
SHS-17	5364.35	34.60	34.60	0.00	5329.75
SHS-18	5373.64	41.31	41.30	0.01	5332.34

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY VOLUME CHANGE

FOURTH QUARTER, 1996

Tank Number	Beginning Volume	Ending Volume	Net Change
102	9,944	12,221	2,277
106	8,010	8,010	0
21	230,133	229,768	(365)
22	254,334	228,204	(26,130)
Total Net Volume Change			(24,218)

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY RECOVERY WELL
VOLUME TABULATION

FOURTH QUARTER, 1996

Well	Month #1	Month #2	Month #3	Total
GRW-1	9,280	7,360	8,720	25,360
GRW-2	7,410	6,010	7,160	20,580
GRW-3	10,630	8,450	9,810	28,890
GRW-4	26,890	20,070	24,460	71,420
GRW-5	28,940	35,620	34,020	98,580
GRW-6	11,500	10,300	12,780	34,580
GRW-9	5,380	5,310	6,290	16,980
GRW-10	198,720	155,940	209,110	563,770
GRW-11	27,490	23,200	25,420	76,110
GRW-12	4,680	3,190	3,710	11,580
GRW-13	0	5,420	10,560	15,980
SHS-7	11,321	15,534	13,890	40,745
SHS-9	4,226	2,806	2,987	10,019
SHS-14	142,363	112,678	144,811	399,852
SHS-18	279	190	222	691
TOTAL VOLUME PUMPED IN GALLONS				1,415,137

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
TOTAL VOLUME SUMMARY

FOURTH QUARTER, 1996

Total Volume Of Water Recovered	1,415,137
Net Change In Storage Volume	(24,218)
Total Water Treated And Pumped To The Infiltration Gallery	1,439,355

GIANT REFINING CO.

5764 US Highway 64
Farmington, New Mexico
87401

505
632-8024
632-8006

February 12, 1996

Mr. William Olson
Hydrogeologist
New Mexico Oil Conservation Division
Environmental Bureau
P. O. Box 2088
Santa Fe, NM 87504-2088

Dear Mr. Olson:

Enclosed you will find the quarterly report for Giant Refining Company's Bloomfield Refinery for the fourth quarter of 1995.

Please contact me if you have any questions.

Sincerely,

Tim Kinney
Remediation Project Manager

/dm

Enclosure

cc w/enc.: Mike Hardy-Giant
Kim Bullerdick-Giant
Jacque Cumbie-Giant
Stephanie Odell-BLM
Maura Hanning-EID
Chris Shuey-SWRIC
Valda Terauds-H+GCL
Jim Durrett-SJC
Herbert Gorrod-EPA
Denny Foust-OCD

QUARTERLY DATA REPORT

GIANT BLOOMFIELD REFINERY

FOURTH QUARTER, 1995

Prepared By:

GIANT REFINING COMPANY
5764 U. S. Highway 64
Farmington, NM 87401
(505) 632-8006
FAX (505) 632-4025

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY
QUARTERLY REPORT
FOURTH QUARTER, 1995

INTRODUCTION

Tank 22 is being used for intermediate water storage. All water is treated by the carbon filter unit exclusively.

SUMMARY

Section 2

Section 2 contains a summary of the quarterly analytical results. Raw data, as received from the laboratory, is available on request as a supplement to the quarterly report.

Section 3

A quarterly potentiometric surface map, as well as the adjusted water surface elevation and product thickness for each well, is included in Section 3.

Section 4

Section 4 illustrates the volume history for the quarter. Total volume pumped from each well, as well as current tank volumes and the reinjection volume, is reported. Additional detail, on a weekly basis, is also available if desired.

SECTION 2

The following pages show the quarterly analytical data for the Giant Refining Remediation Project. The data is broken down into units as described below.

	Unit of Measure
Total dissolved solids (180)	mg/l
Total dissolved solids (calc)	mg/l
Total alkalinity as CaCO3	mg/l
Total hardness as CaCO3	mg/l
Bicarbonate as HCO3	mg/l
Carbonate as CO3	mg/l
Chloride	mg/l
Sulfate	mg/l
Calcium	mg/l
Magnesium	mg/l
Potassium	mg/l
Sodium	mg/l

The remainder of the data is measured in ug/l.

GIANT REFINING COMPANY
ONSITE REMEDIATION PROJECT
QUARTERLY ANALYTICAL DATA SUMMARY
FOURTH QUARTER, 1995

	October	November	December
SYSTEM INFLUENT			
GENERAL WATER CHEMISTRY			
Lab pH (s.u.)	7.3		
Lab Conductivity, umhos/cm	3330.00		
Total Dissolved Solids (180)	2620.00		
Total Dissolved Solids (calc.)	2840.00		
Total Alkalinity as CaCO3	735.00		
Total Hardness as CaCO3	1126.00		
Bicarbonate as HCO3	897.00		
Carbonate as CO3	0.00		
Hydroxide as OH	0.00		
Chloride	204.00		
Sulfate	1300.00		
Calcium	385.00		
Magnesium	40.00		
Potassium	3.50		
Sodium	464.00		
Cation/Anion Balance	5.35		
HALOCARBONS			
Bromodichloromethane	ND		ND
Bromoform	2.8		ND
Bromomethane	ND		ND
Carbon tetrachloride	2.2		ND
Chloroethane	38		ND
2-Chloroethylvinyl ether			
Chloroform	ND		ND
Chloromethane	71		ND
Dibromochloromethane	ND		ND
1,2-Dibromoethane (EDB)	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
1,1-Dichloroethane	ND		ND
1,2-Dichloroethane (EDC)	ND		ND
1,1-Dichloroethene	ND		ND
CIS-1,2-Dichloroethene	ND		ND
trans-1,2-Dichloroethene	ND		ND
1,2-Dichloropropane	ND		ND
cis-1,3-Dichloropropene	ND		ND
trans-1,3-Dichloropropene	ND		ND
Methylene chloride	ND		ND
1,1,2,2-Tetrachloroethane	2.0		ND
Tetrachloroethene	ND		ND
1,1,1-Trichloroethane	ND		ND
1,1,2-Trichloroethane	ND		ND
Trichloroethene	ND		ND
Trichlorofluoromethane	ND		ND
Vinyl Chloride	ND		ND

SYSTEM INFLUENT (Continued)	October	November	December
AROMATICS			
Benzene	52		3.2
Chlorobenzene	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
Ethylbenzene	43		6.5
Toluene	ND		5.2
Xylenes	85		120
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		ND
PAH			
Napthalene			15
Acenaphthylene			ND
1-Methylnaphthalene			51
2-Methylnaphthalene			42
Acenaphthene			ND
Fluorene			5.0
Phenanthrene			7.3
Anthracene			ND
Fluoranthene			ND
Pyrene			ND
Benzo(a)anthracene			ND
Chrysene			ND
Benzo(b)fluoranthene			ND
Benzo(k)fluoranthene			ND
Benzo(a)pyrene			ND
Dibenzo(a,h)anthrancene			ND
Benzo(g,h,i)perylene			ND
Indeno(1,2,3-c,d)pyrene			ND

SYSTEM EFFLUENT

GENERAL WATER CHEMISTRY	October	November	December
Lab pH (s.u.)	7.0		
Lab Conductivity, umhos/cm	3350.00		
Total Dissolved Solids (180)	2600.00		
Total Dissolved Solids (calc.)	2770.00		
Total Alkalinity as CaCO3	735.00		
Total Hardness as CaCO3	1141.00		
Bicarbonate as HCO3	897.00		
Carbonate as CO3	0.00		
Hydroxide as OH	0.00		
Chloride	200.00		
Sulfate	1240.00		
Calcium	392.00		
Magnesium	39.00		
Potassium	3.50		
Sodium	454.00		
Cation/Anion Balance	3.99 %		
HALOCARBONS			
Bromodichloromethane	ND		ND
Bromoform	ND		ND
Bromomethane	ND		ND
Carbon tetrachloride	ND		ND
Chloroethane	ND		ND
2-Chloroethylvinyl ether			
Chloroform	ND		ND
Chloromethane	ND		ND
Dibromochloromethane	ND		ND
1,2-Dibromoethane (EDB)	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
1,1-Dichloroethane	ND		ND
1,2-Dichloroethane (EDC)	ND		ND
1,1-Dichloroethene	ND		ND
cis-1,2-Dichloroethene	ND		ND
trans-1,2-Dichloroethene	ND		ND
1,2-Dichloropropane	ND		ND
cis-1,3-Dichloropropene	ND		ND
trans-1,3-Dichloropropene	ND		ND
Methylene chloride	ND		ND
1,1,2,2-Tetrachloroethane	ND		ND
Tetrachloroethene	ND		ND
1,1,1-Trichloroethane	ND		ND
1,1,2-Trichloroethane	ND		ND
Trichloroethene	ND		ND
Trichlorofluoromethane	ND		ND
Vinyl Chloride	ND		ND

SYSTEM EFFLUENT (Continued)

	October	November	December
AROMATICS			
Benzene	ND		1.9
Chlorobenzene	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
Ethylbenzene	ND		ND
Toluene	ND		ND
Xylenes	1.7		2.8
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		ND
PAH			
Napthalene			ND
Acenaphthylene			ND
1-Methylnaphthalene			ND
2-Methylnaphthalene			ND
Acenaphthene			ND
Fluorene			ND
Phenanthrene			ND
Anthracene			ND
Fluoranthene			ND
Pyrene			ND
Benzo(a)anthracene			ND
Chrysene			ND
Benzo(b)fluoranthene			ND
Benzo(k)fluoranthene			ND
Benzo(a)pyrene			ND
Dibenzo(a,h)anthrancene			ND
Benzo(g,h,i)perylene			ND
Indeno(1,2,3-c,d)pyrene			ND
GBR-17			
HALOCARBONS			ND
Bromodichloromethane			ND
Bromoform			ND
Bromomethane			ND
Carbon tetrachloride			ND
Chloroethane			ND
2-Chloroethylvinyl ether			ND
Chloroform			ND
Chloromethane			ND
Dibromochloromethane			ND
1,2-Dibromoethane (EDB)			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
1,1-Dichloroethane			ND
1,2-Dichloroethane (EDC)			ND
1,1-Dichloroethene			ND
cis-1,2-Dichloroethene			ND
trans-1,2-Dichloroethene			ND

GBR-17 (Continued)

	October	November	December
1,2-Dichloropropane			ND
cis-1,3-Dichloropropene			ND
trans-1,3-Dichloropropene			ND
Methylene chloride			ND
1,1,2,2-Tetrachloroethane			ND
Tetrachloroethene			ND
1,1,1-Trichloroethane			ND
1,1,2-Trichloroethane			ND
Trichloroethene			ND
Trichlorofluoromethane			ND
Vinyl chloride			ND
AROMATICS			
Benzene			ND
Chlorobenzene			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
Ethylbenzene			ND
Toluene			ND
Xylenes			ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether			ND

GBR-32

HALOCARBONS			
Bromodichloromethane			ND
Bromoform			ND
Bromomethane			ND
Carbon tetrachloride			ND
Chloroethane			ND
2-Chloroethylvinyl ether			
Chloroform			3.3
Chloromethane			ND
Dibromochloromethane			ND
1,2-Dibromomethane (EDB)			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
1,1-Dichloroethane			1.1
1,2-Dichloroethane (EDC)			ND
1,1-Dichloroethene			ND
cis-1,2-Dichloroethene			98
trans-1,2-Dichloroethene			ND
1,2-Dichloropropane			ND
cis-1,3-Dichloropropene			ND
trans-1,3-Dichloropropene			ND
Methylene chloride			ND
1,1,2,2-Tetrachloroethane			ND
Tetrachloroethene			9.9
1,1,1-Trichloroethane			ND

GBR-32 (Continued)

	October	November	December
1,1,2-Trichloroethane			ND
Trichloroethene			6.2
Trichlorofluoromethane			ND
Vinyl chloride			ND
AROMATICS			
Benzene			ND
Chlorobenzene			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
Ethylbenzene			ND
Toluene			ND
Xylenes			ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether			ND

GBR-48

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinyl ether	
Chloroform	1.4
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane (EDC)	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	40
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	4.9
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	2.0
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

GBR-49

	October	November	December
HALOCARBONS			
Bromodichloromethane			ND
Bromoform			ND
Bromomethane			ND
Carbon tetrachloride			ND
Chloroethane			ND
2-Chloroethylvinylether			
Chloroform			1.6
Chloromethane			ND
Dibromochloromethane			ND
1,2-Dibromoethane (EDB)			
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
1,1-Dichloroethane			0.4
1,2-Dichloroethane (EDC)			ND
1,1-Dichloroethene			ND
cis-1,2-Dichloroethene			69
trans-1,2-Dichloroethene			ND
1,2-Dichloropropane			ND
cis-1,3-Dichloropropene			0.2
trans-1,3-Dichloropropene			ND
Methylene chloride			ND
1,1,2,2-Tetrachloroethane			ND
Tetrachloroethene			6.1
1,1,1-Trichloroethane			ND
1,1,2-Trichloroethane			ND
Trichloroethene			3.5
Trichlorofluoromethane			ND
Vinyl chloride			ND
AROMATICS			
Benzene			ND
Chlorobenzene			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
Ethylbenzene			ND
Toluene			ND
Xylenes			ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether			ND

GBR-50

	October	November	December
HALOCARBONS			
Bromodichloromethane			ND
Bromoform			ND
Bromomethane			ND
Carbon tetrachloride			ND
Chloroethane			ND
2-Chloroethylvinylether			
Chloroform			ND
Chloromethane			ND
Dibromochloromethane			ND
1,2-Dibromoethane (EDB)			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
1,1-Dichloroethane			ND
1,2-Dichloroethane (EDC)			ND
1,1-Dichloroethene			ND
cis-1,2-Dichloroethene			4.4
trans-1,2-Dichloroethene			ND
1,2-Dichloropropane			ND
cis-1,3-Dichloropropene			ND
trans-1,3-Dichloropropene			ND
Methylene chloride			ND
1,1,2,2-Tetrachloroethane			ND
Tetrachloroethene			1.4
1,1,1-Trichloroethane			ND
1,1,2-Trichloroethane			ND
Trichloroethene			0.3
Trichlorofluoromethane			ND
Vinyl chloride			ND
AROMATICS			
Benzene			ND
Chlorobenzene			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
Ethylbenzene			ND
Toluene			ND
Xylenes			ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether			ND

SHS-3	October	November	December
HALOCARBONS			
Bromodichloromethane			ND
Bromoform			ND
Bromomethane			ND
Carbon tetrachloride			ND
Chloroethane			ND
2-Chloroethylvinylether			
Chloroform			ND
Chloromethane			ND
Dibromochloromethane			ND
1,2-Dibromoethane (EDB)			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
1,1-Dichloroethane			ND
1,2-Dichloroethane (EDC)			ND
1,1-Dichloroethene			ND
cis-1,2-Dichloroethene			ND
trans-1,2-Dichloroethene			ND
1,2-Dichloropropane			ND
cis-1,3-Dichloropropene			ND
trans-1,3-Dichloropropene			ND
Methylene chloride			ND
1,1,2,2-Tetrachloroethane			0.2
Tetrachloroethene			ND
1,1,1-Trichloroethane			ND
1,1,2-Trichloroethane			ND
Trichloroethene			ND
Trichlorofluoromethane			ND
Vinyl chloride			ND
AROMATICS			
Benzene			ND
Chlorobenzene			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
Ethylbenzene			ND
Toluene			ND
Xylenes			ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether			ND

SHS-4

	October	November	December
HALOCARBONS			
Bromodichloromethane			ND
Bromoform			ND
Bromomethane			ND
Carbon tetrachloride			ND
Chloroethane			ND
2-Chloroethylvinylether			ND
Chloroform			ND
Chloromethane			ND
Dibromochloromethane			ND
1,2-Dibromoethane (EDB)			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
1,1-Dichloroethane			ND
1,2-Dichloroethane (EDC)			ND
1,1-Dichloroethene			ND
cis-1,2-Dichloroethene			ND
trans-1,2-Dichloroethene			ND
1,2-Dichloropropane			ND
cis-1,3-Dichloropropene			ND
trans-1,3-Dichloropropene			ND
Methylene chloride			ND
1,1,2,2-Tetrachloroethane			ND
Tetrachloroethene			ND
1,1,1-Trichloroethane			ND
1,1,2-Trichloroethane			ND
Trichloroethene			ND
Trichlorofluoromethane			ND
Vinyl chloride			ND
AROMATICS			
Benzene			ND
Chlorobenzene			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
Ethylbenzene			ND
Toluene			ND
Xylenes			ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether			ND

SHS-6

	October	November	December
HALOCARBONS			
Bromodichloromethane			ND
Bromoform			ND
Bromomethane			ND
Carbon tetrachloride			ND
Chloroethane			ND
2-Chloroethylvinyl ether			
Chloroform			ND
Chloromethane			ND
Dibromochloromethane			ND
1,2-Dibromoethane (EDB)			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
1,1-Dichloroethane			ND
1,2-Dichloroethane (EDC)			ND
1,1-Dichloroethene			ND
cis-1,2-Dichloroethene			0.2
trans-1,2-Dichloroethene			ND
1,2-Dichloropropane			ND
cis-1,3-Dichloropropene			ND
trans-1,3-Dichloropropene			ND
Methylene chloride			ND
1,1,2,2-Tetrachloroethane			ND
Tetrachloroethene			ND
1,1,1-Trichloroethane			ND
1,1,2-Trichloroethane			ND
Trichloroethene			ND
Trichlorofluoromethane			ND
Vinyl chloride			ND
AROMATICS			
Benzene			ND
Chlorobenzene			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
Ethylbenzene			ND
Toluene			ND
Xylenes			ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether			ND

SHS-10

	October	November	December
HALOCARBONS			
Bromodichloromethane	ND		ND
Bromoform	ND		ND
Bromomethane	ND		ND
Carbon tetrachloride	ND		ND
Chloroethane	ND		ND
2-Chloroethylvinyl ether			
Chloroform	ND		ND
Chloromethane	ND		ND
Dibromochloromethane	ND		ND
1,2-Dibromoethane (EDB)	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
1,1-Dichloroethane	ND		ND
1,2-Dichloroethane (EDC)	ND		ND
1,1-Dichloroethene	ND		ND
cis-1,2-Dichloroethene	ND		ND
trans-1,2-Dichloroethene	ND		ND
1,2-Dichloropropane	ND		ND
cis-1,3-Dichloropropene	ND		ND
trans-1,3-Dichloropropene	ND		ND
Methylene chloride	ND		ND
1,1,2,2-Tetrachloroethane	ND		ND
Tetrachloroethene	ND		ND
1,1,1-Trichloroethane	ND		ND
1,1,2-Trichloroethane	ND		ND
Trichloroethene	ND		ND
Trichlorofluoromethane	ND		ND
Vinyl chloride	ND		ND
AROMATICS			
Benzene	ND		ND
Chlorobenzene	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
Ethylbenzene	ND		ND
Toluene	ND		ND
Xylenes	1.1		ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		ND

SHS-12

	October	November	December
HALOCARBONS			
Bromodichloromethane	ND		ND
Bromoform	ND		ND
Bromomethane	ND		ND
Carbon tetrachloride	ND		ND
Chloroethane	ND		ND
2-Chloroethylvinylether			
Chloroform	ND		ND
Chloromethane	ND		ND
Dibromochloromethane	ND		ND
1,2-Dibromoethane (EDB)	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
1,1-Dichloroethane	ND		ND
1,2-Dichloroethane (EDC)	ND		ND
1,1-Dichloroethene	ND		ND
cis-1,2-Dichloroethene	ND		0.2
trans-1,2-Dichloroethene	ND		ND
1,2-Dichloropropane	ND		ND
cis-1,3-Dichloropropene	ND		ND
trans-1,3-Dichloropropene	ND		ND
Methylene chloride	ND		ND
1,1,2,2-Tetrachloroethane	ND		ND
Tetrachloroethene	ND		ND
1,1,1-Trichloroethane	ND		ND
1,1,2-Trichloroethane	ND		ND
Trichloroethene	ND		ND
Trichlorofluoromethane	ND		ND
Vinyl chloride	ND		ND
AROMATICS			
Benzene	ND		ND
Chlorobenzene	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
Ethylbenzene	ND		ND
Toluene	ND		ND
Xylenes	ND		ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		ND

SHS-13

	October	November	December
HALOCARBONS			
Bromodichloromethane	ND		ND
Bromoform	ND		ND
Bromomethane	ND		ND
Carbon tetrachloride	ND		ND
Chloroethane	ND		ND
2-Chloroethylvinyl ether			
Chloroform	ND		ND
Chloromethane	ND		ND
Dibromochloromethane	ND		ND
1,2-Dibromoethane (EDB)	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
1,1-Dichloroethane	ND		ND
1,2-Dichloroethane (EDC)	4.1		6.6
1,1-Dichloroethene	ND		ND
cis-1,2-Dichloroethene	ND		ND
trans-1,2-Dichloroethene	ND		ND
1,2-Dichloropropane	ND		ND
cis-1,3-Dichloropropene	ND		ND
trans-1,3-Dichloropropene	ND		ND
Methylene chloride	ND		ND
1,1,2,2-Tetrachloroethane	ND		ND
Tetrachloroethene	ND		ND
1,1,1-Trichloroethane	ND		ND
1,1,2-Trichloroethane	ND		ND
Trichloroethene	ND		ND
Trichlorofluoromethane	ND		ND
Vinyl chloride	ND		ND
AROMATICS			
Benzene	ND		ND
Chlorobenzene	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
Ethylbenzene	ND		ND
Toluene	ND		ND
Xylenes	ND		ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		ND

SHS-15

	October	November	December
HALOCARBONS			
Bromodichloromethane			ND
Bromoform			ND
Bromomethane			ND
Carbon tetrachloride			ND
Chloroethane			ND
2-Chloroethylvinyl ether			
Chloroform			3.4
Chloromethane			ND
Dibromochloromethane			ND
1,2-Dibromoethane (EDB)			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
1,1-Dichloroethane			ND
1,2-Dichloroethane (EDC)			ND
1,1-Dichloroethene			ND
cis-1,2-Dichloroethene			ND
trans-1,2-Dichloroethene			ND
1,2-Dichloropropane			ND
cis-1,3-Dichloropropene			ND
trans-1,3-Dichloropropene			ND
Methylene chloride			ND
1,1,2,2-Tetrachloroethane			ND
Tetrachloroethene			ND
1,1,1-Trichloroethane			ND
1,1,2-Trichloroethane			ND
Trichloroethene			ND
Trichlorofluoromethane			ND
Vinyl chloride			ND
AROMATICS			
Benzene			ND
Chlorobenzene			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
Ethylbenzene			ND
Toluene			ND
Xylenes			ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether			ND

SHS-15

	October	November	December
HALOCARBONS			
Bromodichloromethane			ND
Bromoform			ND
Bromomethane			ND
Carbon tetrachloride			ND
Chloroethane			ND
2-Chloroethylvinyl ether			
Chloroform			3.4
Chloromethane			ND
Dibromochloromethane			ND
1,2-Dibromoethane (EDB)			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
1,1-Dichloroethane			ND
1,2-Dichloroethane (EDC)			ND
1,1-Dichloroethene			ND
cis-1,2-Dichloroethene			ND
trans-1,2-Dichloroethene			ND
1,2-Dichloropropane			ND
cis-1,3-Dichloropropene			ND
trans-1,3-Dichloropropene			ND
Methylene chloride			ND
1,1,2,2-Tetrachloroethane			ND
Tetrachloroethene			ND
1,1,1-Trichloroethane			ND
1,1,2-Trichloroethane			ND
Trichloroethene			ND
Trichlorofluoromethane			ND
Vinyl chloride			ND
AROMATICS			
Benzene			ND
Chlorobenzene			ND
1,2-Dichlorobenzene			ND
1,3-Dichlorobenzene			ND
1,4-Dichlorobenzene			ND
Ethylbenzene			ND
Toluene			ND
Xylenes			ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether			ND

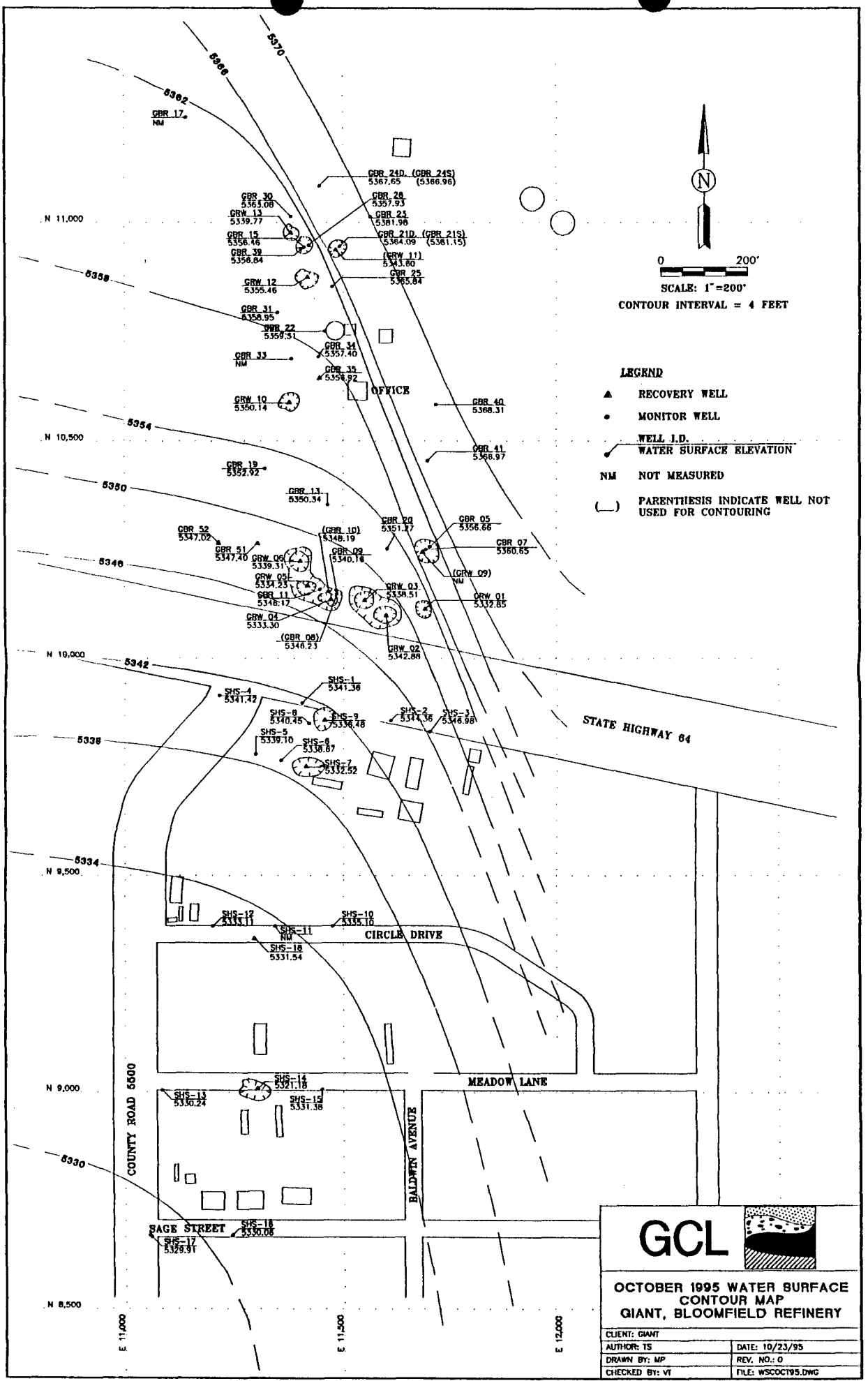
SHS-16

	October	November	December
HALOCARBONS			
Bromodichloromethane	ND		ND
Bromoform	ND		ND
Bromomethane	ND		ND
Carbon tetrachloride	ND		ND
Chloroethane	ND		ND
2-Chloroethylvinylether			
Chloroform	ND		ND
Chloromethane	ND		ND
Dibromochloromethane	ND		ND
1,2 Dibromoethane (EDB)	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
1,1-Dichloroethane	ND		ND
1,2-Dichloroethane (EDC)	ND		ND
1,1-Dichloroethene	ND		ND
cis-1,2-Dichloroethene	ND		ND
trans-1,2-Dichloroethene	ND		ND
1,2-Dichloropropane	ND		ND
cis-1,3-Dichloropropene	ND		ND
trans-1,3-Dichloropropene	ND		ND
Methylene chloride	ND		ND
1,1,2,2-Tetrachloroethane	ND		ND
Tetrachloroethene	ND		ND
1,1,1-Trichloroethane	ND		ND
1,1,2-Trichloroethane	ND		ND
Trichloroethene	ND		ND
Trichlorofluoromethane	ND		ND
Vinyl chloride	ND		ND
AROMATICS			
Benzene	ND		ND
Chlorobenzene	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
Ethylbenzene	ND		ND
Toluene	ND		ND
Xylenes	ND		ND
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		ND

SHS-17

	October	November	December
HALOCARBONS			
Bromodichloromethane	ND		ND
Bromoform	ND		ND
Bromomethane	ND		ND
Carbon tetrachloride	ND		ND
Chloroethane	ND		ND
2-Chloroethylvinylether			
Chloroform	ND		ND
Chloromethane	ND		ND
Dibromochloromethane	ND		ND
1,2-Dibromoethane (EDB)	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
1,1-Dichloroethane	ND		ND
1,2-Dichloroethane (EDC)	ND		ND
1,1-Dichloroethene	ND		ND
cis-1,2-Dichloroethene	ND		ND
trans-1,2-Dichloroethene	ND		ND
1,2-Dichloropropane	ND		ND
cis-1,3-Dichloropropene	ND		ND
trans-1,3-Dichloropropene	ND		ND
Methylene chloride	ND		ND
1,1,2,2-Tetrachloroethane	ND		ND
Tetrachloroethene	ND		ND
1,1,1-Trichloroethane	ND		ND
1,1,2-Trichloroethane	ND		ND
Trichloroethene	ND		ND
Trichlorofluoromethane	ND		ND
Vinyl chloride	ND		ND
AROMATICS			
Benzene	ND		ND
Chlorobenzene	ND		ND
1,2-Dichlorobenzene	ND		ND
1,3-Dichlorobenzene	ND		ND
1,4-Dichlorobenzene	ND		ND
Ethylbenzene	ND		ND
Toluene	ND		ND
Xylenes	ND		ND
Trichlorotrifluoroethane			
Methylt-Butyl Ether	ND		ND

*ND - Not detected at specified detection limit


5370
5366
5362
5358
5354
5350
5346
5342
5338
5334
5330
GBR 17
NM
GBR 24D (GBR 24S)
5367.65 (5366.96)
GBR 30
5365.08
GBR 28
5357.93
GRW 13
5339.77
GBR 23
5361.96
GBR 15
5356.46
GBR 21D (GBR 21S)
5364.09 (5361.15)
GBR 39
5356.84
(GRW 11)
5343.80
GBR 25
5365.84
GRW 12
5355.46
GBR 31
5358.95
GBR 22
5359.31
GBR 34
5357.40
GBR 33
NM
GBR 35
5358.92
OFFICE
GRW 10
5350.14
GBR 40
5368.31
GBR 41
5368.97
GBR 19
5352.92
GBR 13
5350.34
GBR 20
5351.27
GBR 05
5356.66
GBR 52
5347.02
(GBR 10)
5348.19
GBR 07
5360.65
GBR 51
5347.40
GRW 08
5339.31
GBR 09
5340.18
(GRW 09)
NM
GRW 05
5334.23
GRW 03
5338.51
GBR 11
5346.12
GRW 01
5332.85
GRW 04
5333.30
(GBR 06)
5346.23
GRW 02
5342.88
SHS-1
5341.36
SHS-4
5341.42
SHS-8
5340.45
SHS-9
5338.48
SHS-2
5341.36
SHS-3
5346.98
STATE HIGHWAY 64
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5339.10
SHS-6
5336.87
SHS-7
5332.52
SHS-12
5335.11
SHS-10
5335.10
SHS-11
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5331.54
SHS-14
5321.18
MEADOW LANE
SHS-13
5330.24
SHS-15
5331.38
COUNTY ROAD 5500
BALDWIN AVENUE
SAGE STREET
SHS-18
5330.08
SHS-17
5329.91
N 11,000
N 10,500
N 10,000
N 9,500
N 9,000
N 8,500
E 11,000
E 11,500
E 12,000
0
200'
SCALE: 1"=200'
CONTOUR INTERVAL = 4 FEET
LEGEND
RECOVERY WELL
MONITOR WELL
WELL I.D.
WATER SURFACE ELEVATION
NM NOT MEASURED
(__) PARENTHESIS INDICATE WELL NOT USED FOR CONTOURING
GCL
OCTOBER 1995 WATER SURFACE CONTOUR MAP
GIANT, BLOOMFIELD REFINERY
CLIENT: GIANT
AUTHOR: TS
DATE: 10/23/95
DRAWN BY: MP
REV. NO.: 0
CHECKED BY: VT
FILE: WSCOCT95.DWG

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE

OCTOBER, 1995

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
GRW-1	5394.30	61.45	61.45	0.00	5332.85
GRW-2	5391.28	48.40	48.40	0.00	5342.88
GRW-3	5388.77	50.26	50.26	0.00	5338.51
GRW-4	5390.02	56.80	56.70	0.10	5333.30
GRW-5	5390.56	56.33	56.33	0.00	5334.23
GRW-6	5390.81	51.50	51.50	0.00	5339.31
GRW-10	5395.02	48.68	43.93	4.75	5350.14
GRW-11	5397.85	54.25	54.25	0.00	5343.60
GRW-12	5397.24	41.78	41.78	0.00	5355.46
GRW-13	5396.90	57.13	57.13	0.00	5339.77
GBR-5	5395.07	40.95	37.77	3.18	5356.66
GBR-6	5395.70	63.96	63.96	0.00	5331.74
GBR-7	5395.85	35.92	35.02	0.90	5360.65
GBR-8	5390.50	45.25	44.02	1.23	5346.23
GBR-9	5389.92	49.76	49.76	0.00	5340.16
GBR-10	5390.57	42.38	42.38	0.00	5348.19
GBR-11	5389.43	43.70	43.15	0.55	5346.17
GBR-13	5393.04	42.72	42.70	0.02	5350.34
GBR-15	5397.99	41.53	41.53	0.00	5356.46
GBR-18	5421.68	30.75	30.75	0.00	5390.93
GBR-19	5393.83	41.60	40.74	0.86	5352.92
GBR-20	5393.47	42.20	42.20	0.00	5351.27
GBR-21S	5400.65	19.52	19.50	0.02	5381.15
GBR-21D	5400.19	36.10	36.10	0.00	5364.09
GBR-22	5395.91	39.00	36.00	3.00	5359.31
GBR-23	5403.72	22.14	22.14	0.00	5381.98
GBR-24S	5396.08	21.74	21.74	0.00	5366.96
GBR-24D	5396.77	29.12	29.12	0.00	5367.65
GBR-25	5396.72	30.88	30.88	0.00	5365.84
GBR-26	5395.59	37.66	37.66	0.00	5357.93
GBR-30	5396.58	33.50	33.50	0.00	5363.08
GBR-31	5394.86	35.91	35.91	0.00	5358.95
GBR-33	5396.28			0.00	5396.28
GBR-34	5394.00	37.68	36.33	1.35	5357.40
GBR-35	5393.66	38.00	36.43	1.57	5356.92
GBR-39	5397.55	40.71	40.71	0.00	5356.84
GBR-40	5400.76	32.45	32.45	0.00	5368.31
GBR-41	5396.35	29.38	29.38	0.00	5366.97
GBR-51	5389.68	42.28	42.28	0.00	5347.40
GBR-52	5387.74	40.72	40.72	0.00	5347.02

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE
OCTOBER, 1995

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
SHS-1	5383.54	42.20	42.18	0.02	5341.36
SHS-2	5381.66	37.30	37.30	0.00	5344.36
SHS-3	5383.33	36.35	36.35	0.00	5346.98
SHS-4	5383.62	42.20	42.20	0.00	5341.42
SHS-5	5378.36	39.26	39.26	0.00	5339.10
SHS-6	5378.17	39.50	39.50	0.00	5338.67
SHS-7	5375.89	43.37	43.37	0.00	5332.52
SHS-8	5380.25	39.80	39.80	0.00	5340.45
SHS-9	5380.79	44.34	44.30	0.04	5336.48
SHS-10	5373.80	38.70	38.70	0.00	5335.10
SHS-12	5373.94	40.83	40.83	0.00	5333.11
SHS-13	5367.81	37.57	37.57	0.00	5330.24
SHS-14	5367.07	45.89	45.89	0.00	5321.18
SHS-15	5366.21	34.83	34.83	0.00	5331.38
SHS-16	5362.58	32.52	32.52	0.00	5330.06
SHS-17	5364.35	34.44	34.44	0.00	5329.91
SHS-18	5373.64	42.10	42.10	0.00	5331.54

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY VOLUME CHANGE

FOURTH QUARTER, 1995

Tank Number	Beginning Volume	Ending Volume	Net Change
102	16,198	13,733	(2,465)
106	8,010	8,010	0
21	67,472	67,472	0
22	71,773	265,008	193,235
Total Net Volume Change			190,770

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY RECOVERY WELL
VOLUME TABULATION

FOURTH QUARTER, 1995

Well	Month #1	Month #2	Month #3	Total
GRW-1	6,500	7,890	4,550	18,940
GRW-2	9,330	13,500	7,800	30,630
GRW-3	7,540	14,150	8,750	30,440
GRW-4	12,470	17,080	10,290	39,840
GRW-5	34,510	51,100	19,280	104,890
GRW-6	27,584	16,286	4,890	48,760
GRW-9	660	620	500	1,780
GRW-10	301,070	453,080	249,750	1,003,900
GRW-11	39,480	58,700	32,880	131,060
GRW-12	5,620	8,660	4,570	18,850
GRW-13	7,240	9,030	4,000	20,270
SHS-7	3,900	1,563	693	6,156
SHS-9	6,492	6,834	3,787	17,113
SHS-14	137,551	157,278	80,509	375,338
SHS-18	9,192	11,974	7,133	28,299
TOTAL VOLUME PUMPED IN GALLONS				1,876,266

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
TOTAL VOLUME SUMMARY

FOURTH QUARTER, 1995

Total Volume Of Water Recovered	1,876,266
Net Change In Storage Volume	190,770
Total Water Treated And Pumped To The Infiltration Gallery	1,685,496

GIANT
INDUSTRIES, INC.

Crude Gathering Operations

5764 US Highway 64
Farmington, New Mexico
87401

505
632-8024
632-8006

November 8, 1995

Mr. William Olson
Hydrogeologist
New Mexico Oil Conservation Division
Environmental Bureau
P. O. Box 2088
Santa Fe, NM 87504-2088

Dear Mr. Olson:

Enclosed you will find the quarterly report for Giant Refining Company's Bloomfield Refinery for the third quarter of 1995.

Please contact me if you have any questions.

Sincerely,

Tim Kinney
Remediation Project Manager

/dm

Enclosure

cc w/enc.: Carl Shook-Giant
Kim Bullerdick-Giant
Jacque Cumbie-Giant
Stephanie Odell-BLM
Maura Hanning-EID
Chris Shuey-SWRIC
Valda Terauds-H+GCL
Jim Durrett-SJC
Herbert Gorrod-EPA
Denny Foust-OCD

QUARTERLY DATA REPORT

GIANT BLOOMFIELD REFINERY

THIRD QUARTER, 1995

Prepared By:

GIANT REFINING COMPANY
5764 U. S. Highway 64
Farmington, NM 87401
(505) 632-8006
FAX (505) 632-4025

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY
QUARTERLY REPORT
THIRD QUARTER, 1995

INTRODUCTION

The air stripper operations were discontinued in the second quarter. All water is treated by the carbon filter unit exclusively.

SUMMARY

Section 2

Section 2 contains a summary of the quarterly analytical results. Raw data, as received from the laboratory, is available on request as a supplement to the quarterly report.

Section 3

A quarterly potentiometric surface map, as well as the adjusted water surface elevation and product thickness for each well, is included in Section 3.

Section 4

Section 4 illustrates the volume history for the quarter. Total volume pumped from each well, as well as current tank volumes and the reinjection volume, is reported. Additional detail, on a weekly basis, is also available if desired.

SECTION 2

The following pages show the quarterly analytical data for the Giant Refining Remediation Project. The data is broken down into units as described below.

	Unit of Measure
Total dissolved solids (180)	mg/l
Total dissolved solids (calc)	mg/l
Total alkalinity as CaCO3	mg/l
Total hardness as CaCO3	mg/l
Bicarbonate as HCO3	mg/l
Carbonate as CO3	mg/l
Chloride	mg/l
Sulfate	mg/l
Calcium	mg/l
Magnesium	mg/l
Potassium	mg/l
Sodium	mg/l

The remainder of the data is measured in ug/l.

GIANT REFINING COMPANY
ONSITE REMEDIATION PROJECT
QUARTERLY ANALYTICAL DATA SUMMARY
THIRD QUARTER 1995

	JULY	AUG	SEP
SYSTEM INFLUENT			
GENERAL WATER CHEMISTRY			
Lab pH (s.u.)	7.0		
Lab Conductivity, umhos/cm	3620.00		
Total Dissolved Solids (180)	2590.00		
Total Dissolved Solids (calc.)	2537.00		
Total Alkalinity as CaCO3	424.00		
Total Hardness as CaCO3	1149.00		
Bicarbonate as HCO3	517.00		
Carbonate as CO3	0.00		
Hydroxide as OH	0.00		
Chloride	221.00		
Sulfate	1190.00		
Calcium	397.00		
Magnesium	39.00		
Potassium	3.10		
Sodium	431.00		
Cation/Anion Balance	2.70		
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		

1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	1.0
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	19
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	13
Toluene	ND
Xylenes	49
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

SYSTEM EFFLUENT

GENERAL WATER CHEMISTRY	JULY	AUG	SEPT
Lab pH (s.u.)	6.8		
Lab Conductivity, umhos/cm	3650.00		
Total Dissolved Solids (180)	2550.00		
Total Dissolved Solids (calc.)	2526.00		
Total Alkalinity as CaCO3	420.00		
Total Hardness as CaCO3	1155.00		
Bicarbonate as HCO3	512.00		
Carbonate as CO3	0.00		
Hydroxide as OH	0.00		
Chloride	218.00		
Sulfate	1180.00		
Calcium	399.00		
Magnesium	39.00		
Potassium	2.30		
Sodium	440.00		
Cation/Anion Balance	3.97		
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		

1,1-Dichloroethene	ND	
cis-1,2-Dichloroethene	ND	
trans-1,2-Dichloroethene	ND	
1,2-Dichloropropane	ND	
cis-1,3-Dichloropropene	ND	
trans-1,3-Dichloropropene	ND	
Methylene chloride	ND	
1,1,2,2-Tetrachloroethane	ND	
Tetrachloroethene	ND	
1,1,1-Trichloroethane	ND	
1,1,2-Trichloroethane	ND	
Trichloroethene	ND	
Trichlorofluoromethane	ND	
Vinyl chloride	ND	
AROMATICS		
Benzene	ND	ND
Chlorobenzene	ND	
1,2-Dichlorobenzene	ND	
1,3-Dichlorobenzene	ND	
1,4-Dichlorobenzene	ND	
Ethylbenzene	ND	ND
Toluene	ND	ND
Xylenes	ND	ND
Trichlorotrifluoroethane		
Methyl-t-Butyl Ether	ND	
POLYNUCLEAR AROMATIC HYDROCARBONS		
Naphthalene	ND	
Acenaphthylene	ND	
1-Methylnaphthalene	ND	
2-Methylnaphthalene	ND	
Acenaphthene	ND	
Fluorene	ND	
Phenanthrene	ND	
Anthracene	ND	
Fluoranthene	ND	

Pyrene	ND
Benzo(a)anthracene	ND
Chrysene	ND
Benzo(b)fluoranthene	ND
Benzo(k)fluoranthene	ND
Benzo(a)pyrene	ND
Dibenzo(a,h)anthracene	ND
Benzo(g,h,i)perylene	ND
Indeno(1,2,3-c,d)pyrene	ND

GBR-15	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	1.2		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	10		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		

1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	1.2
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	3.1
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

GBR-17	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		

1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

GBR-24D	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		

1,2-Dichlorobenzene	0.7
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	22
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

AROMATICS

Benzene	3.0
Chlorobenzene	ND
1,2-Dichlorobenzene	0.7
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	2.3
Toluene	ND
Xylenes	3.1
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

POLYNUCLEAR AROMATIC HYDROCARBONS

Naphthalene	ND
Acenaphthylene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND

Acenaphthene	ND
Fluorene	0.67
Phenanthrene	0.17
Anthracene	ND
Fluoranthene	ND
Pyrene	ND
Benzo(a)anthracene	ND
Chrysene	ND
Benzo(b)fluoranthene	ND
Benzo(k)fluoranthene	ND
Benzo(a)pyrene	ND
Dibenzo(a,h)anthracene	ND
Benzo(g,h,i)perylene	ND
Indeno(1,2,3-c,d)pyrene	ND

GBR-30	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		

trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

GBR-31	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		

1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

GBR-32

	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	2.4		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	1.6		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	99		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	9.4		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	5.9		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		
AROMATICS			
Benzene	ND		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		

Ethylbenzene	ND		
Toluene	ND		
Xylenes	ND		
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		

GBR-48	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	2.0		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	0.4		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	51		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	6.7		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	4.2		
Trichlorofluoromethane	ND		

Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

GBR-49

	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	0.9		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	0.4		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	58		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		

trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	8.6
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	3.8
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

GBR-50	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		

1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	3.1
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	1.1
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	0.2
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

OFFSITE WELLS

SHS-3

	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		

AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-y-Butyl Ether	ND

SHS-4

	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		

1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

SHS-10	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		

1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	1.3
Toluene	ND
Xylenes	2.3
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

SHS-12

	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		

Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	0.3
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

SHS-13

	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	0.2		
1,2-Dichloroethane	4.8		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		
AROMATICS			
Benzene	ND		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		

Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

SHS-15

	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	0.3		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	9.6		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		

AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

SHS-16

	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		

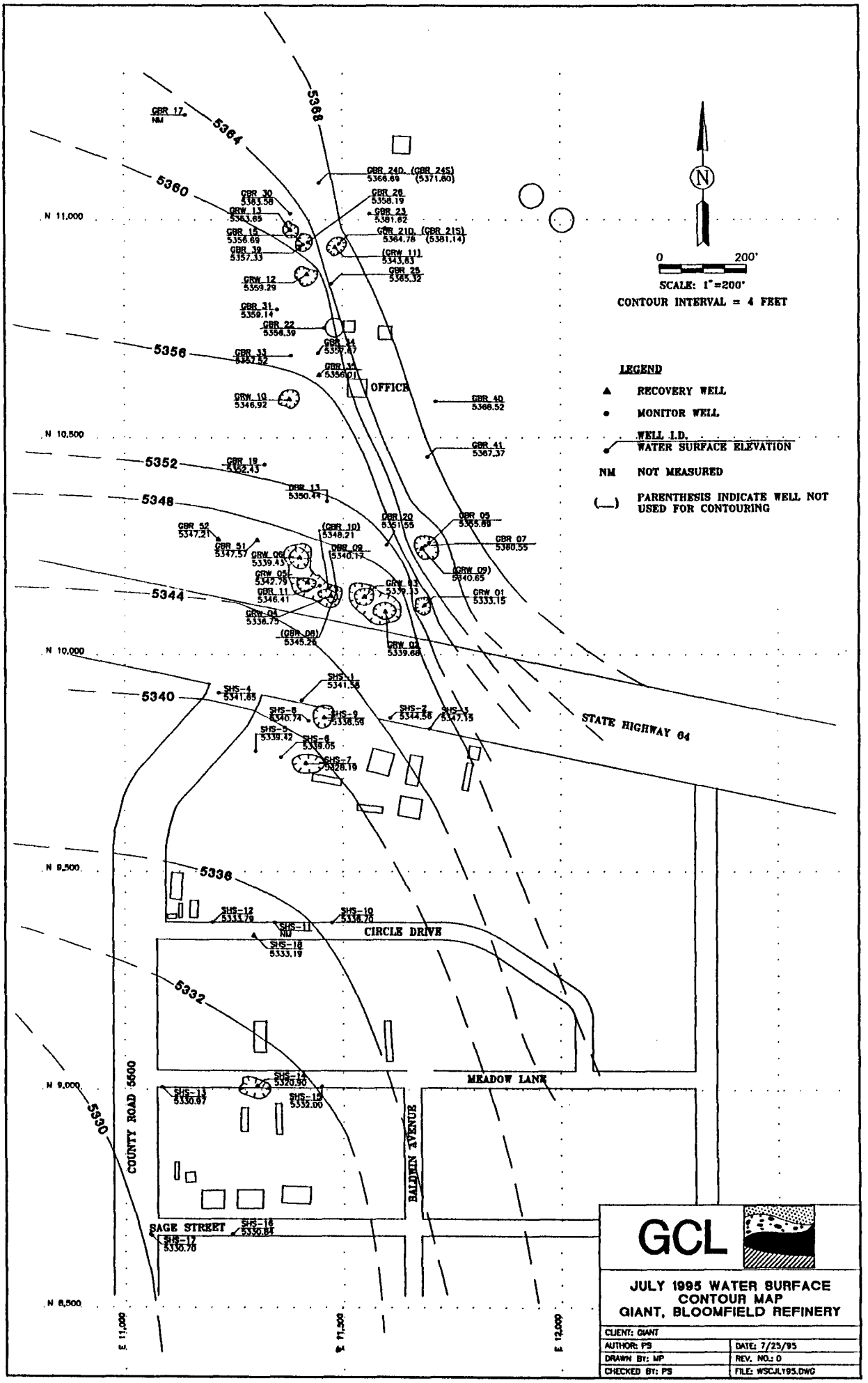
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

SHS-17

	JULY	AUG	SEP
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		

1,1-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	
Methyl-t-Butyl Ether	ND

*ND - Not detected at specified detection limit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5364
5360
5356
5352
5348
5344
5340
5336
5332
5330
N 11,000
N 10,500
N 10,000
N 9,500
N 9,000
N 8,500
E 11,000
E 11,500
E 12,000
GBR 17 NM
GBR 24D (GBR 24S) 5366.69 (5371.80)
GBR 30 5363.58
GRW 13 5363.65
GBR 26 5358.19
GBR 23 5381.62
GBR 15 5356.69
GBR 21D (GBR 21S) 5364.78 (5381.14)
GBR 39 5357.33
(GRW 11) 5343.63
GRW 12 5359.29
GBR 25 5365.32
GBR 31 5359.14
GBR 22 5358.39
GBR 32 5357.47
GBR 33 5357.52
GBR 34 5356.01
OFFICE
GRW 10 5346.92
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GBR 05 5365.89
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GBR 07 5360.55
GBR 51 5347.57
GRW 06 5339.43
GBR 09 5340.17
GRW 05 5342.79
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GRW 03 5339.13
GBR 11 5346.41
GRW 01 5333.15
GRW 04 5336.79
(GBR 08) 5345.26
GRW 02 5339.68
SHS-1 5341.58
SHS-4 5341.65
SHS-8 5340.74
SHS-9 5338.58
SHS-2 5344.56
SHS-5 5347.15
SHS-3 5339.42
SHS-6 5339.05
SHS-7 5328.19
STATE HIGHWAY 64
SHS-12 5333.76
SHS-10 5336.76
SHS-11 NM
CIRCLE DRIVE
SHS-18 5333.19
MEADOW LANE
SHS-14 5320.90
SHS-13 5330.87
SHS-15 5332.00
COUNTY ROAD 5600
BALDWIN AVENUE
SAGE STREET
SHS-16 5330.84
SHS-17 5330.76
0
200'
SCALE: 1"=200'
CONTOUR INTERVAL = 4 FEET
LEGEND
RECOVERY WELL
MONITOR WELL
WELL I.D.
WATER SURFACE ELEVATION
NM NOT MEASURED
(—) PARENTHESIS INDICATE WELL NOT USED FOR CONTOURING
GCL
JULY 1995 WATER SURFACE CONTOUR MAP
GIANT, BLOOMFIELD REFINERY
CLIENT: GIANT
AUTHOR: PS
DATE: 7/25/95
DRAWN BY: MP
REV. NO.: 0
CHECKED BY: PS
FILE: WSCJLY95.DWG

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE

JULY, 1995

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
GRW-1	5394.30	61.15	61.15	0.00	5333.15
GRW-2	5391.28	51.60	51.60	0.00	5339.68
GRW-3	5388.77	49.44	49.44	0.00	5339.33
GRW-4	5390.02	53.27	53.25	0.02	5336.77
GRW-5	5390.56	47.77	47.77	0.00	5342.79
GRW-6	5390.81	51.38	51.38	0.00	5339.43
GRW-10	5395.02	48.10	43.95	4.15	5350.24
GRW-11	5397.85	54.22	54.22	0.00	5343.63
GRW-12	5397.24	37.95	37.95	0.00	5359.29
GRW-13	5396.90	43.25	43.25	0.00	5353.65
GBR-5	5395.07	39.48	36.15	3.33	5358.25
GBR-6	5395.70	59.64	59.64	0.00	5336.06
GBR-7	5395.85	35.30	34.40	0.90	5361.27
GBR-8	5390.50	45.25	43.90	1.35	5346.33
GBR-9	5389.92	49.75	49.75	0.00	5340.17
GBR-10	5390.57	42.36	42.36	0.00	5348.21
GBR-11	5389.43	43.02	43.00	0.02	5346.43
GBR-13	5393.04	42.60	42.54	0.06	5350.49
GBR-15	5397.99	41.30	41.30	0.00	5356.69
GBR-18	5421.68	30.20	30.20	0.00	5391.48
GBR-19	5393.83	41.40	40.56	0.84	5353.10
GBR-20	5393.47	41.92	41.90	0.02	5351.57
GBR-21S	5400.65	19.51	19.49	0.02	5381.16
GBR-21D	5400.19	35.41	35.41	0.00	5364.78
GBR-22	5395.91	39.52	37.16	2.36	5358.28
GBR-23	5403.72	22.10	22.10	0.00	5379.44
GBR-24S	5396.08	24.28	24.28	0.00	5366.00
GBR-24D	5396.77	30.08	30.08	0.00	5366.69
GBR-25	5396.72	31.40	31.40	0.00	5365.32
GBR-26	5395.59	37.40	37.40	0.00	5358.19
GBR-30	5396.58	33.00	33.00	0.00	5363.58
GBR-31	5394.86	35.72	35.72	0.00	5359.14
GBR-33	5396.28	38.76	38.76	0.00	5357.52
GBR-34	5394.00	36.33	36.23	0.10	5357.75
GBR-35	5393.66	37.65	36.33	1.32	5357.07
GBR-39	5397.55	40.22	40.22	0.00	5357.33
GBR-40	5400.76	32.24	32.24	0.00	5368.52
GBR-41	5396.35	28.98	28.98	0.00	5367.37
GBR-51	5389.68	42.11	42.11	0.00	5347.57
GBR-52	5387.74	40.53	40.53	0.00	5347.21

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE
JULY, 1995

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
SHS-1	5383.54	41.96	41.94	0.02	5341.60
SHS-2	5381.66	37.10	37.10	0.00	5344.56
SHS-3	5383.33	36.18	36.18	0.00	5347.15
SHS-4	5383.62	41.97	41.97	0.00	5341.65
SHS-5	5378.36	38.94	38.94	0.00	5339.42
SHS-6	5378.17	39.12	39.12	0.00	5339.05
SHS-7	5375.89	47.70	47.70	0.00	5328.19
SHS-8	5380.25	39.51	39.51	0.00	5340.74
SHS-9	5380.79	42.20	42.20	0.00	5338.59
SHS-10	5373.80	37.10	37.10	0.00	5336.70
SHS-12	5373.94	40.15	40.15	0.00	5333.79
SHS-13	5367.81	36.84	36.84	0.00	5330.97
SHS-14	5367.07	46.17	46.17	0.00	5320.90
SHS-15	5366.21	34.21	34.21	0.00	5332.00
SHS-16	5362.58	31.74	31.74	0.00	5330.84
SHS-17	5364.35	33.65	33.65	0.00	5330.70
SHS-18	5373.64	40.45	40.45	0.00	5333.19

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY VOLUME CHANGE

THIRD QUARTER, 1995

Tank Number	Beginning Volume	Ending Volume	Net Change
102	13,142	16,198	3,056
106	8,010	8,010	0
21	67,472	67,472	0
22	70,808	71,773	965
Total Net Volume Change			4,021

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY RECOVERY WELL
VOLUME TABULATION

THIRD QUARTER, 1995

Well	Month #1	Month #2	Month #3	Total
GRW-1	8,200	9,080	6,960	24,240
GRW-2	12,750	15,490	12,410	40,650
GRW-3	7,880	10,240	9,920	28,040
GRW-4	40,560	33,490	320	74,370
GRW-5	28,240	35,100	28,320	91,660
GRW-6	27,780	34,350	27,270	89,400
GRW-9	5,800	3,490	1,120	10,410
GRW-10	248,640	302,060	252,180	802,880
GRW-11	29,430	54,520	51,680	135,630
GRW-12	2,130	10,300	7,000	19,430
GRW-13	9,050	3,340	4,680	17,070
SHS-7	1,851	1,749	376	3,976
SHS-9	6,194	7,039	6120	19,353
SHS-14	153,937	178,098	118,701	450,736
SHS-18	12,176	13,395	9,327	34,898
TOTAL VOLUME PUMPED IN GALLONS				1,842,743

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
TOTAL VOLUME SUMMARY

THIRD QUARTER, 1995

Total Volume Of Water Recovered	1,842,743
Net Change In Storage Volume	4,021
Total Water Treated And Pumped To The Infiltration Gallery	1,846,764

GIANT
REFINING CO.

5764 US Highway 64
Farmington, New Mexico
87401

505
632-8024
632-8006

August 11, 1995

Mr. William Olson
Hydrogeologist
New Mexico Oil Conservation Division
Environmental Bureau
P. O. Box 2088
Santa Fe, NM 87504-2088

Dear Mr. Olson:

Enclosed you will find the quarterly report for Giant Refining Company's Bloomfield Refinery for the second quarter of 1995.

Please contact me if you have any questions.

Sincerely,

Tim Kinney
Remediation Project Manager

/dm

Enclosure

cc w/enc.: Carl Shook-Giant
Kim Bullerdick-Giant
Jacque Cumbie-Giant
Stephanie Odell-BLM
Maura Hanning-EID
Chris Shuey-SWRIC
Valda Terauds-H+GCL
Jim Durrett-SJC
Herbert Gorrod-EPA
Denny Foust-OCD

QUARTERLY DATA REPORT

GIANT BLOOMFIELD REFINERY

SECOND QUARTER, 1995

Prepared By:

GIANT REFINING COMPANY
5764 U. S. Highway 64
Farmington, NM 87401
(505) 632-8006
FAX (505) 632-4025

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY
QUARTERLY REPORT
SECOND QUARTER, 1995

INTRODUCTION

The air stripper operations were discontinued in the second quarter. All water is treated by the carbon filter unit exclusively.

SUMMARY

Section 2

Section 2 contains a summary of the quarterly analytical results. Raw data, as received from the laboratory, is available on request as a supplement to the quarterly report.

Section 3

A quarterly potentiometric surface map, as well as the adjusted water surface elevation and product thickness for each well, is included in Section 3.

Section 4

Section 4 illustrates the volume history for the quarter. Total volume pumped from each well, as well as current tank volumes and the reinjection volume, is reported. Additional detail, on a weekly basis, is also available if desired.

SECTION 2

The following pages show the quarterly analytical data for the Giant Refining Remediation Project. The data is broken down into units as described below.

	Unit of Measure
Total dissolved solids (180)	mg/l
Total dissolved solids (calc)	mg/l
Total alkalinity as CaCO3	mg/l
Total hardness as CaCO3	mg/l
Bicarbonate as HCO3	mg/l
Carbonate as CO3	mg/l
Chloride	mg/l
Sulfate	mg/l
Calcium	mg/l
Magnesium	mg/l
Potassium	mg/l
Sodium	mg/l

The remainder of the data is measured in ug/l.

GIANT REFINING COMPANY
ONSITE REMEDIATION PROJECT
QUARTERLY ANALYTICAL DATA SUMMARY
SECOND QUARTER, 1995

STRIPPER INFLUENT	April	May	June
GENERAL WATER CHEMISTRY			
Lab pH (s.u.)	6.5		7
Lab conductivity, umhos/cm	3540		3620
Total dissolved solids (180)	2560		2590
Total dissolved solids (calc)	2537		2537
Total alkalinity as CaCO3	268		424
Total hardness as CaCO3	1060		1149
Bicarbonate as HCO3	327		517
Carbonate as CO3	0		0
Hydroxide as OH	0		0
Chloride	348		221
Sulfate	1190		1190
Calcium	364		397
Magnesium	37		39
Potassium	4.3		3
Sodium	434		431
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
1,2-Dichloroethene			

STRIPPER INFLUENT (cont.)	April	May	June
trans-1,2-Dichloroethene	ND		
cis-1,2-Dichloroethene	0.3		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		
AROMATICS			
Benzene	ND		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Ethylbenzene	13		
Toluene	3.5		
Xylenes	78		
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		

SYSTEM EFFLUENT

	April	May	June
GENERAL WATER CHEMISTRY			
Lab pH (s.u.)	6.7		7
Lab conductivity, umhos/cm	3430		3650
Total dissolved solids (180)	2500		2550
Total dissolved solids (calc)	2431		2526
Total alkalinity as CaCO3	139		420
Total hardness as CaCO3	1040		1155
Bicarbonate as HCO3	170		512
Carbonate as CO3	0		0
Hydroxide as OH	0		0
Chloride	333		218
Sulfate	1190		1180
Calcium	357		399
Magnesium	36		39
Potassium	3.1		2
Sodium	432		440
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
1,2-Dichloroethene			
trans-1,2-Dichloroethene	ND		
cis-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		

SYSTEM EFFLUENT (cont.)	April	May	June
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		
AROMATICS			
Benzene	ND		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Ethylbenzene	ND		
Toluene	ND		
Xylenes	ND		
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		

GBR-31

	April	May	June
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
1,2-Dichloroethene			
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		
AROMATICS			
Benzene	ND		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Ethylbenzene	ND		
Toluene	ND		
Total Xylenes	ND		
Methyl-t-butyl Ether	ND		

SHS-10

	April	May	June
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
1,2-Dichloroethene			
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		
AROMATICS			
Benzene	ND		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Ethylbenzene	1		
Toluene	ND		
Total Xylenes	0.6		
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		

SHS-12

	April	May	June
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
1,2-Dichloroethene			
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		
AROMATICS			
Benzene	ND		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Ethylbenzene	ND		
Toluene	ND		
Total Xylenes	ND		
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		

SHS-13

	April	May	June
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane (EDB)	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
1,2-Dichloroethene			
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		
AROMATICS			
Benzene	ND		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Ethylbenzene	ND		
Toluene	ND		
Total Xylenes	ND		
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		

SHS-16	April	May	June
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
1,2-Dichloroethene			
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		
AROMATICS			
Benzene	ND		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Ethylbenzene	ND		
Toluene	ND		
Xylenes	ND		
Trichlorotrifluoroethane			
Methyl-t-Butyl-Ether	ND		

SHS-17

	April	May	June
HALOCARBONS			
Bromodichloromethane	ND		
Bromoform	ND		
Bromomethane	ND		
Carbon tetrachloride	ND		
Chloroethane	ND		
2-Chloroethylvinylether			
Chloroform	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dibromoethane	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichlorethene	ND		
1,2-Dichloroethene			
cis-1,2-Dichloroethene	ND		
trans-1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis-1,3-Dichloropropene	ND		
trans-1,3-Dichloropropene	ND		
Methylene chloride	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl chloride	ND		
AROMATICS			
Benzene	ND		
Chlorobenzene	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Ethylbenzene	ND		
Toluene	ND		
Xylenes	ND		
Trichlorotrifluoroethane			
Methyl-t-Butyl Ether	ND		

*ND - Not detected at specified detection limit

Giant, Bloomfield: April 5, 1995 Water Levels

Well #	Wellhead Elevation (ft. AMSL)	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (feet)	Adjusted WSEL* (ft. AMSL)
GRW-1	5394.30	39.66			5354.64
GRW-2	5391.28	51.74			5339.54
GRW-3	5388.77	53.85			5334.92
GRW-4	5390.02	59.85			5330.17
GRW-5	5390.56	66.60			5323.96
GRW-6	5390.81	49.38			5341.43
GRW-9	5395.70	55.05			5340.65
GRW-10	5395.02	47.30	42.90	4.40	5351.25
GRW-11	5397.85	49.57			5348.28
GRW-12	5397.24	44.30			5352.94
GRW-13	5396.90	36.76			5360.14
GBR-5	5395.07	33.80	32.13	1.67	5362.61
GBR-7	5395.85	34.10	33.57	0.53	5362.18
GBR-8	5390.50	44.94	43.80	1.14	5346.48
GBR-9	5389.92	50.09			5339.83
GBR-10	5390.57	42.32			5348.25
GBR-11	5389.43	43.43	42.95	0.48	5346.39
GBR-13	5393.04	42.64	42.40	0.24	5350.59
GBR-15	5397.99	40.10			5357.89
GBR-17	5402.69	NM			NM
GBR-18	5421.68	29.31			5392.37
GBR-19	5393.83	40.90	40.63	0.27	5353.15
GBR-20	5393.47	41.10			5352.37
GBR-21S	5400.65	19.58			5381.07
GBR-21D	5400.19	37.39			5362.80
GBR-22	5395.91	36.84			5359.07
GBR-23	5403.72	22.34			5381.38
GBR-24S	5396.08	24.86			5371.22
GBR-24D	5396.77	29.50			5367.27
GBR-25	5396.72	31.41			5365.31
GBR-26	5395.59	36.75			5358.84
GBR-30	5396.58	33.45			5363.13
GBR-31	5394.86	36.07			5358.79
GBR-33	5396.28	39.04			5357.24
GBR-34	5394.00	36.44	36.43	0.01	5357.57
GBR-35	5393.66	36.45	36.42	0.03	5357.23
GBR-39	5397.55	39.18			5358.37
GBR-40	5400.76	32.25			5368.51
GBR-41	5396.35	27.60			5368.75
GBR-51	5389.68	42.09			5347.59
GBR-52	5387.74	40.53			5347.21

NM = Not Measured *WSEL = Water Surface Elevation adjusted for product depth.
Note: 0.803 = the specific gravity used for adjusted product depth.

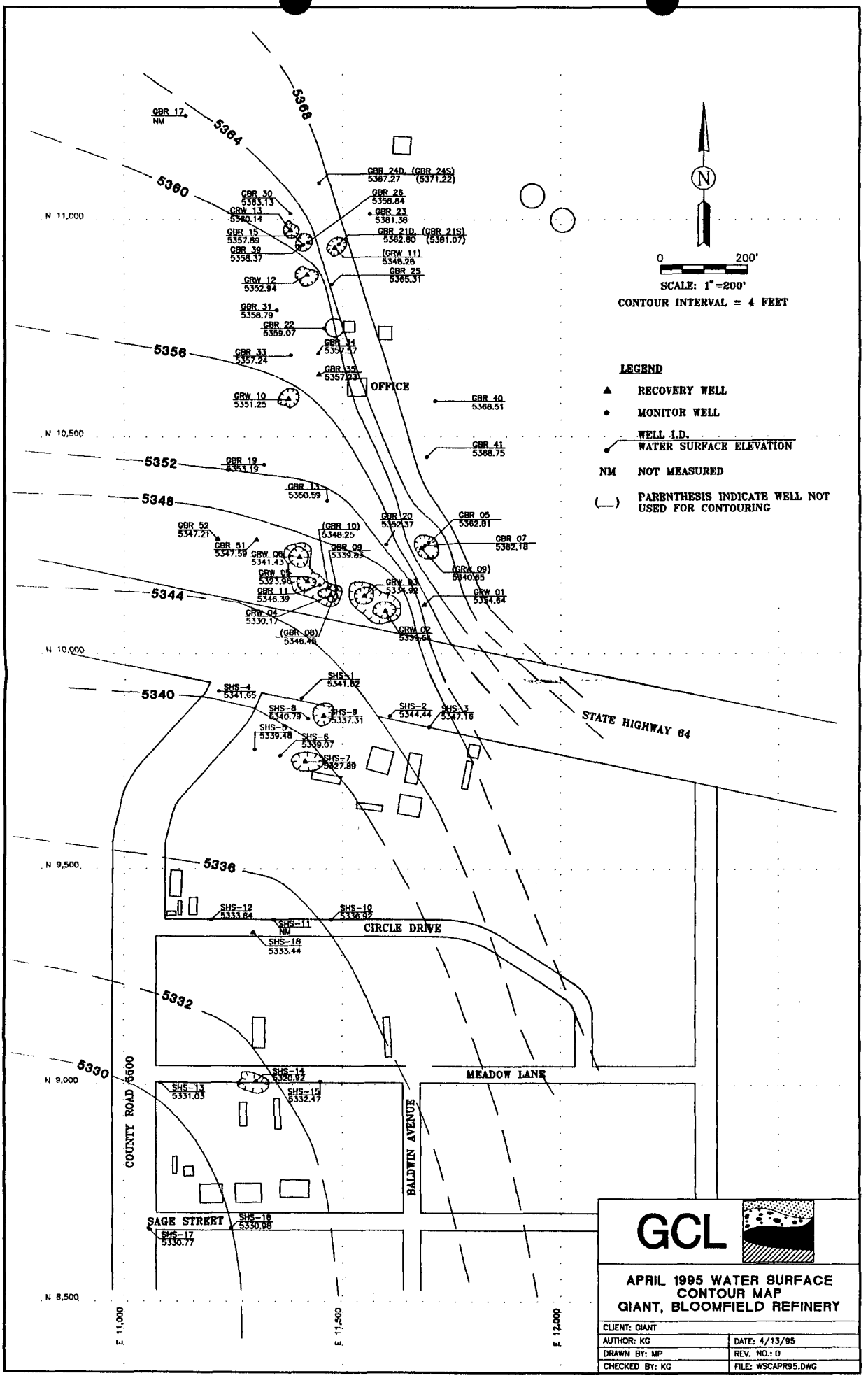
G:\54027\APR95WL.WQ2

Giant, Bloomfield: April 5, 1995 Water Levels

Well #	Wellhead Elevation (ft. AMSL)	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (feet)	Adjusted WSEL* (ft. AMSL)
SHS-1	5383.54	41.99	41.90	0.09	5341.62
SHS-2	5381.66	37.22			5344.44
SHS-3	5383.33	36.17			5347.16
SHS-4	5383.62	41.97			5341.65
SHS-5	5378.36	38.88			5339.48
SHS-6	5378.17	39.10			5339.07
SHS-7	5375.89	48.00			5327.89
SHS-8	5380.25	39.46			5340.79
SHS-9	5380.79	43.48			5337.31
SHS-10	5373.80	36.88			5336.92
SHS-12	5373.94	40.10			5333.84
SHS-13	5367.81	36.78			5331.03
SHS-14	5367.07	46.15			5320.92
SHS-15	5366.21	33.74			5332.47
SHS-16	5362.58	31.60			5330.98
SHS-17	5364.35	33.58			5330.77
SHS-18	5373.64	40.20			5333.44

NM = Not Measured *WSEL = Water Surface Elevation adjusted for product depth.
Note: 0.803 = the specific gravity used for adjusted product depth.

G:\54027\APR95WL.WQ2


5368
5364
5360
5356
5352
5348
5344
5340
5336
5332
5330
N 11,000
N 10,500
N 10,000
N 9,500
N 9,000
N 8,500
E. 11,000
E. 11,500
E. 12,000
GBR 17 NM
GBR 24D. (GBR 24S) 5367.27 (5371.22)
GBR 30 5365.13
GBR 26 5358.84
GRW 13 5360.14
GBR 23 5381.38
GBR 15 5357.89
GBR 21D. (GBR 21S) 5362.80 (5381.07)
GBR 39 5356.37
(GRW 11) 5346.26
GBR 25 5365.31
GRW 12 5352.94
GBR 31 5358.79
GBR 22 5359.07
GBR 34 5352.47
GBR 33 5357.24
GBR 35 5357.93
OFFICE
GRW 10 5351.25
GBR 40 5368.51
GBR 41 5368.75
GBR 19 5353.19
GBR 12 5350.59
GBR 20 5362.37
GBR 05 5362.81
GBR 52 5347.21
(GBR 10) 5348.25
GBR 07 5362.18
GBR 51 5347.59
GRW 06 5341.43
GBR 09 5339.83
(GRW 09) 5340.65
GRW 05 5323.96
GRW 03 5334.92
GBR 11 5346.39
GRW 01 5354.64
GRW 04 5330.17
(GBR 08) 5346.48
GRW 02 5335.61
SHS-4 5341.65
SHS-1 5341.82
SHS-8 5340.79
SHS-9 5337.31
SHS-2 5344.44
SHS-3 5347.16
STATE HIGHWAY 64
SHS-5 5339.48
SHS-6 5339.07
SHS-7 5327.89
SHS-12 5333.84
SHS-10 5336.92
SHS-11 NM
CIRCLE DRIVE
SHS-18 5333.44
SHS-14 5320.92
MEADOW LANE
SHS-13 5331.03
SHS-15 5332.47
COUNTY ROAD 6500
BALDWIN AVENUE
SAGE STREET
SHS-16 5330.98
SHS-17 5330.77
0
200'
SCALE: 1"=200'
CONTOUR INTERVAL = 4 FEET
LEGEND
RECOVERY WELL
MONITOR WELL
WELL I.D.
WATER SURFACE ELEVATION
NM NOT MEASURED
( ) PARENTHESIS INDICATE WELL NOT USED FOR CONTOURING
GCL
APRIL 1995 WATER SURFACE CONTOUR MAP
GIANT, BLOOMFIELD REFINERY
CLIENT: GIANT
AUTHOR: KG
DATE: 4/13/95
DRAWN BY: MP
REV. NO.: 0
CHECKED BY: KG
FILE: WSCAPR95.DWG

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY VOLUME CHANGE

SECOND QUARTER, 1995

Tank Number	Beginning Volume	Ending Volume	Net Change
102	16,790	13,142	(3,648)
106	8,010	8,010	0
21	54,218	54,218	0
22	70,808	70,808	0
Total Net Volume Change			(3,648)

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY RECOVERY WELL
VOLUME TABULATION

SECOND QUARTER, 1995

Well	Month #1	Month #2	Month #3	Total
GRW-1	530	1,250	1,600	3,380
GRW-2	9,080	11,350	14,500	34,930
GRW-3	9,360	11,220	12,700	33,280
GRW-4	16,690	21,230	31,730	69,650
GRW-5	25,710	34,540	35,820	96,070
GRW-6	20,450	28,040	34,860	83,350
GRW-9	4,530	5,130	7,420	17,080
GRW-10	181,740	197,000	291,900	670,640
GRW-11	15,790	30,840	35,310	81,940
GRW-12	7,340	8,730	9,830	25,900
GRW-13	8,510	8,840	3,390	20,740
SHS-7	18	72	2,174	2,264
SHS-9	6,580	5,747	716	13,043
SHS-14	133,080	149,549	187,811	470,440
SHS-18	10,971	15,968	17,975	44,914
TOTAL VOLUME PUMPED IN GALLONS				1,667,621

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
TOTAL VOLUME SUMMARY

SECOND QUARTER, 1995

Total Volume Of Water Recovered	1,667,621
Net Change In Storage Volume	3,648
Total Water Treated	1,671,269
Less Air Stripper Evaporative Loss (1/2%)	8,356
Total Water Pumped to the Infiltration Gallery	1,662,913

QUARTERLY DATA REPORT

GIANT BLOOMFIELD REFINERY

FIRST QUARTER, 1995

Prepared By:

GIANT REFINING COMPANY
5764 U. S. Highway 64
Farmington, NM 87401
(505) 632-8006
FAX (505) 632-4025

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY
QUARTERLY REPORT
FIRST QUARTER, 1995

INTRODUCTION

No significant changes were made in the first quarter.

SUMMARY

Section 2

Section 2 contains a summary of the quarterly analytical results. Raw data, as received from the laboratory, is available on request as a supplement to the quarterly report.

Section 3

A quarterly potentiometric surface map, as well as the adjusted water surface elevation and product thickness for each well, is included in Section 3.

Section 4

Section 4 illustrates the volume history for the quarter. Total volume pumped from each well, as well as current tank volumes and the reinjection volume, is reported. Additional detail, on a weekly basis, is also available if desired.

NOTE: Section 5 formerly contained a summary of the quarterly analytical results for the Bioremediation Project; however, the project has been completed.

SECTION 2

The following pages show the quarterly analytical data for the Giant Refining Remediation Project. The data is broken down into units as described below.

	Unit of Measure
Total dissolved solids (180)	mg/l
Total dissolved solids (calc)	mg/l
Total alkalinity as CaCO3	mg/l
Total hardness as CaCO3	mg/l
Bicarbonate as HCO3	mg/l
Carbonate as CO3	mg/l
Chloride	mg/l
Sulfate	mg/l
Calcium	mg/l
Magnesium	mg/l
Potassium	mg/l
Sodium	mg/l

The remainder of the data is measured in ug/l.

GIANT REFINING COMPANY
ONSITE REMEDIATION PROJECT
QUARTERLY ANALYTICAL DATA SUMMARY
FIRST QUARTER, 1995

STRIPPER INFLUENT

	JANUARY
GENERAL WATER CHEMISTRY	
Lab pH (s.u.)	2.20
Lab Conductivity, umhos/cm	10700.00
Total Dissolved Solids (180)	2610.00
Total Dissolved Solids (calc.)	3433.00
Total Alkalinity as CaCO3	ND
Total Hardness as CaCO3	1033.00
Bicarbonate as HCO3	ND
Carbonate as CO3	0.00
Hydroxide as OH	0.00
Chloride	1360.00
Sulfate	1240.00
Calcium	359.00
Magnesium	34.00
Potassium	2.70
Sodium	439.00
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	ND
Chloroform	ND
Chloromethane	4.30
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethene	ND
1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	1.10
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND

STRIPPER INFLUENT (contined)

	JANUARY
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	14.00
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	45.00
Trichlorotrifluoroethane	ND

STRIPPER EFFLUENT

GENERAL WATER CHEMISTRY	JANUARY
Lab pH (s.u.)	7.00
Lab Conductivity, umhos/cm	3210.00
Total Dissolved Solids (180)	2580.00
Total Dissolved Solids (calc.)	2563.00
Total Alkalinity as CaCO3	249.00
Total Hardness as CaCO3	1109.00
Bicarbonate as HCO3	304.00
Carbonate as CO3	0.00
Hydroxide as OH	0.00
Chloride	296.00
Sulfate	1250.00
Calcium	391.00
Magnesium	32.00
Potassium	2.30
Sodium	444.00

PAH	
Naphthalene	ND
Acenaphthylene	ND
Acenaphthene	ND
Fluorene	ND
Phenanthrene	ND
Anthracene	ND
Fluoranthene	ND
Pyrene	ND
Benzo(A)Anthracene	ND
Chrysene	ND
Benzo(B)Fluoranthene	ND
Benzo(K)Fluoranthene	ND
Benzo(A)Pyrene	ND
Dibenzo(a,h)Anthracene	ND
Benzo(g,h,i)Perylene	ND
Indeno(1,2,3-CD)Pyrene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND

HALOCARBONS	JANUARY
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND

STRIPPER EFFLUENT (continued)	JANUARY
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethene	ND
1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--
METALS	
Silver	ND
Arsenic	ND
Beryllium	ND
Cadmium	ND
Copper	0.012
Mercury	ND
Nickel	0.198
Lead	0.003
Antimony	ND
Selenium	ND

GRW-13	JANUARY
PAH	ND
Naphthalene	ND
Acenaphthylene	ND
Acenaphthene	ND
Fluorene	ND
Phenanthrene	ND
Anthracene	ND
Fluoranthene	ND
Pyrene	ND
Benzo(A)Anthracene	ND
Chrysene	ND
Benzo(B)Fluoranthene	ND
Benzo(K)Fluoranthene	ND
Benzo(A)Pyrene	ND
Dibenzo(a,h)Anthracene	ND
Benzo(g,h,i)Perylene	ND
Indeno(1,2,3-CD)Pyrene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	0.7
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	5.4
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND

JANUARY

cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

*ND - Not detected at specified detection limit

GBR-15

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	0.7
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	9.8
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	1.2
Trichlorotrifluoroethane	---

JANUARY

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	

AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

GBR-24D

JANUARY

PAH	ND
Naphthalene	ND
Acenaphthylene	ND
Acenaphthene	ND
Fluorene	1.2
Phenanthrene	0.34
Anthracene	ND
Fluoranthene	ND
Pyrene	0.073
Benzo(A)Anthracene	ND
Chrysene	0.064
Benzo(B)Fluoranthene	ND
Benzo(K)Fluoranthene	ND
Benzo(A)Pyrene	ND
Dibenzo(a,h)Anthracene	ND
Benzo(g,h,i)Perylene	ND
Indeno(1,2,3-CD)Pyrene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND

GBR-24D

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	11
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	0.6
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	2.3
Toluene	ND
Xylenes	0.8
Trichlorotrifluoroethane	--

GBR-30

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

GBR-30	JANUARY
PAH	ND
Naphthalene	ND
Acenaphthylene	ND
Acenaphthene	ND
Fluorene	ND
Phenanthrene	0.031
Anthracene	ND
Fluoranthene	ND
Pyrene	ND
Benzo(A)Anthracene	ND
Chrysene	0.11
Benzo(B)Fluoranthene	0.035
Benzo(K)Fluoranthene	ND
Benzo(A)Pyrene	ND
Dibenzo(a,h)Anthracene	ND
Benzo(g,h,i)Perylene	ND
Indeno(1,2,3-CD)Pyrene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND

GBR-31

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	0.7
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

GBR-31	JANUARY
PAH	
Naphthalene	ND
Acenaphthylene	ND
Acenaphthene	ND
Fluorene	ND
Phenanthrene	ND
Anthracene	ND
Fluoranthene	ND
Pyrene	ND
Benzo(A)Anthracene	ND
Chrysene	ND
Benzo(B)Fluoranthene	ND
Benzo(K)Fluoranthene	ND
Benzo(A)Pyrene	ND
Dibenzo(a,h)Anthracene	ND
Benzo(g,h,i)Perylene	ND
Indeno(1,2,3-CD)Pyrene	ND
1-Methylnaphthalene	ND
2-Methylnaphthalene	ND

GENERAL WATER CHEMISTRY	JANUARY
Lab pH (s.u.)	7.1
Lab Conductivity, umhos/cm	5210.00
Total Dissolved Solids (180)	4180.00
Total Dissolved Solids (calc.)	3830.00
Total Alkalinity as CaCO3	318.00
Total Hardness as CaCO3	1504.00
Dissolved Oxygen	NA
Bicarbonate as HCO3	388.00
Carbonate as CO3	0.00
Hydroxide as OH	0.00
Chloride	569.00
Sulfate	1770.00
Calcium	517.00
Magnesium	52.00
Potassium	3.50
Sodium	731.00
Cation/Anion Balance	2.27%

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	1.4
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	1.8
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	120 D(10)
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND

Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	11
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	6.4
Trichlorofluoromethane	ND
Vinyl chloride	ND

AROMATICS

Benzene	0.8
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

D(10)=DILUTED 10X

GBR-48

	JANUARY
GENERAL WATER CHEMISTRY	
Lab pH (s.u.)	7.2
Lab Conductivity, umhos/cm	5870.00
Total Dissolved Solids (180)	4740.00
Total Dissolved Solids (calc.)	4288.00
Total Alkalinity as CaCO3	256.00
Total Hardness as CaCO3	1705.00
Dissolved Oxygen	NA
Bicarbonate as HCO3	312.00
Carbonate as CO3	0.00
Hydroxide as OH	0.00
Chloride	708.00
Sulfate	1940.00
Calcium	589.00
Magnesium	57.00
Potassium	4.70
Sodium	832.00
Cation/Anion Balance	3.57%
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	1.4
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	0.3
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	54
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND

GBR-48 (continued)

	JANUARY
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	6.1
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	3.6
Trichlorofluoromethane	ND
Vinyl chloride	ND

AROMATICS

Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

GBR-49

JANUARY

GENERAL WATER CHEMISTRY

Lab pH (s.u.)	7.2
Lab Conductivity, umhos/cm	3760.00
Total Dissolved Solids (180)	3100.00
Total Dissolved Solids (calc.)	2885.00
Total Alkalinity as CaCO3	307.00
Total Hardness as CaCO3	1197.00
Dissolved Oxygen	NA
Bicarbonate as HCO3	374.00
Carbonate as CO3	0.00
Hydroxide as OH	0.00
Chloride	225.00
Sulfate	1530.00
Calcium	413.00
Magnesium	40.00
Potassium	3.50
Sodium	492.00
Cation/Anion Balance	1.24%

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	1.2
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	0.4
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	79
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND

GBR-49 (continued)

	JANUARY
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	4.2
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

GBR-50

JANUARY

GENERAL WATER CHEMISTRY

Lab pH (s.u.)	7.1
Lab Conductivity, umhos/cm	3090.00
Total Dissolved Solids (180)	2690.00
Total Dissolved Solids (calc.)	3025.00
Total Alkalinity as CaCO3	200.00
Total Hardness as CaCO3	1322.00
Dissolved Oxygen	NA
Bicarbonate as HCO3	244.00
Carbonate as CO3	0.00
Hydroxide as OH	0.00
Chloride	39.00
Sulfate	1940.00
Calcium	485.00
Magnesium	30.00
Potassium	2.30
Sodium	405.00
Cation/Anion Balance	1.47%

HALOCARBONS

Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	2.3
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND

GBR-50 (continued)

	JANUARY
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

GBR-51

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

GBR-52

JANUARY

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

OFFSITE WELLS

SHS-3

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	---

SHS-4

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

SHS-6

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

SHS-9

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	0.6
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	60
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	41
Toluene	ND
Xylenes	7.1
Trichlorotrifluoroethane	--

SHS-10

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	0.7
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

SHS-12

	JANUARY
HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND
AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

SHS-13 JANUARY

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	13
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

SHS-14 JANUARY

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	4.6
Toluene	ND
Xylenes	7.9
Trichlorotrifluoroethane	--

SHS-15 JANUARY

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	0.5
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	1.9
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

SHS-16 JANUARY

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

SHS-17 JANUARY

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

AROMATICS	
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	ND
Trichlorotrifluoroethane	--

SHS-18 JANUARY

HALOCARBONS	
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chloroethane	ND
2-Chloroethylvinylether	--
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dibromoethane (EDB)	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,2-Dichloroethene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

AROMATICS	
Benzene	5.6
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	260
Toluene	ND
Xylenes	460
Trichlorotrifluoroethane	--

*DILUTED 10X

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE

JANUARY, 1995

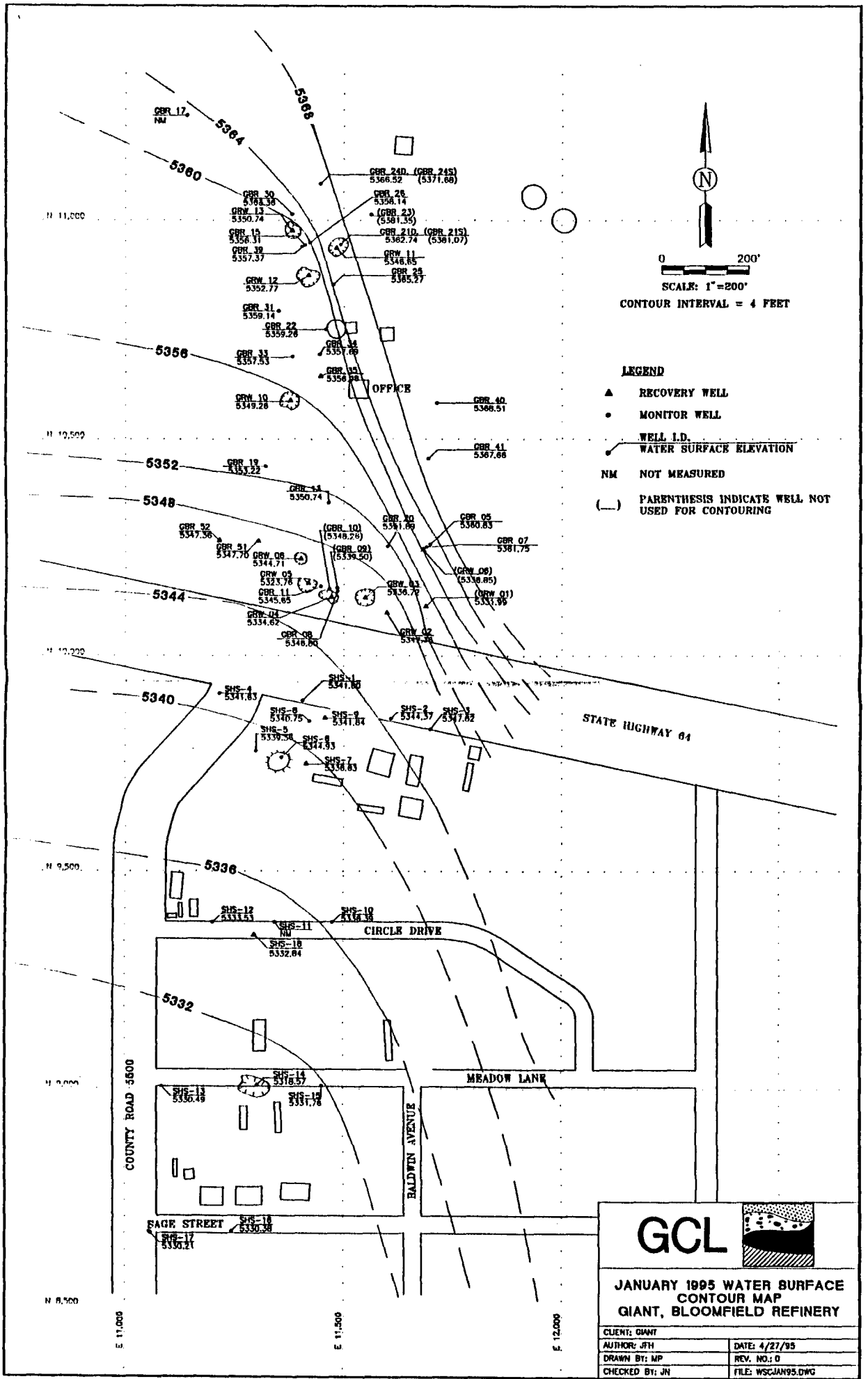
WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
GRW-1	5394.30	62.31	62.31	0.00	5331.99
GRW-2	5391.28	43.92	43.92	0.00	5347.36
GRW-3	5388.77	52.05	52.05	0.00	5336.72
GRW-4	5390.02	55.40	55.40	0.00	5334.62
GRW-5	5390.56	66.80	66.80	0.00	5323.76
GRW-6	5390.81	46.10	46.10	0.00	5344.71
GRW-10	5395.02	47.94	45.22	2.72	5349.26
GRW-11	5397.85	52.20	52.20	0.00	5345.65
GRW-12	5397.24	44.47	44.47	0.00	5352.77
GRW-13	5396.90	53.64	53.64	0.00	5343.26
GBR-5	5395.07	35.84	33.85	1.99	5360.82
GBR-6	5395.70	58.85	58.85	0.00	5336.85
GBR-7	5395.85	34.65	33.97	0.68	5361.74
GBR-8	5390.50	43.72	43.70	0.02	5346.80
GBR-9	5389.92	50.42	50.42	0.00	5339.50
GBR-10	5390.57	42.31	42.31	0.00	5348.26
GBR-11	5389.43	42.89	42.88	0.01	5346.55
GBR-13	5393.04	42.31	42.30	0.01	5350.74
GBR-15	5397.99	41.68	41.68	0.00	5356.31
GBR-18	5421.68	29.64	29.64	0.00	5392.04
GBR-19	5393.83	41.20	40.46	0.74	5353.22
GBR-20	5393.47	41.58	41.58	0.00	5351.89
GBR-21S	5400.65	19.95	19.90	0.05	5380.74
GBR-21D	5400.19	37.45	37.45	0.00	5362.74
GBR-22	5395.91	36.65	36.64	0.01	5359.27
GBR-23	5403.72	22.37	22.37	0.00	5379.32
GBR-24S	5396.08	24.41	24.40	0.01	5365.84
GBR-24D	5396.77	30.25	30.25	0.00	5366.52
GBR-25	5396.72	31.45	31.45	0.00	5365.27
GBR-26	5395.59	37.45	37.45	0.00	5358.14
GBR-30	5396.58	33.22	33.22	0.00	5363.36
GBR-31	5394.86	35.72	35.72	0.00	5359.14
GBR-33	5396.28	38.75	38.75	0.00	5357.53
GBR-34	5394.00	36.77	36.20	0.57	5357.69
GBR-35	5393.66	38.00	36.35	1.65	5356.98
GBR-39	5397.55	40.18	40.18	0.00	5357.37
GBR-40	5400.76	32.25	32.25	0.00	5368.51
GBR-41	5396.35	28.69	28.69	0.00	5367.66
GBR-51	5389.68	41.98	41.98	0.00	5347.70
GBR-52	5387.74	40.38	40.38	0.00	5347.36

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH

GIANT REFINING BLOOMFIELD REFINERY
QUARTERLY POTENTIOMETRIC SURFACE
JANUARY, 1995
Page 2

WELL #	WELLHEAD ELEVATION IN FEET	DEPTH TO WATER IN FEET	DEPTH TO PRODUCT IN FEET	PRODUCT THICKNESS IN FEET	ADJUSTED WSEL* IN FEET
SHS-1	5383.54	41.94	41.94	0.00	5341.60
SHS-2	5381.66	37.29	37.29	0.00	5344.37
SHS-3	5383.33	35.51	35.51	0.00	5347.82
SHS-4	5383.62	41.99	41.99	0.00	5341.63
SHS-5	5378.36	39.00	39.00	0.00	5339.36
SHS-6	5378.17	33.24	33.24	0.00	5344.93
SHS-7	5375.89	39.30	39.25	0.05	5336.63
SHS-8	5380.25	39.50	39.50	0.00	5340.75
SHS-9	5380.79	38.95	38.95	0.00	5341.84
SHS-10	5373.80	37.27	37.27	0.00	5336.53
SHS-12	5373.94	40.55	40.55	0.00	5333.39
SHS-13	5367.81	37.32	37.32	0.00	5330.49
SHS-14	5367.07	48.50	48.50	0.00	5318.57
SHS-15	5366.21	34.45	34.45	0.00	5331.76
SHS-16	5362.58	32.20	32.20	0.00	5330.38
SHS-17	5364.35	34.14	34.14	0.00	5330.21
SHS-18	5373.64	40.80	40.80	0.00	5332.84

* WSEL - WATER SURFACE ELEVATION ADJUSTED FOR PRODUCT DEPTH


5368
5364
5360
5356
5352
5348
5344
5340
5336
5332
GBR 17
NM
GBR 24D (GBR 24S)
5366.52 (5371.68)
GBR 26
5358.14
(GBR 23)
(5361.35)
GBR 21D (GBR 21S)
5362.74 (5361.07)
GRW 11
5346.65
GBR 25
5365.27
GBR 30
5364.36
GRW 13
5350.74
GBR 15
5356.31
GBR 19
5357.37
GRW 12
5352.77
GBR 31
5359.14
GBR 22
5359.28
GBR 34
5357.69
GBR 33
5357.53
GBR 35
5356.98
OFFICE
GRW 10
5349.28
GBR 40
5368.51
GBR 41
5367.68
GBR 18
5353.22
GBR 14
5350.74
GBR 52
5347.36
GBR 51
5347.70
GRW 06
5344.71
(GBR 10)
(5348.26)
(GBR 09)
(5339.50)
GBR 20
5361.69
GBR 05
5360.83
GBR 07
5361.75
(GRW 08)
(5338.85)
(GRW 01)
5333.66
GRW 05
5323.76
GBR 11
5345.65
GRW 03
5336.72
GRW 04
5334.62
GBR 08
5346.86
GRW 02
5344.36
SHS-4
5341.83
SHS-1
5341.80
SHS-8
5340.75
SHS-9
5341.84
SHS-2
5344.37
SHS-3
5347.82
SHS-5
5339.58
SHS-6
5344.93
SHS-7
5336.83
STATE HIGHWAY 64
SHS-12
5333.53
SHS-11
NM
SHS-10
5336.38
SHS-16
5332.84
CIRCLE DRIVE
SHS-14
5338.57
SHS-13
5330.49
SHS-15
5331.76
MEADOW LANE
COUNTY ROAD 5500
BALDWIN AVENUE
SAGE STREET
SHS-18
5330.38
SHS-17
5330.21
N 11,000
N 10,500
N 10,000
N 9,500
N 9,000
N 8,500
E 11,000
E 11,500
E 12,000
N
0
200'
SCALE: 1"=200'
CONTOUR INTERVAL = 4 FEET
LEGEND
RECOVERY WELL
MONITOR WELL
WELL I.D.
WATER SURFACE ELEVATION
NM NOT MEASURED
(__) PARENTHESIS INDICATE WELL NOT USED FOR CONTOURING
GCL
JANUARY 1995 WATER SURFACE CONTOUR MAP
GIANT, BLOOMFIELD REFINERY
CLIENT: GIANT
AUTHOR: JTH
DATE: 4/27/95
DRAWN BY: MP
REV. NO.: 0
CHECKED BY: JN
FILE: WSCJAN95.DWG

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY VOLUME CHANGE

FIRST QUARTER, 1995

Tank Number	Beginning Volume	Ending Volume	Net Change
102	16,339	16,790	451
106	8,010	8,010	0
21	54,707	54,218	(489)
22	71,773	70,808	(965)
Total Net Volume Change			(1,003)

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
QUARTERLY RECOVERY WELL
VOLUME TABULATION

FIRST QUARTER, 1995

Well	Month #1	Month #2	Month #3	Total
GRW-1	6,070	3,990	640	10,700
GRW-2	9,340	10,090	13,110	32,540
GRW-3	12,060	11,950	14,870	38,880
GRW-4	19,020	19,960	26,320	65,300
GRW-5	55,050	41,200	43,680	139,930
GRW-6	61,210	24,510	130	85,850
GRW-9	2,530	4,110	6,910	13,550
GRW-10	226,260	197,980	284,350	708,590
GRW-11	39,410	21,100	26,920	87,430
GRW-12	9,960	9,260	10,800	30,020
GRW-13	14,590	14,250	15,110	43,950
SHS-7	11	44	33	88
SHS-9	622	598	1151	2,371
SHS-14	161,942	164,087	78,814	404,843
SHS-18	8,510	9,907	14,160	32,577
TOTAL VOLUME PUMPED IN GALLONS				1,696,619

GIANT REFINING COMPANY
BLOOMFIELD REFINERY
TOTAL VOLUME SUMMARY

FIRST QUARTER, 1995

Total Volume Of Water Recovered	1,696,619
Net Change In Storage Volume	1,003
Total Water Treated	1,697,622
Less Air Stripper Evaporative Loss (1/2%)	8,488
Total Water Pumped to the Infiltration Gallery	1,689,134