GW - 1

GENERAL CORRESPONDENCE

YEAR(S):
1982 - 2007

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
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BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CINDY PADILLA
DEPUTY SECRETARY

2007 FEB 7 AM 10:18

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

February 1, 2007

Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

RE: COMMENTS ON GIANTS RESPONSE TO THE APPROVAL WITH MODIFICATIONS RIVER TERRACE VOLUNTARY CORRECTIVE MEASURES BIOVENTING SYSTEM SIX-MONTH START-UP REPORT JANUARY 2006 THROUGH JUNE 2006; HWB-GRCB-06-006
EPA ID # NMD089416416

Dear. Messrs Schmaltz and Riege,

The New Mexico Environment Department (NMED) has received Giant Refining Company's, Bloomfield Refinery (GRCB) response letter titled *Approval with Modifications River Terrace Voluntary Corrective Measures Bioventig System Six Month Start-Up Report January 2006 through June 2006*, (Report) dated December 19, 2006. NMED has the following comments.

Comment 6

At the end of Comment 6, GRCB states that bioventing wellhead pressure data are not needed in monitoring the performance of the system since there are air velocity indicators at each well head. Measuring the injection pressures along with air velocities at the bioventing wells is necessary to monitor the effectiveness of the bioventing system because combined injection pressure and velocity measurements can indicate the distribution of air entering into the subsurface along with vadose zone (soil) permeability. The collection of injection pressures along with injection velocity measurements at all bioventing wells is a requirement, beginning with the 2007 periodic monitoring.

Comment 7
The column titled "[photo ionization detector] PID (PPM)" in the tables *Soil Gas Monitoring 2005/2006* modified by GRCB denotes the number 1534 repeatedly in temporary wells TP-#1, TP-#4, TP-#5, TP-#6, and TP-#8. NMED questions this data because it is unlikely the exact same PID value would be recorded at various locations and during different events. In future reports, GRCB must provide explanations for seemingly anomalous or unusual results.

Comment 9(b)
The response to Comment 9(b) provides the reason why bioventing wells BV-1 and BV-3 are likely outside the bioventing system area of influence and states that the results of the "in-situ respiration test for samples collected at bioventing wells BV-1 and BV-3 exhibited significantly lower oxygen utilization rates than what was calculated from samples collected at the other BV wells." NMED was unable to evaluate this conclusion because the data was identified as "[not applicable] N/A" in Table 2 of Section 6.0 of the Report. The area of influence is further defined, with new information, that the "existing slurry wall turns and extends southward from the most northern end of the above-grade sheet-pile." NMED is unable to confirm the location of the slurry wall extension because there is no documentation that the slurry wall extension was installed and if it was installed, the depth interval and length are unknown. GRCB must provide NMED with the oxygen utilization rates for BV-1, BV-3, and TP-9.

Upon review of the Annual Report for the River Terrace Bioventing System, NMED will address future monitoring and the area of influence as it may affect sampling in our response letter. The oxygen utilization rates must be submitted to NMED on or before March 1, 2007.

Please contact Hope Monzeglio of my staff at 505-476-6045 if you have questions regarding this letter.

Sincerely,

John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
H. Monzeglio, NMED HWB
W. Price, OCD
B. Powell, NMOCD Aztec District Office
B. Wilkinson, USEPA Region 6
File: Reading File and GRCB 2007 File
HWB-GRCB-06-006

GIANT
REFINING COMPANY

2007 JAN 3 PM 3 28

Hope Monzeglio
New Mexico Environmental Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East
Bldg 1
Santa Fe, NM 87505

Certified Mail: 7099 3220 0010 2242 5303

December 27, 2006

Re: Approval
North Boundary Barrier Collection System Phase II
Annual Report
May 2005 to May 2006
Giant Refining Company, Bloomfield Refinery
NMED ID # NMD089416416 HWB-GRCB-06-004

Dear Ms. Monzeglio,

Giant Refining Company Bloomfield (GRCB) received the November 2, 2006 letter from the New Mexico Environmental Department (NMED) requesting additional information regarding the North Boundary Barrier Collection System Phase II Annual Report May 2005 to May 2006. The following correspondence will address NMED's comments.

Comment #3: The monitoring well data from April 2005 was collected during the 2005 Semi-Annual Groundwater Sampling Event. Installation of the collection wells and observation wells was not completed until late April 2005. Initial groundwater sampling of the collection and observation wells was conducted in early May 2005. Thus the discrepancy in sampling dates between the monitoring wells and the collection and observation wells.

Comment #4: The replacement page requested by NMED is included with this response.

Comment #7: Per our telephone conversation on November 28, 2006, Phase II data from May 2006 through December 2006 will be added to the Annual

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Groundwater Report due April 15, 2007. The Phase II well elevations and sampling data will be segregated from the typical Annual Groundwater data.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,

Cindy Hurtado
Environmental Coordinator – Giant Refining – Bloomfield

Cc: Randy Schmaltz – Environmental Manager – Giant Refining – Bloomfield
Wayne Price – NMOCD Santa Fe

PHASE II MONITORING - 2005/2006

Water Analysis BTEX & Field Data - Collection Wells

		EPA Method 8021B					EPA Method 8015B	Field Data			
WQCC 20NMAC 6.2.3103		0.01	0.75	0.75	0.62				6.0-9.0		1000
	Date Sampled	mg/L Benzene	mg/L Toluene	mg/L Ethylben	mg/L Xylene	mg/L MTBE	mg/L DRO	mmhos/cm E.C.	pH	Farenheit Temp.	mg/L TDS
CW23+10	Apr-06	4.20	<0.010	<0.010	0.11	2.9	NR	3306	6.86	53.5	2601
	Aug-05	9.40	0.015	0.42	0.36	NR	NR	3284	6.96	68.0	2554
	May-05	6.30	0.076	0.19	0.35	NR	NR	3046	6.92	54.0	2425
CW23+90	Apr-06	2.90	<0.100	0.11	<0.300	0.94	NR	3306	6.87	53.7	2601
	Aug-05	3.30	<0.05	0.17	0.33	NR	NR	3222	6.96	68.0	2501
	May-05	3.40	0.035	0.17	0.40	NR	NR	2702	6.86	55.0	2124
CW25+95	Apr-06	<0.001	<0.001	<0.001	<0.003	0.0054	NR	2205	6.93	52.3	1670
	Aug-05	0.00059	<0.0005	<0.0005	<0.0005	NR	NR	1252	6.98	66.0	899
	May-05	0.001	<0.0005	<0.0005	<0.0005	NR	NR	1287	6.92	56.0	949

NS = Well is Dry - No Sample NR = Not Required SPH = Well Contains Separated Phase Hydrocarbons - No Sample

GIANT
REFINING COMPANY

John Kieling
New Mexico Environmental Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East
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2006 DEC 21 PM 1 04

Certified Mail: 7099 3220 0010 2242 5297

December 19, 2006

Re: Approval with Modifications
River Terrace Voluntary Corrective Measures
Bioventing System Six-Month Start-Up Report
January 2006 Through June 2006
Giant Refining Company, Bloomfield Refinery
NMED ID # NMD089416416 HWB-GRCB-06-006

Dear Mr. Kieling,

Giant Refining Company Bloomfield (GRCB) received the November 2, 2006 letter from the New Mexico Environmental Department (NMED) requesting additional information regarding the River Terrace Voluntary Corrective Measures Bioventing System Six-Month Start-Up Report January 2006 Through June 2006 Giant Refining Company, Bloomfield Refinery. The following correspondence will address NMED's requests.

Comment #3: The subject data was collected on January 17, 2006 to satisfy Pre-Aeration requirements for BV-#1 through BV -#13 listed in Table 1B of the Bioventing Monitoring Plan (Revised) dated October 28, 2005 . This data was inadvertently left out of the report but is included with this response as BV Soil Gas Monitoring – Pre-Aeration.

Comment #5: The number following the Well ID for each soil sample collected during the installation of the bioventing (BV) wells corresponds to the depth below existing grade from which the sample was collected. For instance, soil sample BV-1-6 corresponds to a sample collected from bioventing well BV-1 at a depth approximately 6 feet below existing grade.

Comment #6: BV pressure data was collected during system start-up activities as listed on Table 1B of the Bioventing Monitoring Plan (Revised) dated October

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28, 2005 and is submitted with Comment #3. Routine system monitoring was conducted following guidelines described in Section 3.0 and Table 1C of the Bioventing Monitoring Plan and the data acquired is presented in Section 5.0 of the River Terrace Voluntary Corrective Measures Bioventing System Six-Month Start-Up Report submitted August 28, 2006. Pressure measurements were obtained from TP wells throughout the bioventing area and this data indicates the system is operating effectively. Flow meters at the BV wells are checked periodically to verify system operation but the flows are not recorded. GRCB personnel did not interpret Table 1C or Section 3.0 of the Bioventing Monitoring Plan as requiring documented BV well pressures.
For future routine monitoring, GRCB could include BV wellhead pressure measurements in the data collected and report this data in future River Terrace Annual Reports, if deemed necessary. However, GRCB maintains that BV wellhead pressure data is not needed in monitoring the performance of the system, especially since there are air velocity indicators at each well head.

Comment #7: GRCB has modified the tables presented in Section 5.0 (Monitoring Results) of the 6-month report to reflect the weekly, monthly, and quarterly data collected during the first six months of system operation. The revised tables are attached and will be integrated into the River Terrace Annual Report.

Comment #9(b): The results of the in-situ respiration test for samples collected at bioventing well BV-1 and BV-3 exhibited significantly lower oxygen utilization rates than what was calculated from samples collected at the other BV wells. Therefore, the results from these two BV wells do not appear "representative" of the biodegradation activity within the western portion of the river terrace area, and were therefore not used to calculate the average biodegradation rate for the influenced area.

Figure 1 of the River Terrace Bioventing System – In-Situ Respiration Test Summary shows the area influenced by the bioventing system, based on the results of the in-situ respiration test. Initially, the existing slurry wall was thought to extend north, parallel to the San Juan River (Refer to Figure 1 of the In Situ Respiration Test Summary), ending where the above-grade sheet-piling terminates. However, after further discussion with operators at the Refinery and, upon analysis of the data collected during the respiration test, it now appears that the existing slurry wall turns and extends southward from the most northern end of the above-grade sheet-pile. This understanding is also supported by the fact that TP-7 appears to be completed in the barrier wall because it does not yield any appreciable water volume. Because wells BV-1 and BV-3 are located east of the slurry wall, and the area influenced by the bioventing system is west and south of the slurry wall, the wells are considered outside the area of influence.

Comment 9(c): The results of the in-situ respiration test from samples collected at TP-9 are similar to the sample results collected from BV-1 and BV-3. The oxygen concentration remained relatively stable during the respiration test at a concentration of approximately 20% by volume, which indicates negligible

biodegradation activity at this location. Therefore the data collected from TP-9 was not used to calculate the average biodegradation rate for the bioventing area. Further, the pressure data collected at TP-9, which appears in Section 5.0 of the River Terrace Voluntary Corrective Measures Bioventing System Six-Month Start-Up Report, has been zero. This data as well as the location of TP-9 east of the slurry wall indicates the well is outside the bioventing area of influence.

GRCB will include a revised site map in the Annual Report that delineates the area influenced by the bioventing system based on the additional performance data collected during the second-half of 2006.

Comment #10: Based on the results of the in-situ respiration test conducted in May 2006, the temporary piezometer wells most influenced by the bioventing system (i.e., exhibiting measurable bioremedial activity) include TP-1, TP-2, TP-5, TP-6, and TP-8. This area corresponds to the portion of the River Terrace west and south of the existing slurry/sheet pile barrier wall, which is the area meant by the phrase "the western portion of the river terrace." Also see response to Comment #9(b).

Comment #12: GRCB will provide separate air and water results in the Annual Reports.

Comment #14: Soil gas samples were collected in a l-liter Tedlar bags. For laboratory analysis, a 50 ml portion of the soil gas sample is extracted from the Tedlar bag using a gas-tight syringe. The concentration of the extracted sample is reported in micrograms (ug). The measured concentration is divided by the sample volume (50 ml), resulting in a concentration by volume (ug/ml) then multiply by 1000 to report in ug/L. The revised summary (see response to Comment #7) of the soil gas analytical results were changed from mg/L to ug/L, as reported in the laboratory reports for each sample analysis.

GRCB will incorporate NMED's requested revisions into subsequent versions of the bioventing system reports. If you need additional information, please contact me at (505) 632-4161.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,

Cindy Hurtado

Cindy Hurtado
Environmental Coordinator – Giant Refining – Bloomfield

Cc: Randy Schmaltz – Environmental Manager – Giant Refining – Bloomfield
Wayne Price – NMOCD Santa Fe

River Terrace

BV Soil Gas Monitoring - Pre-Aeration

Sample Location	Sampling Activities	Date	Carbon Dioxide (%)	Oxygen (%)	Organic Vapors (ppm)	Pressure (inches of water)
BV - 1	Pre-Aeration	1/17/2006	0.0	20.9	30.0	0.0
BV - 2	Pre-Aeration	1/17/2006	0.4	14.3	505.0	0.0
BV - 3	Pre-Aeration	1/17/2006	5.6	13.0	18.5	0.0
BV - 4	Pre-Aeration	1/17/2006	0.0	18.6	224.0	0.0
BV - 5	Pre-Aeration	1/17/2006	0.1	11.3	896.0	0.0
BV - 6	Pre-Aeration	1/17/2006	0.2	18.3	234.0	0.0
BV - 7	Pre-Aeration	1/17/2006	0.0	19.0	255.0	0.0
BV - 8	Pre-Aeration	1/17/2006	0.1	15.1	410.5	0.0
BV - 9	Pre-Aeration	1/17/2006	0.0	14.8	315.0	0.0
BV - 10	Pre-Aeration	1/17/2006	0.0	21.0	262.0	0.0
BV - 11	Pre-Aeration	1/17/2006	0.1	14.6	340.1	0.0
BV - 12	Pre-Aeration	1/17/2006	0.0	17.2	256.0	0.0
BV - 13	Pre-Aeration	1/17/2006	0.1	15.0	727.0	0.0

RIVER TERRACE

Soil Gas Monitoring 2005/2006

Sample Location			Sampling Activities	DATE	Purge Volume (L)	Depth to Water (ft)	Pressure (Inches of Water)	PID (PPM)	Oxygen (%)	Carbon Dioxide (%)	Benzene (ug/L)	Ethylben (ug/L)	Toluene (ug/L)	Xylene (ug/L)	GRO (ug/L)
TP-#1	Start-Up		*Pre-Dewatering*	Week of 1/09/06	9.4	5.14	0.00	1401.0	15.0	1.3	5.8	3.5	47.0	320.0	2,800.0
			Pre-Aeration	Week of 1/16/06	14.5	7.88	0.00	191.0	3.1	4.5	NR	NR	NR	NR	NR
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	11.5	6.28	0.02	1490.0	18.1	0.0	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	13.0	7.25	0.08	1534.0	20.6	0.0	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	13.0	7.81	0.05	1534.0	20.0	0.0	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	14.0	8.15	0.10	1534.0	20.6	0.1	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	15.0	8.04	0.30	1534.0	20.7	0.1	22.0	12.0	321.0	2,100.0	8,500.0
	2nd Quarter			Week of 6/17/06	12.5	6.8	0.05	1452.0	18.9	0.5	2.6	<2.0	5.5	210.0	3,100.0
	3rd Quarter														
	4th Quarter														
TP-#2	Start-Up		*Pre-Dewatering*	Week of 1/09/06	12.0	6.62	0.00	1589.0	4.0	6.4	7.8	8.0	11.0	88.0	1,100.0
			Pre-Aeration	Week of 1/16/06	16.5	9.12	0.00	1490.0	3.0	2.9	NR	NR	NR	NR	NR
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	14.2	7.74	0.05	732.0	20.9	0.0	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	17.0	9.25	0.10	600.0	20.9	0.0	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	18.0	9.73	0.01	399.8	20.7	0.0	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	18.0	9.83	0.19	223.6	20.9	0.0	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	18.0	9.83	0.05	92.7	20.9	0.0	0.4	1.4	1.8	17.0	150.0
	2nd Quarter			Week of 6/17/06	15.1	8.27	0.15	23.8	20.9	0.0	0.2	0.1	0.2	2.8	25.0
	3rd Quarter														
	4th Quarter														

NS = Not Sampled due to Transformer Malfunction
NM = Not Measured
PR = Piezometer needs repair - Not Sampled
NR = Not Required
VP = Vacuum Pump Malfunction - Not Sampled
ft below TOC = feet below top of casing

RIVER TERRACE

Soil Gas Monitoring 2005/2006

Sample Location			Sampling Activities	DATE	Purge Volume (L)	Depth to Water (ft)	Pressure (Inches of Water)	PID (PPM)	Oxygen (%)	Carbon Dioxide (%)	Benzene (ug/L)	Ethylben (ug/L)	Toluene (ug/L)	Xylene (ug/L)	GRO (ug/L)
TP-#3	Start-Up		*Pre-Dewatering*	Week of 1/09/06	11.8	6.44	0.00	NM	17.8	0.0	<0.05	<0.05	<0.05	0.1	98.6
			Pre-Aeration	Week of 1/16/06	NM	NM	NM	NM	NM	NM	NR	NR	NR	NR	NR
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	12.8	7.01	0.00	16.5	20.9	0.0	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	13.0	7.14	0.00	163.0	20.9	0.0	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	11.0	6.15	0.00	227.7	20.9	0.0	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	PR	PR	PR	PR	PR	PR	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	15.0	8.09	0.00	179.8	18.6	0.6	0.55	0.53	2.2	23.0	1,300.0
	2nd Quarter			Week of 6/17/06	13.2	7.23	0.00	2.9	20.9	1.0	<0.10	<0.10	<0.10	<0.30	<5.0
	3rd Quarter														
	4th Quarter														
TP-#4	Start-Up		*Pre-Dewatering*	Week of 1/09/06	9 1	4.96	0.00	11.9	16.8	0.0	<0.05	0.073	0.071	0.29	17.00
			Pre-Aeration	Week of 1/16/06	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	10.0	5.74	0.00	658.0	19.3	0.1	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	11.0	6.06	0.00	1534.0	18.5	0.2	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	11.0	6.24	0.00	1534.0	18.1	0.2	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	12.0	6.34	0.00	VP	VP	VP	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	12.0	6.41	0.00	1534.0	18.5	0.6	54.0	23.0	76.0	630.0	19,000.0
	2nd Quarter			Week of 6/17/06	9.8	5.33	0.00	198.0	20.9	0.1	<1.0	<1.0	<1.0	12.00	80.00
	3rd Quarter														
	4th Quarter														

NS = Not Sampled due to Transformer Malfunction

NM = Not Measured

PR = Piezometer needs repair - Not Sampled

NR = Not Required

VP = Vacuum Pump Malfunction - Not Sampled

ft below TOC = feet below top of casing

RIVER TERRACE

Soil Gas Monitoring 2005/2006

Sample Location			Sampling Activities	DATE	Purge Volume (L)	Depth to Water	Pressure (Inches of Water)	PID (PPM)	Oxygen (%)	Carbon Dioxide (%)	Benzene (ug/L)	Ethylben (ug/L)	Toluene (ug/L)	Xylene (ug/L)	GRO (ug/L)
TP-#5	Start-Up		*Pre-Dewatering*	Week of 1/09/06	8 6	4.70	0.00	103.5	16.0	1.1	0.13	0.25	54.0	38.0	150.0
			Pre-Aeration	Week of 1/16/06	13.8	7.57	0.00	1202.0	7.4	0.8	NR	NR	NR	NR	NR
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	13.4	7.33	0.00	1490.0	18.1	0.0	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	13.9	7.60	0.00	1534.0	18.7	0.0	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	14.0	7.73	0.00	1534.0	20.6	0.0	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	14.0	7.85	0.00	1534.0	20.6	0.0	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	14.0	7.81	0.01	1534.0	19.7	0.1	69.0	55.0	310.0	2,000.0	34,000.0
	2nd Quarter			Week of 6/17/06	9.6	5.24	0.00	953.0	18.6	1.4	<10	11.0	15.0	130.0	1,800.0
	3rd Quarter														
	4th Quarter														
TP-#6	Start-Up		*Pre-Dewatering*	Week of 1/09/06	10.4	5.63	0.00	350.0	16.5	1.4	2.70	0.36	41.0	210.0	570.0
			Pre-Aeration	Week of 1/16/06	15.6	8.53	0.00	415.0	6.2	0.8	NR	NR	NR	NR	NR
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	14.9	8.15	0.00	1359.0	18.0	0.0	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	15.0	8.4	0.00	1254.0	18.8	0.1	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	16.0	8.54	0.01	1534.0	20.2	0.2	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	16 0	8.59	0.00	1534.0	19.7	0.3	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	16.0	8.61	0.00	1534.0	20.0	0.3	7.60	6.50	47.0	950.0	4,500.0
	2nd Quarter			Week of 6/17/06	11.3	6.18	0.00	56.9	20.6	0.5	<0.1	<0.10	0.2	3.1	100.0
	3rd Quarter														
	4th Quarter														

NS = Not Sampled due to Transformer Malfunction

NM = Not Measured

PR = Piezometer needs repair - Not Sampled

NR = Not Required

VP = Vacuum Pump Malfunction - Not Sampled

ft below TOC = feet below top of casing

RIVER TERRACE

Soil Gas Monitoring 2005/2006

Sample Location			Sampling Activities	DATE	Purge Volume (L)	Depth to Water	Pressure (Inches of Water)	PID (PPM)	Oxygen (%)	Carbon Dioxide (%)	Benzene (ug/L)	Ethylben (ug/L)	Toluene (ug/L)	Xylene (ug/L)	GRO (ug/L)
TP-#8	Start-Up		*Pre-Dewatering*	Week of 1/09/06	10.3	5.61	0.00	1589.0	4.6	8.9	6.9	2.9	31.0	300.0	1,800.0
			Pre-Aeration	Week of 1/16/06	15.8	8.65	0.00	847.0	1.3	5.2	NR	NR	NR	NR	NR
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	13.2	7.24	0.10	1490.0	20.9	0.0	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	15.0	8.38	0.10	1534.0	20.9	0.0	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	16.0	9.02	0.09	1534.0	20.7	0.0	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	17.0	9.22	0.10	1534.0	20.9	0.0	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	16.0	8.92	0.05	1534.0	20.7	0.1	8.8	13.0	220.0	1,900.0	7,700.0
	2nd Quarter			Week of 6/17/06	13.7	7.5	0.01	1641.0	20.9	0.1	<2.0	2.2	6.6	460.0	3,700.0
	3rd Quarter														
	4th Quarter														
TP-#9	Start-Up		*Pre-Dewatering*	Week of 1/09/06	11.3	5.08	0.00	8.5	17.2	0.2	<0.05	0.18	0.054	0.35	31.0
			Pre-Aeration	Week of 1/16/06	9.4	5.14	0.00	0.4	15.9	2.0	NR	NR	NR	NR	NR
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	9.5	5.22	0.00	58.3	20.7	0.0	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	9.6	5.25	0.00	27.8	20.9	0.0	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	9.5	5.24	0.00	18.5	20.9	0.0	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	9.0	5.28	0.00	51.4	20.9	0.0	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	10.0	5.21	0.00	7.7	20.6	0.1	<0.05	0.063	0.085	0.53	8.00
	2nd Quarter			Week of 6/17/06	9.0	5.26	0.00	13.9	20.9	0.0	<0.10	0.10	<0.10	0.62	31.00
	3rd Quarter														
	4th Quarter														

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VP = Vacuum Pump Malfunction - Not Sampled

ft below TOC = feet below top of casing

RIVER TERRACE

Soil Gas Monitoring 2005/2006

Sample Location			Sampling Activities	DATE	Purge Volume (L)	Depth to Water	Pressure (Inches of Water)	PID (PPM)	Oxygen (%)	Carbon Dioxide (%)	Benzene (ug/L)	Ethylben (ug/L)	Toluene (ug/L)	Xylene (ug/L)	GRO (ug/L)
TP-#10	Start-Up		*Pre-Dewatering*	Week of 1/09/06	9.3	5.08	0.00	0.0	17.8	0.0	<0.05	<0.05	<0.05	0.28	<5.0
			Pre-Aeration	Week of 1/16/06	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	10.0	5.54	0.00	31.2	18.1	0.8	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	10.0	5.67	0.00	52.5	18.5	0.8	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	10.0	5.74	0.00	110.9	17.6	0.8	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	11.0	5.85	0.00	VP	VP	VP	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	11.0	5.86	0.00	21.9	17.1	1.1	0.069	0.053	0.62	6.1	25.0
	2nd Quarter			Week of 6/17/06	9.6	5.23	0.00	6.7	20.9	0.0	0.11	<0.10	0.16	0.57	14.0
	3rd Quarter														
	4th Quarter														
TP-#11	Start-Up		*Pre-Dewatering*	Week of 1/09/06	10.2	5.55	0.00	0.0	17.5	0.3	<0.05	<0.05	<0.05	0.14	<5.0
			Pre-Aeration	Week of 1/16/06	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	11.0	6.03	0.00	24.0	20.7	0.3	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	11.0	6.1	0.00	73.2	20.9	0.3	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	11.0	6.19	0.00	65.2	20.2	0.3	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	12.0	6.29	0.00	VP	VP	VP	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	11.0	6.31	0.00	13.2	20.0	0.4	0.055	0.053	0.32	3.3	13.0
	2nd Quarter			Week of 6/17/06	10.3	5.61	0.00	2.6	18.8	1.4	<0.10	<0.10	<0.10	<0.30	<5.0
	3rd Quarter														
	4th Quarter														

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ft below TOC = feet below top of casing

RIVER TERRACE

Soil Gas Monitoring 2005/2006

Sample Location			Sampling Activities	DATE	Purge Volume (L)	Depth to Water	Pressure (Inches of Water)	PID (PPM)	Oxygen (%)	Carbon Dioxide (%)	Benzene (ug/L)	Ethylben... (ug/L)	Toluene (ug/L)	Xylene (ug/L)	GRO (ug/L)
TP-#12	Start-Up		*Pre-Dewatering*	Week of 1/09/06	13.5	7.38	0.00	0.2	17.8	0.0	<0.05	<0.05	<0.05	0.32	<5.0
			Pre-Aeration	Week of 1/16/06	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	14.0	7.73	0.00	27.0	19.3	1.3	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	14.0	7.79	0.00	122.0	19.3	1.1	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	14.0	7.86	0.00	72.5	18.8	1.1	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	15.0	7.94	0.00	VP	VP	VP	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	15.0	7.94	0.00	10.1	18.7	1.4	0.052	0.055	0.21	2.3	9.000
	2nd Quarter			Week of 6/17/06	13.6	7.44	0.00	6.7	20.9	0.0	0.12	<0.10	0.19	0.52	17.000
	3rd Quarter														
	4th Quarter														
TP-#13	Start-Up		*Pre-Dewatering*	Week of 1/09/06	11.4	6.24	0.00	0.1	17.8	0.0	<0.05	<0.05	<0.05	<0.05	<5.0
			Pre-Aeration	Week of 1/16/06	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	12.0	6.59	0.00	24.2	20.0	0.7	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	12.0	6.64	0.00	121.0	19.4	0.8	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	12.0	6.69	0.00	78.8	19.2	0.8	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	12.0	6.79	0.00	VP	VP	VP	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	12.0	6.78	0.00	12.6	19.1	1.0	0.05	0.085	0.17	1.6	8.6
	2nd Quarter			Week of 6/17/06	11.6	6.35	0.00	19.5	18.1	1.0	0.11	0.11	0.48	2.4	27.0
	3rd Quarter														
	4th Quarter														

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ft below TOC = feet below top of casing

RIVER TERRACE

Soil Gas Monitoring 2005/2006

Sample Location			Sampling Activities	DATE	Purge Volume (L)	Depth to Water	Pressure (inches of Water)	PID (PPM)	Oxygen (%)	Carbon Dioxide (%)	Benzene (ug/L)	Ethylben (ug/L)	Toluene (ug/L)	Xylene (ug/L)	GRO (ug/L)
MW #49	Start-Up		*Pre-Dewatering*	Week of 1/09/06	71.1	9.69	0.00	0.0	17.1	1.0	<0.05	0.082	<0.05	0.340	<5.0
			Pre-Aeration	Week of 1/16/06	74.0	10.13	0.00	2.0	19.8	0.7	NR	NR	NR	NR	NR
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	73.0	10.04	0.00	28.8	19.4	0.7	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	75.0	10.06	0.00	51.9	19.1	1.2	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	*73.0*	*10.05*	*0.00*	*89.4*	*18.7*	*1.1*	*NR*	*NR*	*NR*	*NR*	*NR*
		2nd Month		Week of 2/20/06	74.0	10.11	0.00	VP	VP	VP	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	74.0	10.07	0.00	20.3	19.2	1.0	<0.05	0.06	1.00	8.90	28.00
	2nd Quarter			Week of 6/17/06	73.0	9.98	0.00	16.1	16.8	2.7	<0.10	<0.10	<0.10	1.4	35.0
	3rd Quarter														
	4th Quarter														
DW #1	Start-Up		*Pre-Dewatering*	Week of 1/09/06	113.0	6.9	0.00	0.0	12.7	7.4	0.09	0.59	0.14	1.20	35.00
			Pre-Aeration	Week of 1/16/06	129.0	7.84	0.00	5.7	20.4	0.2	NR	NR	NR	NR	NR
	1st Quarter	1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			2nd Week	Week of 1/30/06	124.0	7.52	0.00	252.0	15.8	3.0	NR	NR	NR	NR	NR
			3rd Week	Week of 2/6/06	127.0	7.71	0.00	449.0	13.9	4.5	NR	NR	NR	NR	NR
			4th Week	Week of 2/13/06	129.0	7.89	0.00	120.2	13.6	4.2	NR	NR	NR	NR	NR
		2nd Month		Week of 2/20/06	130.0	7.91	0.00	VP	VP	VP	NR	NR	NR	NR	NR
		3rd Month		Week of 3/06/06	130.0	7.91	0.00	25.4	9.9	8.7	<0.05	0.17	0.61	5.20	61.00
	2nd Quarter			Week of 6/17/06	150.0	6.49	0.00	5.8	16.6	4.4	<0.10	<0.10	<0.10	0.33	8.60
	3rd Quarter														
	4th Quarter														

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ft below TOC = feet below top of casing

River Terrace

Ground Water Monitoring 2005/2006

				Field Measurements									EPA Method 8021B / WQCC 20NMAC 6.2.3103					EPA Method 8015B	
													0.001	0.75	0.75	0.62			
Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C. (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)		Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#1	Start-Up	*Baseline*	week of 8/15/05	5.35	NPP	9.38	2034	6.92	70.6	NR	NR		1.40	3.80	0.05	23.00	<0.050	1.90	66.00
		Pre-Dewatering	Week of 1/09/06	5.14	NPP	9.38	1911	6.93	48.0	4.34	183		NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	7.88	NPP	9.38	2116	7.05	49.5	0.19	-333		NR	NR	NR	NR	NR	NR	NR
	1st Quarter	1st Month *1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS
		1st Month *2nd Week*	Week of 1/30/06	6.28	NPP	9.38	1957	6.96	50.1	2.20	70		NR	NR	NR	NR	NR	NR	NR
		1st Month *3rd Week*	Week of 2/6/06	7.25	NPP	9.38	2284	7.04	50.1	4.21	144		NR	NR	NR	NR	NR	NR	NR
		1st Month *4th Week*	Week of 2/13/06	7.81	NPP	9.38	2095	6.98	48.5	11.86	87		NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	8.15	NPP	9.38	2261	7.06	50.7	0.883	99		NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	8.04	NPP	9.38	2233	7.04	52.0	0.83	186		1.50	4.10	<0.050	30.00	<0.120	3.80	72.00
	2nd Quarter		Week of 6/17/06	6.8	NPP	9.38	2372	6.96	67.3	0.56	-15		2.60	3.30	<0.250	18.00	<0.620	4.30	40.00
	3rd Quarter																		98.00
	4th Quarter																		

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NWP = No Water Present

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NM = Not Measured

River Terrace

Ground Water Monitoring 2005/2006

Field Measurements

Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C. (umhos/cm)	pH	TEMP (F)	D.O (mg/L)	ORP (mV)	EPA Method 8021B WQCC 20NMAC 6.2.3103					EPA Method 8015B	
												0.01	0.75	0.75	0.62			
												Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#2	Start-Up	*Baseline*	week of 8/15/05	6.84	NPP	9.92	2225	6.85	65.2	NR	NR	6.10	4.20	8.70	25.00	<0.05	1.10	84.00
		Pre-Dewatering	Week of 1/09/06	6.62	NPP	9.92	2001	6.91	48.3	2.56	178	NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	9.12	NPP	9.92	1807	7.01	50.3	1.01	120	NR	NR	NR	NR	NR	NR	NR
	1st Quarter 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2nd Week	Week of 1/30/06	7.74	NPP	9.92	1694	6.96	49.4	5.64	-531	NR	NR	NR	NR	NR	NR	NR
		3rd Week	Week of 2/6/06	9.25	NPP	9.92	1477	7.05	49.0	10.02	141	NR	NR	NR	NR	NR	NR	NR
		4th Week	Week of 2/13/06	9.73	NPP	9.92	1347	7.03	46.6	18.37	-523	NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	9.83	NPP	9.92	1445	7.03	48.7	15.95	70	NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	9.83	NPP	9.92	1802	7.08	53.2	9.48	184	6.20	0.51	1.70	5.00	<0.120	9.90	27.00
	2nd Quarter		Week of 6/17/06	8.27	NPP	9.92	3586	6.93	62.8	0.94	-216	3.60	2.80	2.40	14.00	<0.120	4.90	42.00
	3rd Quarter																	
	4th Quarter																	

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River Terrace

Ground Water Monitoring 2005/2006

				Field Measurements									EPA Method 8021B WQCC 20NMAC 6.2.3103					EPA Method 8015B	
													0.01	0.75	0.75	0.62			
Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C. (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)		Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#3	Start-Up	*Baseline*	week of 8/15/05	6.61	NPP	12.35	1295	6.85	68.4	NR	NR		<0.005	<0.005	<0.005	0.0012	<0.0025	<1.0	<0.05
		Pre-Dewatering	Week of 1/09/06	6.44	NPP	12.35	1262	6.96	50.3	2.89	234		NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	6.48	NPP	12.35	1256	6.97	50.3	3.00	239		NR	NR	NR	NR	NR	NR	NR
	1st Quarter	1st Month *1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS
		1st Month *2nd Week*	Week of 1/30/06	7.01	NPP	12.35	1119	6.94	49.6	0.45	217		NR	NR	NR	NR	NR	NR	NR
		1st Month *3rd Week*	Week of 2/6/06	7.14	NPP	12.35	1134	7.00	48.7	0.52	235		NR	NR	NR	NR	NR	NR	NR
		1st Month *4th Week*	Week of 2/13/06	6.15	NPP	12.35	1121	7.03	49.5	0.36	254		NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	PR	PR	PR	PR	PR	PR	PR	PR		NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	8.09	NPP	12.35	1050	6.94	47.9	0.21	256		<0.001	<0.001	<0.001	<0.003	<0.0025	<1.0	<0.05
	2nd Quarter		Week of 6/17/05	7.23	NPP	12.35	856	6.99	62.1	0.98	179		<0.001	<0.001	<0.001	<0.003	<0.0025	<1.0	<0.05
	3rd Quarter																		
	4th Quarter																		

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River Terrace

Ground Water Monitoring 2005/2006

				Field Measurements								EPA Method 8021B / WQCC 20NMAC 6.2.3103					EPA Method 8015B	
												0.01	0.75	0.75	0.62			
Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)	Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#4	Start-Up	*Baseline*	week of 8/15/05	5.00	NPP	6.49	696	6.88	70.0	NR	NR	<0.01	0.42	<0.01	0.22	<0.05	1.1	8.2
		Pre-Dewatering	Week of 1/09/06	4.96	NPP	6.49	409	6.95	39.7	1.55	231	NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP
	1st Quarter / 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2nd Week	Week of 1/30/06	5.74	NPP	6.49	353	6.94	38.5	0.46	219	NR	NR	NR	NR	NR	NR	NR
		3rd Week	Week of 2/6/06	6.06	NPP	6.49	356	7.00	41.4	1.94	217	NR	NR	NR	NR	NR	NR	NR
		4th Week	Week of 2/13/06	6.24	NPP	6.49	364	7.02	42.5	2.72	70	NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	NWP	NWP	6.49	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP
		3rd Month	Week of 3/06/06	NWP	NWP	6.49	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP
	2nd Quarter		Week of 5/17/06	5.33	NPP	6.49	681	6.95	59.8	0.54	236	<0.010	<0.001	<0.001	5.70	<0.025	1.1000	9.200
	3rd Quarter																	
	4th Quarter																	

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River Terrace

Ground Water Monitoring 2005/2006

				Field Measurements								EPA Method 8021B WQCC 20NMAC 6.2.3103					EPA Method 8015B	
												0.01	0.75	0.75	0.62			
Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C. (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)	Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#5	Start-Up	*Baseline*	week of 8/15/05	5.91	NPP	8.84	923	6.90	68.7	NR	NR	0.35	3.5	<0.005	21	<0.05	1.2	56
		Pre-Dewatering	Week of 1/09/06	4.7	NPP	8.84	947	6.94	49.0	1.44	-45	NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	7.5	NPP	8.84	1390	6.97	49.1	0.03	-160	NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2nd Week	Week of 1/30/06	7.33	NPP	8.84	1222	6.99	51.5	0.94	-151	NR	NR	NR	NR	NR	NR	NR
		3rd Week	Week of 2/6/06	7.60	NPP	8.84	1330	7.06	51.6	0.98	-132	NR	NR	NR	NR	NR	NR	NR
		4th Week	Week of 2/13/06	7.73	NPP	8.84	977	7.07	53.2	0.87	-101	NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	7.85	NPP	8.84	770	7.02	52.0	0.60	-67	NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	7.81	NPP	8.84	747	7.03	54.1	0.52	-51	0.2	0.28	<0.02	20	<0.05	<1.0	59
	2nd Quarter		Week of 6/17/06	5.24	NPP	8.84	989	6.94	65.3	0.05	39	0.054	1.6	<0.001	16	<0.025	<3.0	34
	3rd Quarter																	
	4th Quarter																	

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Ground Water Monitoring 2005/2006

Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C. (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)	EPA Method 8021B / WQCC 20NMAC 6.2.3103					EPA Method 8015B	
			Field Measurements									0.01	0.75	0.75	0.62			
												Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#6	Start-Up	*Baseline*	week of 8/15/05	5.78	NPP	9.94	1128	6.94	68.2	NR	NR	0.26	2.8	<0.01	17.5	<0.05	1	26
		Pre-Dewatering	Week of 1/09/06	5.63	NPP	9.94	983	6.94	48.6	0.39	87	NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	8.53	NPP	9.94	982	7.05	50.6	0.36	-44	NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2nd Week	Week of 1/30/06	8.15	NPP	9.94	1401	7.02	52.4	2.83	-202	NR	NR	NR	NR	NR	NR	NR
		3rd Week	Week of 2/6/06	8.4	NPP	9.94	1573	7.05	50.4	0.89	-129	NR	NR	NR	NR	NR	NR	NR
		4th Week	Week of 2/13/06	8.54	NPP	9.94	1336	6.97	49.1	2.59	111	NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	8.59	NPP	9.94	995	7.05	49.7	2.06	129	NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	8.61	NPP	9.94	602	7.35	52.3	0.63	153	<0.001	0.18	<0.001	0.75	<0.025	<1.0	2.7
	2nd Quarter		Week of 6/17/06	6.18	NPP	9.94	1216	6.98	66.5	0.38	94	<0.001	4.4	<0.001	0.35	<0.025	<1.0	1.9
	3rd Quarter																	5.3
	4th Quarter																	

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Ground Water Monitoring 2005/2006

				Field Measurements									EPA Method 8021B / WQCC 20NMAC 6.2.3103					EPA Method 8015B	
													0.01	0.75	0.75	0.62			
Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)		Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#8	Start-Up	*Baseline*	week of 8/15/05	6.61	NPP	9.72	1934	6.94	72.4	NR	NR		1.15	3.20	<0.05	25	<0.25	7.8	84
		Pre-Dewatering	Week of 1/09/06	5.61	NPP	9.72	1802	6.98	49.4	1.13	345		NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	8.23	NPP	9.72	1769	7.04	50.9	0.21	200		NR	NR	NR	NR	NR	NR	NR
	1st Quarter	1st Month *1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS
		1st Month *2nd Week*	Week of 1/30/06	7.24	NPP	9.72	1704	6.97	50.1	7.49	91		NR	NR	NR	NR	NR	NR	NR
		1st Month *3rd Week*	Week of 2/6/06	8.38	NPP	9.72	2077	7.08	51.0	2.52	89		NR	NR	NR	NR	NR	NR	NR
		1st Month *4th Week*	Week of 2/13/06	9.02	NPP	9.72	2024	6.92	48.6	1.67	209		NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	9.22	NPP	9.72	1627	6.95	48.2	0.81	199		NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	8.92	NPP	9.72	1613	7.03	52.6	0.61	228		0.35	1.10	<0.1	10	<0.025	18	37
	2nd Quarter		Week of 6/17/06	7.5	NPP	9.72	2032	7.01	67.6	0.48	143		0.26	0.64	<0.100	6.3	<0.025	6.8	19
	3rd Quarter																		
	4th Quarter																		

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Ground Water Monitoring 2005/2006

Field Measurements

Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)	EPA Method 8021B / WQCC 20NMAC 6.2.3103					EPA Method 8015B	
												0.01	0.75	0.75	0.62			
												Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#9	Start-Up	*Baseline*	week of 8/15/05	5.12	NPP	10.97	1968	6.92	62.8	NR	NR	<0.005	<0.003	<0.001	0.02	0.027	<1.0	1.1
		Pre-Dewatering	Week of 1/09/06	5.08	NPP	10.97	1870	6.91	48.0	11.07	222	NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	5.14	NPP	10.97	1981	7.00	47.5	0.32	97	NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2nd Week	Week of 1/30/06	5.22	NPP	10.97	2029	6.99	48.1	0.62	251	NR	NR	NR	NR	NR	NR	NR
		3rd Week	Week of 2/6/06	5.25	NPP	10.97	1999	7.03	45.0	0.84	243	NR	NR	NR	NR	NR	NR	NR
		4th Week	Week of 2/13/06	5.24	NPP	10.97	1897	6.93	44.8	1.02	197	NR	NR	NR	NR	NR	NR	NR
	1st Quarter	2nd Month	Week of 2/20/06	5.28	NPP	10.97	1850	6.99	44.4	0.73	198	NR	NR	NR	NR	NR	NR	NR
	1st Quarter	3rd Month	Week of 3/06/06	5.21	NPP	10.97	1944	7.02	47.8	0.75	214	<0.001	<0.003	<0.001	<0.003	<0.0025	<1.0	0.094
	2nd Quarter		Week of 6/17/06	5.26	NPP	10.97	1883	7.02	60.6	0.39	169	<0.001	0.001	<0.001	<0.003	<0.0025	<1.0	<0.050
	3rd Quarter																	
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												EPA Method 8021B						
												WQCC 20NMAC 6.2.3103					EPA Method 8015B	
				Field Measurements								0.01	0.75	0.75	0.62			
Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)	Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#10	Start-Up	*Baseline*	week of 8/15/05	5.10	NPP	9.95	377	6.94	71.2	NR	NR	<0.0005	<0.0005	<0.0005	0.0025	<0.0025	<1.0	<0.05
		Pre-Dewatering	Week of 1/09/06	5.08	NPP	9.95	390	7.02	42.6	8.31	179	NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	5.09	NPP	9.95	387	7.02	42.4	4.47	182	NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2nd Week	Week of 1/30/06	5.54	NPP	9.95	353	6.93	41.2	1.73	201	NR	NR	NR	NR	NR	NR	NR
		3rd Week	Week of 2/6/06	5.67	NPP	9.95	356	7.00	39.7	3.61	228	NR	NR	NR	NR	NR	NR	NR
		4th Week	Week of 2/13/06	5.74	NPP	9.95	343	7.00	41.2	2.18	107	NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	5.85	NPP	9.95	352	7.04	41.4	1.83	220	NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	5.86	NPP	9.95	355	6.99	42.8	1.72	224	<0.001	<0.001	<0.001	<0.003	<0.0025	<1.0	<0.05
	2nd Quarter		Week of 5/17/06	5.23	NPP	9.95	325	7.01	59.8	1.52	168	<0.001	<0.001	<0.001	<0.003	<0.0025	<1.0	<0.05
	3rd Quarter																	
	4th Quarter																	

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Ground Water Monitoring 2005/2006

Field Measurements

Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C. (umhos/cm)	pH	TEMP (°F)	D.O. (mg/L)	ORP (mV)	EPA Method 8021B / WQCC 20NMAC 6.2.3103					EPA Method 8015B	
												0.01	0.75	0.75	0.62			
												Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#11	Start-Up	*Baseline*	week of 8/15/05	5.67	NPP	9.98	794	6.93	68.2	NR	NR	<0.0005	<0.0005	<0.0005	0.0028	<0.0025	<1.0	<0.05
		Pre-Dewatering	Week of 1/09/06	5.55	NPP	9.98	967	6.99	48.3	1.35	150	NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	5.51	NPP	9.98	1041	6.95	47.6	1.30	158	NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2nd Week	Week of 1/30/06	6.03	NPP	9.98	556	6.94	46.8	0.56	194	NR	NR	NR	NR	NR	NR	NR
		3rd Week	Week of 2/6/06	6.1	NPP	9.98	831	6.97	45.5	1.75	257	NR	NR	NR	NR	NR	NR	NR
		4th Week	Week of 2/13/06	6.19	NPP	9.98	805	6.97	45.5	0.88	242	NR	NR	NR	NR	NR	NR	NR
	1st Quarter	2nd Month	Week of 2/20/06	6.29	NPP	9.98	941	7.01	46.2	0.15	240	NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	6.31	NPP	9.98	851	6.92	45.4	0.24	243	<0.001	<0.001	<0.001	<0.003	<0.0025	<1.0	<0.05
	2nd Quarter		Week of 6/17/06	5.61	NPP	9.98	551	6.98	62.6	1.11	177	<0.001	<0.001	<0.001	<0.003	<0.0025	<1.0	<0.050
	3rd Quarter																	
	4th Quarter																	

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Field Measurements

												EPA Method 8021B / WQCC 20NMAC 6.2.3103					EPA Method 8015B	
												0.01	0.75	0.75	0.62			
Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C. (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)	Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#12	Start-Up	*Baseline*	week of 8/15/05	7.43	NPP	11.79	2143	6.88	64.1	NR	NR	<0.0005	0.00055	<0.0005	0.0042	0.0028	1.00	<0.05
		Pre-Dewatering	Week of 1/09/06	7.38	NPP	11.79	1072	6.91	47.1	2.01	244	NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	7.41	NPP	11.79	1234	7.06	50.3	2.96	219	NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2nd Week	Week of 1/30/06	7.73	NPP	11.79	1000	6.97	48.4	1.31	226	NR	NR	NR	NR	NR	NR	NR
		3rd Week	Week of 2/6/06	7.79	NPP	11.79	1008	6.99	47.6	0.62	268	NR	NR	NR	NR	NR	NR	NR
		4th Week	Week of 2/13/06	7.86	NPP	11.79	1001	6.98	47.5	1.25	228	NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	7.94	NPP	11.79	1134	7.00	47.6	0.16	217	NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	7.94	NPP	11.79	1234	6.91	48.0	0.19	242	<0.001	<0.001	<0.001	<0.003	<0.0025	<1.0	<0.05
	2nd Quarter		Week of 6/17/06	7.44	NPP	11.79	1171	7.00	55.9	0.28	157	<0.001	<0.001	<0.001	<0.003	0.0049	<1.0	<0.050
	3rd Quarter																	
	4th Quarter																	

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				Field Measurements								EPA Method 8021B / WQCC 20NMAC 6.2.3103					EPA Method 8015B	
												0.01	0.75	0.75	0.62			
Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C. (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)	Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
TP-#13	Start-Up	*Baseline*	week of 8/15/05	6.27	NPP	16.09	1226	6.97	58.4	NR	NR	<0.0005	<0.0005	<0.0005	0.0037	<0.0025	<1.0	<0.050
		Pre-Dewatering	Week of 1/09/06	6.24	NPP	16.09	7	51.70	1.2	3.14	NM	NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	6.27	NPP	16.09	1157	7.03	51.6	2.55	210	NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2nd Week	Week of 1/30/06	6.59	NPP	16.09	803	6.96	49.5	0.66	195	NR	NR	NR	NR	NR	NR	NR
		3rd Week	Week of 2/6/06	6.64	NPP	16.09	717	7.09	49.0	0.44	241	NR	NR	NR	NR	NR	NR	NR
		4th Week	Week of 2/13/06	6.69	NPP	16.09	573	7.02	48.8	2.25	212	NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	6.79	NPP	16.09	478	7.01	46.7	0.49	218	NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	6.78	NPP	16.09	508	6.90	46.3	0.28	242	<0.001	<0.001	<0.001	<0.003	<0.0025	<1.0	<0.050
	2nd Quarter		Week of 6/17/06	6.35	NPP	16.09	526	7.02	58.6	0.28	240	<0.001	<0.001	<0.001	<0.003	<0.0025	<1.0	<0.050
	3rd Quarter																	
	4th Quarter																	

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Field Measurements

Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C. (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)	EPA Method 8021B / WQCC 20NMAC 6.2.3103					EPA Method 8015B	
												0.01	0.75	0.75	0.62			
												Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
MW #49	Start-Up	*Baseline*	week of 8/15/05	9.57	NPP	16.48	2393	6.96	59.8	NR	NR	0.093	0.015	<0.002	0.0041	<0.002	NR	NR
		Pre-Dewatering	Week of 1/09/06	9.69	NPP	16.48	1973	6.99	51.7	2.23	123	NR	NR	NR	NR	NR	NR	NR
		Pre-Aeration	Week of 1/16/06	9.76	NPP	16.48	1852	7.04	53.2	0.34	83	NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2nd Week	Week of 1/30/06	10.04	NPP	16.48	1868	6.98	51.0	0.54	106	NR	NR	NR	NR	NR	NR	NR
		3rd Week	Week of 2/6/06	10.06	NPP	16.48	1750	7.03	7.0	0.28	190	NR	NR	NR	NR	NR	NR	NR
		4th Week	Week of 2/13/06	10.05	NPP	16.48	1497	7.07	50.8	0.37	177	NR	NR	NR	NR	NR	NR	NR
		2nd Month	Week of 2/20/06	10.11	NPP	16.48	2380	7.07	50.3	1.10	245	NR	NR	NR	NR	NR	NR	NR
		3rd Month	Week of 3/06/06	10.07	NPP	16.48	961	7.07	51.9	0.33	190	<0.001	<0.001	<0.001	0.0061	<0.0025	<1.0	0.074
	2nd Quarter		Week of 6/17/06	9.98	NPP	16.48	701	7.01	57.9	0.26	181	<0.001	<0.001	<0.001	<0.003	<0.0025	<1.0	<0.050
	3rd Quarter																	
	4th Quarter																	

NS = Not Sampled due to Transformer Malfunction

NPP = No Product Present

PR = Piezometer needs repair - Not Sampled

NWP = No Water Present

NR = Not Required

NM = Not Measured

River Terrace

Ground Water Monitoring 2005/2006

				Field Measurements									EPA Method 8021B / WQCC 20NMAC 6.2.3103					EPA Method 8015B	
													0.01	0.75	0.75	0.62			
Sample Location	Sampling Event		DATE	Depth to Water (ft below TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C (umhos/cm)	pH	TEMP (°F)	D.O (mg/L)	ORP (mV)		Benzene (mg/L)	Ethylben (mg/L)	Toluene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
DW #1	Start-Up	*Baseline*	week of 8/15/05	6.43	NPP	15.62	1226	6.97	58.4	NR	NR		<0.001	<0.001	<0.001	0.0031	<0.001	NR	NR
	Start-Up	*Pre-Dewatering*	Week of 1/09/06	6.9	NPP	15.62	1405	7.03	54.0	2.42	149		NR	NR	NR	NR	NR	NR	NR
	Start-Up	*Pre-Aeration*	Week of 1/16/06	7.84	NPP	15.62	1550	7.01	52.4	0.86	-46		NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*1st Week*	Week of 1/23/06	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS
	1st Quarter / 1st Month	*2nd Week*	Week of 1/30/06	7.52	NPP	15.62	2779	6.99	49.6	1.43	117		NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*3rd Week*	Week of 2/6/06	7.71	NPP	15.62	2488	7.04	48.8	0.53	142		NR	NR	NR	NR	NR	NR	NR
	1st Quarter / 1st Month	*4th Week*	Week of 2/13/06	7.89	NPP	15.62	2401	7.05	50.3	0.95	54		NR	NR	NR	NR	NR	NR	NR
	1st Quarter	2nd Month	Week of 2/20/06	7.91	NPP	15.62	1245	7.09	52.3	0.57	188		NR	NR	NR	NR	NR	NR	NR
	1st Quarter	3rd Month	Week of 3/06/06	7.91	NPP	15.62	2118	6.95	50.2	0.75	-64		<0.005	0.041	<0.005	0.23	<0.012	2.2	2.8
	2nd Quarter		Week of 6/17/06	6.49	NPP	15.62	2329	6.96	58.0	0.42	143		<0.001	0.016	<0.001	0.12	<0.0025	1.6	0.9
	3rd Quarter																		
	4th Quarter																		

NS = Not Sampled due to Transformer Malfunction

NPP = No Product Present

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NWP = No Water Present

NR = Not Required

NM = Not Measured

Price, Wayne, EMNRD

From: Price, Wayne, EMNRD

Sent: Friday, November 03, 2006 2:31 PM

To: 'Randy Schmaltz'

Cc: Chavez, Carl J, EMNRD; Ed Riege; David Kirby; Todd Doyle; Cobrain, Dave, NMENV; OConnor, Cheryl, EMNRD; De Saillan, Charles, NMENV

Subject: RE: Discharge Plan Extension

OCD hereby approves of the extension with the following conditions:

1. Approval of this extension does not relieve the owner/operator of responsibility should operations pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve the owner/operator of responsibility for compliance with any OCD, federal, state, or local laws and/or regulations.

2. Within 30 days, Giant shall submit for approval a schedule of anticipated activities that will demonstrate how it intends to meet the deadline, and a permit application for the major modification including both the $100 filing fee and $8400 permit fee.

From: Randy Schmaltz [mailto:rschmaltz@giant.com]
Sent: Friday, November 03, 2006 11:34 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Ed Riege; David Kirby; Todd Doyle
Subject: Discharge Plan Extension

Wayne,

As you are aware, NMED's compliance requirements for the Giant-Bloomfield Refinery have not yet been finalized.

Due to this fact Giant requests to extend the submittal date of the Discharge Plan to June 30, 2007. This extension will allow Giant time to incorporate any new compliance requirements into the Discharge Plan. As we discussed this Discharge plan submittal will be a comprehensive document and will include the Maintenance Schedule spreadsheet identified in the Stipulated Final Order.

Your consideration into this matter is greatly appreciated!

Randy Schmaltz
Giant Refining Company
(505) 632-4171
(505) 320-6989 cell

Chavez, Carl J, EMNRD

From: Randy Schmaltz [rschmaltz@giant.com]
Sent: Friday, November 03, 2006 11:34 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Ed Riege; David Kirby; Todd Doyle
Subject: Discharge Plan Extension

Wayne,

As you are aware, NMED's compliance requirements for the Giant-Bloomfield Refinery have not yet been finalized.

Due to this fact Giant requests to extend the submittal date of the Discharge Plan to June 30, 2007. This extension will allow Giant time to incorporate any new compliance requirements into the Discharge Plan. As we discussed this Discharge plan submittal will be a comprehensive document and will include the Maintenance Schedule spreadsheet identified in the Stipulated Final Order.

Your consideration into this matter is greatly appreciated!

Randy Schmaltz
Giant Refining Company
(505) 632-4171
(505) 320-6989 cell

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

November 2, 2006

Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

RE: APPROVAL WITH MODIFICATIONS
RIVER TERRACE VOLUNTARY CORRECTIVE MEASURES
BIOVENTING SYSTEM SIX-MONTH START-UP REPORT
JANUARY 2006 THROUGH JUNE 2006; HWB-GRCB-06-006
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
EPA ID # NMD089416416

Dear Messrs Schmaltz and Riege:

The New Mexico Environment Department (NMED) is in receipt of Giant Refining Company's, Bloomfield Refinery (GRCB) report titled *River Terrace Voluntary Corrective Measures Bioventing System Six Month Start-Up Report January 2006 through June 2006*, (Report) dated August 2006. NMED hereby approves the Report with the modifications outlined below. GRCB must submit a response to any comments, if required, and adhere to all modifications set forth in this letter.

Comment 1

Section 3.0 (Scope of Activities) and Section 7.0 (Summary) of the Report addresses various sampling activities that occurred during the fist six months the bioventing system was operational. GRCB identifies the sampling activities that occurred during specific months but does not always address which wells were sampled. For example, GRCB states in Section 3.0, page 1, paragraph 4 "Prior to starting the dewatering pumps, total metals (EPA Methods 6010 &

7470) and groundwater field parameters (temperature, pH, conductivity, dissolved oxygen, and oxidation-reduction potential) were collected during the first week of January 2006." GRCB never addresses which specific wells (e.g.,monitoring, temporary, bioventing) were sampled. GRCB must revise these sections in the annual report to identify the wells sampled and the sampling methods used.

Comment 2
Section 4.0 (Regulatory Criteria/Groundwater Cleanup Standards) of the Report contains NMED's Soil Screening Levels (NMED SSLs) dated August 2005, Revision 3.0. GRCB must refer to NMED's website: http://www.nmenv.state.nm.us/hwb/guidance.html to obtain the most recent version of NMED's SSL's as Revision 4, June 2006. All future reports must contain current regulatory criteria.

Comment 3
The October 28, 2005 *Bioventing Monitoring Plan (Revised)* contains tables outlining the monitoring activities at the River Terrace Bioventing system. Table 1B (Baseline Monitoring Activities Prior to Air Injection System Start-up) requires the collection of air measurements for percent carbon dioxide, percent oxygen, organic vapors, and static pressure at bioventing wells BV-1 thought BV-13. This information does not appear to be presented in Section 5.0 (Monitoring Results). GRCB must provide NMED with this data or provide an explanation why the data was not collected.

Comment 4
The last two columns of the *Ground Water Monitoring 2005/2006* Table found in Part 2 of Section 5.0 (Monitoring Results) are labeled EPA Method 8021 above the analytical results for diesel range organics (DRO) and gasoline range organics (GRO). This appears to be a typographical error and should specify EPA Method 8015B above the DRO and GRO result column. In addition, the column for oxidation reduction potential (ORP) does not contain any units. GRCB must revise the EPA Method above the DRO and GRO column and include units of measurement for ORP in future reports (annual report).

Comment 5
The sample identification column of the *River Terrace – Bioventing Wells, Soil Analysis* Table provided in Section 5.0 (Monitoring Results) Part 3 contains a number after the name of each bioventing well (e.g., BV-1-6). Neither the Report nor the tables identify what the second number represents. GRCB must provide an explanation of what the second number represent after the name of each bioventing well.

Comment 6
The tables provided in Section 5.0 (Monitoring Results) of the report do not provide the injection pressure measurements at the well heads. A "Pressure" column appears in Tables 1A, 1B, and

1C of the *Bioventing Monitoring Plan (Revised),* dated October 28, 2005, sampling requirements for the river terrace. More specifically Table 1C, the column "*Pressure", that lists the asterisk notes that "full system and individual well injection pressure will be recorded during each monitoring event."

GRCB must submit this information. If the data was not collected, GRCB must provide an explanation as to why this information was not collected. In addition, GRCB must ensure that full system and individual well injection pressure information is gathered and presented in all future annual reports.

Comment 7

Not all sampling listed in Tables 1A, 1B, and 1C of the *Bioventing Monitoring Plan (Revised),* dated October 28, 2005 was conducted. Some of the table columns indicate WQM, which is denoted at the bottom of the table as the sampling frequency "Weekly x 4 (a sample will be collected once a week for the initial four weeks of operation), monthly for the first quarter, then quarterly thereafter."

The tables presented in Section 5.0 (Monitoring Results) of the Report do not contain the monthly data for the first quarter. GRCB must provide this information in the Report or state why the data was not collected.

Comment 8

The data presented in Section 5.0 (Monitoring Results) of the Report for temperature, dissolved oxygen, and oxidation reduction potential appears to fluctuate and some of the numbers do not seem to be accurate. If a measurement does not appear to be accurate, this information should be explained in a footnote at the bottom of the table. This should be included in all future reports.

Comment 9

Section 6.0 (In-Situ Respiration Test) of the Report provides a section of recommendations.

a. GRCB must continue to follow the monitoring requirements established in the Bioventing Monitoring Plan (Revised) dated, October 28, 2005 and any NMED approved revision to this plan. Upon receipt and review of the Annual Report, NMED will consult with GRCB regarding revisions to the monitoring activities at the River Terrace.

b. Bullet 2 states, "BV-1 and BV-3 are most likely outside the bioventing system influenced area. Therefore, any future data collection from these wells should not be considered....." GRCB must define the bioventing system's area of influence and explain how it was determined that BV-1 and BV-3 are most likely outside the area of influence. GRCB must also provide the injection pressures at the well heads of BV-1 and BV-3 (see comment 6).

c. GRCB must provide an explanation how it was determined that TP-9 is also located outside the influenced area stated in bullet 3 of the Report. GRCB must also provide the pressure measurements at the TP-9 well head.

Comment 10
GRCB states in the last page of Section 7.0 (Summary), paragraph 2 of the Report "Field data collected during the initial 6-months of system operation indicate the bioventing system is effectively enhancing bioremedial activity within the western portion of the river terrace area."

GRCB must define the western portion of the river terrace area and which wells are included in this area.

Comment 11
In the annual report, GRCB must provide an additional map in Section 8.0 (Maps) that identifies both locations of the bioventing wells and temporary wells.

Comment 12
Part 9 of Section 12.0 (Chemical Analytical Reports) of the Report presents groundwater data for the first quarter of 2006; however, this section also contains air quality laboratory results. GRCB must separate groundwater results from air results.

Comment 13
The laboratory's Quality Assurance Plan dated October 2004 included in Section 11.0 (Chemical Analytical Program) of the Report, is incomplete and only includes information up to section 6.0 page 19. The Table of Contents list sections up to Section 13 page 35. Future reports must provide a complete copy of the Quality Assurance Plan.

Comment 14
Section 12.0 (Chemical Analytical Reports) of the Report provides analytical data for soil gas samples (air). GRCB must provide an explanation how the laboratory converted the units for air samples (gas vapor) to be micrograms per liter (µg/L).

Please contact Hope Monzeglio of my staff at 505-428-2545 if you have questions regarding this letter.

Sincerely,

John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
H. Monzeglio, NMED HWB
W. Price, OCD
B. Powell, NMOCD Aztec District Office
B. Wilkinson, USEPA Region 6
L. King, EPA Region 6 (6PD-N)
File: Reading File and GRCB 2006 File
HWB-GRCB-06-006

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, November 02, 2006 1:57 PM
To: 'Jim Lieb'; Monzeglio, Hope, NMENV; Price, Wayne, EMNRD; Cobrain, Dave, NMENV
Cc: Ed Rios; Ed Riege; Steve Morris
Subject: RE: Lab Results on Fire Soils, Spill Training

Jim:

Glad to see Giant is actively training to protect the San Juan River. Keep up the good work. :)

From: Jim Lieb [mailto:jlieb@giant.com]
Sent: Thursday, November 02, 2006 9:58 AM
To: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV
Cc: Ed Rios; Ed Riege; Steve Morris
Subject: Lab Results on Fire Soils, Spill Training

Carl, Hope:

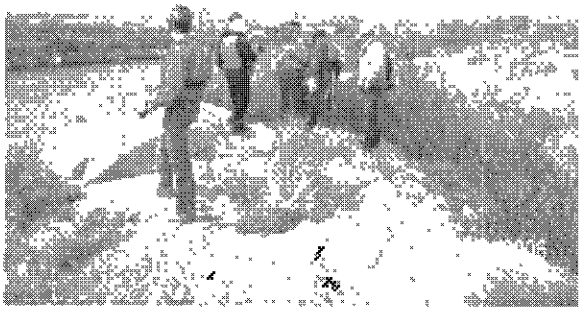
Attached are the lab results from the soil samples Steve took from the fire water areas at the two locations as you requested we take. Fluoride is low. pHs are in the 7 to 8 range and chloride was a bit high in one sample but this is likely due to the natural tendency of the soils here to be elevated in salts.

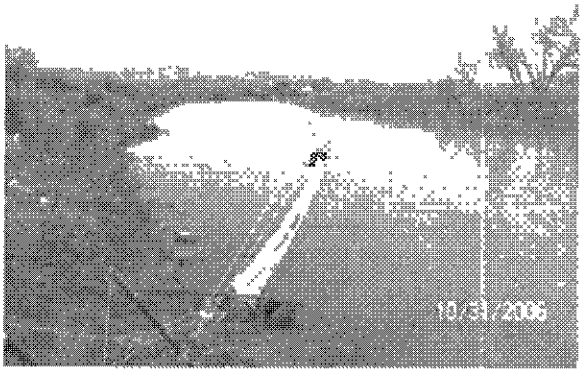
I took part in spill response training including boom deployment exercises earlier this week at Giant's regional office facility in Bloomfield. At least 20 Giant employees from Giants two refineries, transportation, and the pipeline divisions received the training. We conducted two boom deployment exercises on the San Juan River on Tuesday afternoon and Wednesday morning at two separate locations on the river. Monday was devoted to classroom lectures on spill response techniques. Training was provided by H2O OSRO-DOWCAR's Carl Oskins. I have included some pictures from the Tuesday afternoon boom deployment exercise.

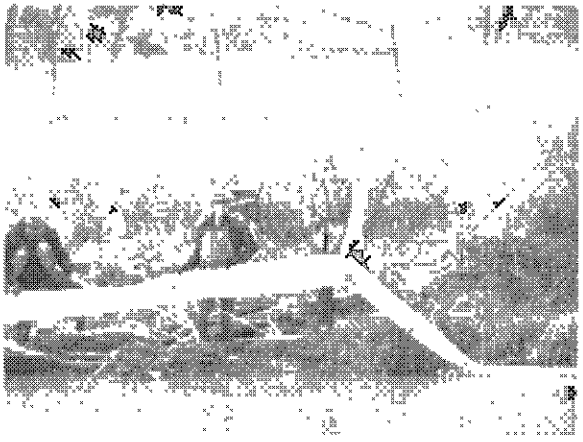
Installation of flumes is progressing. Was delayed some due to the heavy rains we had last week.
Regards,

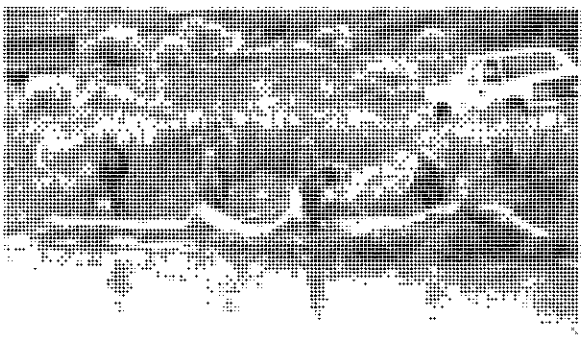
Jim Lieb
Environmental Engineer
Giant Industries, Inc.
Ciniza Refinery
I-40, Exit 39
Jamestown, NM 87347
(505) 722-0227
fax (505) 722-0210
jlieb@giant.com

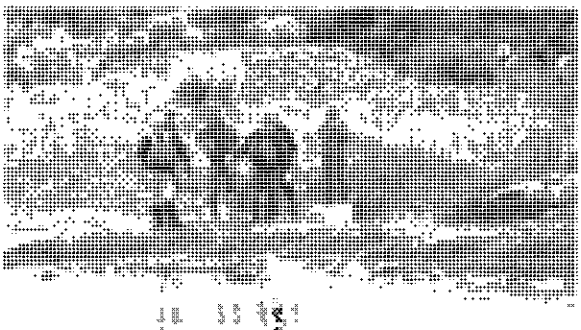
Ciniza- Bloomfield
River Spill Response Training
(October 30- November 1, 2006)











State of New Mexico
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Hazardous Waste Bureau
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Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 12, 2006

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

RE: APPROVAL WITH MODIFICATIONS
INTERIM MEASURES IMPLEMENTATION REPORT
NORTH BOUNDARY BARRIER AND COLLECTION SYSTEM
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
EPA ID # NMD089416416 HWB-GRCB-05-004

Dear Messrs. Schmaltz and Riege:

The New Mexico Environment Department (NMED) has completed its review of the *Interim Measures Implementation Report, North Boundary Barrier and Collection System* (Report), dated June 2006, submitted on behalf of Giant Refining Company, Bloomfield Refinery (GRCB). NMED hereby approves the Report, but requires GRCB to respond to the comments below and include the following elements in future reports.

Comment 1

GRCB states in Section 3.5.2 (Groundwater Sampling) of the Report "[i]n response to a written request submitted to Giant by (Oil Conservation Division) OCD dated May 9th, 2005, baseline groundwater samples were collected during the week of June 10, 2005 from the collection and observation wells where fluids had been detected." The samples were analyzed for volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8021B, dissolved metals by EPA Method 6010C, mercury by EPA Method 7470, and anions (sulfate) by EPA Method 300.0. A summary of laboratory analytical results are provided in Table 5 and a

copy of analytical reports are provided in Appendix I.
There are some discrepancies with the above statements. Table 5 does not provide analytical results for VOCs, dissolved metals and mercury and the sampling date references May 2005, not June 2005. In addition, the laboratory results included in Appendix I are dated May 10, 11, and 12, 2005 and do not reference the June sampling date.

GRCB does not need to submit any replacement pages but must provide an explanation for the discrepancies addressed above. Future reports providing tables that summarize analytical data (e.g. Table 5) must contain all detections. The table must include a row that identifies the Water Quality Commission Control Standard (WQCC) values for each of the detected constituents. Any constituents detected above the WQCC standard must be highlighted.

Comment 2
Table 1 (Summary of Trench Spoils Analytical Results) of the Report compared diesel range organics (DRO) detected at the site to diesel #2/crankcase oil for the industrial direct exposure of 1120 mg/kg of the New Mexico Environment Department's TPH Screening guidelines, November 2005. The DRO detected along the barrier wall cannot be specifically connected to "diesel #2/crankcase oil," only. The results should have been compared to the industrial cleanup level for "unknown oil" of 200 mg/kg. Future reports must compare DRO results to "unknown oil" if the specific hydrocarbon type is unknown. The "diesel #2/crankcase oil" guideline should only be applied when the contamination is known to consist of only that type of diesel.

Comment 3
GRCB states in Section 2.5 (Trench Spoils Segregation and Testing) of the Report that "[a] portion of the excavated soil from the trench was utilized for barrier construction and for backfill purposes. Excess excavated material (i.e., spoils mixed with bentonite) was transported to the refinery site. The majority of the spoils were stock-piled in the former storm water retention basins, located in the northwest portion of the refinery. Visually hydrocarbon-stained soil excavated from the trench was segregated and stock-piled in a separate location on the refinery site for subsequent management."

GRCB must identify the stock-pile location of the segregated "visually hydrocarbon-stained soil" and explain how it was managed subsequent to the completion of the barrier wall.

Comment 4
Future reports must apply the most current New Mexico Soil Screening Levels (NM SSL's). The most recent version of NMED's SSL's can be found on NMED's website: http://www.nmenv.state.nm.us/hwb/guidance.html.

GRCB must respond to this letter by December 30, 2006. If you have any questions regarding this letter, please contact Hope Monzeglio of my staff at (505) 428-2545.

Sincerely,

John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

JEK:hm

cc: D. Cobrain, NMED HWB
H. Monzeglio, NMED HWB
W. Price, OCD
B. Powell, OCD Aztec Office
L. King, EPA Region 6 (6PD-N)
B. Wilkinson, EPA Region 6
File: Reading File and GRCB 2006 File
HWB-GRCB-05-004

Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Thursday, October 05, 2006 8:21 AM
To: Chavez, Carl J, EMNRD
Cc: Cobrain, Dave, NMENV
Subject: Copy of OCD's Compliance Order with Giant Bloomfield

Carl

When you get back in town, can you email, fax, or make a copy that I can come pick up of the final version of OCD's compliance order with Bloomfield dated March 1, 2006. We need a copy for our administrative record as we are responding to comments for our Order and will probably site OCD's compliance order.

Thanks

Hope

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

Chavez, Carl J, EMNRD

From: Randy Schmaltz [rschmaltz@giant.com]
Sent: Thursday, September 28, 2006 9:44 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Ed Riege; Todd Doyle
Subject: Progress on NMED Drat Order

Wayne,

This email is intended to provide an update on the progress of the New Mexico Environment Department, Hazardous Waste Bureau's Draft Compliance Order.
On June 21, 2006 the NMED-HWB issued Giant Refining Company, Bloomfield Refinery a Draft Order. Giant submitted written comments to the order in the (60) day public comment period which ended August 21, 2006. As of this date no formal discussions have taken place in regards to the order. Giant has been told that NMED is working on the written comments and will schedule discussions at a later date!

If you have questions please feel free to call me at (505) 632-4171.

Thanks

Randy Schmaltz
Giant Refining Company
(505) 632-4171
(505) 320-6989 cell

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, August 25, 2006 9:22 AM
To: Powell, Brandon, EMNRD
Cc: Perrin, Charlie, EMNRD; Price, Wayne, EMNRD; 'Randy Schmaltz'
Subject: RE: Giant Refinery

Brandon:

EPA Odor Control Guidance (may help Giant to identify site procedures to minimize impacts to nearby neighborhoods)
http://www.epa.gov/owm/mtb/odor_control-biosolids.pdf#search=%22Industrial%20Odor%20Control%20Chemical%22

Brandon:

Hi. I don't think that bleach offers the complete solution for Giant. They will need to explore ways to reduce odors and there appears to be numerous companies that provide environmental solutions, i.e., chemicals and/or services to control odors at industrial facilities.

Odor Control Websites
http://www.google.com/search?hl=en&q=Industrial+Odor+Control+Chemical&btnG=Google+Search
http://www.google.com/search?hl=en&lr=&rls=GGLR%2CGGLR%3A2006-08%2CGGLR%3Aen&q=industrial+odor+control&btnG=Search

Companies who supply environmentally friendly chemicals that may help control odor
http://www.michigan.gov/deq/0,1607,7-135-3304-11385--,00.html

Thank you.

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

From: Powell, Brandon, EMNRD
Sent: Friday, August 25, 2006 8:37 AM
To: Chavez, Carl J, EMNRD
Cc: Perrin, Charlie, EMNRD
Subject: Giant Refinery

Carl-

I received a complaint about a stench coming from the Giant Refinery from Bronson Ashcroft (505) 632-5563 a home owner that lives approx. a mile from the Giant San Juan Refinery. I spoke with Randy Schmaltz w/ giant and he told me that it was there ponds and that they were trying to locate bleach for it, he is supposed to call me when they find the bleach and are going to use it. I also asked him how often they are bleaching the pond and he told me they are bleaching it heavily about every other month and trickling the bleach in with the discharge. They are trying to completely drain the ponds and redesign them but the rain hasn't allowed that to happen and the small amount of water could be making the problem worse. Should they be bleaching more often (once a month)? Or can you think of anything else we should do. Mr. Ashcroft said he has complained about this issue several times and it goes any for a while and then comes back and he is very upset.

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
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Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

2006 AUG 15 PM 2 28

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

August 11, 2006

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

SUBJECT: NOTIFICATION OF ANNUAL GROUNDWATER SAMPLING EVENT, AUGUST 15, 2006
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
EPA ID # NMD089416416
HWB-GRCB-06-004

Dear Mr. Schmaltz:

The New Mexico Environment Department (NMED) has received Giant Refining Company, Bloomfield Refinery's (GRCB) notification dated August 1, 2006 informing NMED of the August 15, 2006 annual groundwater sampling event. GRCB must perform the following sampling requirements established in this letter for the August annual groundwater sampling event.

Comment 1
GRCB must sample all observation and monitoring wells (MW-#11, MW-#12, MW-#20, MW-#21, MW-#38, MW-#39, MW-#45, MW-#46, MW-#47), identified in the Six Month and Annual Report to the North Boundary Barrier Collection System during the scheduled groundwater monitoring event (August 15, 2006). The observation wells and monitoring wells must be analyzed for DRO, benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertbutyl ether (MTBE).

NMED is aware that some of the observation wells are yielding low amounts of water. GRCB must sample all observation wells that contain enough water for sample collection. If a well is bailed or pumped dry and there is no immediate recharge, then, GRCB may sample the well if recharge is sufficient for sample collection within 24 hours and does not need to remove three well volumes of water. In theory, if a well is pumped dry, the recharge will be formation water. If an observation well is not sampled, GRCB must provide the reason for not sampling the well. For example, if an observation well is bailed or pumped dry and within 24 hours does not recharge sufficiently for sample collection, this must be documented.

Comment 2

All automated and manual extraction of separate phase hydrocarbons (SPH) and water from recovery well, observation wells, and collection wells must be discontinued for 48 hours prior to the measurement of water and SPH levels.

If you have questions regarding this letter please contact me at 505-428-2545.

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Permits Management Program

HM

cc: J. Kieling, NMED HWB
D. Cobrain, NMED HWB
W. Price, OCD
D. B. Powell, OCD Aztec office
B. Wilkinson, EPA Region VI

Reading File, GRCB 2006 file
GRCB 06-004

GIANT
REFINING COMPANY

2006 AUG 3 PM 2 34

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

Certified Mail: 7004 2510 0005 1641 4866

August 2, 2006

Re: Approval with Modifications
2005 Ground Water Remediation and Monitoring
Annual Report April 2006
Giant Refining Company, Bloomfield Refinery
EPA ID #NMD089416416

Dear Mr. Price,

Giant Refining Company Bloomfield (GRCB) received the June 6, 2006 letter from the New Mexico Environmental Department (NMED) requesting additional information regarding the 2005 Groundwater Remediation and Monitoring Annual Report (Volumes I & II), dated April 2006. The following correspondence will address NMED's requests.

Condition #1 requests a corrected formula used to determine "Corrected Groundwater Calculation". A replacement page with the accurate formula is provided with this letter.

Condition #2 reveals a typographical error identifying MW #48 as DW #48. GRCB did not change the name of the well. An updated figure with MW #48 properly labeled is included in this letter.

Condition #3 calls for a legend defining DW, BV, TP, and MW be added to Figures 11, and 12. The appropriate changes have been made and are included in this letter.

Condition #4 indicates the absence of units of measurement for the scales provided. Replacement figures with the necessary corrections have been presented with this letter.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,

Cindy Hurtado

Cindy Hurtado
Environmental Coordinator
Giant Refining – Bloomfield

Cc: Ed Riege – Environmental Superintendent – Giant Refining
Randy Schmaltz – Environmental Manager – Giant Refining
Hope Monzeglio – New Mexico Environmental Department – Santa Fe
Robert Wilkinson – USEPA – Region 6
Brandon Powell – New Mexico Oil Conservation Division - Aztec

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

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

Groundwater Elevation Information

All Monitoring Wells, Recovery Wells, Observation Wells, and Collections Wells were resurveyed in February 2006. All Measuring Point Elevations were updated with the 2006 survey for this report.

The following equations were used to calculate "Corrected Groundwater Elevation":

(1) Separate Phase Hydrocarbon not detected=
MPE– DTW

(2) Separate Phase Hydrocarbon detected=
MPE – [DTW+0.8 (DTW – DTP)]

Separate Phase Hydrocarbon Thickness = DTW - DTP

MPE = Measuring Point Elevation
DTW = Depth to Water
DTP = Dept to Product

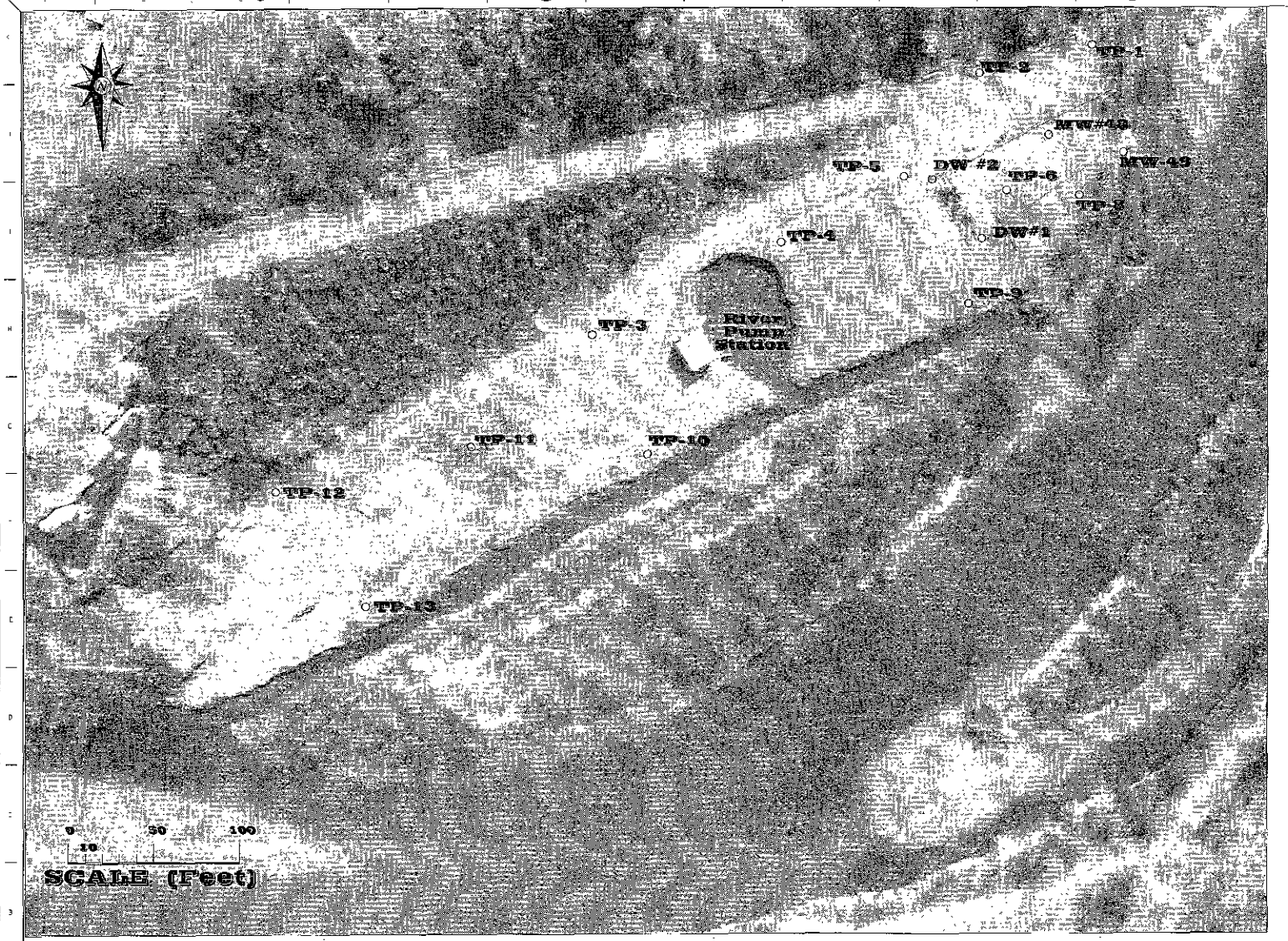


FIGURE 11

NOTES

1. TP - Temporary Piezometer
2. MW - Monitoring Well
3. DW - Dewatering Well

NO	REVISION	BY	DATE	BY	DATE	BY	DATE
1	Revised as per Environmental Dept						

REFERENCE DWGS

SCALE	NONE	DATE	
DRAWN BY	LCB	1/20/05	
INITIAL CHK			
FINAL CHK			
ENGR			
AFFR SY			
JOB No	DRAWN	CHECKED	APPROVED
ATT/WO No	NONE		

GIANT REFINING CO

GIANT REFINING INC.
BLOOMFIELD FACILITY
RIVER TERRACE PROJECT
TP WELL LOCATIONS PLOT

GIANT REFINING CO
BLOOMFIELD REFINERY
BLOOMFIELD NEW MEXICO

DWG. NO. B-500-300 022 REV. 1

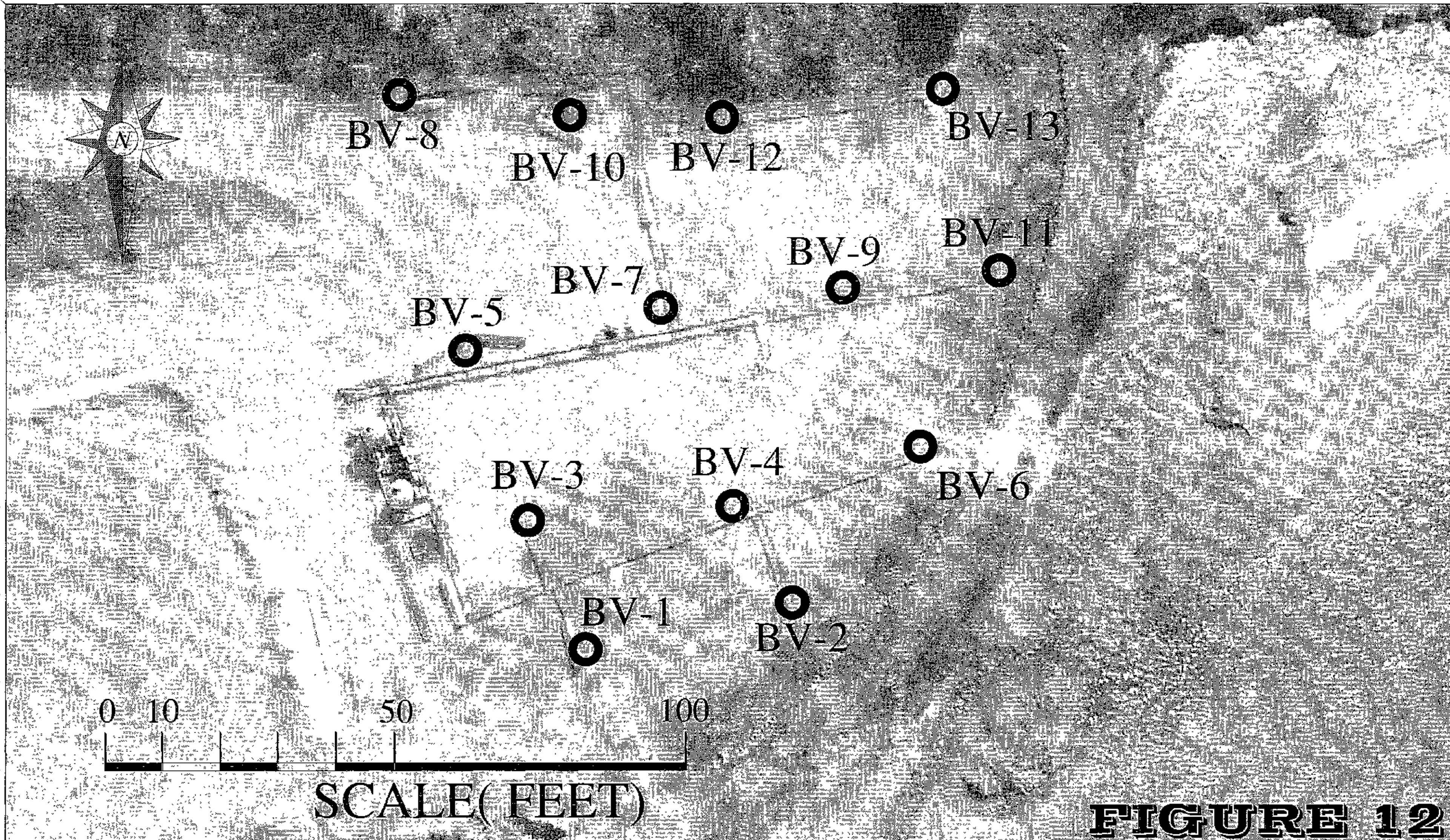


FIGURE 12

NOTES
BV - Denotes Biovent Well

SCALE	DATE
DRAWN BY LDB	3-21-06
INITIAL CHK	
FINAL CHK	
ENGR	
APPR BY	
AFE/WO No	

Revised as per environmental Depart.

REFERENCE DWGS | NO | REVISION | JOB No. | BY DATE DRAWN | BY DATE CHECKED | BY DATE APPROVED

GIANT REFINING INC.
BLOOMFIELD FACILITY
RIVER TERRACE PROJECT
BIOVENT WELL LOCATION PLOT

GIANT REFINING CO
BLOOMFIELD REFINERY
BLOOMFIELD NEW MEXICO
DWG. NO. B-500-900-023
REV

GIANT
REFINING COMPANY

2006 AUG 3 PM 2 20

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

Certified Mail: 7004 2510 0005 1641 4842

August 1, 2006

RE: Giant Refining Company, Bloomfield Refiner
EPA ID# NMD089416416
GW - 001

Dear Mr. Price,

Giant Refinery – Bloomfield has tentatively scheduled the annual groundwater sampling campaign to start the week of August 15, 2006.

Giant will be following NMED's guidelines from the Corrective Measures Study and Corrective Measures Implementation letter dated January 6, 2003. In conjunction, OCD guidance will be followed per the Site Investigation and Abatement plan letter dated December 30, 2002.

The construction design of MW #24 does not accommodate monitoring and Giant proposes deleting this well from the monitoring program. Groundwater elevation measurements will be taken on all monitoring wells, recovery wells, observation wells, and collection wells. Wells that are included in the River Terrace Voluntary Corrective Measures Work Plan will not be incorporated into this sampling event as that project is on a quarterly sampling schedule.

If any representatives from the NMED Hazardous Waste Bureau would like to participate, please contact me so that safety orientation training can be scheduled for incoming personnel.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,
Cindy Hurtado
Cindy Hurtado
Environmental Coordinator
Giant Refining – Bloomfield

Cc: Ed Riege – Environmental Superintendent – Giant Refining
Randy Schmaltz – Environmental Manager – Giant Refining
Hope Monzeglio – New Mexico Environmental Department – Santa Fe

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

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

GIANT
REFINING COMPANY

2006 JUL 31 PM 2 07

July 27, 2006

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

Certified Mail: 7006 0810 003 7020 5175

RE: Giant - Bloomfield Refinery
EPA ID# NMD089416416

Dear Mr. Price,

Please find enclosed a check for $8500.00. As we discussed this check is to cover all the applicable fees for Giant Refining Company –Bloomfield Refinery's Modified Discharge Plan GW-001 which will be submitted later this year. This check includes the $100 application fee and the $8400 Discharge plan fee. The fees are being paid upfront as required by the extension granted to Giant by OCD on 6/27/2006.

The extension was requested due to the recent issuance of a Draft Order by the New Mexico Environmental Department (NMED) to our facility, The Draft Order contains corrective action requirements that could affect the Discharge Plan Modification. This extension will allow Giant time to incorporate modifications into the Discharge Plan that could arise from the corrective action.

If you need additional information, please contact me at (505) 632-4171.

Sincerely,

James R. Schmaltz
Environmental Manager
Giant Refining – Bloomfield

Cc: Ed Riege

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

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

ACKNOWLEDGEMENT OF RECEIPT
OF CHECK/CASH

Please acknowledge receipt of check No. [redacted] dated 7/26/06

in the amount of $ 8500 00

From Giant Refining Co.

For GW-001

Submitted by: Lawrence Romero Date: 7/31/06

Submitted to ASD by: Lawrence Romero Date: 7/31/06

Received in ASD by: _____ Date: _____

Filing Fee ✓ New Facility _____ Renewal _____

Modification ✓ Other _____

Organization Code 521.07 Applicable FY 2004

To be deposited in the Water Quality Management Fund.

Full Payment _____ or Annual Increment _____

THE FACE OF THIS CHECK IS PRINTED BLUE - THE BACK CONTAINS A SIMULATED WATERMARK

GIANT INDUSTRIES, INC.

23733 N. Scottsdale Rd.
Scottsdale, AZ
85255-9969

480
585-8888

Bank of America
Bank of America
North Carolina

66-19
530

Valid for 180 days From Date of Issue

Pay Date:07/26/06 Check No. [redacted] $*****8,500.00 Amount

EIGHT THOUSAND FIVE HUNDRED AND 00/100
To the Order of

Water Quality Management Fund
c/o Oil Conservation Division
1220 S St Francis Dr
Santa Fe NM 87505

Fredric L. Halliger

[redacted]

GIANT INDUSTRIES, INC.

23733 N. Scottsdale Rd.
Scottsdale, AZ
85255-9969

480
585-8888

Page: 1

Vendor #:84592

Check #: [redacted]

Check Date:07/26/06

Invoice Number	Inv. Date	Description	Gross	Discount	Net
GW-001-6-27-06	06/27/06		8,500.00		8,500.00
			8,500.00		8,500.00

REVENUE TRANSMITTAL FORM

	Description	FUND	CES	DFA ORG	DFA ACCT	ED ORG	ED ACCT	AMOUNT	
1	CY Reimbursement Project _____ Tax ___	064	01						1
5	Gross Receipt Tax	064	01		2329	900000	2329134		2
3	Air Quality Title V	092	13	1300	1696	900000	4169134		3
4	PRP Prepayments	248	14	1400	9696	900000	4969014		4
2	Climax Chemical Co.	248	14	1400	9696	900000	4969015		5
6	Circle K Reimbursements	248	14	1400	9696	900000	4969248		6
7	Hazardous Waste Permits	339	27	2700	1696	900000	4169027		7
8	Hazardous Waste Annual Generator Fees	339	27	2700	1696	900000	4169339		8
10	✓ Water Quality - Oil Conservation Division	341	29		2329	900000	2329029	8500 00	10
11	Water Quality - GW Discharge Permit	341	29	2900	1696	900000	4169029		11
12	Air Quality Permits	631	31	2500	1696	900000	4169031		12
13	Payments under Protest	651	33		2919	900000	2919033		13
14	Xerox Copies	652	34		2349	900000	2349001		*14
15	Ground Water Penalties	652	34		2349	900000	2349002		15
16	Witness Fees	652	34		2349	900000	2349003		16
17	Air Quality Penalties	652	34		2349	900000	2349004		17
18	OSHA Penalties	652	34		2349	900000	2349005		18
19	Prior Year Reimbursement	652	34		2349	900000	2349006		19
20	Surface Water Quality Certification	652	34		2349	900000	2349009		20
21	Jury Duty	652	34		2349	900000	2349012		21
22	CY Reimbursements (i.e. telephone)	652	34		2349	900000	2349014		22
23	UST Owner's List	783	24	2500	9696	900000	4969201		*23
24	Hazardous Waste Notifiers List	783	24	2500	9696	900000	4969202		*24
25	UST Maps	783	24	2500	9696	900000	4969203		*25
26	UST Owner's Update	783	24	2500	9696	900000	4969205		*26
28	Hazardous Waste Regulations	783	24	2500	9696	900000	4969207		*28
29	Radiologic Tech. Regulations	783	24	2500	9696	900000	4969208		*29
30	Superfund CERLIS List	783	24	2500	9696	900000	4969211		*30
31	Solid Waste Permit Fees	783	24	2500	9696	900000	4969213		31
32	Smoking School	783	24	2500	9696	900000	4969214		32
33	SWQB - NPS Publications	783	24	2500	9696	900000	4969222		*33
34	Radiation Licensing Regulation	783	24	2500	9696	900000	4969228		*34
35	Sale of Equipment	783	24	2500	9696	900000	4969301		*35
36	Sale of Automobile	783	24	2500	9696	900000	4969302		*36
37	Lust Recoveries	783	24	2500	9698	900000	4969814		**37
38	Lust Repayments	783	24	2500	9696	900000	4969815		**38
39	Surface Water Publication	783	24	2500	9696	900000	4969801		39
40	Exxon Reese Drive Ruidoso - CAF	783	24	2500	9698	900000	4969242		40
41	Emerg. Hazardous Waste Penalties NOV	957	32	9600	1696	900000	4164032		41
42	Radiologic Tech. Certification	987	05	0500	1696	900000	4169005		42
44	Ust Permit Fees	988	20	3100	1696	900000	4169020		44
45	UST Tank Installers Fees	989	20	3100	1696	900000	4169021		45
46	Food Permit Fees	991	26	2600	1696	900000	4169026		46
43	Other								43

Gross Receipt Tax Required ** Site Name & Project Code Required TOTAL

ontact Person: Wayne Price Phone: 476-3490 Date: 7/31/06

eceived in ASD By: _____ Date: _____ RT #: _____ ST #: _____

FSB025
Revised 07/07/00

STATE

Nizhoni Christian Academy's honor roll

Nizhoni Christian Academy in Bloomfield recognized nine of its students for their hard work throughout the school year by listing them on the honor roll.

The following students earned a place on the honor roll because they received at least an 85 percent average throughout the 2005-2006 school year.

- Samantha Sales, seventh grade, 88 percent
- Chandler Sandoval, sixth grade, 89 percent
- Pamela Hardy, sixth grade, 93 percent
- Tatum Sandoval, fourth grade, 93 percent
- Brendan Tsosie, sixth grade, 94 percent
- April Begay, sixth grade, 94 percent
- Kayla Yoder, third grade, 96 percent
- Latanya Largo, third grade, 96 percent
- Josh Yoder, sixth grade, 97 percent

Federal funding will improve county roads

San Juan County will receive $1.79 million in federal funding for improvements on Navajo Route 13 and County Road 4990, according to a statement from U.S. Sen. Jeff Bingaman's office.

The projects will receive the funding under a fiscal year 2006 spending bill. Navajo Route 13 is slated to receive $1.29 million for pavement rehabilitation on 5.5 miles of the route, from U.S. Highway 491 west toward Red Valley.

Environment Dept. files draft cleanup order for Giant

— By Nathan Gonzalez —
The Daily Times

FARMINGTON — State environment officials are seeking public comment on a draft order outlining steps for Bloomfield's Giant refinery plant to remediate decades of ground contamination.

Nearly 400 barrels of oil, gasoline and other materials have found their way into soil and groundwater since November 1984. The contamination also poses a threat to the San Juan River, said State Environment Department Communication Director Adam Rankin.

"It's significant," Rankin said of the contamination, when compared to others around the state. "It's not that often we issue draft orders of this magnitude."

Local Giant officials were unavailable for comment. Leland Gould, executive vice president of governmental affairs for Giant, said he could not comment on the proposed order because he has yet to review the 175-page document.

The draft order, which was released Thursday for a 60-day public comment period, outlines the steps Giant Industries, Inc. will take to correct the contamination and contains investigation and cleanup requirements as well as a time line, Rankin said.

The refinery, which has been operable since the late 1950s, has a refining capacity of 18,000 barrels per day. There are 42 gallons per barrel.

"Giant has been processing crude oil into petroleum products, and as a result of its operations, has released a variety of hazardous and solid wastes into the environment," according to a release from the Environment Department.

State officials have identified 26 contaminated sites the oil company will be ordered to clean over the next several years.

Wayne Price, Environment Bureau chief for the Oil and Conservation Division of the State Energy, Minerals and Natural Resources Department, said Giant already has taken steps to address the contamination after being fined between $90,000 and $100,000 less than two years ago.

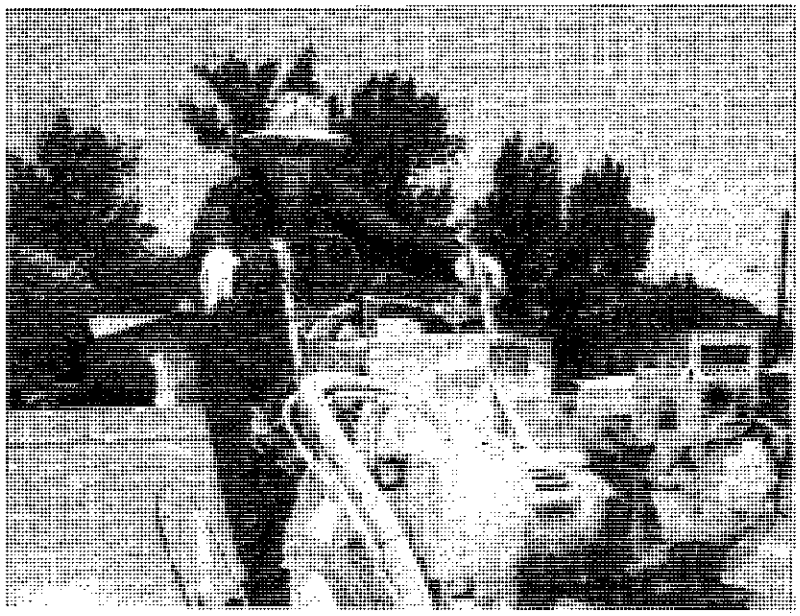
"(Giant) settled for $30,000," Price said, adding that the company placed "the rest of the money into restoration. They spent well over $2 million to keep the contamination from getting into the river."

Price said there has not been any indication of contamination in the river's quality waters since then.

The draft order can be found at the Environment Department's Hazardous Waste Bureau web site at www.nmenv.state.nm.us/HWB. Public comments must be received by 5 p.m. Aug. 21.

Nathan Gonzalez:
rgonzalez@daily-times.com

DRAWING THE LINE



Anthony Stallings refuses to appear in District Court

— By Rhys Saunders —
The Daily Times

AZTEC — A Farmington man who pleaded guilty to an aggravated assault charge in connection with a Jan. 8, 2005, shooting did not appear Monday for a scheduled District Court appearance.

Stallings

Anthony Stallings, 32, left a phone message for his attorney, Ray Archambeau, stating he would not make his 8 a.m. Monday court appearance because he has thrush, Archambeau told District Court Judge Thomas Hynes.

Hynes again rescheduled Stallings' appearance for 2 p.m. Monday. Stallings again failed to appear. Hynes once more rescheduled Stallings' sentence-

Stallings was charged with aggravated burglary, a second-degree felony, and larceny of a firearm, a fourth-degree felony, according to court documents.

In November 2005, Stallings allegedly broke into a home on County Road 1788 and stole several items, including a rifle, according to documents. San Juan County Sheriff's Office deputies confiscated the rifle from him during a Nov. 21, 2005, shooting in Kirtland, court documents state.

Stallings is also scheduled to be sentenced for charges related to a Jan. 8, 2005, shooting after he allegedly fired at the driver's side door of Stanley Saunders' vehicle over an alleged debt, court documents state.

The District Attorney's Office dropped a charge of attempted murder in that case and Stallings pleaded guilty to aggravated assault, court documents state.

Rhys Saunders:

THE DAILY TIMES $1.00

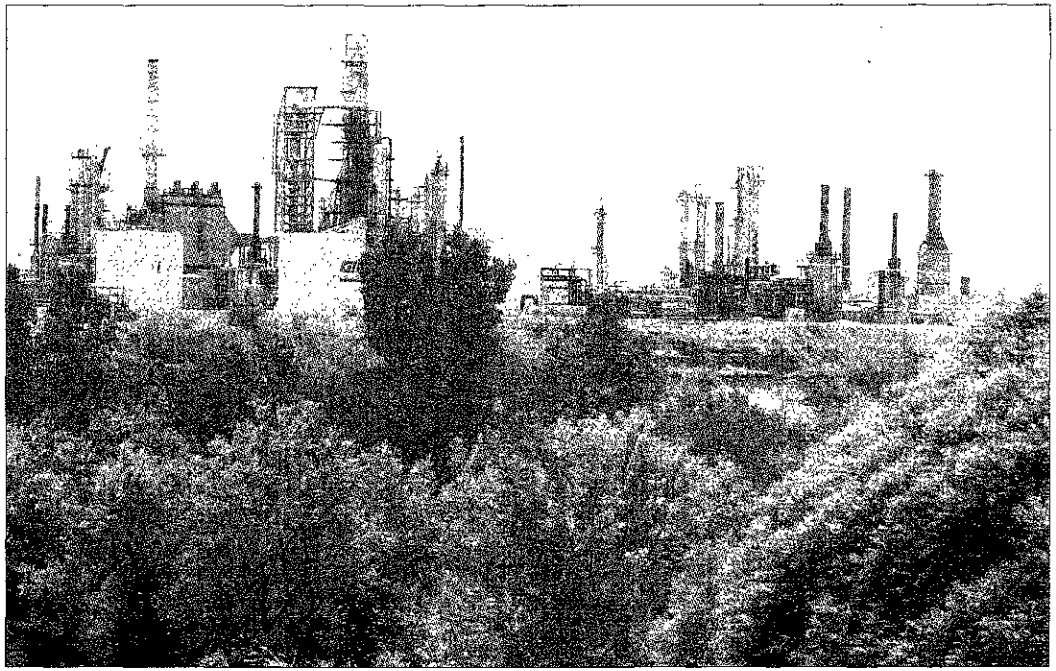
Aztec • Bloomfield • Cuba • Kirtland • Gallup • Shiprock • Waterflow • Blanco • Durango • Cortez • Ignacio

The Four Corners Information Leader

SUNDAY

June 25, 2006

A quick fix for giant pollution?



Dave Watson/*The Daily Times*

A Giant Industries refinery near the San Juan River is pictured on Thursday in Bloomfield. The New Mexico Environment Department is requiring the oil company to clean up material spilled around the refinery since 1984.

State orders refinery to clean spills dating back to 1984

— By Nathan Gonzalez —
The Daily Times

FARMINGTON — Since 1984, Giant Industries' refinery in Bloomfield has spilled approximately 156,282 gallons of petroleum products, according to the New Mexico Environment Department.

In addition, various other chemicals and refinery byproducts have seeped into the soil, contaminating the groundwater and threatening the San Juan River's quality fishing waters.

A report released Thursday by the Environment Department cites at least nine incidents where nearly 400 barrels of material were not recovered following spills between November 1984 and January 1998 at the refinery, which has been in operation since the late 1950s.

Leaking storage tanks have aided in placing petroleum materials and other chemicals into the ground at the refinery, located on 285 acres just south of the Bloomfield city limits.

"Surface water, groundwater and soil have all been affected, to varying degrees, from the release of contaminants," the report states.

Environment Department officials released the report to begin a 60-day public comment period on the proposed draft order requiring a cleanup.

Environment Department Communications Director Adam Rankin said the draft outlines steps Giant will take to correct decades of contamination.

"Our goal is to clean up the contamination and make sure the groundwater is the priority," Rankin said. "In a state that is arid and dry, we need to make sure (the San Juan River) is protected."

See **Giant** A3.

WAR ON TERROR

Financial monitoring necessary officials say

— By Martin Crutsinger —
The Associated Press

WASHINGTON — An unheralded Belgian company that handles much of the world's financial message traffic is suddenly getting a lot of attention.

Known by its acronym, Swift, the financial-industry owned cooperative has for nearly five years been making its immense international data base available to help the Bush administration track down terrorists.

The group has complied with administration subpoenas to supply financial data in a program that was secret until it was revealed Thursday by several news organizations over the objections of the administration.

Democrats and civil liberties groups said Friday that the whole effort had disturbing similarities to another controversial anti-terrorism program of warrantless spying on telephone calls and e-mails.

But the administration defended the program, which has been going since shortly after the Sept. 11, 2001, terror attacks, and denounced the news media for making it public.

Treasury Secretary John Snow called the financial-records effort "government at its best" and said it was "entirely consistent with our democratic values, with our best legal traditions."

The program allows U.S. counterterrorism analysts to obtain financial information from a vast database maintained by Swift, which is headquartered in Brussels. It routes about 11 million financial transactions daily among 7,800 banks and other financial institutions in 200 countries.

Republicans defended the financial program, saying that it made sense in trying to track down terrorists.

"I think that the tracking of the financing of terrorism trumps most things," said Senate Banking Committee Chairman Richard Shelby, R-Ala.

TEEN INNOCENCE LOST

Giant

(Continued from Page A1)

Leland Gould, executive vice president of governmental affairs for Giant, said Friday he could not comment on the 175-page document because his office or legal council have yet to receive the draft order.

But, he added that the company is "looking forward to working with the Environment Department on these issues."

Those issues include volatile organic compounds and petroleum products such as diesel fuel, gasoline, jet fuel and kerosene, which all were spilled into the ground below.

The company installed a barrier between the refinery facility and the river to keep contaminants from entering the San Juan, said Wayne Price, Environment Bureau chief for the Oil and Conservation Division of the State Energy, Minerals and Natural Resources Department.

"They have a number of projects ongoing to abate and remediate the groundwater contamination," Price said. "The contamination is now contained."

According to the Environment Department, most of the contaminants detected beneath the facility are in the northeast portion of the refinery.

Rankin said that under the plan, the company will be placed under a specific timeline to correct the contamination and clarify how the company will monitor the air, soil and groundwater.

"The order says, 'You, Giant, need to develop plans to determine the extent and nature of the plume and propose a way to clean it up,'" Rankin said, adding that it will ultimately be state officials that must approve of the company's corrective plan.

The Environment Department also will have the power to fine the company for failure to comply with the final order, as State Energy, Minerals and Natural Resources did about two years ago, Price said.

Giant received a fine up to $100,000, Price said. However, the oil company paid $30,000 and invested up to $2 million in upgrades to prevent the contamination from spreading.

A bentonite slurry was installed around the entire refinery to contain the release of any hazardous chemicals.

"When it contacts water, this stuff hardens up and becomes impermeable. It's a common technique used to prevent unwanted seep through," Price said.

Subsequent samples of the San Juan River in the last two years have come back negative for any forms of contamination, Price said. Monthly testing by the Oil and Conservation Division likely will be scaled back.

"One of the main goals of this order, besides cleanup, is to determine where the leaks and spills are coming from at the refinery site," Rankin said. "If you don't know where they are coming from, you aren't really solving the problem."

Giant employs about 200 people, including subcontractors.

The draft order can be found at the Environment Department's Hazardous Waste Bureau Web site at www.nmenv.state.nm.us/HWB. Public comments must be received by 5 p.m. on Aug. 21.

Nathan Gonzalez: ngonzalez@daily-times.com

Cline

(Continued from Page A1)

known gang members, according to Sgt. Tyler Truby of the sheriff's office. He declined to name those individuals.

Nikki Cline, Jayni Cline's mother, said her daughter and her daughter's friends have no gang ties.

"She was just somebody's little girl. ... Anyone who knew her knew who she was," she said. "The other kids — those kids were my family too. They were not affiliated with gangs. They are all good kids."

The alleged gang associations are mistakes, she added.

"It was just a little Bloomfield and Aztec thing, going on since the Hatfields and McCoys. They weren't involved in gangs," she said. "When kids are involved (police) always want to say they are affiliated with a gang."

Jessica Lynn, 16, of Aztec, said she was Cline's friend. She said that if four or more people are involved in a skirmish, it should not be automatically considered a gang incident.

Cline was a sweet girl who happened to be in the wrong place at the wrong time, Lynn said.

"No matter what was going on, she was happy," she added. "She had such a good heart."

Nikki said she is not worried that her daughter will be characterized unfairly.

"Everyone in Bloomfield knows Jayni," she said. "I don't feel I have to explain her to anybody."

When asked about her feelings on the shooter, she expressed pity.

"I know he didn't mean to shoot her. You couldn't look at this girl and shoot her," she said. "That it is a reflection of what is going on today. Something needs to be done. These kids should not be walking around with guns. A 16-year-old kid lost her life and an 18-year-old lost his."

Jordan is being charged with an open count of murder for killing Cline, according to sheriff's deputies.

The sheriff's office is still investigating the incident.

"We're not saying the fight was gang-related or over gang issues, but there were people involved who have gang affiliations," Truby said. "We have no indication that Cline herself was affiliated with any gangs or belonged to a gang."

Healthy

(Continued from Page A1)

unhealthy food completely.

For the past three years, Tibbetts Middle School in Farmington has not had any junk food in

THE DAILY TIMES
FARMINGTON, NEW MEXICO
THE FOUR CORNERS INFORMATION LEADER
Sammy M. Lopez — Publisher
Troy Turner — Editor

DAILY TIMES EDITORIAL

This Giant cleanup deserves attention

The numbers and charges are daunting.

More than 156,000 gallons of petroleum products.

Nine incidents where nearly 400 barrels of material went unrecovered.

Major spills dating back to 1984.

Additionally, other chemicals and refinery byproducts seeped into the soil, contaminating the groundwater and threatening the San Juan River, which is important for its water supply and world-famous fishing.

Last week, the New Mexico Environment Department released a scathing report detailing the many pollution problems of the Giant Industries refinery in Bloomfield, citing the above details and opening a 60-day public comment period on the proposed cleanup order.

"Surface water, groundwater and soil have all been affected, to varying degrees, from the release of contaminants," the report states.

The draft cleanup order outlines the requirements Giant must meet to make amends, but it is hard to make amends to an environmental mess that was in the making for decades.

The economy, and the heart and soul of the local livelihood, depends greatly on the success and continued growth of the local oil and gas industry. There can be little doubt that the riches pumped from local grounds in turn pump riches into the local economy.

But none of us, including our industries that matter so much, should forget just how valuable another critical commodity is that we are blessed with having: water.

Additionally, the land itself is very much prized here.

There are several questions that should be answered during the review of the cleanup and its enforcement.

Why did it take so long for the spills to be discovered? Or, perhaps a better question, why so long before Giant was caught and punished for a habit of spilling?

Why does Giant have such a history?

Does it feel the penalty is worth the risk?

What is going to be done to assure more such spills are prevented, and how serious will the state and federal regulators be in sending the message to other refineries that this type of thing cannot be allowed?

We understand and respect the role of Giant in our economy, most notably for the 200 people it employs and who must count on Giant for their jobs to support their families and lifestyle.

However, the message during this cleanup period must be clear.

Make it happen.

Make it clean.

And send a message.

Oil and water don't mix.

WHERE TO WRITE:

Sen. Pete V. Domenici, 328 Hart Senate Office Building, Washington, DC 20510, phone (202) 224-6621, fax: (202) 228-3261, Web site at www.house.gov/tomudall Fax. (202) 226-1331. Farmington Field Office:. Pete Valencia, (505) 324-

City continues to be sensitive to Navajo cor

BILL STANDLEY
Guest columnist

As Mayor of the City of Farmington, I feel the need to address some unfortunate events that have occurred in our community over the last couple of weeks — a tragic shooting involving a police officer and the assault and robbery of an individual by three assailants.

The Navajo community, the city of Farmington and others have been tremendously impacted by these events and I extend my condolences and offer my thoughts and prayers to the families that have been affected.

Ever since the events occurred that were chronicled in the book, "The Broken Circle," following an incident in the 1970s, and the U.S. Civil Rights Commission issued its report shortly thereafter, Farmington has struggled with its image and perceptions about how people of all races are treated in our community.

As a city, it has been a high priority to reach out to the diverse population which calls northwest New Mexico home. Over the years, we have made progress, building trust and relationships between people and communities, agreeing to work together to solve problems and enhance our mutual environment.

An unfortunate event occurred on June 4, 2006. Three men have been arrested and charged with kidnapping, robbing and beating a defenseless individual because he was inebriated. We are collectively ashamed that this type of incident took place in Farmington. However, it did happen. Afterward, we did all we could to quickly bring those responsible to justice. These three men must think about the lives they affected while behind bars.

The Farmington Police Department has filed the most serious charges against these three men applicable to this crime. They have asked the District Attorney's Office if hate crime statutes could apply to stiffen any sentences imposed and, likewise, the FBI's determination whether federal charges for violations of federal civil rights may be used to strengthen the cases against these men.

It is our hope that swift action, serious charges and appropriate maximum sentences will act as a deterrent and serve as a warning, that such activities will not be tolerated in the Farmington community.

Then, less than a week later, in the parking lot of a Farmington business, a Farmington police officer responded to a 911 call for help. This event ended in tragedy — in 40 seconds. A young man lost his life, forever changing the lives of the John family. The police officer and his family will be unalterably affected. Witnesses have, in their minds, an image they will never be able to erase. The list of victims is long and the list of explanations as to why something like this happens is short.

As you know, the San Juan County Sheriff's Office conducted a thorough investigation of what happened in this incident, and we thank them for their professionalism and the completeness of the report. They submitted their findings to the District Attorney who announced, based on the investigation presented and state statutes, no charges would be brought against the officer involved in the shooting.

The investigation will continue, and all who have any knowledge of the incident are encouraged to contact the San Juan County Sheriff's Office or any other law enforcement agency. Additionally, the results of further tests may shed more light on what happened.

In the days following this tragedy, Police Chief Mike Burridge, City Manager Bob Hudson and I have made ourselves available to a number of people who wanted to know more about the shooting incident and the beating of a lone individual by three men.

We have talked with and met with a number of local and central leaders of the Navajo Nation. We have contacted the Governor's office, the U.S. Civil Rights Commission, the Department of Justice, local groups/organizations, individuals at-large, and members of our own Citizens Police Advisory Committee, as well as board members of the Farmington Intertribal Indian Organization (FIIO) and its director. We want to be open to as many channels of communication as possible.

In addition we will, in the future, completely support and fully cooperate with any law enforcement agency which may be brought in to conduct further investigations into details of these ev

We want to ing dis reestabl in those built an tions in

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Bill Farmin his th March.

Leaders of Iraq and Afghanistan face similar sit

DAVID S. BRODER
Syndicated columnist

WASHINGTON — The situation the United States and its allies now face in Afghanistan and Iraq is one almost without precedent. In two countries where we used our military might to rout the menacing dictatorial regimes running things, we now find ourselves sponsoring governments with notably shaky holds on popular support.

The leaders of those governments — Hamid Karzai in Afghanistan and Nouri al-Maliki in Iraq — came to power through the influence of American diplomacy and American guns. But, in a historic reversal of fortune, they now hold this country hostage to their decisions and their fate.

In Afghanistan and Iraq, we won military victories that appeared to be decisive enough to allow for the creation of new national governments. In both countries, we provided protection for the conduct of democratic

This week, Pamela Constable, The Washington Post's correspondent in Kabul, reported in a Page 1 story that "many Afghans and some foreign supporters say they are losing faith in ... Karzai's government, which is besieged by an escalating insurgency and endemic corruption and is unable to protect or administer large areas of the country."

Constable, who knows the country well, quoted a foreign military official in Kabul, speaking anonymously, who said, "The president (Karzai) had a window

project his authority" is limited by the meagerness of his forces and the presence of U.S. and NATO troops.

Lugar noted that Karzai had recently complained publicly that the United States and its allies had been laggard in going after the Taliban and had accused Pakistan once again of harboring those terrorists - suggesting that the targets of his criticism perhaps were throwing the blame back on him.

But the disaffection Constable described is rooted in the corruption that has been documented in squandered aid programs, in the continued flourishing of the long-established drug trade and in the revival of the Taliban, which has launched an offensive that has claimed hundreds of lives.

Meantime in Iraq, Maliki, having completed his Cabinet, this week announced his grand plan for national "reconciliation," only to stumble over the issue of

unveile aware ground offered not inv and [redacted] said said, w tice."

That but it ra appeal those w and ma contesti try.

Lug anyone the U.S Iraq be sense Baghda cult to desists," Sunnis ticket

GIANT
REFINING COMPANY

June 27, 2006

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

Certified Mail: 7006 0100 0003 5288 1144

RE: Giant - Bloomfield Refinery
EPA ID# NMD089416416

Dear Mr. Price,

Due to the recent issuance of a Draft Order by the New Mexico Environmental Department (NMED) to our facility, Giant Refining Company – Bloomfield Refinery requests to extend the submittal date of the Discharge Plan to December 1, 2006.

Giant anticipates a final Consent Order from NMED by September 2006.The Draft Order contains corrective action requirements that could affect our Discharge Plan Modification. The extension would allow Giant time to incorporate modifications into the Discharge Plan that could arise from the corrective action.

If you need additional information, please contact me at (505) 632-4171.

Sincerely,

James R. Schmaltz
Environmental Manager
Giant Refining – Bloomfield

Cc: Carl Chavez – OCD
Ed Riege

2006 JUN 28 PM 1 08

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

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

Price, Wayne, EMNRD

From: Price, Wayne, EMNRD
Sent: Tuesday, June 27, 2006 12:21 PM
To: 'Randy Schmaltz'
Cc: Chavez, Carl J, EMNRD; 'Ed Riege'; 'Todd Doyle'
Subject: RE: Discharge Plan Modification Extension

Re: GW-001 Giant Bloomfield

OCD hereby approves of the extension with the following conditions:

1. All fees associated with the modification shall be paid no later than July 31, 2006.
2. Giant shall submit a monthly progress report via E-mail.

Please be advised that NMOCD approval of this plan does not relieve the owner/operator of responsibility should operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve the owner/operator of responsibility for compliance with any OCD, federal, state, or local laws and/or regulations.

From: Randy Schmaltz [mailto:rschmaltz@giant.com]
Sent: Tuesday, June 27, 2006 10:14 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Ed Riege; Todd Doyle
Subject: Discharge Plan Modification Extension

Wayne,

Please find enclosed a request to extend the deadline for Bloomfield's Discharge Plan Modification.

Thank you for your consideration into this matter!

Randy Schmaltz
Giant Refining Company
(505) 632-4171
(505) 320-6989 cell

Chavez, Carl J, EMNRD

From: Randy Schmaltz [rschmaltz@giant.com]
Sent: Tuesday, June 27, 2006 10:14 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Ed Riege; Todd Doyle
Subject: Discharge Plan Modification Extension

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Randy Schmaltz
Giant Refining Company
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Wayne Price
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Dr
Santa Fe, NM 87505

Certified Mail: 7006 0100 0003 5288 1144

June 27, 2006

RE: Giant - Bloomfield Refinery
EPA ID# NMD089416416

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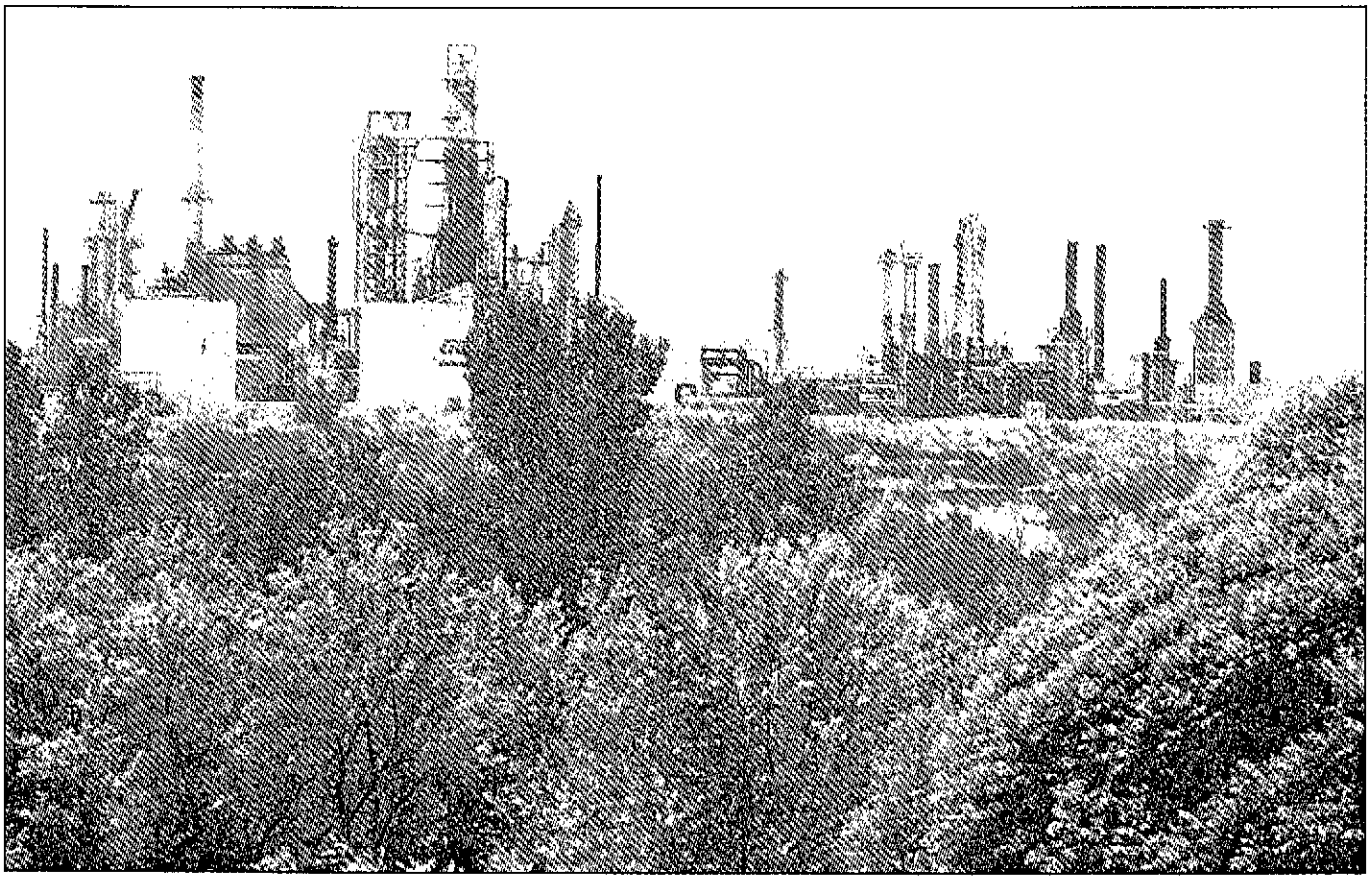
If you need additional information, please contact me at (505) 632-4171.

Sincerely,

James R. Schmaltz
Environmental Manager
Giant Refining – Bloomfield

Cc: Carl Chavez – OCD
Ed Riege

A quick fix for giant pollution?



Dave Watson/*The Daily Times*

A Giant Industries refinery near the San Juan River is pictured on Thursday in Bloomfield. The New Mexico Environment Department is requiring the oil company to clean up material spilled around the refinery since 1984.

State orders refinery to clean spills dating back to 1984

— By Nathan Gonzalez —
The Daily Times

FARMINGTON — Since 1984, Giant Industries' refinery in Bloomfield has spilled approximately 156,282 gallons of petroleum products, according to the New Mexico Environment Department.

In addition, various other chemicals and refinery byproducts have seeped into the soil, contaminating the groundwater and threatening the San Juan River's quality fishing waters.

A report released Thursday by the Environment Department cites at least nine incidents where nearly 400 barrels of material were not recovered following spills between November 1984 and January 1998 at the refinery, which has been in operation since the late 1950s.

Leaking storage tanks have aided in placing petroleum materials and other chemicals into the ground at the refinery, located on 285 acres just south of the Bloomfield city limits.

"Surface water, groundwater and soil have all been affected, to varying degrees, from the release of contaminants," the report states.

Environment Department officials released the report to begin a 60-day public comment period on the proposed draft order requiring a cleanup.

Environment Department Communications Director Adam Rankin said the draft outlines steps Giant will take to correct decades of contamination.

"Our goal is to clean up the contamination and make sure the groundwater is the priority," Rankin said. "In a state that is arid and dry, we need to make sure (the San Juan River) is protected."

See **Giant** A3.

Giant

(Continued from Page A1)

Leland Gould, executive vice president of governmental affairs for Giant, said Friday he could not comment on the 175-page document because his office or legal council have yet to receive the draft order.

But, he added that the company is "looking forward to working with the Environment Department on these issues."

Those issues include volatile organic compounds and petroleum products such as diesel fuel, gasoline, jet fuel and kerosene, which all were spilled into the ground below.

The company installed a barrier between the refinery facility and the river to keep contaminants from entering the San Juan, said Wayne Price, Environment Bureau chief for the Oil and Conservation Division of the State Energy, Minerals and Natural Resources Department.

"They have a number of projects ongoing to abate and remediate the groundwater contamination," Price said. "The contamination is now contained."

According to the Environment Department, most of the contaminants detected beneath the facility are in the northeast portion of the refinery.

Rankin said that under the plan, the company will be placed under a specific timeline to correct the contamination and clarify how the company will monitor the air, soil and groundwater.

"The order says, 'You, Giant, need to develop plans to determine the extent and nature of the plume and propose a way to clean it up,'" Rankin said, adding that it will ultimately be state officials that must approve of the company's corrective plan.

The Environment Department also will have the power to fine the company for failure to comply with the final order, as State Energy, Minerals and Natural Resources did about two years ago, Price said.

Giant received a fine up to $100,000, Price said. However, the oil company paid $30,000 and invested up to $2 million in upgrades to prevent the contamination from spreading.

A bentonite slurry was installed around the entire refinery to contain the release of any hazardous chemicals.

"When it contacts water, this stuff hardens up and becomes impermeable. It's a common technique used to prevent unwanted seep through," Price said.

Subsequent samples of the San Juan River in the last two years have come back negative for any forms of contamination, Price said. Monthly testing by the Oil and Conservation Division likely will be scaled back.

"One of the main goals of this order, besides cleanup, is to determine where the leaks and spills are coming from at the refinery site," Rankin said. "If you don't know where they are coming from, you aren't really solving the problem."

Giant employs about 200 people, including subcontractors.

The draft order can be found at the Environment Department's Hazardous Waste Bureau Web site at www.nmenv.state.nm.us/HWB. Public comments must be received by 5 p.m. on Aug. 21.

Nathan Gonzalez: ngonzalez@daily-times.com

Chavez, Carl J, EMNRD

From: Price, Wayne, EMNRD

Sent: Thursday, June 22, 2006 3:25 PM

To: VonGonten, Glenn, EMNRD; Chavez, Carl J, EMNRD

Subject: RE: Environment Department Seeks Public Comment on San Juan Refining Company and Giant Industries Arizona, Inc., Draft Order

From: Rankin, Adam, NMENV
Sent: Wednesday, June 21, 2006 6:02 PM
To: AP- ABQ. Bureau; (brosnanj@shns.com); (cadams@bizjournals.com); (chamblen@nmsu.edu); (david_stevens@link.freedom.com); (deby@cibolabeacon.com); (editor@cibolabeacon.com); (editora@lavozdelnorte.net); (editorial@crosswindsweekly.com); (editorial@roswell-record.com); (hobbsradionews@basinbroadband.com); (krwgfm@nmsu.edu); (lilly@roswell-record.com); (news@alibi.com); (news@currentargus.com); (news@roswellradio.org); (news@sangrechronicle.com); (news@thedailypress.com); (newsroom@taosnews.com); (pstein@daily-times.com); (rgsun@cybermesa.com); (rtrndhse@aol.com); alenderman@sfnewmexican.com; Anthony Ortiz (anthony.ortiz@krqe.com); bmassey@ap.org; bobquick@sfnewmexican.com; Cameron Ward (education@hobbsnews.com); citydesk@sfnewmexican.com; Corrales Comment; Daniel Russell (editor@hobbsnews.com); David Giuliani (dgiuliani@lasvegasoptic.com); David Miles; dbaker@ap.org; dheil@sfnewmexican.com; Diana Alba (dalba@lcsun-news.com); Dolores Bernal (dbernal@lcsun-news.com); ecrawford@abqjournal.com; editor@sfreporter.com; Elva Osterich (eosterreich@alamogordonews.com); Eric Mack; gguzman@abqjournal.com; Hansen, Brian; hhoughton@sfnewmexican.com; James Wulff (jwulff@kobtv.com); Jayme Rubenstein (jayme.rubenstein@gmail.com); jfleck@abqJournal.com; jjadrnak@abqjournal.com; jnorth@abqjournal.com; Joe Garcia (jgarcia@daily-times.com); John Arnold (jarnold@abqjournal.com); Kate Nash (knash@abqtrib.com); KCIE Dulce (abmtz01@hotmail.com); KKOB Radio (kkobam@citcomm.com); KNMX (news@knmx.com); kroberts@abqjournal.com; KSWV (Business Fax); lamonitor@lamonitor.com; Lisa Foxx; Marlena Hartz (marlena_Hartz@link.freedom.com); Matt Grubs (mgrubs@hearst.com); Mercedes Mejia (mmejia@unm.edu); Michael Scanlon (mscanlon@lcsun-news.com); Michelle Fox (courts@hobbsnews.com); mmauritson@lcsun-news.com; moswald@abqjournal.com; news@ksfr.org; newsroom@sfnewmexican.com; Nick Wilkinson (blacksift@yahoo.com); Phaedra Haywood (phaywood@sfnewmexican.com); Rene Romo (Business Fax); rsimon@abqjournal.com; smatlock@sfnewmexican.com; sterrell@sfnewmexican.com; Steve Ramirez (sramirez@lcsun-news.com); Sue Vorenberg (svorenberg@abqtrib.com); Tania Soussan (tsoussan@abqjournal.com); Thomas Guengerich (mountainmaileditor@yahoo.com); Tom McDonald (tmcdonald@lasvegasoptic.com); Trip Jennings (tjennings@abqjournal.com); Vanessa Reyes (vanessa.reyes@kfoxtv.com); Victoria Parker Stevens (vstevens@currentargus.com); Walt Rubel (wrubel@lcsun-news.com); ABQ Journal - Bruce Daniels; ABQ Journal - Charlie Moore; ABQ Journal - Gary Salazar; ABQ Journal - Jeff Jones ; ABQ Journal - John Robertson ; ABQ Journal - Martin Salazar ; ABQ Journal - Mike Easterling ; ABQ Journal - Rene Romo ; ABQ Tribune - Asst. City Editor ; ABQ. Journal - Sharon Hendrix ; ABQ. Tribune - Bill Slakey ; ABQ. Tribune - Kate Nelson; Alarie Ray- KOBTV Producer ; Alibi - Tim McGivern; AP- Clark ; AP- Dick Benke; AP- Herrera ; AP- Montoya ; AP- Sue Holmes ; The New Mexico Daily Lobo; Dennis Domrzalski; East Mountain Telegraph ; Journal North- Jeremy Pawloski ; Journal North- Wren Propp ; KASA TV 2- Fox ; KASA TV- FOX 2 ; KAZQ-TV ; KKOB News- Alex Cuellar ; KKOB News- Judith Jenkins ; KKOB News- Larry Mohlenbrink ; KKOB News- Pat Allen ; KLUZ-TV Albuquerque (spanish language) ; KNME - TV 5 Franz Joachim ; KNMX Radio-Matt Martinez ; KOAT - TV Derrick Davis ; KOAT-TV Assignment Desk ; KOAT-TV Cary Schwanitz ; KOBE/KMVR Radio ; KOBF-TV Farmington ; KOB-TV ; KOB-TV Assignment Desk ; KPZA,KIXN,KZOR,KYKK ; Kristen Davenport ; KRQE-TV Assignments Desk ; KRQE-TV Kim Vallez ; KRQE-TV Paul Burt ; KRQE-TV Salle Jayson ; KRSN Radio Los Alamos ; KRSY AM/FM Radio ; KUNM - Angela Taylor ; KUNM Radio (NPR) ; KUNM- Tom Trowbridge ; KUNM-Tom Trowbridge 2 ; Las Vegas Optic - Mercy Lopez ; Lorene Mills ; Los Alamos Monitor -- Carol Clark ; Los Alamos Monitor - Roger Snodgrass ; Los Alamos Monitor 2 ; NPR - Ted Robbins ; Patty McDermop ; Raton Range ; Reuters- NM Stringer Zalie Pollon ; Reuters ; Rio Rancho Observer - Eric Maddy ; Rio Rancho Observer 2 ; Rio Rancho Observer ; Scott Gerdes; SF New Mexican - B Ferry ; SF New Mexican - W Brown ; SF New Mexican- Stone ; Taos News; Alamogordo Daily News ; Alamogordo Daily News 2 ; Carlsbad Current Argus -- Joshua Byers; Carlsbad Current-Argus -- S Davis ; De Baca County News ; Deming Headlight ; Deming Headlight - Desma Montellano ; Deming Headlight- Kevin Buey ; El Defensor Chieftain ; El Paso Times ; Farmington Daily Times ; Gallup Independent; Gallup Independent- 2 ; Hal Rhodes ; Hobbs Radio Network - Al Lobeck ; J. Moorman ; Jack Nixon ; KCCC-AM; KDBC-TV El Paso (CBS) ; KDEM-FM/KOTF-AM- Candy Sweetser ; KFOX (El Paso) ; KFOX El Paso Angela Word; KGRT Radio Las Cruces ; KICA-AM ; KINN- AM Radio ; KINT-TV El Paso (spanish language) ; KKOR-FM/KXXI-FM/KYVA-AM/KTHR-FM; KNFT Radio Silver City ; KRWG - Gary Worth ; KRWG - Las Cruces ; KSVP/KTZA Radio ; kSWV Radio ; KTQM Radio Clovis- John Randal ; KTSM Ch. 9 - Justin Bannister ; KVIA-TV El Paso (ABC) ; KVLC Radio Las Cruces ; Las Cruces Bulletin; Las Cruces Sun-News ; Moriarity Independent ; Mountain Monthly ; Mountain View Journal ; Portales/Quay - David Irvin ; Radio- Roswell ; Round Up; Ruidoso News - Diane Stallings ; Sierra County Sentinel ; Union Broadcasting -- Courtney Clairborne ; Union County Leader ; Valencia County News-Bulletin

Subject: Environment Department Seeks Public Comment on San Juan Refining Company and Giant Industries Arizona, Inc., Draft Order

For Immediate Release
June 21, 2006

Contact: Adam Rankin NMED Communication Director
Phone: (505) 827-0314

Environment Department Seeks Public Comment on San Juan Refining Company and Giant Industries Arizona, Inc., Draft Order

(Santa Fe, NM) – The New Mexico Environment Department (NMED) today is releasing for public comment a Draft Order to Giant Refining Company, Bloomfield Refinery, pursuant to NMSA 1978 §§ 74-4-10.1 and 74-4-13 of the New Mexico Hazardous Waste Act.

Releases of hazardous wastes and petroleum products to the environment at the Giant's Bloomfield facility have resulted in contamination of the soil and groundwater and threaten to contaminate the San Juan River. The Draft Order contains investigation and cleanup requirements for the pollution and a schedule for implementation of the cleanup requirements.

Giant's Bloomfield Refinery is a crude oil refining facility owned by the San Juan Refining Company and operated by Giant Industries Arizona, Inc. The Bloomfield Refinery has changed ownership over the years and has been in operation since the late 1950's as a crude topping unit. Currently, the facility has the refining capacity of 18,000 barrels per day. Throughout its history, Giant has been processing crude oil into petroleum products, and as a result of its operations has released a variety of hazardous and solid wastes to the environment.

NMED has identified 26 contaminated sites that Giant will be required to clean up based on a series of investigation work plans that must be submitted to and approved by NMED over the next several years. The first investigation work plan will be due to NMED by December 31, 2006, according to the Draft Order. NMED is also requiring Giant to implement a facility-wide groundwater monitoring plan to ensure groundwater quality is protected.
Hazardous constituents released at the facility include: organic contaminants, such as benzene, toluene, ethylbenzene, xylenes; other volatile organic compounds; semi-volatile organic compounds, including polynuclear aromatic hydrocarbons; separate-phase hydrocarbons, diesel-range organics, gasoline-range organics, oil-range organics; metals, such as arsenic, barium, cadmium, chromium, copper, lead, mercury, manganese, selenium, and zinc; and other inorganic contaminants, such as fluoride, chloride, nitrate, and sulfate.

Most contaminants detected beneath the facility are found in the northwest portion of the refinery and primarily consist of xylenes, gasoline-range hydrocarbons, diesel-range hydrocarbons, and separate phase hydrocarbons. Surface water, groundwater, and soil have all been affected, to varying degrees, by the release of contaminants. Based on monitoring results no public drinking water supplies have been affected by contamination from the refinery.

NMED invites the public to submit written comments on the Draft Order during a 60-day public comment period that begins today. The draft Order may be reviewed at the NMED Hazardous Waste Bureau located at 2905 Rodeo Park

Drive East, Building 1, Santa Fe, New Mexico 87505-6303. Procedures for submitting written comments and a copy of the Order are also available at the NMED Web site http://www.nmenv.state.nm.us/HWB/grcbperm.html, under Draft Order. Written comments will be received through **5:00 p.m., August 21, 2006.** NMED will issue the Final Order after considering all written comments received.

For more information, contact Adam Rankin, NMED Communications Director, at (505) 827-0314.

###

Adam Rankin
Communications Director
New Mexico Environment Department
(505) 827-0314 O
(505) 231-0475 C
(505) 827-1768 F
adam.rankin@state.nm.us
www.nmenv.state.nm.us

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 7, 2006

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

SUBJECT: APPROVAL WITH MODIFICATIONS
2005 GROUND WATER REMEDIATION AND MONITORING
ANNUAL REPORT APRIL 2006
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
EPA ID # NMD089416416
HWB-GRCB-06-003

Dear Messrs. Schmaltz and Riege:

The New Mexico Environment Department (NMED) has completed its review of the *2005 Groundwater Remediation and Monitoring Annual Report (Volumes I & II)*, dated April 2006, submitted on behalf of Giant Refining Company, Bloomfield Refinery (GRCB). GRCB must adhere to the requirements established in this Approval with Modifications for future groundwater reports and submit a response for all requested information. The requested information and replacement pages must include a response letter that details where the information was revised and cross-referencing NMED's numbered comments. GRCB must submit a response to NMED no later than August 14, 2006 or this approval will be rescinded.

GRCB must make the following modifications and submissions as a condition for this approval.

1. In Section 9-1, *The Groundwater Elevation Information,* the "separate phase hydrocarbon detected" formula is written incorrectly. NMED applied the formula to calculate the

"Corrected Groundwater Calculation" and the results did not equal the results provided in the table. However, the formula written below does provide the correct calculation.

Corrected Groundwater Elevation = MPE – [DTW + 0.8 (DTW – DTP)]

Therefore, GRCB must submit a replacement page to include the correct formula as stated above.

2. In section 10, Figure 11 shows DW #48 in the same location as MW-48 (shown in Figure 3); however, MW-48 does not exist on Figure 11. Therefore, NMED is under the assumption that DW #48 was renamed from MW-48. If NMED is wrong with this assumption GRCB must provide an explanation for this well. GRCB cannot arbitrarily change a well name. If MW-48 represents a DW well, this must be identified in a legend. GRCB must submit a replacement figure with the appropriate changes.

3. In Section 10, on Figure 11 and Figure 12, GRCB must define DW, BV, TP, and MW in a legend on each map. GRCB must submit replacement figures with the appropriate changes.

4. In Section 10, Figures 11 and 12 do not show unit measurements (e.g., feet, meters) for the scales provided. GRCB must submit replacement figures with units designated for the map scales.

If you have questions regarding this approval please contact me at 505-428-2545.

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Permits Management Program

HM/td

cc: J. Kieling, NMED HWB
D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

May 22, 2006

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

2006 MAY 26 PM 12 42

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

SUBJECT: RIVER TERRACE BIOVENTING SYSTEM
MONITOING PLAN AMENDMENT
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
NMED ID # NMD089416416
HWB-GRCB-05-002

Dear Messrs. Schmaltz and Riege:

The New Mexico Environment Department (NMED) has reviewed your letter dated May 18, 2006 submitted by Malcolm Pirnie on behalf of Giant Refining Company, Bloomfield Refinery. The letter presented the proposed modifications to the in-situ respiration test, initially established in the *Bioventing Monitoring Plan (Revised)* dated October 28, 2005. NMED hereby approves the modifications outlined in the May 18, 2006 letter to the in-situ respiration test. The letter submitted by Giant constitutes a replacement page modifying the frequency and duration of the in-situ respiration test.

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

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Permits Management Program
Hazardous Waste Bureau

HM

cc: J. Kieling, NMED HWB
D. Cobrain, NMED HWB
W. Price, OCD
B. Wilkinson, EPA

File: Reading File and GRCB 2006 File

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
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BILL RICHARDSON
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RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
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March 30, 2006

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

2006 MAR 31 PM 1 03

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

SUBJECT: ADDITIONAL ANALYSIS TO THE APRIL 3, 2006 SEMI-ANNUAL GROUNDWATER SAMPLING GIANT REFINING COMPANY, BLOOMFIELD REFINERY RCRA PERMIT NO. NMD089416416

Dear Mr. Schmaltz and Mr. Riege:

The New Mexico Environment Department (NMED) is requiring Giant Refining Company, Bloomfield Refinery (GRCB) to complete additional laboratory analysis for the following observation and monitoring wells during the April 3, 2006 groundwater sampling event: OW0+60, OW1+50, OW3+85, OW5+50, OW6+70, OW8+10, OW11+15, OW14+10, OW16+60, OW19+50, OW22+00, OW23+10, OW23+90, OW25+70, MW-11, MW-12, MW-24, MW-38 MW-45, MW-46, and MW-47. These wells must be analyzed for diesel range organics (DRO) 8015B (covers carbon range C10 to C36) in addition to benzene, toluene, ethylbenzene, xylenes, (BTEX) and methyl tertiary-butyl ether (MTBE) as stated in the March 20, 2006 letter from GRCB.

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

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Permits Management Program

cc: John Kieling, NMED HWB
D. Cobrain, NMED HWB
W. Price, OCD Santa Fe Office
C. Chavez, OCD Santa Fe Office
B. Wilkinson, EPA Region 6

File: Reading File and GRCB 2006 File

GIANT
REFINING COMPANY

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

2006 MAY 8 PM 12 25

Certified Mail: 7004 2510 0005 1641 4828

May 5, 2006

Re: Approval with Modifications
System Start-Up Six Month Report of the North Boundary Barrier Collection System Phase II (May 2005 through October 2005)
Giant Refining Company, Bloomfield Refinery
NMED ID # NMD089416416

Dear Mr. Price,

Giant Refining Company Bloomfield (GRCB) received the April 12, 2006 letter from the New Mexico Environmental Department (NMED) requesting additional information regarding the System Start-Up Six Month Report of the North Boundary Barrier Collection System Phase II (May 2005 through October 2005) Giant Refining Company, Bloomfield Refinery. The following correspondence will address NMED's requests.

All conditions listed in the April 12, 2006 letter from NMED will be addressed in the Phase II Annual Report.

Condition #2 requests information concerning the construction of MW #46. As shown on the attached Installation Diagram for MW #46, the well end cap at the bottom of the well does not contain any openings.

Condition #3 identifies a typographical error in the data of Section 5-4 Groundwater Elevation Information, August 2005 table. The correct Total Depth is 14.98 feet and Depth to Product is 14.96 feet. Water was not present at that time. A corrected table is provided with this letter.

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50 ROAD 4990
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BLOOMFIELD
NEW MEXICO
87413

Condition #8 calls for installation diagrams and boring logs for all collection wells to be included in the Phase II Annual Report. The fluids collection system consists of 15 collection wells and 14 observation wells located upgradient (plant-side) and downgradient (river-side) of the north boundary barrier, respectively. The collection well locations correspond to the troughs in the Nacimiento Formation identified during the barrier construction activities. For each collection well, a corresponding observation well was installed on the downgradient side of the barrier, approximately 20-feet from the barrier along the river-side of the Hammond ditch access roadway. Boring logs were developed and are provided for each observation well. Boring logs were not developed for the collection wells, due to the close proximity and similar subsurface geologic characteristics observed during well installation of the corresponding downgradient observation well. Well installation diagrams were developed and are provided for each of the 29 collection and observation wells in the System Start-Up Six Month Report of the North Boundary Barrier Collection System Phase II (May 2005 through October 2005) Giant Refining Company, Bloomfield Refinery.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,

Cindy Hurtado

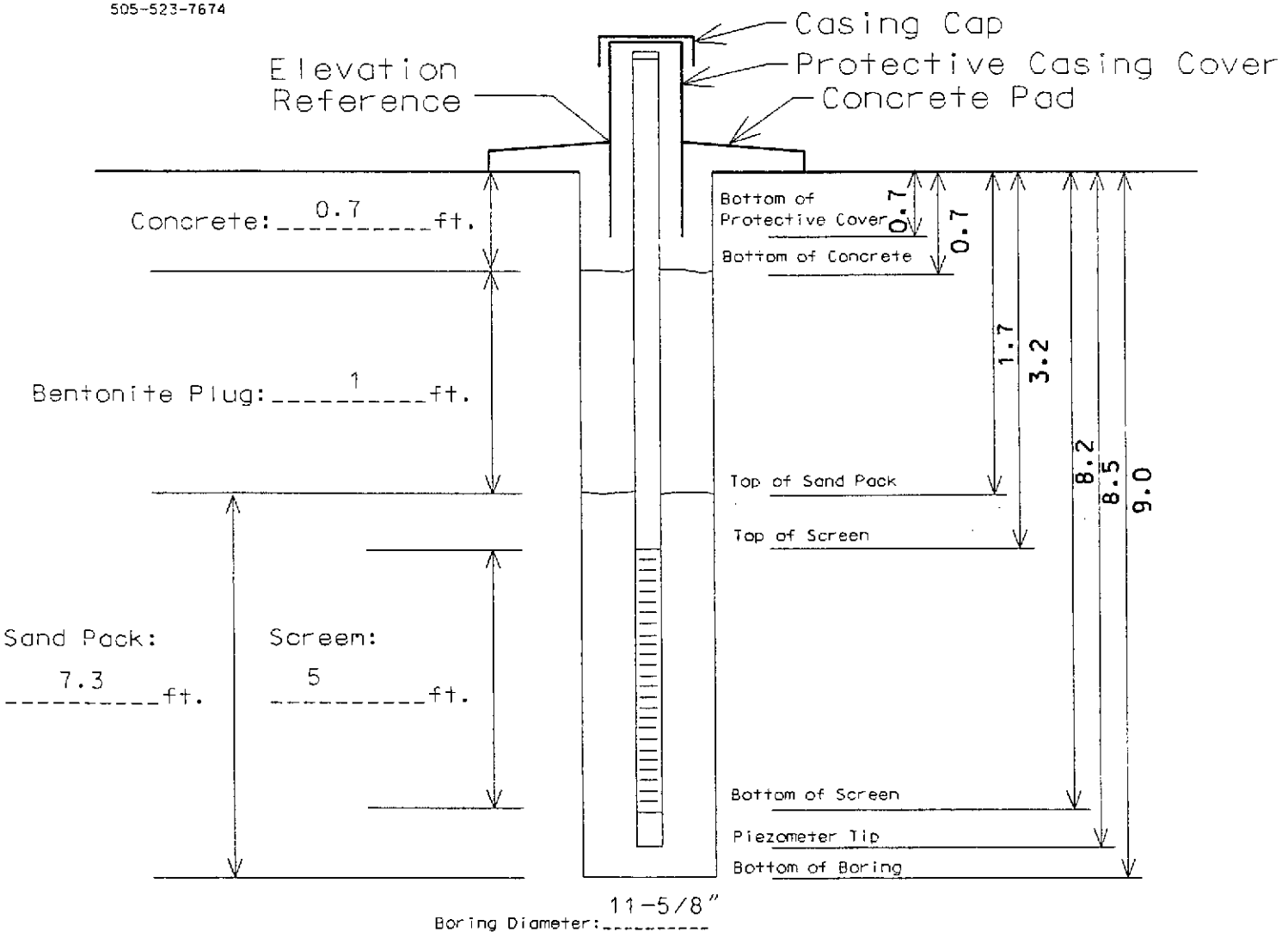
Cindy Hurtado
Environmental Coordinator – Giant Refining – Bloomfield

Cc: Randy Schmaltz – Environmental Manager – Giant Refining – Bloomfield
Hope Monzeglio – NMED Santa Fe

PRECISION ENGINEERING, INC.
505-523-7674

Installation Diagram

Monitoring Well No. MW - 46



Sand Type: 10-20 Silica

Bollards, Type/Size: Steel, 3" min.

Bentonite: 3/8" Chip

Screen Type/Size: 4" PVC Sch. 40, 0.010" Slotted

Cement/Grout: ---

Riser Type/Size: 4" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: 5560.48

Other: N/A

Bottom Cap Used? Yes

Site Easting: 2576.06

Project #: 03-015

Project Name: Bloomfield Wells

Elevation: 5496.43

Observation Well Fluids Monitoring August 2005

Well ID	Date	Measuring Point Elevation	Total Well Depth	Depth To Product (DTP)	Depth To Water (DTW)	Corrected Groundwater Elevation
OW 0+60	8/2/2005	5508.69	14.98	14.92	14.93	5493.77
	8/11/2005	5508.69	14.98	14.10	14.78	5494.45
	8/23/2005	5508.69	14.98	14.96	NWM	5496.72
OW 1+50	8/2/2005	5505.22	14.98	14.90	14.91	5490.32
	8/11/2005	5505.22	14.98	13.80	14.79	5491.22
	8/23/2005	5505.22	14.98	14.86	14.88	5490.36
OW 3+85	8/2/2005	5506.17	15.06	12.60	12.63	5493.56
	8/11/2005	5506.17	15.06	12.35	13.60	5493.57
	8/23/2005	5506.17	15.06	12.80	12.86	5493.36
OW 5+50	8/2/2005	5506.94	14.09	13.45	NWM	5496.18
	8/11/2005	5506.94	14.09	13.38	NWM	5496.24
	8/23/2005	5506.94	14.09	13.74	NWM	5495.95
OW 6+70	8/2/2005	5503.79	14.67	NPM	NWM	
	8/11/2005	5503.79	14.67	NPM	NWM	
	8/23/2005	5503.79	14.67	NPM	NWM	
OW 8+10	8/2/2005	5507.26	17.99	NPM	NWM	
	8/11/2005	5507.26	17.99	NPM	NWM	
	8/23/2005	5507.26	17.99	NPM	NWM	

NPM = No Product Measured NWM = No Water Measured

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

APR 2 4 2006

Mr. James Bearzi, Chief
Hazadous Waste Bureau
New Mexico Environmental Department
2905 Rodeo Park Dr. East
Building 1
Santa Fe, NM 87505-6003

Subject: Comments on Draft Order to the San Juan Refining Company and Giant Industries Arizona, Inc., DBA Giant Refining Company

Dear Mr. Bearzi:

Thank you for the opportunity to review the Draft Order to the San Juan Refining Company and Giant Industries Arizona, Inc. My staff and Mr. Troy Hill's staff, who administer various components of the Resource Conservation and Recovery Act (RCRA) for the Environmental Protection Agency, Region 6 (EPA), have reviewed the Draft Order and offer technical comments, as described below. Please note that we did not provide a legal review for the Order.

First, I would like to acknowledge the comprehensive nature of the Draft Order, which memorializes work that has been conducted and additional work that needs to be implemented. It is a credit to the work of your staff.

Specific to the Draft Order, we offer the following technical comments:

Page 18, Section II. A. 7. Ecological and Human Exposure to Contaminants: this is an important section and could benefit from an introductory paragraph outlining the significance of evaluating these exposure criteria, coupled with a brief discussion of impact routes. Parts 84 and 85 of this section could be moved into the introduction of this section.

Page 21, Number 97. You wrote: "Exposure to high levels of metallic, inorganic or organic mercury can permanently damage the brain, kidneys and developing fetus." Change last three words to "..., as well as the development of human fetuses."

Page 22, Number 72. Recommend that the MCL of 10 mg/L be included in the discussion of Nitrate.

Page 22, Number 73. Recommend adding to the end of the last sentence, "PAH contents of plants and animals may be higher than PAH contents of soil or water in which they live *through bioaccumulation or biomagnification processes.*"

Page 25. A space is needed between paragraph numbers 13 and 14.

Page 34, Section III. F. NOTICES
Please add notification to the EPA.
EPA, Region 6
Hazardous Waste Technical Enforcement Section (6EN-HX)
1445 Ross Ave.
Dallas, Texas 75202

Page 35, Section III. K. RECORD PRESERVATION
Recommend that the facility preserve all final reports in CD-ROM format and provide NMED and EPA with copies of all CD-ROM documents. This will be particularly useful in the event of a Freedom of Information Act Request.

Page 37, Section III. Q. Financial Assurance
The word Financial is misspelled in the title.

Page 37. At this point in the document, your section titles change from the use of all capital letters to standard capital and lower case letters. The text changes again at page 38. We recommend consistency throughout the document regarding the use of capital letters versus standard capital and lower case letters.

Page 47, Section V. B. 2. Monitoring
Regarding paragraph 3, in the annual monitoring reports it would be extremely useful to show graphically the concentration of hazardous constituents over time in each well. This will aid in determining trends in contaminant concentrations and assist in future decision-making. It is also recommended that a Geographic Information System (GIS) be employed to show all units, areas of concern, slurry wall, well locations, and other relevant features. The resulting data could be tied into virtual tables that would show concentrations over time at any particular location and aid in monitoring long term trends as well as decision making. It is further recommended that Global Positioning System (GPS) data be used to locate all wells, units, and features that would be input into the GIS system particular to the site.

Page 74, Section VIII. C. 2. Sample Custody
If possible, we recommend that "Bar Code" sample containers be used in field work to expedite and simplify sample handling and processing.

Page 84,
Section VIII. F. 1. g Toxicity Assessment and Section VIIII. F. 1. h Uncertainties.
We recommend that a professional toxicologist and risk assessor be required to carry out these activities.

Again, thank you for the opportunity to comment on the Draft Order to the San Juan Refining Company and Giant Industries Arizona, Inc. I hope you find these

comments useful. We look forward to our continued work concerning Giant Refinery. Should you wish to further discuss these matters, you may contact me at (214) 665-7548 or Mr. Robert Wilkinson at (214) 665-8316.

Sincerely,

Mark Hansen
Chief, Hazardous Waste Enforcement Branch

cc: Hope Monzeglio, NMED
Wayne Price, OCD
Troy Hill, EPA, Region 6

EPA

United States
Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

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BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 12, 2006

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

SUBJECT: EXTENSION APPROVAL OF THE PART B PERMIT APPLICATION REVISION
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
RCRA PERMIT NO. NMD089416416
HWB-GRCB-06-001

Dear Mr. Schmaltz and Mr. Riege:

The New Mexico Environment Department (NMED) received Giant Refining Company Bloomfield Refinery's (GRCB) extension request letter dated, April 6, 2006. The letter is requesting an extension of the submittal date for the permit application submittal schedule.

NMED hereby approves GRCB request for an extension. GRCB will submit a written response providing either a schedule for the submittal of the revised permit application or a timetable submitting a justification for an alternative to acquiring a permit for the surface impoundment on or before May 15, 2006.

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

Sincerely,

Hope Monzeglio
Project Leader
Permits Management Program

HM

cc: J. Bearzi, NMED HWB
D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD
B. Wilkinson, EPA
L. King, EPA-6PD-N

File: Reading File and GRCB 2006 File

State of New Mexico
ENVIRONMENT DEPARTMENT
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BILL RICHARDSON
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RON CURRY
SECRETARY

PM 12 38

CERTIFIED MAIL
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April 12, 2006

Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

Subject: **APPROVAL WITH CONDITIONS**
SYSTEM START-UP SIX MONTH REPORT OF THE NORTH BOUNDARY BARRIER COLLECTION SYSTEM PHASE II (MAY 2005 THROUGH OCTOBER 2005)
RCRA PERMIT NO. NMD 089416416
HWB-GRCB-06-002

Dear Messrs. Schmaltz and Riege:

The New Mexico Environment Department (NMED) has completed its review of the *System Start-Up North Boundary Barrier Collection System Phase II (May 2005 Through October 2005)* (Report) dated January 5, 2006, submitted on behalf of Giant Refining Company Bloomfield Refinery (GRCB). NMED hereby approves the Report with the conditions listed below. All conditions listed below must be addressed in a response letter or included in the Annual System Monitoring Report (Annual Report). If a response letter is submitted, the letter is due to NMED no later than May 12, 2006. The Annual Monitoring Report is due on or before June 30, 2006.

1. All automated and manual extraction of separate phase hydrocarbons (SPH) and water from recovery wells, observation wells, and collection wells shall be discontinued for 48 hours prior to the measurement of water and product levels.

2. GRCB must identify in a response letter if the well end cap located at the bottom of MW-46 contains an opening that allows for the release of fluids that collect in the well casing below the screened interval.

3. [The Report, Section 5-4 Groundwater Elevation Information, August 2005 table, observation well OW0+60, Date column for row 8/23/05]. The Total Well Depth denotes 14.98 feet and the Depth to Water (DTW) is reported as 15.2 feet. It appears there may be a typographical error as the depth to water measurement is deeper than the depth of the well measurement. GRCB must provide NMED with an explanation for this discrepancy in a response letter or provide a corrected table.

4. [The Report, Section 5-1 Groundwater Elevation Information, May 2005 table, collection well CW3+85, the Depth to Product column contains "0" (zeros)]. The "0" also appears in Section 5-3 Groundwater Elevation Information, July 2005 table, collection well CW 23+90. The "0" must be defined via a footnote or an alternate acronym such as "not detected" or "not present." This must be revised in the Annual Report.

   Note: no product measured (NPM) and no water measured (NWM) could be interpreted as "no attempt was made to measure depth to product or depth to water in a well, which does not mean, "not present."

5. The Report, Section 9 Maps: NMED requests that an 11"x17" map, as well as the figure submitted in the Report, be provided in the Annual Report.

6. GRCB shall also include a year when referencing a month or date (e.g. In the Report, Section 8 Summary states "...[g]iant personnel collected initial and annual groundwater samples from all Observation and Collection Wells that do not contain separate phase hydrocarbons in May and in August."). Years must be included in the Annual Report.

7. GRCB must include a brief description of instrument calibration in the Field Methods Section of the Annual Report. This should include how the instrument was calibrated and the type of calibration standard used, etc.

8. The Annual Report must include the installation diagrams and drilling/boring logs for all collection wells.

9. GRCB must continue to sample all observation and collection wells located along the perimeter of the barrier wall during scheduled groundwater monitoring events. Observation and Collection wells containing SPH do not need to be sampled. All analytical information must be included in the Annual Report.

Please contact me with any questions regarding this letter at (505)-428-2545.

Sincerely,

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HM

cc: J. Kieling, NMED HWB
D. Cobrain, NMED, HWB
W. Price, OCD
C. Chavez, OCD
D. Foust, OCD Aztec Office
B. Wilkinson, EPA

Reading File and GRCB 2006 File

GIANT
REFINING COMPANY

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

Certified Mail: 7004 2510 0005 1641 4781

March 20, 2006

RE: Giant - Bloomfield Refinery
EPA ID# NMD089416416

Dear Mr. Price,

Giant Refinery – Bloomfield will be collecting semi-annual groundwater samples starting the week of April 3, 2006.

Samples will be collected from all monitoring wells, recovery wells, observation wells, and collection wells with the exception of wells that contain separate phase hydrocarbon or wells that are dry or do not contain enough water to pull a sample. Wells that are included in the River Terrace Voluntary Corrective Measures Work Plan will not be incorporated into this sampling event as that project is on a quarterly sampling schedule.

Semi-annual groundwater samples will be analyzed for BTEX and MTBE using EPA Method 8021B. Basic water quality parameters such as pH, electrical conductivity, and temperature shall be monitored during purging of the wells.

If any representatives from the OCD would like to participate, Giant requires all incoming personnel to undergo safety orientation training before entering the plant.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,

Cindy Hurtado
Environmental Coordinator
Giant Refining – Bloomfield

Cc: Ed Riege – Environmental Superintendent – Giant Refining
Randy Schmaltz – Environmental Supervisor – Giant Refining

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

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

Chavez, Carl J, EMNRD

From: OConnor, Cheryl, EMNRD
Sent: Monday, March 06, 2006 11:14 AM
To: Davidson, Florene, EMNRD
Cc: Macquesten, Gail, EMNRD; Price, Wayne, EMNRD; Chavez, Carl J, EMNRD
Subject: Report

Florene,

For the weekly report:

Giant Refining Co. ("Giant") has entered into a Stipulated Final Order to resolve an Administrative Compliance Order ("Order") issued by the OCD. The citations were for violations of the Water Quality Act. Giant violated rules promulgated pursuant to the Act by (1) failing to notify the OCD of discharges that could impact groundwater and/or surface water; (2) allowing hydrocarbon and toxic constituents to seep into two tributaries to the San Jan River and allowing toxic pollutants to enter the San Juan River; and (3) failing to comply with the terms and conditions of their permit in failing to prevent oil from reaching navigable waters and failing to install recovery systems to prevent the contamination from entering a river.

In resolution of the Order, Giant is required to do assessment, remediation and development of a contingency plan for affected areas of its Refinery, and to develop extensive modifications to their discharge plan. Non-compliance with deadlines for these requirements carry stiff penalties. In addition to these extensive requirements, Giant has paid a $30,000.00 penalty.

Thanks, Cheryl

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
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BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

2006 1 26

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

February 24, 2006

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

SUBJECT: APPROVAL OF CORRECITVE MEASURES IMPLEMENTATION REPORT OUTLINE FOR THE BARRIER WALL AND RECOVERY SYSTEM INSTALLATIONS GIANT REFINING COMPANY, BLOOMFIELD REFINERY EPA NO. NMD 089416416 HWB-GRCB-05-004

Dear Mr. Schmaltz and Mr. Riege:

The New Mexico Environment Department (NMED) is in receipt of Giant Refining Company's, Bloomfield Refinery (GRCB) outline for the *North Boundary Corrective Measures Implementation Report* dated October 28, 2005. This report is considered an Interim Measures Implementation Report because the barrier wall may not be a final remedy at the site. NMED hereby approves the Interim Measures Implementation Report outline with the following conditions:

1. Appendix B must include as-built illustrations of the barrier wall, including cross-sections and also identification of the lithologic unit to which the barrier wall is anchored,

2. Provide an appendix that describes the management of investigative derived waste (IDW), and

3. Provide an appendix that provides descriptions of all methods used to monitor and sample the installation of the barrier wall. This information must include, but is not limited to; instrument calibration and use, field parameters and methods, and laboratory methods.

The above information must be included this report. GRCB shall submit the Interim Measures Implementation Report to NMED on or before July 3, 2006.

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

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HM

cc: J. Bearzi, NMED, HWB
*D. Cobrain, NMED HWB
W. Price, OCD Santa Fe Office
C. Chavez, OCD Santa Fe Office
D. Foust, OCD Aztec Office
B. Wilkinson, EPA

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*denotes electronic copy

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DEPUTY SECRETARY

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February 24, 2006

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

SUBJECT: APPROVAL OF CORRECITVE MEASURES IMPLEMENTATION REPORT OUTLINE FOR THE BARRIER WALL AND RECOVERY SYSTEM INSTALLATIONS GIANT REFINING COMPANY, BLOOMFIELD REFINERY EPA NO. NMD 089416416 HWB-GRCB-05-004

Dear Mr. Schmaltz and Mr. Riege:

The New Mexico Environment Department (NMED) is in receipt of Giant Refining Company's, Bloomfield Refinery (GRCB) outline for the *North Boundary Corrective Measures Implementation Report* dated October 28, 2005. This report is considered an Interim Measures Implementation Report because the barrier wall may not be a final remedy at the site. NMED hereby approves the Interim Measures Implementation Report outline with the following conditions:

1. Appendix B must include as-built illustrations of the barrier wall, including cross-sections and also identification of the lithologic unit to which the barrier wall is anchored,

2. Provide an appendix that describes the management of investigative derived waste (IDW), and

3. Provide an appendix that provides descriptions of all methods used to monitor and sample the installation of the barrier wall. This information must include, but is not limited to; instrument calibration and use, field parameters and methods, and laboratory methods.

The above information must be included this report. GRCB shall submit the Interim Measures Implementation Report to NMED on or before July 3, 2006.

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

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HM

cc: J. Bearzi, NMED, HWB
*D. Cobrain, NMED HWB
W. Price, OCD Santa Fe Office
C. Chavez, OCD Santa Fe Office
D. Foust, OCD Aztec Office
B. Wilkinson, EPA

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BILL RICHARDSON
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DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

February 21, 2006

Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

Subject: **ADDITIONAL GROUNDWATER SAMPLING AT THE RIVER TERRACE WORK PLAN REVISION**
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
RCRA PERMIT NO. NMDD 089416416
HWB-GRCB-05-002

Dear Messrs. Schmaltz and Riege:

Giant Refining Company, Bloomfield refinery (GRCB) contacted the New Mexico Environment Department (NMED) to inform them of a mercury detection in dewatering well-1 (DW-1). Because of this finding, NMED requires GRCB to revise Table 1C to include mercury in the quarterly analytical suite for DW-1. GRCB must analyze for mercury during the next two quarterly sampling events. If mercury continues to be present in DW-1, NMED may require Giant to analyze for mercury in additional wells located in the River Terrace Area.

GRCB must revise Table 1C and submit the revision to NMED on or before March 20, 2006. GRCB shall report the quarterly mercury analytical data to NMED for review within 10 days of receipt of the laboratory results.

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

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HM

cc: *D. Cobrain, NMED HWB
W. Price, OCD
C. Chavez, OCD
D. Foust, OCD Aztec Office
B. Wilkinson, EPA

Reading File and GRCB 2006 File
* denotes electronic copy

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, February 09, 2006 11:27 AM
To: 'Randy Schmaltz'; Price, Wayne, EMNRD
Cc: Ed Riege; David Kirby; Chad King; OConnor, Cheryl, EMNRD
Subject: RE: North Barrier Wall Work Plan

Randy:

Good morning. I have reviewed the "North Barrier Wall Work Plan" (Work Plan) and have the following comments and/or recommendations:

Figure 1: One well appears to be optional, but it seems to be imperative to the sump well drainage network and is required to be emplaced. The location of topographic elevation lows in the Nacimiento Fm. are necessary to ensure adequate placement for testing and that the wells function as intended. OCD would like to have wells placed in the lowest possible areas of maximum saturated thickness, where groundwater is present and upgradient to seeps along the bluff. Therefore, the ground elevations at all well locations should be surveyed in order to identify topographic low and high elevations of the top of the Nacimiento Fm. and to ensure wells are properly positioned in saturated zones, which trend or are in-line with all seep areas along the bluff, to date. OCD would expect low lying Nacimiento Fm. saturated zones to correspond with seepage along the bluff. In addition, sump wells north and west of MW-24 are required to prevent seepage along the bluff at that location.

Figure 2: About 5 feet of screen with blank below screen interval positioned at the saturated zone with tremied cement below and around blank (seated in the Nacimiento Fm.) is required to prevent the creation of preferential pathway for contaminant migration downward through Nacimiento and into San Juan River. The blank is estimated to extend about 40 feet into the Nacimiento Fm.

Drilling: Split-spoon sampling for lithologic characterization is required to accurately document the hydrogeology north of the barrier wall.

Sampling:

Ground water: In the initial assessment, standard bailer sampling (3 volume evacuation) is recommended to physically assess the water. Thereafter, pump selection shall be appropriate for environmental groundwater continuous pumping and sampling. Standard in-line (recommended) general chemistry parameters, i.e., temperature, pH, PID field measurements, etc., shall be checked for stabilization before final sample collection.

Soil: A field PID should be utilized to identify organic contamination in split-spoon samples. Professional judgment on sample locations, i.e., silt/clay interfaces, shall be implemented in the field.

Analysis: EPA Test Methods shall include General Chemistry, VOCs, SVOCs, PAHs, and Metals. Physical observations of soil and ground water for PSHs, sheen, olfactory senses of groundwater shall also be recorded.

Please contact me if you have questions. Thank you.

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

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

From: Randy Schmaltz [mailto:rschmaltz@giant.com]
Sent: Tuesday, February 07, 2006 9:08 AM
To: Price, Wayne, EMNRD; Chavez, Carl J, EMNRD
Cc: Ed Riege; David Kirby; Chad King
Subject: North Barrier Wall Work Plan

Gentlemen,

Please find enclosed Giant's "North Barrier Wall Work Plan" for the installation of wells north of the barrier wall. Giant has been able to reserve a drilling contractor for the week of Feb 13-17. This allows Giant to get the drilling done before the scheduled construction of the new overhead power line.

I will follow up this e-mail with a hard copy of the "North Barrier Wall Work Plan" for your records.

Your prompt consideration in this matter is greatly appreciated.
Randy Schmaltz

<<OCD-Work Plan For Wells North of the Barrier Wall.doc>> <<OCD-NBW Figure 1.pdf>> <<OCD-NBW Figure 2.pdf>> <<OCD-NBW Figure 3.pdf>>

GIANT
REFINING COMPANY

February 6, 2006

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, New Mexico 87505

Subject: "North Barrier Wall Work Plan" for Well Installations North of the Barrier Wall Bloomfield Refinery, Bloomfield, NM

This work plan provides for installation of sump recovery wells between the San Juan River and the Bloomfield Refinery North Boundary Barrier. The San Juan River is located along the northern boundary of the refinery property. Construction of the North Boundary Barrier was completed in March 2005 and was well documented in previous submittals to the Oil Conservation Division (OCD).

Seven to eight wells will be installed at the locations shown on Figure 1. The purpose of drilling and installing the wells is to achieve three goals.

1. Develop a further understanding of the soil and rock stratigraphy between the North Boundary Barrier and the San Juan River.
2. Assess the amount of residual hydrocarbon impacted groundwater between the North Boundary Barrier and the San Juan River.
3. Provide a means for removal of impacted groundwater/phase separated hydrocarbon (PSH) to augment site remediation.

Well installations are scheduled to begin on February 13, 2006 and should be completed on February 17, 2006.

Drilling and Sampling

Borings will be drilled using hollow-stem auger. Four-inch diameter sump recovery wells will be installed in the borings. If refusal is met using hollow-stem auger, the borings will be advanced using air rotary drill methods. A CME-75 truck-mounted drill rig will be employed to perform the drilling.

Logs of earth materials encountered will be prepared during drilling by a geologist. Lithologic descriptions will be based on observation of drill cuttings and driven samples taken at selected intervals. Indications of joint and fracture frequency in the rock may be inferred based on observation of drill cuttings and behavior of the drilling equipment. Earth materials will be classified in general accordance with ASTM D 2487 and ASTM D 2488.

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FAX
505-632-3911

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

Five borings will be drilled to approximately 60 feet below ground surface (bgs). Based on available information, the borings will extend through the Jackson Lake Terrace and about 30 to 40 feet into the Nacimiento Formation. These five boring locations were selected based on information obtained from the recovery, collection and observation wells adjacent to the North Boundary Barrier, observations of past surface seepage of impacted groundwater, and observations made during an emergency installation of drainage improvements in the West Arroyo.

A sixth boring to about 60 feet bgs may be drilled "as-needed" (Figure 1). If groundwater of sufficient quantity to allow extraction is found, the sixth boring will be would be drilled.

Two borings are shown on Figure 1 which will be drilled to about 20 feet bgs. Installations of monitoring wells in these two borings are intended to provide information on the residual amount of groundwater/PSH down gradient of the North Boundary Barrier.

Well Construction

Four inch diameter PVC well casings and screens will be installed. The screens will be placed at the interface of the Jackson Lake deposits and the Nacimiento Formation. The screens in the deep wells (60 feet) will penetrate 20 to 25 feet below groundwater levels measured during drilling. This is to allow for accumulation and removal of groundwater/PSH, if present. Bentonite slurry will be placed below the bottom of well screens where the borings extended to depths greater than 25 feet below groundwater.

A schematic of a 60-foot deep boring and well is shown on Figure 2. Figure 3 shows a schematic of a 20-foot deep well.

The wells will be developed following installation and Groundwater/PSH measurements will be taken twice a week for two weeks following installation. Once a steady groundwater level is established samples will be collected and submitted for laboratory testing, as appropriate. The frequency of groundwater/PSH measurements after the two week period will be assessed based on the collected data.

Summary Report

A report will be prepared and submitted to OCD. The report will include the following information.

- Lithologic logs of borings.
- As-built well schematics.
- Summary of groundwater/PSH measurements collected for a period of two weeks following well installation.
- Compilation of laboratory test results.

If you have questions or need additional information please contact me at (505) 632-4171.

Sincerely,

James R. Schmaltz
Environmental Mgr.
Bloomfield Refinery

CC. Carl Chavez, OCD
Ed Riege
Chad King
David Kirby

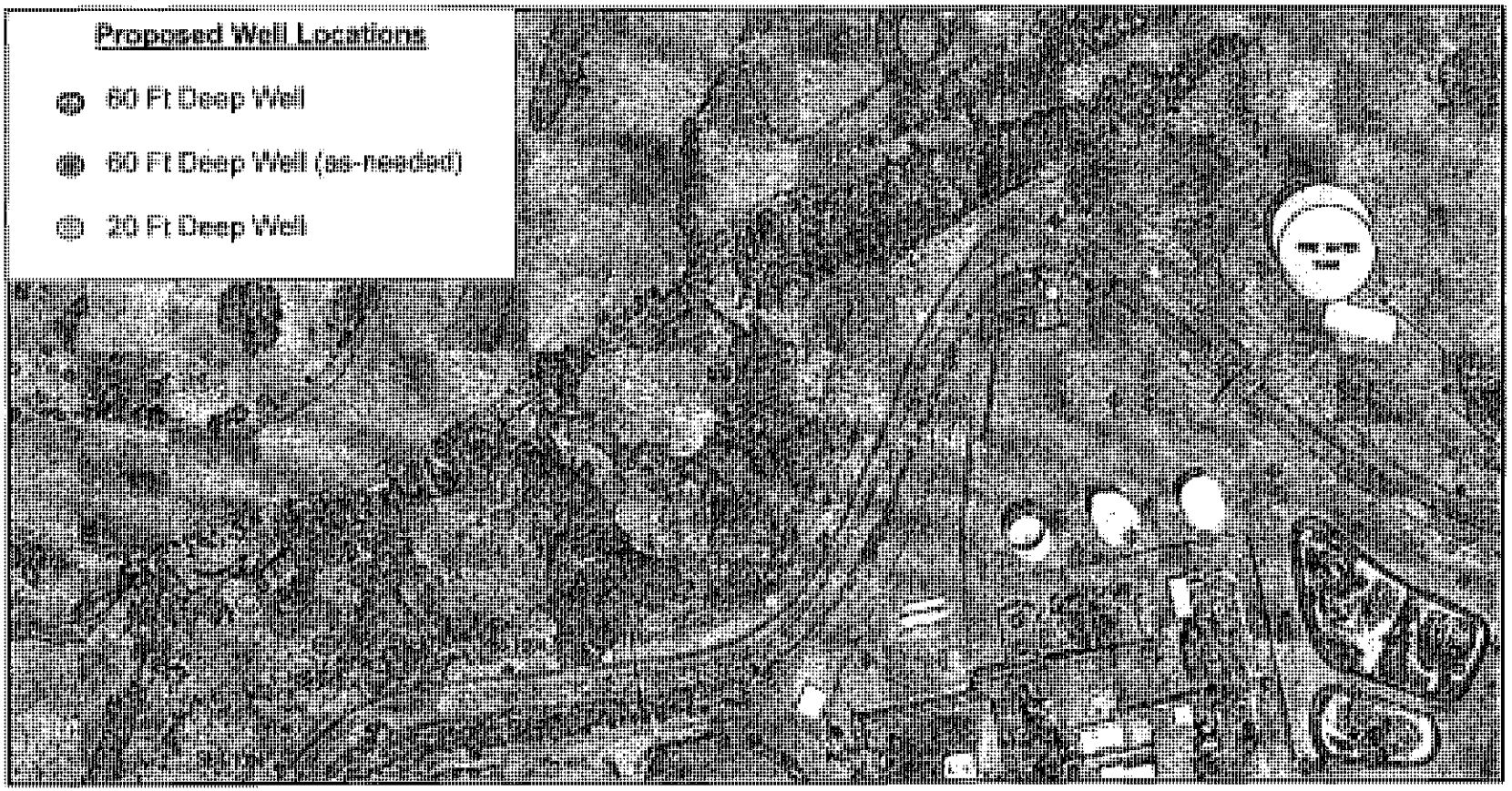

Figure 1
Proposed Well Locations
February 2006

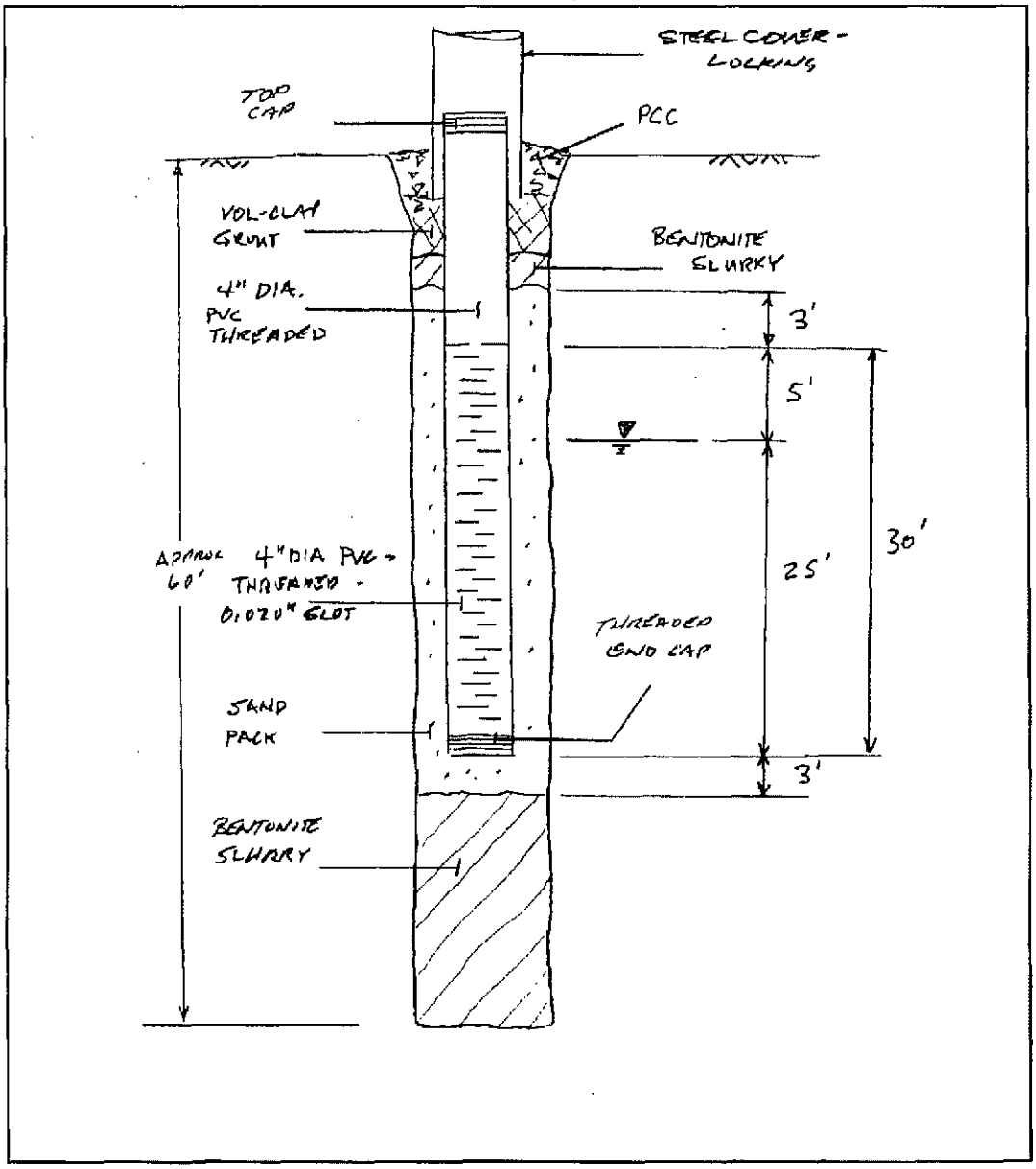

Figure 2
60 Foot Well Schematic
February 2006

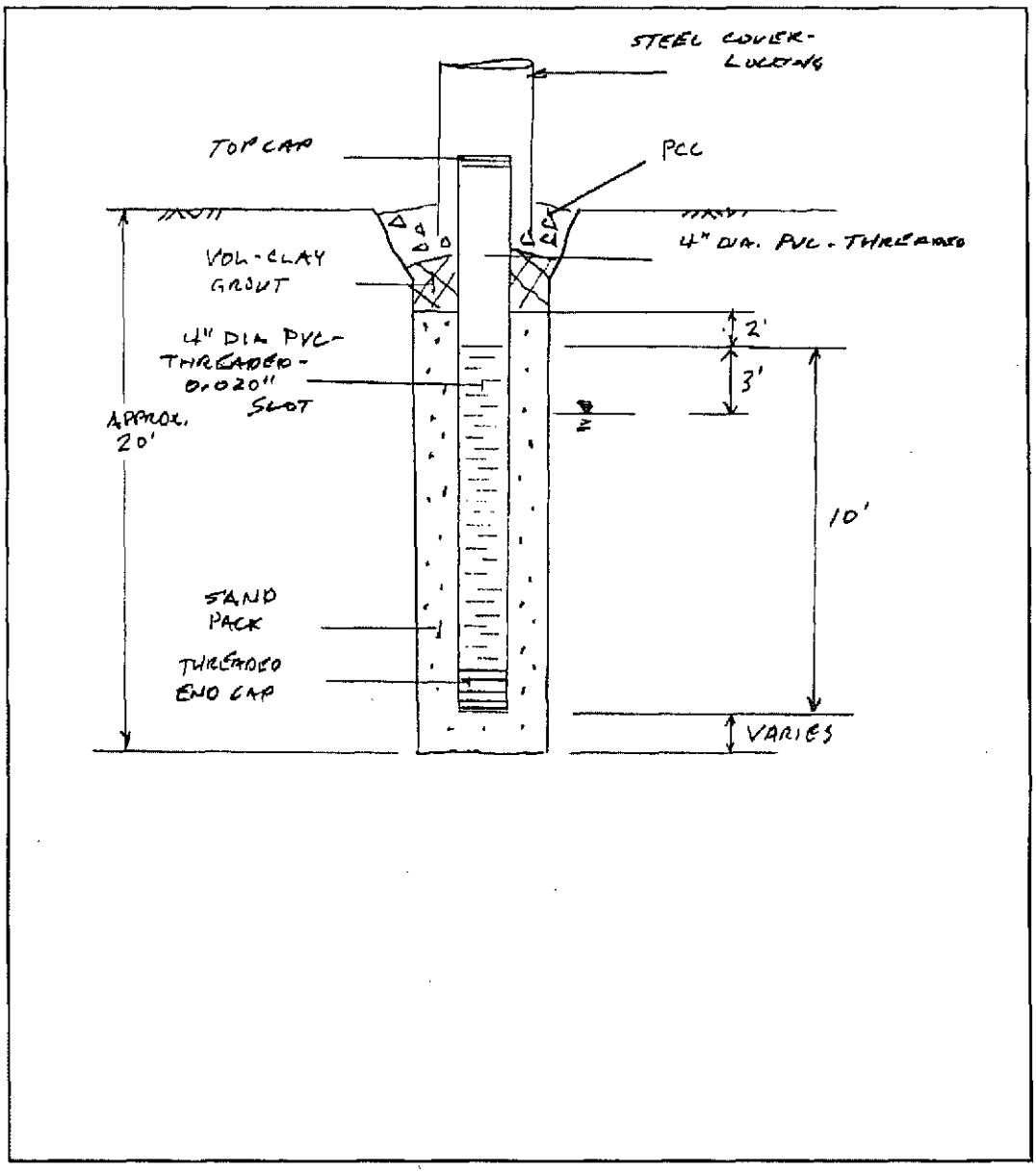

Figure 3
20 Foot Well Schematic
February 2006

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

2006 FEB 2 PM 2 16

February 1, 2006

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

SUBJECT: PART B PERMIT APPLICATION REVISION
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
RCRA PERMIT NO. NMD089416416
HWB-GRCB-06-001

Dear Mr. Schmaltz and Mr. Riege:

The New Mexico Environment Department Hazardous Waste Bureau (NMED) has determined that a permit is necessary for Giant Refining Company's Bloomfield Refinery wastewater treatment surface impoundment. Therefore, NMED is requiring Giant to update the *Part B Operating Permit Application for Hazardous Waste Treatment Surface Impoundments* dated January 30, 1996. Giant must revise this application as an operating permit for the Surface Impoundment (SI) and address specific treatment goals for this unit. The application must be revised in its entirety to address current conditions at the refinery in accordance with current state and federal regulations. The Part B application should not address any corrective action because this will be addressed in another enforceable document. At a minimum, the following areas must be incorporated into the application:

a. General information requirements for the Part A application found in 40 CFR 270.13. This must include a description of activities that require the facility to obtain a permit under RCRA;

b. General requirements for Part B applications found in 40 CFR 270.14;

c. Identify the treatment goals of the SI and the purpose of its existence;

d. The 1996 permit application only addresses a goal to de-characterize benzene characteristic waste. The revised application must present a complete characterization (chemical and physical characteristics) of the waste stream entering the SI to include but not limited to D018, F037 and F038 wastes.

e. Part B information requirements for surface impoundments found in 40 CFR 270.17 and air emissions controls for tanks, surface impoundments, and containers found in 40 CFR 270.27;

f. Groundwater Monitoring requirements found in 40 CFR 270.14 (c);

g. All applicable requirements included in 40 CFR 264 subpart B through subpart E including:

   1. Security procedures, general inspection schedule, and a contingency plan;

   2. Description of procedures, structures, or equipment used at the facility to prevent hazards;

   3. Description of precautions to prevent accidental ignition or reactive of ignitable, reactive, or incompatible wastes;

   4. Traffic Patterns;

   5. Outline of both introductory and continuing training programs

h. Facility location information;

i. Copy of a SI closure plan and financial assurance requirements;

j. Part B Certification, signatories to permit applications and reports as described in 40 CFR 270.11;

k. Address the status of the unit pertaining to air emissions in accordance with 40 CFR 264 Subpart CC and include any exemptions;

l. Address waste treated in the SI pertaining to land disposal restrictions and any exemptions Giant may claim including information on the underground injection of treated waste;

m. Exposure information found in 40 CFR 270.10(j);

n. The requirements of 264 subpart K.

To avoid additional fees, Giant must provide NMED with proof of payment for the application submitted in 1996. Giant must respond to NMED with a schedule for the submittal of the revised permit application on or before April 3, 2006.

If you have any questions regarding this letter, please contact Hope Monzeglio of my staff at (505) 428-2545.

Sincerely,

John E. Kieling
Program Manager
Permits Management Program

JK:hm

cc: J. Bearzi, NMED HWB
D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD
B. Wilkinson, EPA
M. Hanson, EPA
L. King, EPA

File: Reading File and GRCB 2006 File

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, January 25, 2006 3:48 PM
To: 'randys@giant.com'
Cc: OConnor, Cheryl, EMNRD
Subject: OCD Assessment, Remediation and Contingency Plan Comments and Concerns

RE: OCD Concerns with the "Assessment, Remediation and Contingency Plan" dated December 22, 2005

Dear Mr. Schmaltz:

The Oil Conservation Division (OCD) has completed it's review of the "Assessment, Remediation and Contingency Plan" (draft plan) in the area north of the barrier wall submitted on December 22, 2005 in compliance with the proposed Administrative Compliance Order. Giant shall submit a redraft of the plan by February 3, 2006, addressing the OCD's concerns and comments. Giant shall submit a "North Barrier Wall Work Plan" (work plan) with details for additional work north of the barrier wall on or before February 15, 2006. Once approved, the drill work needs to be completed by March 8, 2006, due to the construction of an overhead power line by the City of Bloomfield across the area. The OCD's comments and concerns are as follows:

1) In general, the opening paragraph of the draft plan states that phase separated hydrocarbons (PSH) in shallow soil north of the barrier wall pose a threat to the San Juan River. However, while soils in the area are of interest, the main pathway of concern is in the shallow water table, which probably contains free product as indicated by PSH and dissolved phase organic contamination detected in the shallow water table north of the barrier wall and in seep oil staining along the bluff. OCD recommends that Giant include the "shallow water table" in combination with soils for the final draft to accurately identify potential pathways of exposure that are critical to establishing objectives for a future work plan(s).

2) The draft plan prescribes an evaluation with recommendations to the current collection system as necessary, and an action plan for remediation of contamination north of the barrier wall. Giant is proposing remediation in the form of additional wells to be installed as early as mid-February, although there are no details on the well construction, location, etc. OCD recommends a sump recovery well design and construction for the wells in order to control contaminant hydrogeology by lowering the water table. This will induce groundwater flow north of the barrier wall toward the sump recovery wells, effectively capturing dissolved phase and any PSH contamination to prevent uncontrolled seepage along the bluff and overland flow into the San Juan River. If PSHs are anticipated and are present, care shall be taken and equipment, i.e., pumps, etc., will need to be intrinsically safe to avoid fire and/or explosion. Based on the local hydrogeology observed through Giant's investigation, well construction may require continuous pumping to effectively lower the water table. For the installation of the sump wells, the OCD prefers that the hollow-stem auger drill method be implemented instead of the air rotary method (USGS: Guidelines & Standard Procedures for Studies of Ground-Water Quality). Air rotary may induce fractures in the formation and alter ground water chemistry. Assuming no unforeseen circumstances, Giant could drill the wells by mid-February.

3) OCD is concerned with Giant's references or defaults to a 6-month evaluation report and scrutiny of existing catch basins. Specifically, the OCD is concerned about whether Giant will actually install the wells. The OCD recommends that Giant submit a "North Barrier Wall Work Plan" with objectives, locations with rationale, sump recovery well design, drill method, estimated pump rate, routing of effluent for treatment, date of installation, and sampling and monitoring schedule(s) to the OCD for approval.

4) A contingency is mentioned in the event of a "free-flowing liquid" event. The OCD recommends that the contingency plan should state that it is being implemented north of the barrier wall to actively remediate ground water contamination, prevent its uncontrolled migration to the bluff area, and eliminate the potential for overland flow from seeps along the bluff area (Nacimiento and Jackson River Terrace Formations interface) to discharge into the San Juan River.

5) Bluff inspections should be performed weekly at a minimum, and semi-weekly during precipitation events, until the contaminant hydrogeology is brought under control north of the barrier wall. The treatment system should be inspected and maintained weekly for operation, maintenance records, and to verify that the treatment system is working. Giant proposes every two weeks, which severely underscores the urgency of the situation near a sensitive watershed area.

6) Under the "hydrocarbon fluids have not reached the San Juan River" section of the draft plan, it is imperative that Giant maintains an appropriate number of booms and/or absorbent devices to enable immediate response and prevent the illegal discharge of contamination into the river. Giant should have either, or both, staff trained as first responders and/or hire a professional environmental service company to develop or follow an emergency response plan under short notice. Also, any containerized contaminated soils shall be characterized for proper treatment and/or disposal.

7) Under the "hydrocarbon fluids have reached the waters of the San Juan River" section of the draft plan, the term "emergency response" should be amended to be "mitigation and emergency response." A sufficient supply of floating booms, types, with rapid restock shall be available for immediate emergency response in the event of a worse case scenario. Giant should have an emergency response plan in place with trained personnel in emergency response and site-specific safety considerations and/or have advance contracts in place with a environmental professional service construction and emergency responder(s) familiar with Giant's emergency response plan and be prepared for immediate response to releases at or near the San Juan River. During our conference call, Giant committed to heavy equipment being on site within 24 hours of a worse case scenario.

8) Giant does not propose access from the bottom of the bluff to mitigate and/or remediate seepage from the bluff via overland flow toward the San Juan River. This raises the question of whether it is included in an emergency response plan? Giant needs to acquire the necessary means to access contamination from the bottom of the bluff with minimal disturbance to the river. Larger containment devices for soil removal operations will likely be needed, since single drum containerization would not be efficient in a worse case scenario. This should be discussed and planned with emergency response contractors in advance of a worse case scenario. An emergency response plan should be shared with contractors to ensure that a rapid response time can be achieved. Prospective emergency responders, who cannot immediately respond, should be removed from consideration.

9) Properly positioned sump recovery wells should help to eliminate the possibility of an uncontrolled discharge(s) into the San Juan River.

Sincerely,

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

1/25/2006

Please be advised that NMOCD approval of this plan does not relieve Giant Refining Company of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve Giant Refining Company of responsibility for compliance with any other federal, state, or local laws and/or regulations.

OConnor, Cheryl, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, January 19, 2006 9:02 AM
To: OConnor, Cheryl, EMNRD
Cc: Price, Wayne, EMNRD; Foust, Denny, EMNRD
Subject: Giant Assessment, Remediation and Contingency Plan Area North of the Barrier Wall

Cheryl:

I have completed a review of the "Assessment, Remediation and Contingency Plan" (plan) in the area north of the barrier wall submitted on December 22, 2005 as an offer of settlement an Administrative Compliance Order. In general, the plan incorrectly states that phase separated hydrocarbons (PSH) in shallow soil are the problem; however, the pathway of concern is in the shallow water table, which probably contains free product as indicated by PSH and dissolved phase organic contamination as detected in the shallow water table north of the barrier wall.

The plan mainly prescribes an evaluation with recommendations to the current collection system as necessary, and an action plan for remediation and responding to contamination north of the barrier wall. Although remediation in the form of installing addition wells as early as mid-February, north of the barrier wall, there is no specificity on the key objectives and/or well construction. OCD recommends a sump well design and construction of the wells in order to control contaminant hydrogeology by lowering the water table, inducing groundwater flow toward the sump recovery wells, effectively capturing dissolved phase and PSH contamination to prevent continued seepage along the bluff and the potential for overland flow into the San Juan River. The well construction shall require continuous pumping with effluent routed back to a treatment system in order to control the hydrogeology. For the installation of the sump wells, OCD prefers that the hollow-stem auger drill method be implemented and not the air rotary method (USGS: Guidelines & Standard Procedures for Studies of Ground-Water Quality). Air rotary may induce fractures and it alters ground water chemistry. However, the installation of the wells seems to be contingent on the six month evaluation (evaluation) of the barrier that will be available by January 31, 2006; however, the plan states, "assuming no unforeseen circumstances, the drilling of the additional wells can be scheduled as early as mid-February."

OCD is concerned with references or defaults to the evaluation in consideration of whether the wells will actually be installed. OCD recommends that Giant provide the locations with rationale, date of installation, sump recovery well design, routing of effluent for treatment, sampling and monitoring schedule.

A contingency is mentioned in the event of a free-flowing liquid event, but I believe the contingency plan should have stated that this plan is being implemented north of the barrier wall to actively remediate ground water contamination, prevent the migration and uncontrolled overland flow of contamination in the form of seeps along the bluff area (Nacimiento and Jackson River Terrace Formations interface), and to eliminate the potential for an illegal discharge(s) into the San Juan River.

Bluff inspections shall be performed semi-weekly to weekly at a minimum, until the contaminant hydrogeology is brought under control north of the barrier wall. Giant proposes every two weeks, which severely underscores the urgency of the situation near a sensitive watershed area.

Under the "hydrocarbon fluids have not reached the San Juan River" section, it is imperative that Giant maintains an appropriate number of booms and/or absorbent devices to immediately respond to and prevent the illegal discharge of contamination into the river. Also, any containerized contaminated soils shall be characterized for proper treatment and/or disposal.

Under the "hydrocarbon fluids have reached the waters of the San Juan River" section, the term "mitigation" shall be replaced by emergency response. A sufficient supply of floating booms with rapid restock shall be available for immediate emergency response in the event of a worse case scenario. Giant shall have personnel trained in emergency response and site-specific safety considerations and/or have advance contracts in place with a environmental professional service construction and emergency responder(s) familiar with Giant's scenario and

prepared for immediate response to releases at or near the San Juan River. I was told that heavy equipment would be on site within 24 hours of a worse case scenario. In addition, Giant does not propose access from the bottom of the bluff to remediate and stop a discharge into the river. Giant shall plan and acquire the necessary means to access contamination from the bottom of the bluff with minimal disturbance to the river. If this scenario were to unfold, larger containment devices for soil removal operations will likely be needed, since single drum containerization would not be efficient. This should be discussed with contractors in advance of a worse case scenario.

If Giant installs the sump recovery wells, this should help eliminate the possibility of a worse case scenario from occurring at the San Juan River.

Thank you.

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

Carl: Will get concerns to Grant by end of day Wed, 1/24/06.

Randy will get Redraft of Ass. plan back by 2/3/06.

- Drill & exploratory plan – to be submitted @ later date.
- Discharge plan modifications

1/23/06 : Wayne Price, Carl, CO'C
Ned Kendrick, Randy & ~~Peter~~ Ed Niggy Riegs
Assessment & remediation plan

Concerns:

- Shallow soil v. shallow water

Randy - Wants to identify where problems

Wayne: Rains hardo, wants to see back up system - sump wells, to pump out contamination, not just use as exploratory wells.

Carl: Goal: put in sump wells
· Bath tub effect so seepage goes to wells, rather than river.

~~Giant~~ Randy: Plan to drill & have sump well to allow to pump contamination out.

Carl: Clear dealing w/ H_2O table problem.
· Drill plan, specs
· Wants to protect river
· Concern: monitoring plan: Giant: 1x every 2 weeks.

Carl: Wants to do > 1x every 2 weeks –
- Wld like to see 2x/wk, esp. w/ rain fall.

Randy: 2 temp. employees: hired to make sure pumps are

- Walk w. perimeter every other week. Problem areas more.

Wants to slow down # of areas look @.

Carl: Weekly ok going across river & look for seepage
. Others, every 2 weeks.

Carl: Draw down.

Randy: Big enough reservoir so never reach level of intake / full make.

Wayne: Hope barrier works. But wants to

have wells be able to control as a back up.

Randy: Manual trucks.
- Will commit to ving wells in event of rain fall / precipitation

Earl: hollow stem v. air drill.

Randy: will use hollow stem, auger will use air drill only where can't get a mechanical equipment for hollow stem.

- Hollow stem gives more info & so want to use.

- Wayne: Giant will ask for permission to do air drilling from ocs.

Giant: ok.

Next: Monitoring wells.

Randy: Relocate pwr. lines.

- Power line from ~~Carlsbad~~ Farmington city.
  - For power plant.
  - deadline: poles in by last wk. Feb / 1st of March.
  - Giants Drilling must be done ~~by~~ 3/8/06.

- Wld like to put in a 12" diameter, but b/c of cobblestones may be limited to 6". Depth: don't have info, but want to penetrate Naze Ments of 12-15' [which is a total of ~ 30'].

~~Carl:~~ Contingency plan: implemented ~ of slurry wall. - objective

Randy: Just contracted w/ Swift Water Recovery out of TAOS
- They'll do a geological response plan.

~~Carl:~~ hydrocarbons not reached San Juan River.
· Wait to make sure adequate # of booms to respond in emergency.

Giant: Will submit in the plans - will spell out all eq., length & type of booms.

Carl & Wayne: ok.

→ Have booms, skimmer pumps, air compressors. for worse case situation

· Carl: Hydrocarbons:
replace mitigation ~~w/ (immediate emergency response)~~

— Wayne: I do both.

Carl: 24 ~~hr. response time~~
Giant: Best is to protect river site.
- Carlsbad Co. - have drag line.

GIANT
REFINING COMPANY

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

Certified Mail: 7004 2510 0005 1641 4699

December 28, 2005

Re: **Giant Refining Company, Bloomfield Refinery**
River Terrace Voluntary Corrective Measures – Revised Monitoring Plan
EPA # NMD089416416 HWB – GRCB – 05 - 002

Dear Mr. Price,

Giant Refining Company Bloomfield (GRBC) received the November 23, 2005 letter from New Mexico Environmental Department (NMED) stating NMED's conditional approval of the October 28, *Bioventing Monitoring Plan (Revised)* submitted by GRBC. The purpose of this letter is to respond to the conditions stated in NMED's letter.

Response to NMED Conditions of Approval

The following responses correspond to the conditions of the October 28, 2005 revised monitoring plan, as stated in NMED's approval letter dated November 23, 2005.

1. Table 1A and Table 1B have been modified to incorporate NMED's request to collect baseline groundwater samples from all temporary wells (TP), monitoring wells (MW), and dewatering wells (DW) for laboratory analysis prior to the start of the dewatering system. The samples will be submitted to the laboratory for RCRA eight metals analysis. The revised version of Table 1A and Table 1B are attached.
2. Table 1A has been revised to incorporate NMED's request to collect soil gas samples from all temporary wells (TP), monitoring wells (MW), and dewatering wells (DW) prior to the start of the dewatering system. The samples will be submitted to the laboratory for BTEX and GRO analysis by

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FAX
505-632-3911

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

EPA Method 8021B and Method 8015B, respectively. The soil gas sampling modifications have been incorporated into the attached revised version of Table 1A.

3. Table 1C has been modified to reflect the sample frequency at "GAC 1 Eff" as stated in Section 3.1.5, paragraph 3 of the revised monitoring plan. The revised version of Table 1C and corresponding footnote is attached.
4. GRCB will submit a Six-Month System Start-up Report and an Annual System Monitoring Report as requested by NMED. The Six-Month Report will be submitted to NMED 220 days after system start-up. The Annual Report will be submitted 13 months after system start-up. The format of the reports will follow the Periodic Monitoring Report guidelines as provided by NMED in the November 23, 2005 letter.
5. In the event the bioventing system experiences problems or must be shut down, GRCB will notify NMED within 24 hours upon identification of abnormal system operations.

Please feel free to call me at 505-632-4161, or Randy Schmaltz at 505-632-4171, if you have any questions.

Sincerely,

Cindy Hurtado

Cindy Hurtado
Environmental Coordinator – Giant- Bloomfield

Cc: Hope Monzeglio - NMED
Ed Riege – Giant Refining Co., Gallup
Randy Schmaltz – Giant Refining Co., Bloomfield

Table 1A: Baseline Monitoring Activities Prior to the Dewatering and Air Injection System Start-Up

Bioventing Monitoring Plan
Giant Refinery - Bloomfield, New Mexico

Location	Matrix	DTW / DTP	Temp	pH	Cond	DO	ORP	% CO2	% O2	Organic Vapors (PID)	Pressure	Baseline Samples
MW-48	GW	B	B	B	B	B	B					T
MW-49	GW	B	B	B	B	B	B					T
DW-1	GW	B	B	B	B	B	B					T
DW-2	GW	B	B	B	B	B	B					T
TP-1	GW	B	B	B	B	B	B					T
TP-2	GW	B	B	B	B	B	B					T
TP-3	GW	B	B	B	B	B	B					T
TP-4	GW	B	B	B	B	B	B					T
TP-5	GW	B	B	B	B	B	B					T
TP-6	GW	B	B	B	B	B	B					T
TP-8	GW	B	B	B	B	B	B					T
TP-9	GW	B	B	B	B	B	B					T
TP-10	GW	B	B	B	B	B	B					T
TP-11	GW	B	B	B	B	B	B					T
TP-12	GW	B	B	B	B	B	B					T
TP-13	GW	B	B	B	B	B	B					T
GAC Inf	EW											
GAC 1 Eff	EW											
GAC 2 Eff	EW											
MW-48	A							B	B	B	B	BTEX, GRO
MW-49	A							B	B	B	B	BTEX, GRO
DW-1	A							B	B	B	B	BTEX, GRO
DW-2	A							B	B	B	B	BTEX, GRO
TP-1	A							B	B	B	B	BTEX, GRO
TP-2	A							B	B	B	B	BTEX, GRO
TP-3	A							B	B	B	B	BTEX, GRO
TP-4	A							B	B	B	B	BTEX, GRO
TP-5	A							B	B	B	B	BTEX, GRO
TP-6	A							B	B	B	B	BTEX, GRO
TP-8	A							B	B	B	B	BTEX, GRO
TP-9	A							B	B	B	B	BTEX, GRO
TP-10	A							B	B	B	B	BTEX, GRO
TP-11	A							B	B	B	B	BTEX, GRO
TP-12	A							B	B	B	B	BTEX, GRO
TP-13	A							B	B	B	B	BTEX, GRO

Notes:

B - Baseline monitoring activities prior to the start of the dewatering pumps and venting blower.

Matrix
GW - groundwater
EW - extracted groundwater
A - soil gas

Field Parameters
DTW - Depth to water measurement
DTP - Depth to product measurement
Temp - temperature
Cond - conductivity
DO - dissolved oxygen
ORP - oxidation-reduction potential
% CO2 - percent carbon dioxide
% O2 - percent oxygen
PID - photoionization detector

Analytical Analysis
T - Total RCRA 8 Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) by EPA Method 6010 / 7470
BTEX - BTEX only by EPA Method 802 1B
GRO - GRO by EPA Method 8015B

(Revised December 2005)

Table 1B: Baseline Monitoring Activities Prior to Air Injection System Start-Up

Bioventing Monitoring Plan
Giant Refinery - Bloomfield, New Mexico

Location	Matrix	DTW / DTP	Temp	pH	Cond	DO	ORP	% CO2	% O2	Organic Vapors (PID)	Pressure	Baseline Samples
MW-48	GW	D	D	D	D	D	D					
MW-49	GW	D	D	D	D	D	D					
DW-1	GW	D	D	D	D	D	D					
DW-2	GW	D	D	D	D	D	D					
TP-1	GW	D	D	D	D	D	D					
TP-2	GW	D	D	D	D	D	D					
TP-3	GW	D	D	D	D	D	D					
TP-4	GW	D	D	D	D	D	D					
TP-5	GW	D	D	D	D	D	D					
TP-6	GW	D	D	D	D	D	D					
TP-8	GW	D	D	D	D	D	D					
TP-9	GW	D	D	D	D	D	D					
TP 10	GW	D	D	D	D	D	D					
TP-11	GW	D	D	D	D	D	D					
TP 12	GW	D	D	D	D	D	D					
TP-13	GW	D	D	D	D	D	D					
GAC Inf *	EW											B, GRO, DRO, T
GAC 1 Eff *	EW											B, GRO, DRO
GAC 2 Eff *	EW											B, GRO, DRO
MW-48	A							D	D	D	D	
MW-49	A							D	D	D	D	
DW-1	A							D	D	D	D	
DW-2	A							D	D	D	D	
TP-1	A							D	D	D	D	
TP-2	A							D	D	D	D	
TP-3	A							D	D	D	D	
TP-4	A							D	D	D	D	
TP-5	A							D	D	D	D	
TP-6	A							D	D	D	D	
TP-8	A							D	D	D	D	
TP-9	A							D	D	D	D	
TP-10	A							D	D	D	D	
TP-11	A							D	D	D	D	
TP-12	A							D	D	D	D	
TP-13	A							D	D	D	D	
BV-1	A							D	D	D	D	
BV-2	A							D	D	D	D	
BV-3	A							D	D	D	D	
BV-4	A							D	D	D	D	
BV-5	A							D	D	D	D	
BV-6	A							D	D	D	D	
BV-7	A							D	D	D	D	
BV-8	A							D	D	D	D	
BV-9	A							D	D	D	D	
BV-10	A							D	D	D	D	
BV-11	A							D	D	D	D	
BV-12	A							D	D	D	D	
BV-13	A							D	D	D	D	

Notes:

D - Baseline monitoring activities to be completed after the start of the dewatering pumps and before the start of the bioventing blower.

***** - Sampling commences when dewatering begins.

Matrix
GW - groundwater
EW - Extracted groundwater
A - soil gas

Field Parameters
DTW - Depth to water measurement
DTP - Depth to product measurement
Temp - temperature
Cond - conductivity
DO - dissolved oxygen
ORP - oxidation-reduction potential
% CO2 - percent carbon dioxide
% O2 - percent oxygen
PID - photoionization detector

Analytical Analysis
B - BTEX, MTBE by EPA Method 8021B
GRO - GRO by EPA Method 8015B
DRO - DRO by EPA Method 8015B
T - Total RCRA 8 Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) by EPA Method 6010 / 7470

(Revised December 2005)

Table 1C: Summary of Performance Monitoring Activities

Bioventing Monitoring Plan
Giant Refinery - Bloomfield, New Mexico

Location	Matrix	DTW / DTP	Temp	pH	Cond	DO	ORP	% CO2	% O2	Organic Vapors (PID)	Pressure *	Baseline Samples
MW-48	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO, Pb & Cr
MW-49	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO, Pb & Cr
DW-1	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO, Pb & Cr
DW-2	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO, Pb & Cr
TP-1	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-2	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-3	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-4	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-5	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-6	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-8	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-9	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-10	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-11	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-12	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
TP-13	GW	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ					Q-B, GRO, DRO
GAC Inf	EW											Q-B, GRO, DRO
GAC 1 Eff	EW											W*M - B, GRO, DRO
GAC 2 Eff	EW											Q - B, GRO, DRO
MW-48	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
MW-49	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
DW-1	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
DW-2	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-1	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-2	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-3	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-4	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-5	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-6	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-8	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-9	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-10	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-11	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-12	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO
TP-13	A							WMQ	WMQ	WMQ	WMQ	Q - B[2], GRO

*** Pressure** - Full system and individual well injection pressure will be recorded during each monitoring event.

Matrix
GW - groundwater
EW - Extracted groundwater
A - soil gas

Field Parameters
DTW - Depth to water measurement
DTP - Depth to product measurement
Temp - temperature
Cond - conductivity
DO - dissolved oxygen
ORP - oxidation-reduction potential
% CO2 - percent carbon dioxide
% O2 - percent oxygen
PID - photoionization detector

Analytical Analysis
B - BTEX, MTBE by EPA Method 8021B
B[2] - BTEX only by EPA Method 8021B
GRO - GRO by EPA Method 8015B
DRO - DRO by EPA Method 8051B
Pb & Cr - Total Lead and Chromium using EPA Method 6010

Sample Frequency
WMQ - Weekly x 4 (a sample will be collected once a week for the initial four weeks of operation), monthly for first quarter, then quarterly thereafter.
Q - Quarterly
W*M - Weekly until breakthrough is detected; monthly thereafter.

AT 60 DAYS AND IN AUGUST 2006- PERFORM IN-SITU RESPIRATION TESTING

Shutdown blower and monitor oxygen/carbon dioxide levels in TP-1, 2, 5, 6, 8, 9, and each of the 13 BV wells.

Monitor every 1/2 hour for first 4 hours, then every hour until hour 12. Then monitor every 10 to 12 hours up to 48 to 72 hours.

(Revised December 2005)

Chavez, Carl J, EMNRD

From: OConnor, Cheryl, EMNRD
Sent: Friday, December 23, 2005 9:31 AM
To: ekendrick@montand.com
Cc: Macquesten, Gail, EMNRD; Sanchez, Daniel J., EMNRD; Lee, Wayne, EMNRD; Chavez, Carl J, EMNRD
Subject: Giant ACO

12/23/05

Ned:

Good morning. Trust that this finds you on the plane and on your way to beautiful Boston (even this time of the year).

I am e-mailing you a revised Agreed Compliance Order, ("ACO") with new language in paragraphs 25 and 28(b). As we discussed yesterday evening, the testing of the entire facility is a one-time thing to be completed within this 5 years. The OCD will not require Giant to re-test the large tanks, provided they are being tested pursuant to other regulatory agency requirements.

Please advise if this ACO is acceptable to your client. If we are unable to resolve this matter today, please work with Gail Macquesten the first week of January; I will be back in the office on January 10th.

Merry Christmas.

Cheryl O'Connor

STATE OF NEW MEXICO
NEW MEXICO OIL CONSERVATION DIVISION

IN THE MATTER OF	**COMPLIANCE ORDER**
Giant Refining Company	**NM-OCD 2006-001**
Respondent.	November 15, 2005

AGREED ORDER DIRECTING COMPLIANCE AND ASSESSING CIVIL PENALTY

Pursuant to the New Mexico Oil and Gas Act, NMSA 1978, Sections 70-2-1 through 70-2-38, as amended (hereinafter, "Act") and the Water Quality Act, NMSA 1978, Sections 74-6-1 to 74-6-17, as amended (hereinafter, "WQA"), the Director of the New Mexico Oil Conservation Division (hereinafter, "OCD"), issues this Order to **GIANT REFINING COMPANY (hereinafter, "Giant")**, directing compliance with the Act, the OCD Rules, WQA and the Water Quality Control Commission (hereinafter, "WQCC") Rules, and assessing a penalty for violations of the Act, OCD Rules, WQA and WQCC Rules.

I. BACKGROUND

A. Parties

1. The OCD, a division of the New Mexico Energy, Minerals and Natural Resources Department, is the state division charged with administration and enforcement of the Oil and Gas Act (hereinafter, "Act"), NMSA 1978, Section 70-2-12B(22), as amended, and OCD Rules, including the administration and enforcement of the WQA and the WQCC Rules as pertaining to New Mexico's oil and gas activity, which includes oil refineries.

2. Giant is a domestic profit corporation authorized to do business in the State of New Mexico under Public Regulation Commission (hereinafter, "PRC") SCC number 1690171.

B. Relevant Rules and Statutes

3. NMSA 1978, Section 70-2-33(A) defines "person" to include corporations.

4. Rule19.15.3.116 NMAC (hereinafter, "OCD Rule 116") stipulates that the OCD "shall be notified of any unauthorized release occurring during the ... servicing or processing of crude oil, natural gases ... in the State of New Mexico...." Notification

must be made directly to the OCD. The Rule further requires that the responsible person for the release must remediate the site in accordance with an OCD approved plan or Rule 19.15.1.19 NMAC.

5. OCD Rule 19.15.1.19 NMAC (hereinafter, "OCD Rule 19") requires the abatement of water pollution, and specifies that the WQCC standards set out in Rule 20.6.2.3103 NMAC (hereinafter, "WQCC Rule 3103"), shall be met.

6. WQCC Rule 20.6.2.1203 NMAC (hereinafter, "WQCC Rule 1203") requires notification of discharges that may affect groundwater and/or surface water.

7. The Act, Section 70-2-31(A), NMSA 1978 authorizes penalties of up to **one thousand dollars ($1,000.00) per day per** violation for any knowing and willful violation of any provision of the Act or any rule adopted pursuant to the Act.

8. Section 74-6-10(A), NMSA 1978 of the Water Quality Act provides for civil penalties of up to **ten thousand dollars ($10,000.00) per day** for violations of the WQA. The OCD is authorized to enforce these penalties as they relate to the protection of groundwater. *See 74-6-2, NMSA 1978.*

C. Findings of Fact

9. Giant owns and operates the Bloomfield Oil Refinery located in the NW/4 NE/4 and the S/2 NE/4 and the N/2 NE/4 SE/4 of Section 27, and the S/2 NW/4 and the N/2 NW/4 SW/4 and the SE/4 NW/4 SW/4 and the NE/4 SW/4 of Section 26, Township 29 North, Range 11 West, NMPM, San Juan County, New Mexico.

10. The Bloomfield Refinery is permitted by the OCD pursuant to 20.6.3104 NMAC (hereinafter, "WQCC Rule 3104") and Giant is the current holder of discharge permit GW-01.

11. The discharge permit does not authorize discharges of effluent or leachate that may move directly or indirectly into groundwater or surface water. It does require certain best management practices and proper handling of all waste in order to protect fresh water, address stormwater runoff, vadose zone and water pollution, and requires that all spills/releases shall be reported, remediated and abated pursuant to both OCD and WQCC rules. In addition, the permit requires Giant abide by the information submitted and commitments in the discharge permit application.

12. On August 11, 2004, OCD employees Bill Olson, Wayne Price and Denny Foust discovered active discharges of hydrocarbon in two small tributaries (draws) on the north side of the refinery. Hydrocarbon saturated stained soil and dead vegetation were noted during inspection of the draws. The contamination had migrated down the draws to within a few feet of the San Juan River.

13. In addition, a new seep was noted in the embankment at the Hammond Ditch Tank 37 collection area. The Tank 37 area is easily accessed by the Hammond ditch road and should have been a red flag to Giant employees that contamination was not being contained properly.

14. Discharge permit condition #15 requires Giant to report all spill/releases pursuant to OCD Rule 116 and WQCC Rule 1203. Giant did not report this contamination to the OCD and failed to properly contain the contamination.

15. Other water contaminants and toxic pollutants that may affect human health have been present in the ground water beneath the Site. These include phase separated hydrocarbons, benzene, toluene, ethlylbenzene, xylenes, heavy metals and inorganic salts. Standards for contaminants in ground water are set forth in WQCC Rule 3103 and toxic pollutants in 20.6.2.7VV NMAC (hereinafter, "WQCC Rule 7.VV). The OCD is concerned that pollution from the site will continue to enter the San Juan River and tributaries with an adverse impact on public health and the environment.

16. The OCD instructed Giant to initiate emergency clean-up actions and construct barriers to protect the San Juan River and downstream water users. During Giant's emergency remedial actions, initial soil samples collected from the two small tributaries (draws) on the north side of the refinery showed levels of benzene (1.190 mg/l) that exceed the WQCC groundwater standard of .01 mg/l. Benzene is a toxic pollutant as defined in by WQCC Rule 7.VV, and is a chemical constituent of crude oil and by-products manufactured at Giant's oil refinery.

17. Part 1.8 of Giant's discharge Plan renewal of July 6, 1999 required that Giant provide containment or diversionary structures or equipment to prevent oil from reaching navigable waters. Part 1.9 of the plan provided that Giant would perform inspections on a continuous basis. Giant has failed to perform these functions and is in violation of condition # 2 of its discharge permit.

18. By letter dated December 30, 2002, the OCD approved conditions for groundwater remediation and monitoring by Giant. Condition number 19 required Giant to notify the OCD of the discovery of separate-phase hydrocarbons or the exceedance of a WQCC standard in any down gradient monitor well where separate phase hydrocarbons were not present or where containment concentrations did not exceed WQCC standards during the preceding monitoring event, pursuant to OCD Rule 116. Giant's April 2004 Groundwater Remediation and Monitoring Annual Report shows that monitoring point P-5 is the final monitoring point for the sheet-piling project located within a few feet of the San Juan River. Groundwater in this area is obviously hydraulically connected to the San Juan River. Giant failed to address this issue pursuant to permit approval condition number 17a. Giant also failed to install recovery systems to prevent this contamination from entering the river.

II. CONCLUSIONS of LAW

19. The OCD has jurisdiction over Giant and the subject matter in this Order pursuant to the Act (NMSA 1978, Section 70-2-12B(22), as amended), OCD Rules, the WQA and WQCC Rules.

20. Giant is a person as defined in the Act (NMSA 1978, Section 70-2-33A), the WQA and WQA Rule 20.6.2.7II NMAC.

III. ALLEGED VIOLATIONS

21. Giant knowingly and willfully violated OCD Rule 116 and WQCC Rule 1203 by failing to notify the OCD of discharges that may affect groundwater and/or surface water. The OCD has determined that there are three violations of this rule, which are failure to notify the OCD of contaminants in the two tributaries and the Tank # 37 area. The OCD recommends a civil penalty for each violation of S10,000.00, for a total of penalty of $30,000.00.

22. Giant knowingly and willfully violated 20.6.4 NMAC on three occasions, by allowing hydrocarbon and toxic constituents to seep into two tributaries to the San Juan River and allowing toxic pollutants to enter the San Juan River. This is also a violation of the terms of its permit. The OCD recommends a civil penalty of $10,000.00 per violation, for a total penalty of $30,000.00

23. Giant knowingly and willfully violated WQCC Rule 3104 on two occasions by failing to comply with the terms and conditions of their permit. Giant violated Part 1.8 of their discharge plan by failing to prevent oil from reaching navigable waters, and condition 17a of their approval conditions by failing to install recovery systems to prevent the contamination from entering a river, which is also a violation of the New Mexico Standards for Interstate and Intrastate Surface Water Standards, 20.6.4 NMAC. The OCD recommends a civil penalty of $15,000.00 for each violation, for a total of $30,000.00.

24. On September 16, 2005, the OCD issued an Administrative Compliance Order, alleging the above violations, assessing a civil penalty and ordering Giant to take corrective action.

IV. COMPROMISE and SETTLEMENT

25. Giant neither admits fault or liability for the alleged violations or findings of fact but acknowledges it is a person as defined by NMSA 1978, Section 70-2-33(A) and may be subject to civil penalties under NMSA 1978, Section 70-2-31(A), if found to be in violation of OCD rules or the WQCC.

26. The parties have engaged in settlement discussions to resolve the dispute described above, and desire to resolve the issues raised by the Administrative Compliance Order without the necessity of litigation and the costs associated therewith.

27. Taking into account both aggravating and mitigating factors, the OCD hereby assesses a civil penalty of **Ninety Thousand Dollars ($90,000.00)** against Giant for three (3) knowing and willful violations of OCD Rule 116 and WQCC Rule 1203 (failure to notify the OCD of discharges that may affect groundwater and/or surface water); three (3) knowing and willful violations of 20.6.4 NMAC (allowing hydrocarbon and toxic constituents to seep into two tributaries to the San Juan River and allowing toxic pollutants to enter the San Juan River); and two (2) knowing and willful violations by failing to comply with the terms and conditions of their permit, which resulted in two (2) knowing and willful violations of 20.6.4 NMAC.

28. **Sixty Thousand Dollars ($60,000.00)** of the penalty will be waived provided that:

(a) Giant provides to the OCD, no later than December 22, 2005, an acceptable assessment, remediation, and contingency plan for the entire area north of the slurry wall barrier to the San Juan River, inclusive of the Jackson Lake Terrace formation. The plan shall contain a schedule for Giant to accomplish the recommendations of the plan. Both the plan and schedule are subject to OCD conditions. Giant may request a time extension for accomplishing recommendations. The OCD, in its sole discretion, may grant any requested extension for good cause shown by Giant.

(b) By July 1, 2006, Giant shall develop an operation, checking and maintenance schedule spreadsheet for the refinery. This schedule shall include an investigation schedule to determine all sources of contamination within the refinery, and will include testing of the large petroleum storage tanks, all above and below ground tanks, pressure testing process lines, sumps and other possible above and underground sources of contamination in the refinery, finished products terminal, tank farm areas and pits. Testing of the entire facility shall be completed within five (5) years, which under this Order is a one-time testing requirement. Exempted from this testing requirement are large tanks that have been or are due to be tested under other regulatory agency rules, regulations or guidelines, provided that these tanks shall be identified in the spreadsheet and test dates and results provided to the OCD.

(c) No later than July 1, 2006, Giant shall submit a modified discharge plan to GW-01 permit application to the OCD. The application shall include a comprehensive ground water monitoring and remediation plan (hereinafter, "Plan"), which shall include the items required in subparagraphs (a) and (b), above. The Plan shall include a long-term monitoring and remediation plan for both the refinery and the area outside the refinery north of the recently installed slurry wall, to and including all seeps, existing or potential, along the bluff. It shall account for all remediation systems and safeguards in place site-wide, including the French drain collection system, the 2600 foot underground slurry barrier wall and associated collection and observation wells, the sheet-piling and

underground slurry barrier wall in the river terrace area, periodic sampling of the river and bio-venting system to be constructed on the river terrace.

Giant may request a time extension for accomplishing recommendations. The OCD, in its sole discretion, may grant any requested extension for good cause shown by Giant.

29. In the event these conditions are not met by the designated deadlines, **Twenty Thousand Dollars ($20,000.00)** of the conditionally waived penalty shall immediately become due and payable for each of the three above designated deadlines.

30. Giant shall pay the **Thirty Thousand Dollars ($30,000.00)** civil penalty by December 21, 2005. Payment shall be made by certified or cashier's check made payable to the "New Mexico Oil Conservation Division" and mailed or hand delivered to the New Mexico Oil Conservation Division, Attention: Director, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505.

31. The parties agree to this Order for the sole purpose of settling the Administrative Compliance Order and Giant expressly agrees it shall pay the civil penalty set out above and meet all the terms and conditions of the Compromise and Settlement Paragraphs 1 through 5.

V. OTHER TERMS AND CONDITIONS

32. Waiver. By signing this Order, Giant expressly waives any right, pursuant to the Oil and Gas Act or otherwise, to a hearing either prior or subsequent to the entry of this Order or to an appeal from this Order.

33. Enforcement. The OCD retains the right to pursue relief authorized by the Act or the WQA for any violation not addressed herein. The OCD retains the right to enforce this Order by suit or otherwise to the same extent and with the same effect as a final Order of the Division entered after notice and hearing in accordance with all terms and provisions of the Act. The laws of New Mexico shall govern the construction and interpretation of this Order.

34. Binding Effect. This Order shall be binding on the parties and their officers, directors, employees, agents, subsidiaries, successors, assigns, trustees or receivers.

35. Integration. This Order merges all prior written and oral communications between the arties concerning the subject matter of this Order, and contains the entire agreement between the parties. This Order shall not be modified without the express written consent of the parties.

36. Mutual Release. The parties mutually release each other form all claims that each party raised or could have raised against the other regarding the facts and legal

conclusions alleged above. Nothing in this Order relieves Giant of liability should its operations fail to adequately investigate and remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, nothing in this Order relieves Giant of its responsibility for compliance with any federal, state or local laws and/or regulations.

37. Waiver of State Liability. Giant shall assume all costs and liabilities incurred in performing any obligation under this Order. The OCD, on its own behalf or on behalf of the Department of Energy, Minerals and Natural Resources, shall not assume any liability for Giant's performance of any obligation under tbis Order.

38. Disclosure to Successors-in-Interest. Giant shall disclose this Order to any successor-in-interest to the Facility and shall advise such successor-in-interest that this Order is binding on the successor-in-interest until such time as Giant complies with its terms and conditions or it is terminated by written agreement of the parties.

39. Effective Date. This Order shall become effective upon execution by the Division Director of the OCD.

Done at Santa Fe, New Mexico this ___ day of December 2005.

By: _____

MARK FESMIRE, P.E., Director
Oil Conservation Division

ACCEPTANCE

GIANT REFINING COMPANY hereby accepts the foregoing Order, and agrees to all of the terms and provisions set forth in the Order.

GIANT REFINING COMPANY

By: _____

Title: _____

Date: _____

APPROVED:

ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

By: _____

Cheryl O'Connor
Assistant General Counsel
OCD

GIANT REFINING COMPANY

By: _____

Edmund H. Kendrick
Attorney for Giant Refining Company
P.O. Box 2307
Santa Fe, New Mexico 87504-2307

GIANT
REFINING COMPANY

CERTIFIED MAIL # 7004 2510 0005 1641 9588

RECEIVED
DEC 20 2005
OIL CONSERVATION DIVISION

December 12, 2005

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

Re: APPROVAL WITH CONDITIONS OF THE OCTOBER 28, 2005 BIOVENTING MONITORING PLAN (REVISED) RIVER TERRACE VOLUNTARY CORRECTIVE MEASURES
GIANT REFINING COMPANY, BLOOMFIED REFINERY
EPA ID NO: NMD089416416
HWB-GRCB-05-002

Dear Ms. Monzeglio:

According to NMED's November 23, 2005 letter approving with conditions Giant's Bioventing Monitoring Plan (Revised) River Terrace Voluntary Corrective Measures, NMED will accept the August 2005 groundwater samples taken from the river terrace wells to be used as pre-dewatering organic samples, if the system startup occurs before December 31, 2005.

Giant is anticipating the Bioventing system startup to take place during the first week in January 2006 and requests a fifteen-day extension of the December 31, 2005 deadline. Thus allowing the August 2005 samples to be used as the pre-dewatering organic samples.

Your consideration in this matter is greatly appreciated!

Sincerely,

James R. Schmaltz
Environmental Manager

Cc:
Wayne Price - OCD
Ed Riege
Chad King

PHONE
505 632-8013
FAX
505-632-3911

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

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, December 08, 2005 3:21 PM
To: OConnor, Cheryl, EMNRD
Cc: Price, Wayne, EMNRD
Subject: FW: OCD Compliance Order

After receiving Giant's summary from our meeting yesterday (see summary below), it reflects a strategy for moving forward with addressing the CO that appears to be acceptable. However, one item of concern with respect to their contingency plan for a worst case scenario and to stop impacts to the river (please refer to pictures I sent you), we want to mention, since oil appears to be draped over the Nacimiento Fm. coming out from the Jackson Lake Terrace and Nacimiento Formation interface that they should also include in Item 1 the following: contingency plan for removing stained soils with oil and/or stopping any over land oil flow that would impact the river in a worse case scenario. We had discussed remediation via upward dragline scraping from the top of the bluff, but may also have to be done by bringing heavy equipment across the river to immediately stop, and remediate the draped oil or overland flow of oil over the Nacimiento Fm. that may discharge into the river.

Wayne and I need to confer with you to determine how we want to respond to their meeting summary from our Dec. 7, 2005 meeting What do you think? Thanks.

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

-----Original Message-----
From: Randy Schmaltz [mailto:rschmaltz@giant.com]
Sent: Wednesday, December 07, 2005 5:14 PM
To: Chavez, Carl J, EMNRD
Cc: Price, Wayne, EMNRD; Ed Riege
Subject: OCD Compliance Order

Carl, I have enclosed an outline of the area's we talked about and wanted addressed in the settlement. Please take a look and let me know if you concur.

1). Area North of the Barrier wall (slurry wall)
Giant will submit a conceptual plan for assessing and remediation for the area north of the slurry wall which includes:
* Assessing the effectiveness of the hydraulic barrier (slurry wall).
* Through review of the on-going removal, collection and monitoring program.
* Recommendations and modifications, and an action plan for the collection of remaining fluids between the barrier wall and the San Juan River. Which will include installation of collection wells at various location.

2). Area South of the Barrier wall (slurry wall)
Giant will develop a program to determine any sources of contamination within the refinery.
* By July 1, 2006 Giant will prepare and submit a "Underground Process and Sewer line Identification and Maintenance Plan".
* This plan will include summaries of recent underground process and sewer lines, sump, and tank testing as well as schedule for future testing.

* This plan will include drawings of the underground process and sewer lines identified.
* Giant will prepare and submit a plan to identify possible underground contamination in the tank farm.

3). Discharge Plan Modification

By July 1, 2006 Giant will submit a discharge plan modification application. The plan will take into account all remediation systems and safeguards site wide.

If you have any questions please feel free to call.

Thanks Randy

Chavez, Carl J, EMNRD

From: Randy Schmaltz [rschmaltz@giant.com]
Sent: Thursday, December 08, 2005 12:46 PM
To: Chavez, Carl J, EMNRD; Price, Wayne, EMNRD
Cc: Ed Riege
Subject: Stain pictures


River Bluff 12-6-05 008.jpg (2...


River Bluff 11-21-05 010.jpg (...


River Bluff 12-8-05 005.jpg (1...

Gents, here are the picture of the stains. The first on is the new area I'm watching and the next two are the before and after of the existing area of the west arroyo.

<<River Bluff 12-6-05 008.jpg>> <<River Bluff 11-21-05 010.jpg>> <<River Bluff 12-8-05 005.jpg>>

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 01, 2005

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: River Terrace - 11/05 Order No.: 0511103

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 3 samples on 11/10/2005 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

Hall Environmental Analysis Laboratory

Date: *01-Dec-05*

CLIENT: San Juan Refining
Client Sample ID: MW #48
Lab Order: 0511103
Collection Date: 11/9/2005 11:05:00 AM
Project: River Terrace - 11/05
Lab ID: 0511103-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	3.3	1.0		mg/L	1	11/17/2005 10:47:10 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/17/2005 10:47:10 PM
Surr: DNOP	139	58-140		%REC	1	11/17/2005 10:47:10 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	14	2.0		mg/L	40	11/14/2005 10:41:17 PM
Surr: BFB	117	79.7-118		%REC	40	11/14/2005 10:41:17 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	40	11/14/2005 10:41:17 PM
Benzene	400	20		µg/L	40	11/14/2005 10:41:17 PM
Toluene	ND	20		µg/L	40	11/14/2005 10:41:17 PM
Ethylbenzene	910	20		µg/L	40	11/14/2005 10:41:17 PM
Xylenes, Total	4000	20		µg/L	40	11/14/2005 10:41:17 PM
Surr: 4-Bromofluorobenzene	110	82.2-119		%REC	40	11/14/2005 10:41:17 PM
EPA METHOD 8310: PAHS						Analyst: **JMP**
Naphthalene	95	2.5		µg/L	1	11/29/2005 7:25:34 PM
1-Methylnaphthalene	34	2.5		µg/L	1	11/29/2005 7:25:34 PM
2-Methylnaphthalene	36	2.5		µg/L	1	11/29/2005 7:25:34 PM
Acenaphthylene	ND	2.5		µg/L	1	11/29/2005 7:25:34 PM
Acenaphthene	ND	2.5		µg/L	1	11/29/2005 7:25:34 PM
Fluorene	1.2	0.80		µg/L	1	11/29/2005 7:25:34 PM
Phenanthrene	1.7	0.60		µg/L	1	11/29/2005 7:25:34 PM
Anthracene	ND	0.60		µg/L	1	11/29/2005 7:25:34 PM
Fluoranthene	ND	0.30		µg/L	1	11/29/2005 7:25:34 PM
Pyrene	ND	0.30		µg/L	1	11/29/2005 7:25:34 PM
Benz(a)anthracene	ND	0.020		µg/L	1	11/29/2005 7:25:34 PM
Chrysene	ND	0.20		µg/L	1	11/29/2005 7:25:34 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	11/29/2005 7:25:34 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	11/29/2005 7:25:34 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	11/29/2005 7:25:34 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	11/29/2005 7:25:34 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	11/29/2005 7:25:34 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	11/29/2005 7:25:34 PM
Surr: Benzo(e)pyrene	73.7	54-102		%REC	1	11/29/2005 7:25:34 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *01-Dec-05*

CLIENT: San Juan Refining
Client Sample ID: MW #49
Lab Order: 0511103
Collection Date: 11/9/2005 1:30:00 AM
Project: River Terrace - 11/05
Lab ID: 0511103-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	1.4	1.0		mg/L	1	11/17/2005 11:19:39 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/17/2005 11:19:39 PM
Surr: DNOP	138	58-140		%REC	1	11/17/2005 11:19:39 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.60	0.050		mg/L	1	11/15/2005 12:14:48 AM
Surr: BFB	120	79.7-118	S	%REC	1	11/15/2005 12:14:48 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/15/2005 12:14:48 AM
Benzene	39	0.50		µg/L	1	11/15/2005 12:14:48 AM
Toluene	0.55	0.50		µg/L	1	11/15/2005 12:14:48 AM
Ethylbenzene	9.9	0.50		µg/L	1	11/15/2005 12:14:48 AM
Xylenes, Total	1.4	0.50		µg/L	1	11/15/2005 12:14:48 AM
Surr: 4-Bromofluorobenzene	109	82.2-119		%REC	1	11/15/2005 12:14:48 AM
EPA METHOD 8310: PAHS						Analyst: **JMP**
Naphthalene	12	2.5		µg/L	1	11/29/2005 9:01:34 PM
1-Methylnaphthalene	ND	2.5		µg/L	1	11/29/2005 9:01:34 PM
2-Methylnaphthalene	ND	2.5		µg/L	1	11/29/2005 9:01:34 PM
Acenaphthylene	ND	2.5		µg/L	1	11/29/2005 9:01:34 PM
Acenaphthene	ND	2.5		µg/L	1	11/29/2005 9:01:34 PM
Fluorene	ND	0.80		µg/L	1	11/29/2005 9:01:34 PM
Phenanthrene	ND	0.60		µg/L	1	11/29/2005 9:01:34 PM
Anthracene	ND	0.60		µg/L	1	11/29/2005 9:01:34 PM
Fluoranthene	ND	0.30		µg/L	1	11/29/2005 9:01:34 PM
Pyrene	ND	0.30		µg/L	1	11/29/2005 9:01:34 PM
Benz(a)anthracene	ND	0.020		µg/L	1	11/29/2005 9:01:34 PM
Chrysene	ND	0.20		µg/L	1	11/29/2005 9:01:34 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	11/29/2005 9:01:34 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	11/29/2005 9:01:34 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	11/29/2005 9:01:34 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	11/29/2005 9:01:34 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	11/29/2005 9:01:34 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	11/29/2005 9:01:34 PM
Surr: Benzo(e)pyrene	83.6	54-102		%REC	1	11/29/2005 9:01:34 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *01-Dec-05*

CLIENT: San Juan Refining
Lab Order: 0511103
Project: River Terrace - 11/05
Lab ID: 0511103-03

Client Sample ID: River Near MW #49
Collection Date: 11/9/2005 10:45:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/15/2005 12:45:40 AM
Benzene	ND	0.50		µg/L	1	11/15/2005 12:45:40 AM
Toluene	ND	0.50		µg/L	1	11/15/2005 12:45:40 AM
Ethylbenzene	ND	0.50		µg/L	1	11/15/2005 12:45:40 AM
Xylenes, Total	ND	0.50		µg/L	1	11/15/2005 12:45:40 AM
Surr: 4-Bromofluorobenzene	99.9	82.2-119		%REC	1	11/15/2005 12:45:40 AM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *01-Dec-05*

CLIENT: San Juan Refining
Work Order: 0511103
Project: River Terrace - 11/05

QC SUMMARY REPORT

Method Blank

Sample ID **MB-9211** Batch ID: **9211** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/17/2005 8:38:48 PM** Prep Date **11/16/2005**
Client ID: Run ID: **FID(17A) 2_051116A** SeqNo: **423450**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.297	0	1	0	130	58	140	0			

Sample ID **Reagent Blank 5m** Batch ID: **R17290** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/14/2005 7:37:31 AM** Prep Date
Client ID: Run ID: **PIDFID_051114B** SeqNo: **422264**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	23.29	0	20	0	116	79.7	118	0			

Sample ID **Reagent Blank 5m** Batch ID: **R17290** Test Code: **SW8021** Units: **µg/L** Analysis Date **11/14/2005 7:37:31 AM** Prep Date
Client ID: Run ID: **PIDFID_051114B** SeqNo: **422075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	21.77	0	20	0	109	82.2	119	0			

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

CLIENT: San Juan Refining
Work Order: 0511103
Project: River Terrace - 11/05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9173** Batch ID: **9173** Test Code: **SW8310** Units: **µg/L** Analysis Date **11/29/2005 3:25:32 PM** Prep Date **11/11/2005**
Client ID: Run ID: **HUGO_051128A** SeqNo: **426863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	2.5									
1-Methylnaphthalene	ND	2.5									
2-Methylnaphthalene	ND	2.5									
Acenaphthylene	ND	2.5									
Acenaphthene	ND	2.5									
Fluorene	ND	0.8									
Phenanthrene	ND	0.6									
Anthracene	ND	0.6									
Fluoranthene	ND	0.3									
Pyrene	ND	0.3									
Benz(a)anthracene	ND	0.02									
Chrysene	ND	0.2									
Benzo(b)fluoranthene	ND	0.05									
Benzo(k)fluoranthene	ND	0.02									
Benzo(a)pyrene	ND	0.02									
Dibenz(a,h)anthracene	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	8.32	0	10	0	83.2	54	102	0			

5 / 10

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

Hall Environmental Analysis Laboratory

Date: *01-Dec-05*

CLIENT: San Juan Refining
Work Order: 0511103
Project: River Terrace - 11/05

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID **0511103-02a ms** Batch ID: **R17290** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/15/2005 1:16:31 AM** Prep Date

Client ID: **MW #49** Run ID: **PIDFID_051114B** SeqNo: **422300**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	1.079	0.05	0.5	0.5976	96.3	82.6	114	0			
Surr: BFB	28.82	0	25	0	115	79.7	118	0			

Sample ID **0511103-02a msd** Batch ID: **R17290** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/15/2005 1:47:34 AM** Prep Date

Client ID: **MW #49** Run ID: **PIDFID_051114B** SeqNo: **422301**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	1.067	0.05	0.5	0.5976	93.8	82.6	114	1.079	1.14	8.39	
Surr: BFB	28.59	0	25	0	114	79.7	118	28.82	0.801	0	

6 / 10

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *01-Dec-05*

CLIENT: San Juan Refining
Work Order: 0511103
Project: River Terrace - 11/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-9211** Batch ID: **9211** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/17/2005 9:11:21 PM** Prep Date **11/16/2005**
Client ID: Run ID: **FID(17A) 2_051116A** SeqNo: **423451**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.935	1	5	0	119	81.2	149	0			

Sample ID **LCSD-9211** Batch ID: **9211** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/17/2005 9:42:12 PM** Prep Date **11/16/2005**
Client ID: Run ID: **FID(17A) 2_051116A** SeqNo: **423452**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.612	1	5	0	112	81.2	149	5.935	5.61	23	

Sample ID **GRO lcs 2.5ug** Batch ID: **R17290** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/15/2005 2:49:19 AM** Prep Date
Client ID: Run ID: **PIDFID_051114B** SeqNo: **422285**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.545	0.05	0.5	0	109	82.6	114	0			

Sample ID **BTEX lcs 100ng** Batch ID: **R17290** Test Code: **SW8021** Units: **µg/L** Analysis Date **11/14/2005 8:05:39 PM** Prep Date
Client ID: Run ID: **PIDFID_051114B** SeqNo: **422077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	41.32	2.5	40	0	103	64.5	133	0			
Benzene	20.91	0.5	20	0	105	88.5	114	0			
Toluene	18.83	0.5	20	0	94.2	87.2	114	0			
Ethylbenzene	19.49	0.5	20	0	97.5	88.6	113	0			
Xylenes, Total	57.38	0.5	60	0	95.6	83.3	114	0			

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

CLIENT: San Juan Refining
Work Order: 0511103
Project: River Terrace - 11/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-9173** Batch ID: **9173** Test Code: **SW8310** Units: **µg/L** Analysis Date **11/29/2005 4:13:31 PM** Prep Date **11/11/2005**

Client ID: Run ID: **HUGO_051128A** SeqNo: **426866**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	21.35	2.5	40	0	53.4	34.8	97.4	0			
1-Methylnaphthalene	23.96	2.5	40.1	0	59.8	34.7	100	0			
2-Methylnaphthalene	23.61	2.5	40	0	59.0	35	98.1	0			
Acenaphthylene	26.96	2.5	40.1	0	67.2	48.3	95.1	0			
Acenaphthene	26.62	2.5	40	0	66.6	45	95	0			
Fluorene	2.81	0.8	4.01	0	70.1	46.8	93.4	0			
Phenanthrene	1.43	0.6	2.01	0	71.1	48.7	104	0			
Anthracene	1.46	0.6	2.01	0	72.6	47.5	102	0			
Fluoranthene	2.94	0.3	4.01	0	73.3	46.3	108	0			
Pyrene	2.74	0.3	4.01	0	68.3	43.8	109	0			
Benz(a)anthracene	0.29	0.02	0.401	0	72.3	40.3	115	0			
Chrysene	1.53	0.2	2.01	0	76.1	42.6	107	0			
Benzo(b)fluoranthene	0.35	0.05	0.501	0	69.9	48.6	107	0			
Benzo(k)fluoranthene	0.18	0.02	0.25	0	72.0	23.3	136	0			
Benzo(a)pyrene	0.18	0.02	0.251	0	71.7	33.4	117	0			
Dibenz(a,h)anthracene	0.39	0.04	0.501	0	77.8	27.3	139	0			
Benzo(g,h,i)perylene	0.41	0.03	0.5	0	82.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.779	0.08	1.002	0	77.7	39.9	125	0			

8 / 10

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

J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: San Juan Refining
Work Order: 0511103
Project: River Terrace - 11/05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9173** Batch ID: **9173** Test Code: **SW8310** Units: **µg/L** Analysis Date **11/29/2005 5:01:31 PM** Prep Date **11/11/2005**

Client ID: Run ID: **HUGO_051128A** SeqNo: **426867**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	20.81	2.5	40	0	52.0	34.8	97.4	21.35	2.56	32.1	
1-Methylnaphthalene	20.78	2.5	40.1	0	51.8	34.7	100	23.96	14.2	32.7	
2-Methylnaphthalene	20.3	2.5	40	0	50.8	35	98.1	23.61	15.1	34	
Acenaphthylene	22.05	2.5	40.1	0	55.0	48.3	95.1	26.96	20.1	38.8	
Acenaphthene	22	2.5	40	0	55.0	45	95	26.62	19.0	38.6	
Fluorene	2.39	0.8	4.01	0	59.6	46.8	93.4	2.81	16.2	39.3	
Phenanthrene	1.3	0.6	2.01	0	64.7	48.7	104	1.43	9.52	25	
Anthracene	1.3	0.6	2.01	0	64.7	47.5	102	1.46	11.6	23.9	
Fluoranthene	2.74	0.3	4.01	0	68.3	46.3	108	2.94	7.04	15.7	
Pyrene	2.64	0.3	4.01	0	65.8	43.8	109	2.74	3.72	15.3	
Benz(a)anthracene	0.28	0.02	0.401	0	69.8	40.3	115	0.29	3.51	119	
Chrysene	1.45	0.2	2.01	0	72.1	42.6	107	1.53	5.37	16.6	
Benzo(b)fluoranthene	0.3	0.05	0.501	0	59.9	48.6	107	0.35	15.4	21.7	
Benzo(k)fluoranthene	0.17	0.02	0.25	0	68.0	23.3	136	0.18	5.71	19.4	
Benzo(a)pyrene	0.18	0.02	0.251	0	71.7	33.4	117	0.18	0	16.7	
Dibenz(a,h)anthracene	0.36	0.04	0.501	0	71.9	27.3	139	0.39	8.00	17.3	
Benzo(g,h,i)perylene	0.38	0.03	0.5	0	76.0	38.2	117	0.41	7.59	118	
Indeno(1,2,3-cd)pyrene	0.822	0.08	1.002	0	82.0	39.9	125	0.779	5.37	17.7	

9/10

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR | Date and Time Received: 11/10/2005

Work Order Number 0511103 | Received by AT

Checklist completed by _____ Signature | 11/10/05 Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☑	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	4°	*4° C ± 2 Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

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

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

Client: San Juan Refining
Address: #50 CR 4990 Bloomfield, NM 87413
Phone #: 505-632-4161
Fax #: 505-632-3911

Project Name: River Terrace - 11/05
Project #:
Project Manager:
Sampler: Cindy Hurtado/Angela Folk
Sample Temperature: 4°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
11/09/05	1105am	H2O	MW #48	2-VOA	X			051103-1
"	"	"	"	2-VOA	X			
"	"	"	"	1-liter			Amber	
11/09/05	1305am	H2O	MW #49	2-VOA	X			-2
"	"	"	"	2-VOA	X			
"	"	"	"	1-liter			Amber	
11/09/05	1045am	H2O	River Near MW #49	2-VOA	X			-3

BTEX + MTBE + TMB's (8021)	BTEX + MTBE — TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
X																
		X														
						X										
X																
		X														
						X										
X																

Date: 11/09/05 Time: 3pm Relinquished By: (Signature) Cindy Hurtado
Received By: (Signature) [signature] 11/10/05 @ 1205
Date: Time: Relinquished By: (Signature)
Received By: (Signature)

Remarks:

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

November 23, 2005

Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

Subject: **APPROVAL WITH CONDITIONS OF THE OCTOBER 28, 2005 BIOVENTING MONITORING PLAN (REVISED) RIVER TERRACE VOLUNTARY CORRECTIVE MEASURES GIANT REFINING COMPANY, BLOOMFIELD REFINERY EPA ID NO.: NMD089416416 HWB-GRCB-05-002**

Dear Messrs. Schmaltz and Riege:

The New Mexico Environment Department (NMED) is in receipt of Giant Refining Company; Bloomfield Refinery (GRCB) *Bioventing Monitoring Plan (Revised) River Terrace Voluntary Corrective Measures* document dated October 28, 2005. NMED hereby issues this approval with conditions. The conditions are addressed in the comments below and GRCB must only submit replacement pages as required. The replacement pages must be submitted to NMED on or before December 30, 2005. NMED must be notified of any modifications or changes to this plan in writing within 15 days of implementation.

1. Comment No. 1 of the cover letter states "GRCB analyzed groundwater samples from the river terrace wells for BTEX, MTBE, GRO, and DRO in August 2005 (See Table A of plan) as part of regularly scheduled monitoring events. We propose these results be used for the pre-dewatering organic samples indicated in NMED Table 1D".

NMED Comment: NMED accepts the condition addressed above if the system startup occurs before December 31, 2005. If the system startup occurs after December 31, 2005, GRCB must collect and analyze groundwater samples in accordance with NMED's Table 1D, included in the September 30, 2005 letter.

NMED Table 1D requires that the samples collected from all temporary wells (TP), monitoring wells (MW), and dewatering wells (DW) be analyzed for all eight RCRA metals (totals) (RCRA metals) as part of baseline monitoring prior to dewatering. The samples collected in the August 2005 sampling event were not analyzed for RCRA metals; however, according to Table 1B of the October 28, 2005 revised report, it appears GRCB will be analyzing samples for RCRA metals after dewatering occurs. The analysis for RCRA metals after dewatering occurs will not provide baseline information concerning the presence or absence of metals at the River Terrace prior to changing subsurface conditions.

NMED's purpose for baseline monitoring is to gather data prior to all remediation activities to determine existing conditions at the River Terrace area. This baseline data can then be compared to data collected during and after remediation activities to determine the effectiveness of remediation.

2. **NMED Comment:** NMED does not approve comment No. 2 in the cover letter which states "GRCB proposes the pre-dewatering soil gas samples indicated in NMED Table 1E be collected after dewatering has stabilized". GRCB must collect soil gas samples as indicated in NMED's Table 1E to determine the conditions at the River Terrace area prior to dewatering. This will allow GRCB to evaluate changes at the River Terrace resulting from dewatering and system start-up. GRCB must submit a replacement page incorporating the sampling described in NMED's Table 1E, accordingly.

3. **NMED Comment:** Table 1C, the footnote "WM" found in "GAC 1 Eff' row under the "Baseline Samples" column must be revised to match the text in Section 3.1.5, paragraph 3 stating "Effluent samples from the lead GAC filter (GAC 1 Eff) will be obtained at system startup and weekly thereafter until breakthrough is detected. Once the breakthrough profile is determined, GAC 1 Eff samples will be obtained monthly". A replacement page must be submitted accordingly.

4. **NMED Comment:** GRCB must submit to NMED a Six-Month System Start-up Report and an Annual System Monitoring Report and use Attachment A *Periodic Monitoring Report* format as a guideline to these reports. The reports must address the remediation progress at the River Terrace; include all sampling activities and data gathered during the

six-month and annual time frames. The Six- Month Report is due 220 days after system start-up. The Annual Report is due 13 months after system start-up.

5. GRCB must notify NMED within 24 hours if operation of the bioventing system experiences problems or must be shut down.

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

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HM:hcm

cc: * D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD Aztec Office
B. Wilkinson, EPA
D. Tucker, Malcolm Pirnie
K. Robinson, Malcolm Pirnie

Reading File and GRCB 2005 File
*denotes electronic version

Attachment A

Periodic Monitoring Report Guidelines

PERIODIC MONITORING REPORT

The Respondent shall use the following guidance for preparing periodic monitoring reports. The reports shall present the reporting of periodic groundwater, vapor, and remediation system monitoring at the Facility. The following sections provide a general outline for monitoring reports, and also provide the minimum requirements for reporting within each subsection when preparing routine monitoring reports for specific units and for Facility-wide monitoring. All data collected during each monitoring and sampling event in the reporting period shall be included in the reports. In general, interpretation of data shall be presented only in the Background, Conclusions, and Recommendations sections of the reports. The other text sections of the reports shall be reserved for presentation of facts and data without interpretation or qualifications. The general report outline is provided below.

Title Page

The title page shall include the type of document; Facility name and SWMU, AOC site, and any other unit name; and the submittal date. A signature block providing spaces for the name, title, and organization of the preparer and the responsible GRCB representative shall be provided on the title page in accordance with 20.4.1.900 NMAC incorporating 40 CFR 270.11(d)(1).

Executive Summary

The executive summary shall provide a brief summary of the purpose, scope, and results of the monitoring conducted at the subject site during the reporting period. The Facility SWMU, AOC and unit names(s) and location shall be included in the executive summary. In addition, this section shall include a brief summary of conclusions based on the monitoring data collected.

Table of Contents

The table of contents shall list all text sections, subsections, tables, figures, and appendices or attachments included in the report. The corresponding page numbers for the titles of each section of the report shall be included in the table of contents.

Introduction

The introduction section shall include the Facility name, unit name and location and unit status (active operations, closed, corrective action, etc.). General information on the site usage and status shall be included in this section. A brief description of the purpose of the monitoring, type of monitoring conducted, and the type of results presented in the report also shall be provided in this section.

Scope of Activities

A section on the scope of activities shall briefly describe all activities performed during the monitoring event or reporting period including field data collection, analytical testing, remediation system monitoring, if applicable, and purge/decontamination water storage and disposal.

Regulatory Criteria

A section on regulatory criteria shall provide information regarding applicable cleanup standards, risk-based screening levels, and risk-based cleanup goals for the subject site. A table summarizing the applicable cleanup standards or inclusion of applicable cleanup standards in the data tables can be substituted for this section. The appropriate cleanup levels for each site shall be included, if site-specific levels have been established at separate sites. Risk-based evaluation procedures, if used to calculate cleanup levels, must either be included as an attachment or referenced. The specific document and page numbers must be included for all referenced materials.

Monitoring Results

A section shall provide a summary of the results of monitoring conducted at the site. This section shall include the dates and times that monitoring was conducted, the measured depths to groundwater, direction(s) of groundwater flow, field air and water quality measurements, static pressures, field measurements, and a comparison to previous monitoring results. Field observations or conditions that may influence the results of monitoring shall be reported in this section. Tables summarizing vapor-monitoring parameters, groundwater elevations, depths to groundwater measurements, and other field measurements can be substituted for this section. The tables shall include all information required in the Tables Section of this Attachment.

Chemical Analytical Data Results

A section shall discuss the results of the chemical analyses. It shall provide the dates of vapor or groundwater sampling, the vapor or groundwater analytical methods, and the analytical results. It shall also provide a comparison of the data to previous results and to cleanup standards or established cleanup levels for the site. The rationale or purpose for altering or modifying the sampling program shall be provided in this section. A table summarizing the laboratory analytical data, QA/QC data, applicable cleanup levels, and modifications to the vapor and groundwater sampling program can be substituted for this section. The tables shall include all information required in the Tables Section of this Attachment.

Remediation System Monitoring

A section shall discuss the remediation system monitoring. It shall summarize the remediation system's capabilities and performance. It shall also provide monitoring data, treatment system discharge sampling requirements, and system influent and effluent sample analytical results. The dates of operation, system failures, and modifications made to the remediation system during the reporting period shall also be included in this section. A summary table may be substituted for this section. The tables shall include all information required in the Tables Section of this Attachment.

Summary

A summary section shall provide a discussion and conclusions of the monitoring conducted at the site. In addition, this section shall provide a comparison of the results to applicable cleanup levels, and to relevant historical monitoring and chemical analytical data. An explanation shall be provided with regard to data gaps. A discussion of remediation system performance, monitoring results, modifications, if applicable, and compliance with discharge requirements shall be provided in this section. Recommendations and explanations regarding future monitoring, remedial actions, or site closure shall also be included in this section.

Tables

A section shall provide the following summary tables. With prior approval from the Department, the Respondent may combine one or more of the tables. Data presented in the tables shall include the current data plus data from the three previous monitoring events or, if data from less than three monitoring events is available, data acquired during previous investigations and vapor, groundwater, and remediation system monitoring. The dates of data collection shall be included in the tables. Summary tables may be substituted for portions of the text. All data tables shall include only detected analytes and data quality exceptions that could potentially mask detections.

1. A table summarizing the regulatory criteria (a Regulatory Criteria text section may be substituted for this table or the applicable cleanup levels may be included in the analytical data tables).
2. A table summarizing groundwater elevations and depths to groundwater data. The table shall include the monitoring well depths, casing elevations, the screened intervals in each well, and the dates and times of measurements.
3. A table summarizing field measurements of surface water quality data, if applicable.
4. A table summarizing field measurements of vapor monitoring data (must include historical vapor monitoring data as described above).
5. A table summarizing field measurements of groundwater quality data (must include historical water quality data as described above).
6. A table summarizing vapor sample chemical analytical data, if applicable (must include historical vapor sample analytical data as described above).

7. A table summarizing surface water chemical analytical data, if applicable (must include historical surface water analytical data as described above).
8. A table summarizing groundwater chemical analytical data (must include historical groundwater analytical data as described above).
9. A table summarizing remediation system monitoring data, if applicable (must include historical remediation system monitoring data as described above).

Figures

The section shall include the following figures. All figures shall include a scale and north arrow. An explanation shall be provided on each figure for all abbreviations, symbols, acronyms, and qualifiers. All figures shall have a date.

1. A vicinity map showing topography and the general location of the subject site relative to surrounding features or properties.
2. A Facility site plan that presents pertinent site features and structures, well and piezometer locations, and remediation system location(s) and features. Off-site well locations and pertinent features shall be included on the site plan, if practical. Additional site plans may be required to present the locations of relevant off-site well locations, structures, and features.
3. Figures presenting the locations of piezometer, monitoring and other well locations, groundwater elevation data, and groundwater flow directions.
4. Figures presenting groundwater analytical data for the current monitoring event. The analytical data corresponding to each sampling location may be presented in tabular form on the figure or as an isoconcentration map.
5. Figures presenting surface water sampling locations and analytical data for the current monitoring period.
6. Figures presenting vapor sampling locations and analytical data for the current monitoring event. The analytical data corresponding to each sampling location may be presented in table form on the figure or as an isoconcentration map.
7. Figures presenting geologic cross-sections based on outcrop and borehole data, if applicable.

Appendices

Each monitoring report shall include the following appendices. Additional appendices may be necessary to present data or documentation not listed below.

Field Methods

An appendix shall include the methods used to acquire field measurements of groundwater elevations, vapor and water quality data, and vapor and groundwater samples. It shall include the methods and types of instruments used to measure depths to water, air or headspace parameters, and water quality parameters. In addition, decontamination, well purging techniques, well sampling techniques, and sample handling procedures shall be provided in this appendix. Methods of measuring and sampling remediation systems shall be reported in this section, if applicable. Purge and decontamination water storage and disposal methods shall also be presented in this appendix. Copies of purge and decontamination water disposal documentation shall be provided in a separate appendix.

Chemical Analytical Program

An appendix shall discuss the analytical program. It shall include the analytical methods, a summary of data quality objectives, and data quality review procedures. A summary of data quality exceptions and their effect on the acceptability of the analytical data with regard to the monitoring event and the site status shall be included in this appendix along with references to case narratives provided in the laboratory reports.

Chemical Analytical Reports

This appendix shall include all laboratory chemical analytical data generated for the reporting period. The data may be submitted electronically on a compact disc in Microsoft Excel format. The reports shall include all chain-of-custody records and QA/QC results provided by the laboratory. Hard (paper) copies of all chain-of-custody records shall be submitted as part of this appendix.

State of New Mexico
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Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
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BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

November 1, 2005

Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

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

Dear Messrs. Schmaltz and Riege:

The New Mexico Environment Department (NMED) is in receipt of the September 19, 2005 document submitted on behalf of Giant Refining Company, Bloomfield Refinery (GRCB) regarding the *Request for Additional Information and Changes to the North Boundary Barrier Collection System Design and Monitoring Plan Phase II.* The following comments address the additional information presented in the September 19, 2005 document. GRCB must adhere to the following requirements:

1. In reference to comment No. 3 of the 9/19/05 letter addressing dissolved oxygen (DO): based on the information provided, the Hach High Range Dissolved Oxygen Accuvac Ampul method provides high measurement readings resulting from interference. The skewed results may also be a consequence of improper method application. The method is intended for aquiculture use and not groundwater testing. NMED is requiring GRCB to find an alternate instrument that accurately measures DO in groundwater samples.

NMED recommends utilizing a down hole instrument with an application that applies to groundwater. NMED can recommend alternate instruments upon request.

2. GRCB must submit a System Start-up Six-Month Report that includes all data gathered from the observation and collection wells for the first 6 months after the barrier installation (May 2005 through October 2005). The tables submitted in the June 17, 2005 and July 15, 2005 letters can be utilized but must be revised to include the following:

- Add a "Measuring Point Elevation" column that indicates the elevation from which GRCB measures the depth to water (DTW) and depth to product (DTP) (i.e the surveyed well casing elevation),

- Add a "Corrected Groundwater Elevation" column,

- Footnotes providing the calculation to determine the corrected groundwater elevations if separate phase hydrocarbon (SPH) is present. The footnotes must also include any other calculations that were used in generating the data tables,

- The tables must apply an acronym to each separate cell of a row or column for the wells not sampled due to the presence of (SPH); the well was dry, or other reason a well was not sampled (e.g. not analyzed (NA); not sampled (NS), dry, contains SPH (SPH)). The acronym must be defined at the bottom of a table in a key or as a footnote, and

- Provide a divider that separates the data for each month. Include a section that addresses fluids recovered from the observation and collection wells and the frequency of fluids removal.

3. GRCB must also submit an Annual System Monitoring Report that summarizes the previous years monitoring data (May 2005 through April 2006). The Annual Report must adhere to the requirements established in comment No. 2, in addition to the following:

- All groundwater sampling data for the observation and collection wells that has occurred to date (e.g. the initial groundwater sampling results and the results from the groundwater monitoring event as addressed in the May 9, 2005 letter, and any other sampling that occurs before April 2006). The data presented in tables must incorporate the month the sampling data was collected (e.g. June 17, 2005 letter), and

- An appendix that includes all the analytical laboratory results. The laboratory results must be separated by month.

4. Tables in the June 17, 2005 letter indicate wells not sampled due to the presence of hydrocarbons. Be aware the presence of hydrocarbons is unknown until the laboratory analyzes the sample; however, a well may not be sampled due to the presence of SPH. GRCB must revise the tables titled *PHASE II Monitoring – 2005 General Chemistry – Observation Wells*, *PHASE II Monitoring – 2005 General Chemistry – Collection Wells*, *PHASE II Monitoring – 2005 BTEX & Total Metals – Observation Wells*, *PHASE II Monitoring – 2005 BTEX & Total Metals – Collection Wells* included in the June 17, 2005 letter in accordance with applicable bullets in comments No. 2 and 3.

The System Start-up Six-Month Report must be submitted to NMED on or before December 31, 2005. The Annual System Monitoring Report must be submitted on or before June 30, 2006. Should you have any questions regarding this letter, please call me at 505-428-2545.

Sincerely,

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HM

cc: *D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD Aztec Office
B. Wilkinson, EPA

* Denotes electronic copy
Reading File and GRCB 2005 File

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
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BILL RICHARDSON
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RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

October 31, 2005

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

SUBJECT: APPROVAL WITH MODIFICATIONS
2004 GROUND WATER REMEDIATION AND MONITORING ANNUAL REPORT APRIL 2005
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
NMED ID # NMD089416416
HWB-GRCB-05-001

Dear Messrs. Schmaltz and Riege:

The New Mexico Environment Department (NMED) has completed its review of the *2004 Groundwater Remediation and Monitoring Annual Report* (Annual Report), dated April 2005, submitted on behalf of Giant Refining Company, Bloomfield Refinery (GRCB). GRCB must adhere to the requirements established in this Approval with Modifications for future groundwater reports and submit a response for all requested information, within 120 days of receipt of this Approval with Modifications or this approval will automatically be rescinded. GRCB must make the following modifications and submissions as a condition for this approval.

1. In future groundwater monitoring reports, the "Executive Summary" should be restricted to a brief generalized summary of the groundwater monitoring activities that occurred that year. The "Executive Summary" should not provide specific details of all soil and

groundwater remediation and monitoring activities; this information should be provided in "Background Information."

2. Section 3.0, Scope of Services, paragraph 2 indicates monitoring well MW-21 and recovery well RW-03 did not contain separate phase hydrocarbons (SPH); however, Section 9, *Groundwater Elevation* Tables 1 and 2 identify MW-21 and RW-03 as containing SPH. GRCB must clarify and explain why these wells in the Scope of Services were identified as not containing SPH when the Tables indicate otherwise. This must be revised in future reports.

3. Section 3.0, Scope of Services, paragraph 2 identifies RW-15 and MW-16 as wells that were sampled. However, Section 9.0, *Groundwater Elevation* Tables 1 and 2, do not identify MW-16 but do list RW-16. GRCB must make the correction if this is a typographical error or provide a rational why Tables 1 and 2 do not list MW-16. If MW-16 exists, all maps must be updated to include MW-16. NMED requires the submittal of an updated map, if changes are made.

4. Section 8, Summary, *Comparison of Results to Cleanup Levels and Historical Groundwater Monitoring and Analytical Data, Monitor Wells,* includes references to a specific month but do not provide the associated year. Future groundwater monitoring reports must include both the month and year being addressed in this section. This shall apply throughout the report.

5. Section 8, Summary, *Comparison of Results to Cleanup Levels and Historical Groundwater Monitoring and Analytical Data, Outfalls* states "BTEX, General Chemistry, Dissolved Metals, Total Metals (RCRA 8) Outfalls 2 and 3 were less than detection limits for BTEX and MTBE which is consistent with 2003 results. The General Chemistry, dissolved metals and total metals results were all below the NM WQCC standards and many were below detection limits."

   NMED is primarily concerned with groundwater quality relative to cleanup standards and with contaminant concentration trends. NMED is not concerned with detection limits unless the detection limits are elevated.

6. Section 9, *Groundwater Elevation* Tables 1 and 2. GRCB must provide the following information:

   - Define collar elevation and specifically describe the location on the well that was surveyed (e.g. elevation measured at a point on the well monument, elevation measured at a point on the well casing),

- Describe the difference between collar elevation and well casing height,
- Provide the calculations that were used to determine the corrected groundwater elevations with and without SPH.
- Define what zero represents.

7. Section 9, *Groundwater Elevation* Tables 1 and 2 must be revised in future groundwater monitoring reports to incorporate the following:

   - Remove the *Collar Elevation* and *Well Casing Height* columns. The well casing elevations can be provided in a separate table as additional information,
   - Add a SPH Thickness Column that lists the measured SPH thickness (i.e. depth to water minus depth to SPH),
   - Add a Measuring Point Elevation column that indicates the elevation from which GRCB measures the DTW (e.g., the surveyed well casing elevation.) GRCB must collect the depth measurements from the same measured point each time a depth measurement is collected,
   - The tables must include footnotes describing how the corrected groundwater elevations are determined if SPH is present. The footnotes must also include any other calculations that are used in generating the data tables, and
   - Include a footnote defining zero or provide an acronym that clearly defines what the zero represents as it pertains to the different columns. GRCB must also define what blank cells represent when no information is provided. See comment No. 8 below.

8. Section 9, *Water Quality Field Measurements* Table 3 must be revised to incorporate an acronym to each separate cell of a row or column for the wells not sampled due to the presence of (SPH); the well was dry, or other reason a well was not sampled (e.g. not analyzed (NA); not sampled (NS), dry, contains SPH (SPH)). The acronym must be defined at the bottom of a table in a key or as a footnote. Table 3 also describes wells not sampled due to the presence of hydrocarbons. Be aware the presence of hydrocarbons is unknown until the laboratory analyzes the sample; however, a well may not be sampled due to the presence of SPH.

GRCB must revise and resubmit Table 3. These changes must also apply to future groundwater monitoring reports.

9. Section 9, *Temporary Piezometers 2004* Table 9. Future groundwater monitoring reports must identify the media sampled (e.g. water or soil, see Table 10). This must be applied to all tables in Section 9 (e.g. March 2004 Groundwater Sampling Event BTEX & MTBE).

10. Section 9, *Soil Analysis* Table 10 does not identify the applicable soil screening levels. Future groundwater reports containing soil analytical results must include the applicable NMED Soil Screening Levels which can be found on NMED's Hazardous Waste Bureau website: http://www.nmenv.state.nm.us/hwb/guidance.html.

11. Section 9.0, *Water Quality Field Measurements* Table 14, contains two empty columns with the headings Dissolved Oxygen (DO) and Oxidation Reduction Potential (ORP). GRCB must explain why DO and ORP parameters were not measured in these wells. Future groundwater monitoring report tables containing void spaces within a column that are not applicable must be notated as not applicable (N/A) or contain another notation and include a footnote that defines the notation.

12. Future Facility Site Plans (Figure 3) must depict the locations of Outfalls 1, 2, and 3.

13. Future groundwater elevation maps (Figures 4 and 5) must identify each monitoring well and its corresponding groundwater elevation. (This was required in the November 17, 2004 letter from NMED Specific comment # 6b.)

14. Future Product Thickness maps (Figures 8 and 9) must indicate each monitoring well and the measured SPH thickness. (This was required in the November 17, 2004 letter from NMED Specific comment # 6c.)

15. Future groundwater monitoring reports containing figures similar to Figure10, *River Terrace Sampling Locations,* and Figure 11, *San Juan River Sampling Points,* must include a north arrow and scale.

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

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Permits Management Program

cc: *D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD Aztec Office
B. Wilkinson, EPA

* Denotes electronic copy
File: Reading File and GRCB 2005 File

GIANT
REFINING COMPANY

RECEIVED
NOV - 7 2005
OIL CONSERVATION DIVISION

October 28, 2005

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Frances Dr.
Santa Fe, New Mexico 87505

Ms. Hope Monzeglio
NMED Hazardous Waste Bureau
2905 Rodeo Park Dr. East. BLDG 1
Santa Fe. New Mexico 87505

Re: **Giant Refining Company's – Bloomfield's River Terrace Voluntary Corrective Measures Work Plan NMD089416416 HWB-GRCB-05-002**

Mr. Price & Ms. Monzeglio:

The purpose of this letter is to resolve an omission made in Giant's June 29, 2005 letter to your agencies regarding that morning's teleconference wherein we discussed changes to the River Terrace Voluntary Corrective Measures (VCM) Work Plan.

In the June 29 teleconference. Giant proposed to design the VCM system such that extracted groundwater from dewatering activities will be treated and subsequently discharged to the intake of the refinery raw water pump station at the river terrace. The raw water pump station will then transport the treated groundwater, along with raw river water, to the refinery ponds. The VCM control system will include interlocks that do not allow the VCM groundwater pumps to operate unless the raw water pumps are running. You indicated in our call that this approach for managing the extracted groundwater is acceptable to OCD and NMED.

We apologize for omitting this item from our June 29, 2005 letter. Please feel free to call me at 505-632-4171 if you have any questions.

Sincerely,

James R. Schmaltz
Environmental Manager
Giant Refining Company – Bloomfield

Cc: Denny Foust - OCD Aztec Office
Dave Cobrain – NMED Hazardous Waste Bureau
Bob Wilkinson – EPA
Ed Riege – Giant Refining Co., Gallup

PHONE
505-632-8013
FAX
505 632-3911

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

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

September 30, 2005

Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

Subject: **APPROVAL WITH MODIFICATIONS**
SUPPLEMENT TO THE RIVER TERRACE VOLUNTARY
CORRECTIVE MEASURES WORK PLAN
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
NMD089416416 HWB-GRCB-05-002

Dear Messrs. Schmaltz and Riege:

The New Mexico Environment Department (NMED) is in receipt of the Giant Refining Company, Bloomfield Refinery (GRCB) *Voluntary Corrective Measures Bioventing Monitoring Plan* for the River Terrace Sheet Pile Area, dated September 9, 2005 this plan is a supplement report to the July 15, 2005 report and NMED hereby issues this Approval with Modifications. GRCB must only revise the sections addressed below and submit the revised plan with a table or letter cross-referencing the changes. The revised plan must be submitted to NMED on or before October 31, 2005. Upon final approval of the September 9, 2005 Supplemental Plan, any modifications or changes must be submitted in writing to NMED within fifteen (15) days of implementation.

1. All sections must be revised to include the correct sampling locations in accordance with Tables 1A – 1E or make reference to Tables 1A-1E for the sampling locations.

2. Section 2.0 (Baseline Monitoring) and Section 2.1 (Groundwater Sampling) must be revised to include methyl tert-butyl ether (MTBE) and total metals as part of the sampling collection and analysis. See Tables 1A-1E.

3. Table 1of GRCB's monitoring plan must be replaced with Tables 1A, 1B, 1C, 1D and 1E, included in this letter. If requested by GRCB, NMED will forward an electronic version of the tables.

4. Section 2.3 (Soil Gas Sampling) must be revised to omit diesel range organics (DRO) analysis. DRO is a heavier end petroleum hydrocarbon with a low capacity to volatilize. The sampling analysis still requires Volatile Organic Compounds - BTEX by EPA Method 8021B and Total Petroleum Hydrocarbons –Gasoline Range Organics (GRO) by EPA Modified Method 8015B. See Tables 1A-1E.

5. Section 4.2 (Soil Sampling Procedures) applies the term "drill cuttings" as part of describing sample collection methods. This appears to be a typographical error and likely refers to "soil samples." This same error appears to have been repeated in the following paragraph. Please correct as necessary.

6. Figure 1 must be revised to include the locations of all thirteen (13) temporary well points.

7. Appendix B (Sampling Forms) needs to be adjusted. Some forms do not contain all parameters to be monitored, such as dissolved oxygen and oxidation-reduction potential and some do not contain the correct sampling \ analysis information. NMED viewed these as templates and it is recommended these forms be updated prior to field activities referred to in Tables 1A-1E.

8. GRCB must submit a plan that describes the soil sampling activities that will be completed once remediation has commenced. This plan must be submitted no later than thirty (30) days prior to the start of sampling activities. The plan must identify the sampling locations and activities that will take place.

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

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HM:hcm

cc: * D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD Aztec Office
B. Wilkinson, EPA
D. Tucker, Malcolm Pirnie
K. Robinson, Malcolm Pirnie

Reading File and GRCB 2005 File
*denotes electronic version

Table 1A
Baseline Monitoring Prior to the start of Dewatering and Air Injection System Start Up

Sample Points	DTW/DTP	T	Cond	pH	DO	ORP	% CO_2	% O_2	Organic Vapors (PID)	Pressure
TP-1	B	B	B	B	B	B	B	B	B	B
TP-2	B	B	B	B	B	B	B	B	B	B
TP-3	B	B	B	B	B	B	B	B	B	B
TP-4	B	B	B	B	B	B	B	B	B	B
TP-5	B	B	B	B	B	B	B	B	B	B
TP-6	B	B	B	B	B	B	B	B	B	B
TP-8	B	B	B	B	B	B	B	B	B	B
TP-9	B	B	B	B	B	B	B	B	B	B
TP-10	B	B	B	B	B	B	B	B	B	B
TP-11	B	B	B	B	B	B	B	B	B	B
TP-12	B	B	B	B	B	B	B	B	B	B
TP-13	B	B	B	B	B	B	B	B	B	B
MW-48	B	B	B	B	B	B	B	B	B	B
MW-49	B	B	B	B	B	B	B	B	B	B
DW-1	B	B	B	B	B	B	B	B	B	B
DW-2	B	B	B	B	B	B	B	B	B	B
GAC Inf										
GAC 1 Eff										
GAC 2 Eff										

B -baseline monitoring pre dewatering and system start up indicates parameters must be collected

DTW - depth to water measurement
DTP - depth to product measurement
T - temperature
Cond - electrical conductivity
DO - dissolved Oxygen
ORP - oxidation Reduction Potential
% CO_2 - percent carbon dioxide
% O_2 - percent oxygen
PID - photoionization detector

Table 1B
Baseline Monitoring After the start of Dewatering and Immediately Prior to Air Injection System Start Up

Sample Points	DTW/DTP	T	Cond	pH	DO	ORP	% CO_2	% O_2	Organic Vapors (PID)	Pressure
TP-1	D	D	D	D	D	D	D	D	D	D
TP-2	D	D	D	D	D	D	D	D	D	D
TP-3	D	D	D	D	D	D	D	D	D	D
TP-4	D	D	D	D	D	D	D	D	D	D
TP-5	D	D	D	D	D	D	D	D	D	D
TP-6	D	D	D	D	D	D	D	D	D	D
TP-8	D	D	D	D	D	D	D	D	D	D
TP-9	D	D	D	D	D	D	D	D	D	D
TP-10	D	D	D	D	D	D	D	D	D	D
TP-11	D	D	D	D	D	D	D	D	D	D
TP-12	D	D	D	D	D	D	D	D	D	D
TP-13	D	D	D	D	D	D	D	D	D	D
MW-48	D	D	D	D	D	D	D	D	D	D
MW-49	D	D	D	D	D	D	D	D	D	D
DW-1	D	D	D	D	D	D	D	D	D	D
DW-2	D	D	D	D	D	D	D	D	D	D
GAC Inf										
GAC 1 Eff										
GAC 2 Eff										

D -post dewatering, pre system start up indicates parameters must be collected.

DTW - depth to water measurement
DTP - depth to product measurement
T - temperature
Cond - electrical conductivity
DO - dissolved Oxygen
ORP - oxidation Reduction Potential
% CO_2 - percent carbon dioxide
% O_2 - percent oxygen
PID - photoionization detector

Table 1C
Monitoring System Start Up

Sample Points	DTW/DTP	T	Cond	pH	DO	ORP	% CO_2	% O_2	Organic Vapors (PID)	* Pressure
TP-1	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-2	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-3	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-4	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-5	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-6	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-8	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-9	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-10	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-11	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-12	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
TP-13	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
MW-48	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
MW-49	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
DW-1	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
DW-2	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ	WMQ
GAC Inf										
GAC 1 Eff										
GAC 2 Eff										

*** Pressure** - full system and individual well injection pressure must be recorded during each monitoring event

WMQ - weekly x 4 (a sample will be collected once a week for the initial four weeks of operation) and, monthly for the first quarter then quarterly thereafter

Q - Quarterly
DTW - depth to water measurement
DTP - depth to product measurement
T - temperature
Cond - electrical conductivity
DO - dissolved Oxygen
ORP - oxidation Reduction Potential
% CO_2 - percent carbon dioxide
% O_2 - percent oxygen
PID - photoionization detector

At 60 Days and in June 2006 -Perform In-Situ Respiration Testing
Shut down blower and monitoring oxygen/Carbon Dioxide levels in TP-1 through TP-13, MW-48, MW-49 and each of the 13 BV wells
Monitor every 1/2 hour for first 4 hours, then every hour until hour 12. Then monitor every 10-12 hours for 72 hours.

Table 1D
Groundwater Monitoring Frequency After System Start up

Sample Points	Baseline Pre Dewater	Dewater Start up	Monitoring Frequency System Start Up
TP-1	B, G&D, T		Q-B, G&D
TP-2	B, G&D, T		Q-B, G&D
TP-3	B, G&D, T		Q-B, G&D
TP-4	B, G&D, T		Q-B, G&D
TP-5	B, G&D, T		Q-B, G&D
TP-6	B, G&D, T		Q-B, G&D
TP-8	B, G&D, T		Q-B, G&D
TP-9	B, G&D, T		Q-B, G&D
TP-10	B, G&D, T		Q-B, G&D
TP-11	B, G&D, T		Q-B, G&D
TP-12	B, G&D, T		Q-B, G&D
TP-13	B, G&D, T		Q-B, G&D
MW-48	B, G&D, T		Q-B, G&D, Pb & Cr
MW-49	B, G&D, T		Q-B, G&D, Pb & Cr
DW-1	B, G&D, T		Q-B, G&D, Pb & Cr
DW-2	B, G&D, T		Q-B, G&D, Pb & Cr
GAC Inf		B, G&D, T	Q-B, G&D If MTBE is detected in the GAC Inf, GAC Eff 1 & 2 must analyze for MTBE
GAC 1 Eff		B, G&D -sample weekly until breakthrough detected and then monthly thereafter	
GAC 2 Eff		B, G&D, -Q	

Water Sample Analysis

B - BTEX EPA Method 8021 B + MTBE
G & D - GRO/DRO EPA Method 8015B
T - Total RCRA 8 Metals
Pb & Cr - Total Lead and Chromium EPA Method 6010C

Q - Quarterly

Note: If metals are detected in any temporary well during baseline monitoring, GRCB must contact NMED for additional metals analysis

Table 1E
Soil Gas Sampling (Air Sampling) Frequency

Sample Points	Pre Dewater	System Start up
TP-1	B, G	Quarterly B, G
TP-2	B, G	Quarterly B, G
TP-3	B, G	Quarterly B, G
TP-4	B, G	Quarterly B, G
TP-5	B, G	Quarterly B, G
TP-6	B, G	Quarterly B, G
TP-8	B, G	Quarterly B, G
TP-9	B, G	Quarterly B, G
TP-10	B, G	Quarterly B, G
TP-11	B, G	Quarterly B, G
TP-12	B, G	Quarterly B, G
TP-13	B, G	Quarterly B, G
MW-48	B, G	Quarterly B, G
MW-49	B, G	Quarterly B, G
DW-1	B, G	Quarterly B, G
DW-2	B, G	Quarterly B, G

Air Sampling Analysis
B - BTEX EPA Method 8021 B
G - GRO EPA Method 8015B

BTEX - benzene, toluene, ethyl benzene, xylenes
GRO - Gasoline Range Organics

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, September 23, 2005 9:23 AM
To: Price, Wayne, EMNRD
Cc: Foust, Denny, EMNRD
Subject: Giant Refinery- Bloomfield NM Site Visit- September 22, 2005

Wayne:

Per your request, please find below information that OCD requested from Giant during the site visit yesterday.

The annulus pressure reading at the UIC (Class I) at 3:00 p.m. was 1200 psi. The MIT was performed on 9/20/05 from 14:52:48 to 15:57:36 (time period). According to Giant, 350 psig held during the MIT. OCD could not determine the start and end time based on the data provided (available table of data with charts). Giant presented no circular pressure data chart. Giant will provide the start vs. end time documentation to OCD. The over pressure shut-off valve was reported to work by Giant, and OCD requested a copy of the shut-down report to confirm.

An 18 in PVC stormwater pipe was observed to be present just above an oil seep area. According to Giant, two former stormwater conduits were discovered during the slurry wall installation, which can be confirmed from their construction list. Giant indicated that they were both plugged. The conduits are located: 1) The 18 inch stormwater pipe trends north and is located near the top of the bluff just north of the "West French Drain Collection System," and 2) The aluminum culvert of unknown dimension also trends north toward the bluff and is located near the fire water area. OCD requested Giant to submit the discovery of the storm drains as noted in their construction list records for documentation of the discovery and verification of plugging.

A couple of items for consideration after the site visit were: 1) Determine whether sufficient controls (i.e., LF process, construction-berms, monitoring, etc.) are present around the landfill area; and 2) Study emergency and contingency plans for possible future residual oil (north side of the new slurry wall) impacts to the San Juan River. Giant indicated that they would be studying their contingency plan with inspection schedule (especially after precipitation events) in the event oil impacts the San Juan River. A rather large oil seep stain was noticed along the far west-side of the bluff and appears to be growing from past site visits.

Please contact me if you have questions. Thanks.

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

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

September 16, 2005

CERTIFIED MAIL
RETURN RECEIPT NO. 7001 1940 0004 7923 4771

Mr. Randy Schmaltz
Environmental Manager
San Juan Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

Subject Matter: Compliance Order

Dear Mr. Schmaltz:

Please find enclosed a Compliance Order NM-OCD 2006-001 issued for the Giant Bloomfield Refinery GW-001.

Sincerely,

J. Daniel Sanchez
Enforcement and Compliance Manager
Oil Conservation Division

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

September 15, 2005

This is a directive to notify that I, Mark Fesmire, will be out of the office from September 16 through 23, 2005.

During my absence, Daniel Sanchez is hereby given authority to sign all OCD documents requiring my signature.

Mark E. Fesmire, PE
Director

STATE OF NEW MEXICO
NEW MEXICO OIL CONSERVATION DIVISION

IN THE MATTER OF
Giant Refining Company (Giant)

RESPONDENT.

COMPLIANCE ORDER
NM-OCD 2006-001

September 16, 2005

ADMINISTRATIVE COMPLIANCE ORDER

Pursuant to the New Mexico Water Quality Act ("WQA"), NMSA 1978, §§ 74-6-1 to 74-6-17, the Director of the New Mexico Oil Conservation Division (OCD), acting through his designee, the Compliance and Enforcement Manager, issues this Compliance Order ("Order") to Respondent Giant Refining Company. ("Giant Refining Company", "Respondent" or "GIANT") to enforce the WQA and the Water Quality Control Commission ("WQCC") Rules, 20.6.2 NMAC, for violations of the WQA and WQCC Rules.

FINDINGS OF FACT

1. OCD an agency of the executive branch of New Mexico Energy, Minerals, and Natural Resources Department is charged with administration and enforcement of the Oil and Gas Act N.M.S.A. 1978 (OGA) and OCD Rules including administration and enforcement of the WQA and the WQCC Rules when specifically pertaining to New Mexico's Oil and Gas activity which includes oil refineries. Giant Refining Company owns and operates the Bloomfield Oil Refinery located in the NW/4 NE/4 and the S/2 NE/4 and the N/2 NE/4 SE/4 of Section 27, and the S/2 NW/4 and the N/2 NW/4 SW/4 and the SE/4 NW/4 SW/4 and the NE/4 SW/4 of Section 26, Township 29 North, Range 11 West, NMPM, San Juan County, New Mexico.

2. The Bloomfield Refinery is permitted by the OCD pursuant to WQCC Rule 20.6.2.3104 and is a current holder of discharge permit GW-001. The Permit as written does not authorize discharges of effluent or leachate that may move directly or indirectly into groundwater or surface water. The permit requires certain best management practices and proper handling of all waste in order to protect fresh water, addresses stormwater water runoff, vadose zone and water pollution, and requires that all spills/releases shall be reported, remediated and abated pursuant to both OCD and WQCC rules. In addition, the permit requires Giant to abide by the information submitted and commitments in the discharge permit application.

3. On August 11, 2004, New Mexico Oil Conservation Division (OCD) employees Bill Olson, Wayne Price and Denny Foust discovered active discharges of hydrocarbon in two small tributaries (draws) on the north side of the refinery. Hydrocarbon saturated stained soil and dead vegetation was noted during inspection of the draws. The contamination had migrated down the draws to within a few feet of the San Juan River. In addition, a new seep was noted in the embankment at the Hammond Ditch tank 37-collection area. Tank 37 area is easily accessed by the Hammond ditch road and should have been a "Red Flag" to Giant employees that contamination was not being contained properly. The discharge permit condition #15 requires Giant to report all spill/releases pursuant to OCD rule 116 and WQCC 1203. Giant did not report this contamination to OCD, and Giant failed to properly contain the contamination.

4. Other water contaminants and toxic pollutants that may affect human health have been present in the ground water beneath the Site. These water contaminants and toxic pollutants include phase separated hydrocarbons, benzene, toluene, ethlylbenzene, xylenes, heavy metals and inorganic salts. See 20.6.2.3103 NMAC (setting forth numeric standards for contaminants for ground water) and 20.6.2.7.VV NMAC (setting forth toxic pollutants). Giant has lost control of the contamination beneath the site, and OCD is concerned that pollution will continue to enter the San Juan River and tributaries with an adverse impact on public health and the environment. Giant has not adequately investigated, controlled, remediated and abated the pollution.

5. OCD instructed Giant to initiate emergency clean-up actions and construct barriers to protect the San Juan River and downstream water users. During Giant's emergency remedial actions initial soil samples were collected from the two small tributaries (draws) on the north side of the refinery. The analytical results indicated that levels of benzene (1.190 mg/l) were found which exceeded the WQCC groundwater standard of .01 mg/l. Benzene is a chemical constituent of crude oil and by-products manufactured at the oil refinery. Benzene is considered a toxic pollutant as defined in the WQCC Rules 20.6.2.7.VV.

6. Giant's discharge permit condition #2 "Commitments" requires Giant to abide by all commitments submitted in the discharge Plan renewal dated July 06, 1999 and supplemental information. Giant submitted a Spill Prevention Control and Countermeasure Plan. Part 1.8 of this plan provided that giant would provide containment or diversionary structures or equipment to prevent oil from reaching navigable waters. Part 1.9 of the plan provided that Giant would perform the required inspections on a continuous basis. Giant has failed to perform these functions and is in violation of permit condition #2.

7. OCD approved Giant's discharge permit GW-001 on April 19, 2000. Condition #18 required Giant to submit a stormwater run-off plan for OCD approval by August 15, 2000. Giant failed to submit the plan. OCD finds that Giant was negligent because a stormwater run-off plan would have provided early detection of the contamination found by OCD inspectors. Giant has violated the permit conditions by not supplying and implementing such a plan.

8. OCD requested Giant to submit a surface water monitoring plan in a letter dated July 17, 2002. Giant failed to submit a plan. OCD finds that Giant was negligent because a surface water monitoring run-off plan would have provided early detection of the contamination found by OCD inspectors. Giant has violated the permit conditions by not supplying and implementing such a plan.

9. In a letter issued to Giant on December 30, 2002 OCD approved conditions for ground water remediation and monitoring. Condition # 19 required Giant to notify the NMOCD of the discovery

of separate-phase hydrocarbons or the exceedance of a WQCC standard in any down gradient monitor well where separate-phase hydrocarbons were not present or where contaminant concentrations did not exceed WQCC standards during the preceding monitoring event pursuant to NMOCD rule 116. In reviewing Giant's April 2004 Groundwater Remediation and Monitoring Annual Report OCD discovered that monitoring point P-5 had a benzene content of 1.4 mg/l which exceeds the groundwater standard of .01 mg/l. Monitoring point P-5 is the final monitoring point for the sheet-piling project located within a few feet of the San Juan River. In addition, the groundwater in this area is obviously hydraulically connected to the San Juan River. Giant failed to address this issue pursuant to approval condition #17 a. of the December 30, 2002 approval conditions by not providing conclusions and recommendations for this issue, and Giant has failed to install recovery systems to prevent this contamination from entering the river. Giant is discharging toxic pollutants to the San Juan River, a violation of the State of the New Mexico Standards for Interstate and Intrastate Surface Water Standards 20.6.4 NMAC and is accordingly in violation of the permit conditions.

CONCLUSIONS OF LAW

1. OCD has jurisdiction over Giant Refining Company and over the subject matter of this Order pursuant to Section 70-2-12.B(22) of the Oil and Gas Act, the WQA and WQCC Rules.

2. Giant Refining Company is a "person" as defined in Section 74-6-2.I of the WQA and Section 20.6.2.7.ii NMAC.

3. Reference Finding #4 Above: Giant Refining Company violated WQCC Rules, Section 20.6.2.1203 which requires notification of discharges that may affect groundwater, and/or surface water. Giant failed to notify OCD of the mattersw found in finding #4 described above. OCD has determined there are three violations associated with finding #4. The presence of contaminants in two tributaries and Tank #37 area were not reported to OCD. The civil penalty for these violations is $10,000 per violation for a total of $30,000.

4. Reference Finding #5 and #9 Above: Giant has allowed hydrocarbon and toxic constituents to seep into two tributaries of the San Juan River (refer to finding #5 above). Giant has allowed toxic pollutants to enter the San Juan River (refer to finding #9 above).

Giant is in violation of the State of New Mexico Standards for Interstate and Intrastate Surface Water Standards 20.6.4 NMAC The civil penalty for these violations is $10,000 per violation for a total of $30,000.

5. Reference Finding #6,7 ,8 and 9 Above: Giant Refining Company violated Sections 20.6.2.3 104 which requires the permittee to comply with the terms and conditions of the permit. Giant failed to implement these conditions as indicated in Findings #6,7,8 and 9 above. The civil penalty for these permit violations is $15,000/violation for a total of $60,000.

Now, therefore, OCD hereby orders:

COMPLIANCE ORDER

1. Based upon the foregoing findings of fact and conclusions of law, Giant Refining Company is ordered to comply with the following schedule of compliance.

2. Within 30 days of the date of this Order, Giant Refining Company shall submit for OCD approval an application for a major modification of the current discharge permit including all required fees. The modification shall include a comprehensive action plan describing how Giant intends to prevent hydrocarbons and toxic pollutants from entering into groundwater and migrating into the San Juan River and its tributaries. The plan shall include all of the requirements listed in OCD's Emergency Action Directive dated August 13, 2004 and include a commitment to continue the investigation, remediation of

contaminated soils and abatement of existing groundwater contamination on and off site. The plan shall also include additional monitoring and recovery wells throughout the plant area including at the slurry wall and sheet-piling projects near the San Juan River.

CIVIL PENALTY

3. OCD hereby assesses a civil penalty against the Respondent in this Order of $120,000.00 Dollars. This penalty amount is derived as shown under Conclusions of Law items 1-5 and has taken into account mitigating circumstances and good faith effort performed to date. This penalty shall be due within 30 days of the date of this Order.

4. If Giant Refining Company fails to comply with the Schedule of Compliance set forth above, the Director of OCD may assess an additional civil penalty of up to $25,000 for each day of noncompliance with the Order. NMSA 1978, § 74-6-10(F)(1).

RIGHT TO ANSWER AND REQUEST A HEARING

5. Pursuant to Section 74-6-10.G of the WQA, Respondent has the right to answer this Order and to request a hearing. If the Respondent (a) contests any material or legal matter upon which the Order is based, (b) contends that the Respondent is entitled to prevail as a matter of law, or (c) otherwise contests the appropriateness of the Order, the Respondent may request a hearing by mailing or delivering within 30 days of receipt of this Order, a written Request for Hearing and Answer to the Order to:

Water Quality Control Commission Hearing Clerk
C/o New Mexico Environment Department
Harold Runnels Building, Rm. 2050 South
1190 Saint Francis Drive
P.O. Box 26110
Santa Fe, New Mexico 87502-6110

The Respondent must attach a copy of this Order to the Request for Hearing.

6. The Respondent's Answer shall clearly and directly admit, deny or explain each of the factual allegations contained in the Order with regard to which the Respondent has any knowledge. Where the Respondent has no knowledge of a particular factual allegation the Respondent shall so state, and the Respondent may deny the allegation on that basis. Any allegation of the Order not specifically denied shall be deemed admitted.

7. The Respondent's Answer shall also include any affirmative defense upon which the Respondent intends to rely. Any affirmative defense not asserted in the Answer, except a defense asserting lack of subject matter jurisdiction, shall be deemed waived.

FINALITY OF ORDER

8. This Order shall become final unless the Respondent files a Request for Hearing and answer with the WQCC within 30 days of receipt of this Order. Failure to file an Answer constitutes an admission of all facts alleged in the Order and a waiver of the right to a hearing under Section 74-6-10(G) of WQA concerning this Order. Unless the Respondent requests a hearing and files an Answer, the Schedule of Compliance set forth in this Order shall become final.

SETTLEMENT CONFERENCE

9. Whether or not Respondent requests a hearing and files an Answer, the Respondent may confer with OCD concerning settlement. OCD encourages settlement consistent with the provisions and objectives of the WQA and applicable WQCC rules. Settlement discussions do not extend the 30 day deadline for filing the Respondent's Answer and a request for hearing, or alter the deadlines for compliance with this Order. Settlement discussions may be pursued as an alternative to and simultaneously with the hearing proceedings. The Respondent may appear at the settlement conference

itself and/or be represented by legal counsel.

10. Any settlement reached by the parties shall be finalized by written, stipulated final order. A stipulated final order must resolve all issues raised in the Order, must be approved by the Director of OCD, shall be final and binding all parties to the Order, and shall not be appealable.

11. To explore the possibility of settlement in this matter, contact David K. Brooks, Assistant General Counsel, Office of General Counsel, New Mexico Oil Conservation Division, 1220 St. Francis Drive, Santa Fe, New Mexico 87505, 505-476-3450.

12. Compliance with the requirements of this Order does not relieve Respondent of the obligation to comply with all other applicable laws and Rules.

TERMINATION

13. This Order shall terminate when Respondent certifies that all requirements of this Order have been met, and OCD has approved such certification, or when the Director of OCD approves a stipulated final order.

J. Daniel Sanchez
Compliance and Enforcement Manager - Oil Conservation Division

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
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Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

August 17, 2005

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

SUBJECT: VOLUNTARY CORRECTIVE MEASURES REPORT FOR RIVER TERRACE INVESTIGATION, MONITORING AND TEMPORAY WELL INSTALLATIONS (MW-48, MW-49, TP-1 THROUGH TP-13)
BLOOMFIELD REFINING COMPANY
EPA ID NO. NMD089416416
HWB-GRCB-05-003

Dear Mr. Schmaltz and Mr. Riege:

The New Mexico Environment Department (NMED) is requiring Giant Refining Company, Bloomfield Refinery (GRCB) to submit a Voluntary Corrective Measures Report (VCM Report). The VCM Report must summarize all investigation activities that have occurred to date at the River Terrace Area prior to the installation of the remediation system. The VCM Report must summarize all activities including the installation of monitoring wells (MW) 48, MW-49 and temporary well points one through 13 (TP-1 - TP-13). The VCM Report must incorporate all proposed activities submitted by GRCB beginning with the October 27, 2004 letter containing the activity plan. The VCM Report must also incorporate the conditions listed in NMED's Approval with Conditions to the Voluntary Corrective Measures included in NMED's letters dated December 29, 2004, February 17, 2005, and any other correspondence that required specific actions. For conditions not met, an explanation of why the conditions were not met must be included in the VCM Report. To date, NMED has received various submittals regarding

specific aspects of the Voluntary Corrective Measures occurring at the River Terrace Area; however, not all NMED required conditions have been addressed. Finally, the VCM Report format must be submitted in a format similar to that provided in Attachment I to this letter. Attachment 1 is an excerpt from another permit and its purpose is to provide GRCB with general guidelines for report formats. GRCB must also submit a copy of this report to the Oil Conservation Division (OCD) Santa Fe and Aztec offices attention Wayne Price and Denny Foust, respectively and also to the U.S. Environmental Protection Agency (EPA) attention Bob Wilkinson.

The VCM Report must contain but is not limited to the following:

1. well specifications addressed in the February 17, 2003 letter, condition # 1. The boring logs do not contain schedule PVC type, or screen slot size,

2. information indicating whether vadose zone headspace vapor readings were collected for temporary well points TP-1 through TP-13 as stated in condition # 3 in the February 17, 2003 letter. If the headspace vapor readings were not collected the VCM Report must explain why the readings were not collected,

3. a site map containing the locations and names of all monitoring wells and temporary well points,

4. analytical laboratory reports including quality control (QC) summary reports,

5. summary tables of the analytical data as necessary.

The VCM Report must be submitted to NMED no later than December 30, 2005. If you have any questions regarding this letter please call me at (505) 428-2545.

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HCM:hcm

cc: J. Kieling, NMED HWB
D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD Aztec Office
B. Wilkinson, EPA

Reading File and GRCB 2005 File

You forwarded this message on 8/12/2005 2:15 PM.
Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

Price, Wayne, EMNRD

From: Randy Schmaltz [rschmaltz@giant.com] **Sent:** Fri 8/12/2005 12:45 PM
To: Price, Wayne, EMNRD
Cc: Ed Riege; Cindy Hurtado
Subject: DP Application Amendments
Attachments: DP application Amendments.doc(26KB)

Wayne, here are the changes we spoke of. We will follow up with hard copies for the amended pages.

<<DP application Amendments.doc>>
Thanks Randy

Discharge Plan Application Amendments

Section 7.0

Diesel/Kerosene Salt Dryers

Three salt wash vessels are used to remove impurities from diesel and kerosene product streams. Occasionally, the salt must be replaced and, at that time, the vessels are drained. Wastewater containing dissolved solids and trace hydrocarbons are discharged to the process sewer.

This discharge typically ranges from 800 to 1,000 gallons per event when replacing salt. This event occurs 2 –3 times per year.

The solids (mostly dirt particles) are settled out in the API separator and the trace hydrocarbons are recovered and reprocessed. The API separator solids are shipped off-site for recycling or disposal.

Section 9.0

Separate phase hydrocarbon (SPH) was not observed during the installation of the two monitoring wells (MW-48 and MW-49) and thirteen temporary well points (TP-1 through TP-13) in the River Terrace.

You forwarded this message on 8/10/2005 3:58 PM.
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Price, Wayne, EMNRD

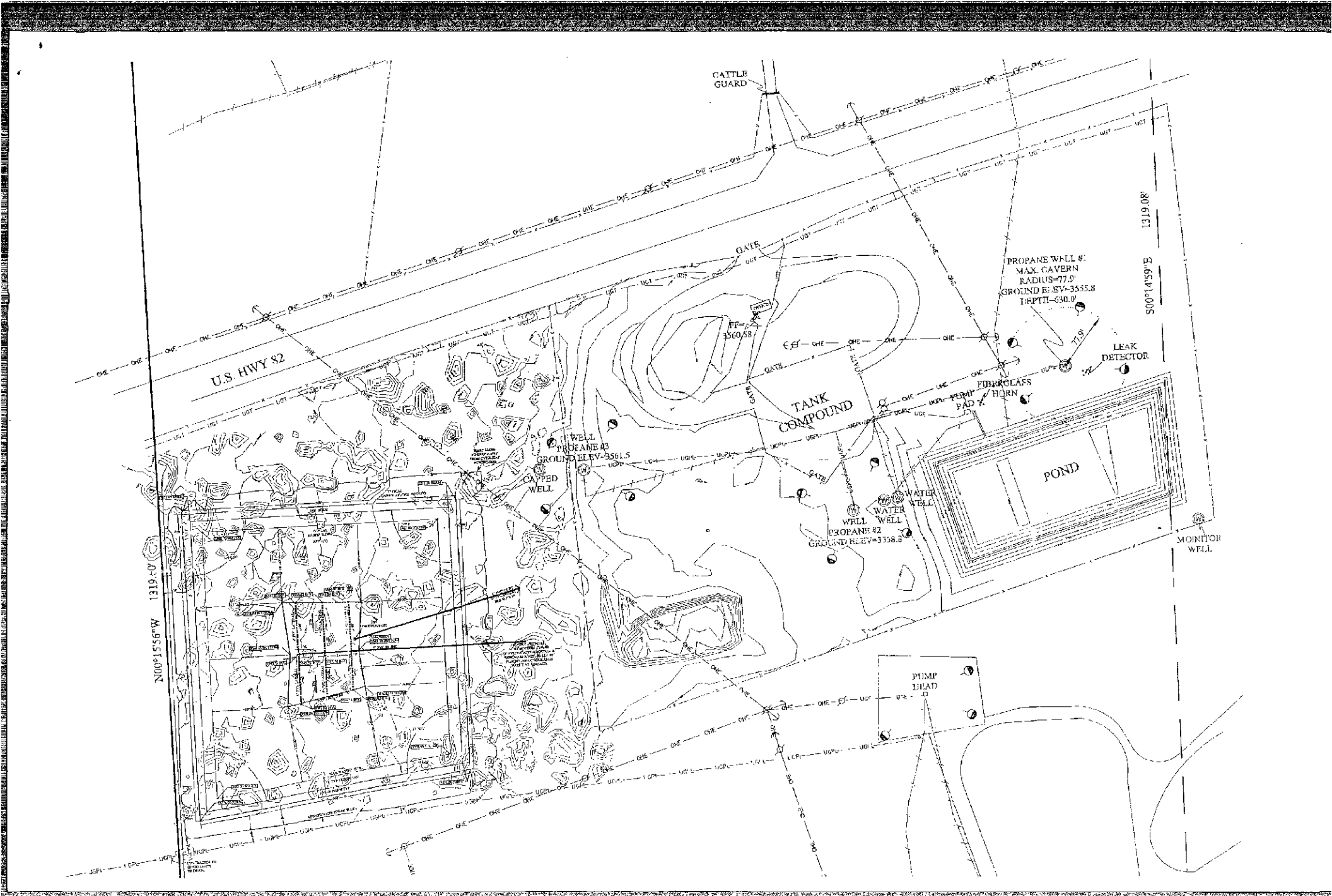
From: Randy Schmaltz [rschmaltz@giant.com] **Sent:** Wed 8/10/2005 2:37 PM
To: Price, Wayne, EMNRD
Cc: Ed Riege
Subject: FW: Giant Bloomfield Draft Permit
Attachments: DRAFT__DPAPP_8_01_05.DOC(117KB)

Wayne, I have enclosed Giant's suggested changes! Thanks.

-----Original Message-----
From: Price, Wayne, EMNRD [mailto:wayne.price@state.nm.us]
Sent: Tuesday, August 02, 2005 4:40 PM
To: rschmaltz@giant.com; Eriege@giant.com
Cc: Foust, Denny, EMNRD; Monzeglio, Hope, NMENV
Subject: Giant Bloomfield Draft Permit

Please provide comments by August 12, 2005.

Wayne Price-Senior Environmental Engr.
Oil Conservation Division
1220 S. Saint Francis
Santa Fe, NM 87505
E-mail wayne.price@state.nm.us
Tele: 505-476-3487
Fax: 505-4763462


CATTLE GUARD
U.S. HWY 82
GATE
TANK COMPOUND
PROPANE WELL #3
MAX. CAVERN RADIUS=77.0'
GROUND ELEV=3555.8
DEPTH=630.0'
77.0'
LEAK DETECTOR
FIBERGLASS HORN
PUMP PAD
POND
WELL PROPANE #3
GROUND ELEV=3561.5
CAPPED WELL
WATER WELL
WELL PROPANE #2
GROUND ELEV=3558.8
MOINITOR WELL
PUMP HEAD
1319.08'
S00°14'59"E
1319.0'
N00°15'56"W

You replied on 8/9/2005 8:27 AM.

Price, Wayne, EMNRD

From: Monzeglio, Hope, NMENV **Sent:** Mon 8/8/2005 4:15 PM
To: Price, Wayne, EMNRD
Cc:
Subject: Discharge plan
Attachments:

Wayne

See my comments below. I did not formulate them for Giant, they are just some thoughts. I need to check with Dave on a few things tomorrow, if I have more comments, I will email you. My comments 2 and 3 are minor and may not need to be addressed. Again in my message I will be away from August 10 (I will be in the office until 2:15) and return to the office August 16.

1. The Draft "*Attachment to the Discharge Permit GW-01 Approval*," 19, #2 states an annual groundwater report will be submitted to the OCD by December 01, of each year.

   However, in the December 30, 2002 letter sent to Barry Holman from OCD *"RE: Site Investigation and Abatement Plan,"* #17 states each year Giant shall submit a comprehensive annual report on all investigation, remediation, and monitoring activities. The report shall be submitted to the NMOCD ...April 1 of each year.

   NMED also sent a letter January 9, 2003 *Subject: GRC Draft Corrective Measures Study and Corrective Measures Implementation Supplement.* #15, NMED states the annual groundwater report shall be submitted by April 1st.

   In my conditional approval for the 2003 GW Report sent November 17, 2004, specific comment # 9, address the April 1 deadline as stated below:

   Attachment A, #15 states, "The initial annual ground water monitoring report, and all annual ground water monitoring reports submitted thereafter by Giant, shall include a comprehensive summary of on all investigation, remediation and monitoring activities. The report shall be submitted to the NMOCD Santa Fe Office and to the NMED Hazardous Waste Bureau by April 1 of each respective year with copies provided to the EPA and the NMOCD Aztec District Office."

   The LTGWMWP, Monitoring Plan, p. 6 paragraph 1, states, "The report will be submitted to the NMOCD Santa Fe Office, NMOCD Aztec District Office, NMED Hazardous Waste Bureau, and the EPA by April 15 of each respective year."

   Giant cannot arbitrarily change submittal dates without prior approval. Future reports must be submitted to the NMOCD Santa Fe Office and to the NMED Hazardous Waste Bureau by April 15 of each respective year with copies provided to the EPA and the NMOCD Aztec District Office.

   Is this the same report and are we changing the due date? I just want to make sure we are on the same page.

2. In the OCD discharge plan Application July 2005 submitted by Giant (what you had Randy sent me) On page 7-3 Under the Diesel/Kerosene Salt Dryers: third paragraph states "Sources of solid waste include the following.

   Are they missing a sentence as they never list the solid wastes?

3. Same report as # 2, on page 9-2, Under River Terrace Sheet Pile Area (RTSPA) paragraph 6. (state SPH was not found in TP1 - 8 or the monitoring wells.) (This is petty) but Giant does not address TP 9-13 are we to assume they found SPH there, I do not think Giant found SPH in TP 9 - TP 13 but because they do not state this, it may lead someone to believe SPH was found in those TP wells.?? Any thoughts.

Talk to you soon.

Hope

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

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BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
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July 28, 2005

Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

Subject: **SUPPLEMENTAL INFORMATION REQUEST AMENDMENTS TO THE REMEDIATION SYSTEM RIVER TERRACE VOLUNTARY CORRECTIVE MEASURES WORK PLAN.**
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
RCRA PERMIT NO. NMDD 089416416
HWB-GRCB-05-002

Dear Messrs. Schmaltz and Riege:

The New Mexico Environment Department (NMED) is requiring Giant Refining Company, Bloomfield Refinery (GRCB) to submit additional information in the revised version of the July 15, 2005 *River Terrace Voluntary Corrective Measures Work Plan* (VCM Work Plan) addressing the implementation and monitoring of the remediation system at the River Terrace Sheet Pile Area. The additional information must be attached as an appendix to the revision of the document cited above. The appendix must address the information listed below.

1. GRCB must include a list of the parameters that will be used to demonstrate the bioventing remediation system is operating correctly and is effectively remediating the river terrace area.

2. GRCB must describe in detail how the remediation system will be monitored. GRCB must also identify the parameters that will be monitored to demonstrate the occurrence of natural attenuation processes at the site.

3. Prior to the system startup, NMED is requiring GRCB to collect baseline measurements to include but is not limited to the following:

   a) measure depth to water (DTW) and depth to product (DTP) levels in all temporary wells, monitoring wells, recovery wells and bioventing wells,

   b) percent oxygen, percent carbon dioxide, and organic vapor measurements in the vadose zone from all temporary wells, monitoring wells, and bioventing wells. Organic vapors must be measured using a photo ionization detector (PID) equipped with a 10.6 or higher electron volt (eV) lamp or a combustible gas indicator (CGI). Vadose zone vapor samples shall be collected from approximately one foot above the water table by inserting a tube into the well and inserting the PID or CGI probe into the other end of the tubing. To determine the tubing length, a depth to water measurement must be obtained from the wells and the tubing shall be inserted to a depth of one foot above the measured depth to water. The tubing size shall accommodate the size of the probe eliminating the entry of ambient air. Giant should use caution when collecting the vapor reading to ensure water is not pulled into the tubing.

   c) dissolved oxygen (DO), pH, electrical conductivity, temperature, carbon dioxide, and oxidation reduction potential (ORP) values in all temporary, monitoring, and bioventing wells.

4. GRCB must provide a description of methods and instruments used to collect samples and measure field parameters.

5. GRCB must include a schedule and frequency of all monitoring activities planned for this area.

The appendix must be submitted to NMED on or before September 12, 2005. Upon final approval of the July 15, 2005 amendment to the VCM work plan, any modifications or changes must be submitted in writing to NMED within thirty (30) days of implementation.

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

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HM:hcm

cc: D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD Aztec Office
B. Wilkinson, EPA

Reading File and GRCB 2005 File

State of New Mexico
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BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

July 26, 2005

Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

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

Dear Messrs. Schmaltz and Riege:

The New Mexico Environment Department (NMED) is in receipt of the June 17, 2005 letter submitted on behalf of Giant Refining Company, Bloomfield Refinery (GRCB) regarding well data, general chemistry parameters and analytical results. The information submitted was required as a condition for approval of the North Boundary Barrier Collection System Design and Monitoring Plan Phase II. NMED is requesting additional information:

1. GRCB must provide an updated map identifying the current locations and names assigned to all observation and recovery wells. GRCB must also provide the well construction diagrams for all observation and recovery wells.

2. GRCB must provide a copy of the analytical laboratory reports that are the source of the data provided in the summary tables included in the June 17, 2005 letter.

3. NMED questions the dissolved oxygen (DO) data presented in the tables that indicate DO levels greater than 9.8 milligrams per liter (mg/L). DO in water under saturated conditions at atmospheric pressure at sea level will not exceed a concentration of 9.8 milligrams per liter (mg/L). Therefore, the results provided in the table indicate the instrument was not properly calibrated, as the results cannot be greater than 9.8 mg/L at an elevation higher than sea level. GRCB must describe how the dissolved oxygen (DO) measurements were collected and include the type of instrument used and describe the instrument calibration procedures. GRCB must remeasure DO in the wells and submit a revised table presenting the new DO data.

4. NMED questions the electrical conductivity values presented in the tables because the units indicate mg/L and typically the unit of measure for electrical conductivity is either milliSiemens per centimeter (ms/cm) or microSiemens per centimeter (µS/cm). GRCB must explain this discrepancy. GRCB must revise the tables to include the correct values, if different than those submitted, and include the correct units.

5. GRCB must identify the instruments used to collect the field data presented in the tables included with the June 17 letter. GRCB must also describe the collection and calibration procedures and methods applied when collecting this data.

The required information must be submitted to NMED on or before September 20, 2005. Should you have any questions regarding this letter, please call me at 505-428-2545.

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HM:hcm

cc: D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD Aztec Office
B. Wilkinson, EPA

Reading File and GRCB 2005 File

State of New Mexico
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DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

July 26, 2005

Mr. Randy Schmaltz
Environmental Supervisor
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

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

SUBJECT: CORRECTIVE MEASURES IMPLEMENTATION REPORT FOR THE BARRIER WALL AND RECOVERY SYSTEM INSTALLATIONS GIANT REFINING COMPANY, BLOOMFIELD REFINERY RCRA PERMIT NO. NMD 089416416 HWB-GRCB-05-004

Dear Mr. Schmaltz and Mr. Riege:

The New Mexico Environment Department (NMED) is requiring Giant Refining Company, Bloomfield Refinery (GRCB) to submit a Corrective Measures Implementation Report (CMI Report). The CMI Report must summarize all activities that have occurred to date concerning the barrier wall installation, including information on the design and installation of the recovery and observation wells and provide as-built drawings of the barrier wall, associated wells and ancillary equipment. The CMI Report must incorporate all correspondence to date between NMED and GRCB starting with the Corrective Action Plan dated November 16, 2004 submitted by GRCB to NMED.

GRCB must submit a CMI Report outline to NMED for approval prior to the submittal of the CMI Report. NMED requires that CMI outline be submitted by November 1, 2005. The CMI Report will be due 120 days after receipt of NMED approval of the CMI Report outline. GRCB must also submit a final copy of the CMI Report to the New Mexico Energy, Minerals and

Natural Resource Department Oil Conservation Division (NMEMNRD OCD) Santa Fe and Aztec offices; attention Wayne Price and Denny Foust, respectively and the U.S. Environmental Protection Agency (EPA); attention Bob Wilkinson.

The CMI Report must contain the following but is not limited to:

1. A site plan of the refinery identifying the barrier wall and current locations and names of all observation and recovery wells installed at the refinery including those constructed along the barrier wall. The site plan must contain pertinent site features, symbols, and abbreviations,

2. All collection and observation well construction diagrams and boring logs,

3. All analytical laboratory and quality control (QC) data reports,

4. Summary tables of all field measurements, water table elevations and the analytical data collected during and after system installation,

s

5. Descriptions of the methods and instruments used to collect samples and measure field parameters.

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

Sincerely,

Hope Monzeglio

Hope Monzeglio
Project Leader
Hazardous Waste Bureau

HCM:hcm

cc: D. Cobrain, NMED HWB
W. Price, OCD
D. Foust, OCD Aztec Office
B. Wilkinson, EPA

Reading File and GRCB 2005 File

GIANT
REFINING COMPANY

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

Certified Mail: 7004 2510 0005 1641 4477

July 20, 2005

RE: Giant Refining Company, Bloomfield Refiner
EPA ID# NMD089416416
GW - 001

Dear Mr. Price,

Giant Refinery – Bloomfield has tentatively scheduled the annual groundwater sampling campaign to start the week of August 8, 2005.

Giant will be following the directives from NMED's Conditional Approval of North Boundary Barrier Collection System Design and Monitoring Plan Phase II dated May 9, 2005 as well as the guidelines from the Corrective Measures Study and Corrective Measures Implementation letter dated January 6, 2003. In conjunction, OCD guidance will be followed per the Site Investigation and Abatement plan letter dated December 30, 2002.

The construction design of MW #24 does not accommodate monitoring and Giant proposes deleting this well from the monitoring program. Giant also proposes removing P-#4 and P-#5 from the monitoring program and replacing then with MW #48 and MW #49.

If any representatives from the New Mexico Oil Conservation Division would like to participate, please contact me so that safety orientation training can be scheduled for incoming personnel.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,

Cindy Hurtado

Cindy Hurtado
Environmental Coordinator
Giant Refining – Bloomfield

Cc: Ed Riege – Environmental Superintendent – Giant Refining
Randy Schmaltz – Environmental Supervisor – Giant Refining

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

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

GIANT
REFINING COMPANY

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Frances Dr.
Santa Fe, New Mexico 87505

Certified Mail: 7004 2510 0005 1641 4422

July 15, 2005

RE: **Discharge Plan Application**
GW –01
San Juan Refining Company
Giant – Bloomfield Refinery

Dear Mr. Price,

Giant Refining Company – Bloomfield Refinery submits this application for renewal of Groundwater Discharge Permit #GW – 01 at this site.

There have not been any changes in facility operations; however, the application reflects upgrades and environmental improvements, which Giant has implemented since 2001.

If you need more information, please contact me at (505) 632-4171.

Sincerely,

James R. Schmaltz
Environmental Manager
Giant Refining Company – Bloomfield

Cc: Ed Riege, Environmental Superintendent, Giant Industries, Inc.
Denny Foust, New Mexico Oil Conservation Division – Aztec
David Kirby, Corporate Counsel, Giant Industries, Inc.

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

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

Table of Contents

Disclaimer

This application has been prepared using the requirements, format, and guidance that is contained in the document titled "Guidance For The Preparation Of Discharge Plans At Natural Gas Plants, Refineries, Compressor and Crude Oil Pump Stations" (Revised 12-95), as issued by the Oil Conservation Division. Further, this application was prepared for the sole and expressed purpose of renewing the existing discharge plan permit, of which renewal is required every five years. The information contained in this application is proprietary and may not be used for any purpose other than the processing of this application without the expressed written consent of the Giant Refining Company.

Section 1.0 Type of Operation

The Bloomfield Refinery is a crude oil refining facility.

The Standard Industrial Classification (SIC) code is 2911 and the NAIC is 32411.

The refinery has a nominal crude capacity of 18,000 barrels per day and produces various finished products; including propane, butane, naphtha, unleaded gasoline, jet fuel, diesel, kerosene, and residual fuel.

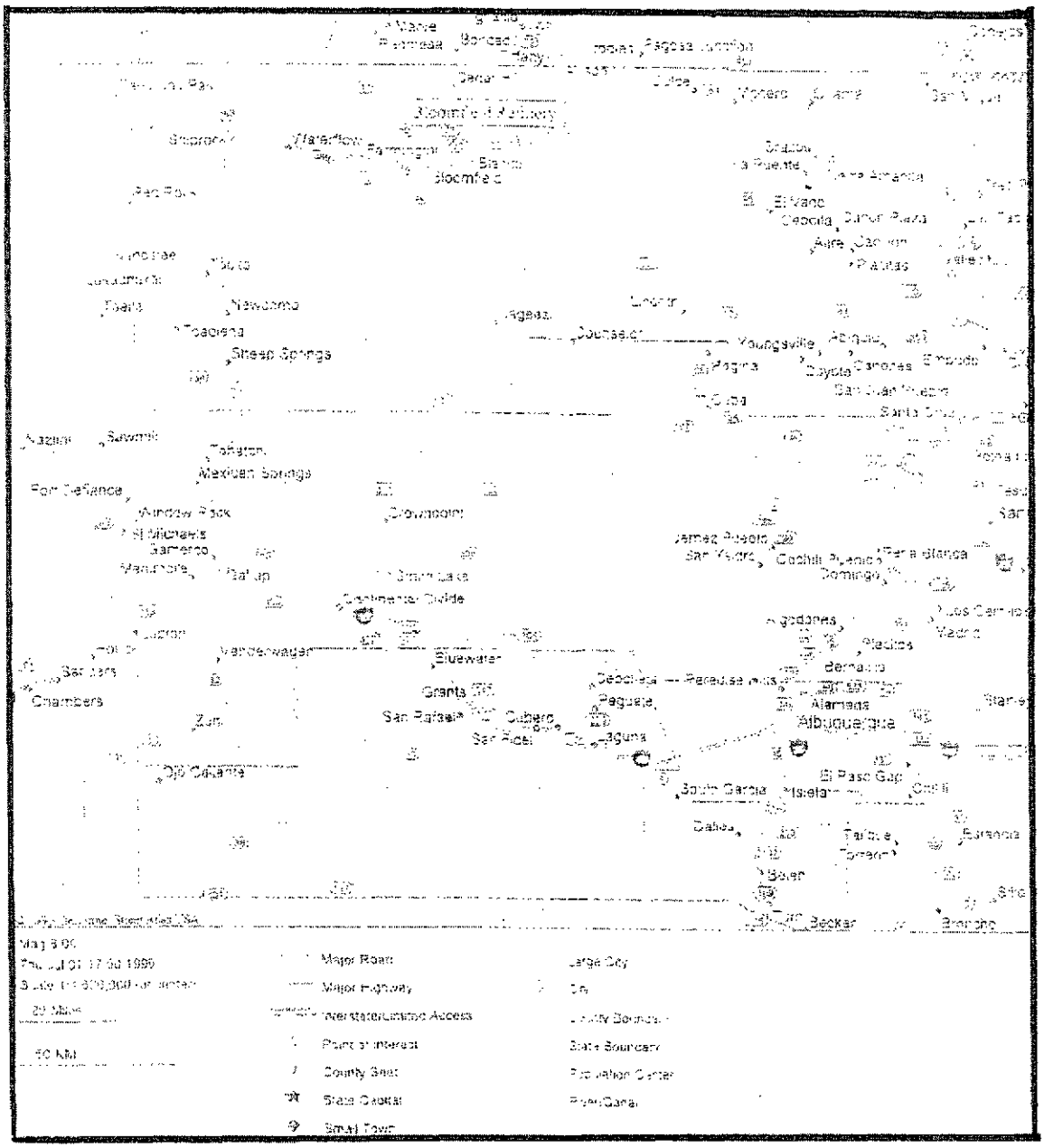
Section 2.0 Name of Operator or Legally Responsible Party or Local Representative

Owner:	San Juan Refining Company 23733 North Scottsdale Road Scottsdale, Arizona 85255	(parent corporation)
Operator:	Giant Refining Company P.O. Box 159 Bloomfield, New Mexico 87413	(postal address)
	Giant Refining Company #50 Rd 4990 Bloomfield, New Mexico 87413	(physical address)
Key Contact:	Chad King, General Manager	
Telephone:	(505) 632-4145	

Section 3.0 Location of the Discharge Plan Facility

The Bloomfield Refinery is generally located in the Four Corners Region of northern New Mexico. It is more specifically located approximately one mile south of the City of Bloomfield, New Mexico at 50 County Road 4990.

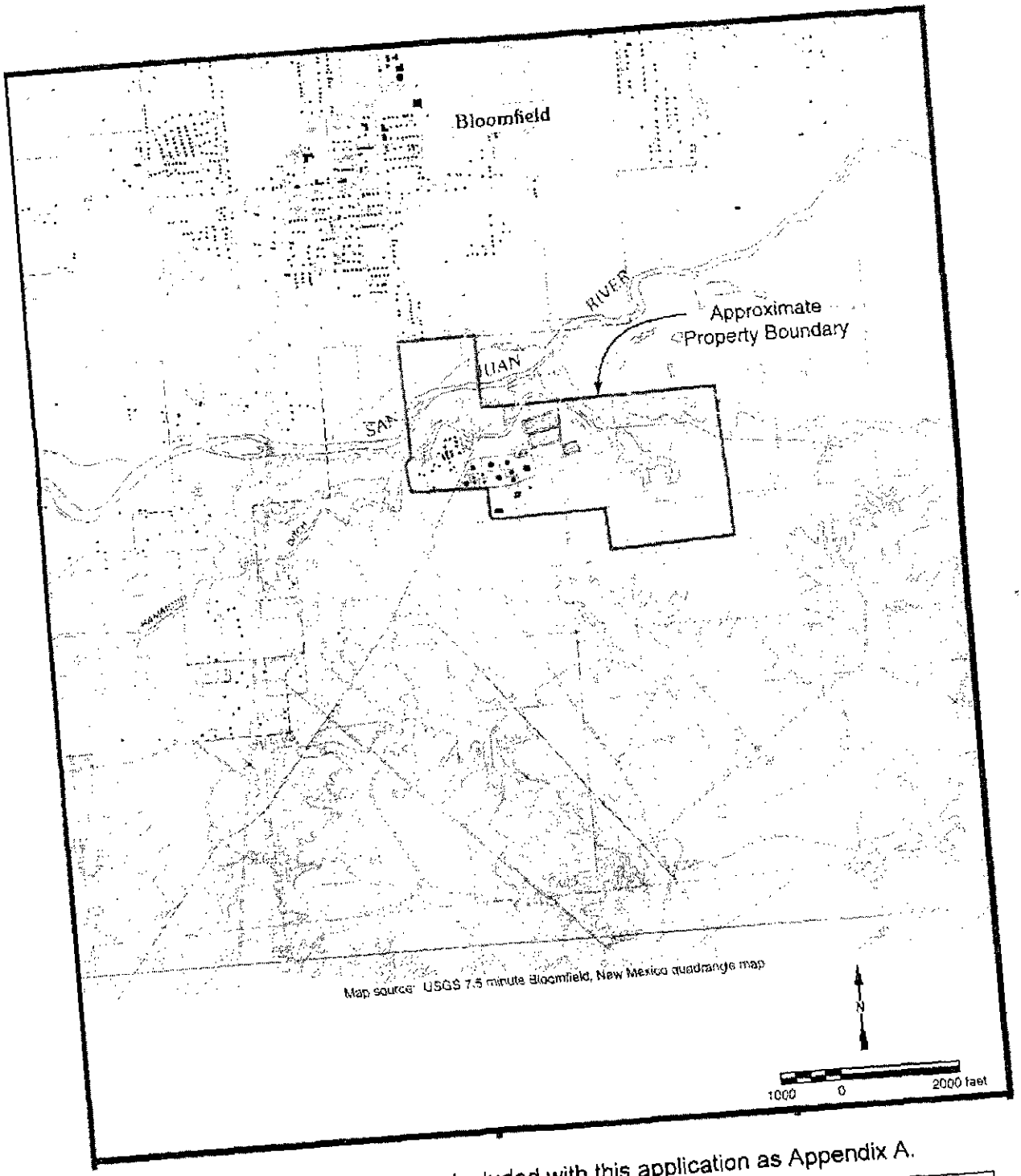
Regional Map



The plant site is nominally located at latitude 36° 41' 30" and longitude 107° 58' 20".

The legal description of the site is 286.93 acres, more or less, being that portion of the NW ¼ NE ¼ and the S ½ NE ¼ and the N ½ NW ¼ SW ¼ and the SE ¼ NW ¼ SW ¼ of Section 26, Township 29 North, Range 11 West, San Juan County, New Mexico.

Locality Map



A detailed map of the plant is also included with this application as Appendix A.

Section 4.0 Landowners

Originally constructed as a crude topping unit in the late 1950's by Kimball Campbell.

Plateau, Inc purchased the facility in the early 1960's and sold it in 1964 to Suburban Propane of New Jersey.

Bloomfield Refining Company acquired the facility in 1984.

San Juan Refining Company obtained ownership in 1995 and is the current landowner of record.

Address:	San Juan Refining Company 23733 North Scottsdale Road Scottsdale, AZ 85255
Telephone:	(480) 585-8888

Section 5.0 Facility Description

The Bloomfield Refinery receives and processes up to 18,000 barrels per day of crude oil and produces propane, butane, gasoline, kerosene, jet fuel, fuel oil, and residual fuel.

The refinery is located in northwestern New Mexico, approximately 1 mile south of the City of Bloomfield in San Juan County. It is further located approximately 1/2 mile east of State Route 44 on County Road 4990 (a.k.a. Sullivan Road).

The refinery is situated on an elevated terrace south of the San Juan River and the Hammond Irrigation Ditch. This terrace is approximately 100 feet above the river level and 20 feet above the irrigation ditch. The northern refinery fence line adjoins the irrigation ditch and the distance from the refinery to the river's edge varies from approximately 300 to 1,000 feet.

The main part of the refinery is located on a 45 acre site north of County Road 4990 and includes the following general areas:

- Office Area (buildings, warehouse, storage yard)
- Parking Lots & Heavy Oil Loading Station
- Process Area (refinery operations equipment)
- Wastewater Treatment Unit (WWTU)
- Tank Farm Area
- Used Equipment Laydown Area
- Firefighting Training Area
- Solid Waste Disposal Area

A refinery terminal facility, regional business office, transportation maintenance facility, and the refinery evaporation ponds are located on a 25 acre site south of County Road 4990 and includes the following general areas:

- Terminal Office & parking areas
- Crude Oil Unloading Station & Storage Tank Area
- Product Loading Station & Storage Tank Area
- High Pressure Storage Bullets Area
- Regional Office & parking area
- Transportation Maintenance Facility and truck parking areas
- Refinery Wastewater Evaporation Ponds
- Class I Injection Well (GW-130)

Crude supplies arrive by pipeline or tank trucks. The refinery incorporates various processing units that convert crude into finished products. These units are briefly described as follows:

- The crude unit separates crude oil into various fractions; including gas, naphtha, diesel, kerosene, and reduced crude.

- The reforming unit combines low octane naphtha molecules to form high octane naphtha.

- The fluidized catalytic cracking unit breaks up long-chain hydrocarbon molecules into smaller molecules, and essentially converts heavier oils into naphtha and lighter oils.

- The sulfur recovery unit converts hydrogen sulfide gas into elemental sulfur and produces a solid elemental sulfur byproduct.

- The poly unit polymerizes olefinic LPG and produces gasoline blendstock.

- The treater unit removes sulfur from LPG.

- The DHT (diesel hydrotreating) unit removes sulfur from diesel and light oils.

- The tank farm is a system of storage tanks used throughout the refinery to hold and store crude oil, intermediate feedstocks, finished products, chemicals, and water. These tanks are located above ground and range in size from 110,000 barrels to less than a 1,000 barrels.

In addition to the above-mentioned processing units, various other equipment and systems support the operation of the refinery and are briefly described as follows.

Pumps, valves, and piping systems are used throughout the refinery to transfer various liquids among tankage and processing units.

Several tank truck loading racks are used at the terminals to load out finished products and receive crude oil, other feedstocks, additives, and chemicals.

A firefighting training facility is used to conduct employee firefighting training.

The process wastewater system is a network of curbing, paving, catch basins, and underground piping that collects rainwater and other effluent from various processing areas within the refinery and then conveys this wastewater to the API separator. In general, process wastewater is effluent that may reasonably be expected to come in contact with hydrocarbons.

The API separator is a large concrete containment structure that uses gravity and residence time to separate wastewater into three components; a sludge layer that sinks to the bottom, a scum layer that floats to the top, and a clarified effluent in the middle. The clarified effluent then flows on through a series of three lined aeration lagoons.

Each lagoon is equipped with two aerators which effectively strip dissolved gasses and light hydrocarbons from the wastewater. Effluent from the aeration lagoons flows to the evaporation ponds.

The evaporation pond acts as a holding basin for excess wastewater and allows for solar and wind-effect evaporation to take place. Water that is not evaporated is pumped to the Class I injection well.

The Class I well injects a nonhazardous wastewater stream into portions of the Cliff House and Upper Menefee Formations (3600 feet deep). It operates under Discharge Permit Number GW-130.

The storm water system is a network of berms, embankments, culverts, trenches, ditches, and retention ponds that collect, convey, control, treat, and release storm water that falls within or passes through refinery property.

Items Specifically Requested in the OCD Guidance Document:

1. Location of fences

   The refinery incorporates an outer perimeter fence that substantially consists of chainlink, barbed wire and posts, and roughly corresponds to the property boundaries. In addition, interior zones of 8 foot high chain link fencing are installed around the warehouse yards, storage pads, loading racks, and other sensitive areas. The locations of these fence lines are shown on the plant site drawing in Appendix A.

2. Location of pits

   The refinery does not use earthen pits for waste accumulation.

3. Location of berms

   The refinery uses earthen berms to form secondary containment basins for tankage. The locations of these berms are shown on the plant site drawing in Appendix A.

4. Location of tanks

   The refinery uses aboveground tanks for storage at various locations within the refinery. The locations of these tanks are shown on the plant site drawing in Appendix A.

5. Location of discharges

   Treated process and non-process wastewater is evaporated at the evaporation ponds or injected underground at the Class I injection well.

   Storm water that is not contained on-site is released off-site at five outfall locations on the boundary of refinery property. Storm water analysis and a map of outfall locations are kept on site in the Storm Water Pollution Prevention Plan.

   Sanitary sewage is treated and released at four septic fields located within the Giant property line.

   The locations of the evaporation ponds, storm water outfalls, and septic fields are shown on the plant site drawing in Appendix A.

6. Location of storage facilities

   The refinery uses warehouses, outdoor yards, and curbed pads for storage of various materials and equipment within the refinery. The locations of these storage facilities are shown on the plant site drawing in Appendix A.

7. Location of disposal facilities

   The refinery uses an onsite landfill to dispose of sulfur, FCC fines, and FCC spent catalyst. The Sulfur Recovery Unit (SRU) generates approximately 300 tons of solid sulfur per year. The Fluidized Catalytic Cracking (FCC) unit produces 200 tons per year. These materials are deposited in the landfill and covered with soil.

8. Location of processing facilities

   The refinery uses various processing units and support systems as described above. The locations of these facilities are shown on the plant site drawing in Appendix A.

Section 6.0 Materials Stored or Used at the Facility

The refinery receives, stores, and processes crude oil and other petroleum-based feedstocks, and then produces various intermediate feedstocks and finished products, including propane, butane, unleaded gasoline, jet fuel, diesel, kerosene, and residual oil. These materials are stored in aboveground atmospheric and pressurized tanks, and are listed on Table 6.1 and Table 6.2 in Appendix B, respectively. These tables include the following information.

- tank name
- contents
- material of construction
- year tank was built or most recently modified
- volume
- location

The refinery also receives, stores, and uses a variety of additives, chemicals, and other sensitive materials in order to support the operation of the refinery. These materials are listed on Table 6.3 in Appendix B. This table includes the following information.

- product name
- product form (gas, liquid, or solid)
- general composition
- nominal quantity stored on-site at any given time
- location

Items Specifically Requested in the OCD Guidance Document

The OCD guidance document specifically requires that the following categories be included in the material list.

- process specific chemicals
- acids/caustics
- detergents/soaps
- solvents/inhibitors/degreasers
- paraffin treatment/emulsion breakers
- biocides
- other

The tables in Appendix B include the materials that correspond to the above categories.

Section 7.0 Sources and Quantities of Effluent & Waste Solids Generated at the Facility

The following processing units, systems, equipment, or categories are potential sources of effluent or waste solids generated at the refinery.

Sources of wastewater effluent include the following. These discharges are collected in the refinery process sewer system and flow to the API Separator. Appendix C illustrates the process water and wastewater flow.

Boiler Feedwater Treatment System

Raw water is treated in this system in order to remove impurities before being supplied as feedwater to the refinery boilers. Wastewater from water softening units and boiler blowdown containing dissolved solids is routinely discharged to the refinery process sewer system.

This discharge typically ranges from 4,000 to 6,000 gallons per day.

Boilers

Four boilers are in service at the refinery: two fired boilers, one waste heat boiler, and one steam generator. Wastewater containing dissolved solids is routinely discharged to the process sewer from these boilers.

This discharge typically ranges from 8,000 to 10,000 gallons per day.

Cooling Towers

Two cooling towers are in service at the refinery. Wastewater containing dissolved solids and biocide residue is routinely discharged to the process sewer from this equipment.

This discharge typically ranges from 30,000 to 40,000 gallons per day.

Crude Unit

Two desalters at the crude distillation unit are used to remove impurities and water from crude oil. Wastewater containing dissolved solids and trace hydrocarbons are routinely discharged to the process sewer from this equipment.

This discharge typically ranges from 30,000 to 40,000 gallons per day.

Sulfur Recovery Unit

The SRU recovers solid elemental sulfur compounds from refinery fuel gas. Wastewater from a rinsing operation and filter press is routinely discharged to the process sewer. The wastewater contains dissolved solids and trace sulfur compounds.

This discharge typically ranges from 3,000 to 4,000 gallons per day.

Polymerization Unit

A water wash system is used to remove impurities from an intermediate gasoline feedstock. Wastewater containing trace hydrocarbons are intermittently discharged to the process sewer.

This discharge typically ranges from 14,000 to 18,000 gallons per day.

Sour WaterTreater

One accumulator drum at this unit collects water from overhead vessels throughout the process units. Wastewater containing trace hydrocarbons is routinely discharged to the process sewer from this accumulator drum.

This discharge typically ranges from 14,000 to 15,000 gallons per day.

Heater Treater at Terminals

"Wet" crude oil is unloaded into this system. Steam is used to treat the load and separate the water from the oil. Wastewater containing trace hydrocarbons and dissolved solids is routinely discharged to the process sewer.

This discharge typically ranges from 14,000 to 15,000 gallons per day.

Storage Tanks

Numerous aboveground storage tanks are used within the refinery to store various products and intermediate feedstocks. Wastewater containing dissolved solids and trace hydrocarbons are occasionally drained from these tanks as bottom water or decanted water and then discharged to the process sewer.

This discharge typically ranges from 1,800 to 2,500 gallons per day

Recovered Groundwater

San Juan Refining Company – Giant - Bloomfield utilizes15 active recovery wells and the Hammond Ditch French Drain Recovery System to pump and treat hydrocarbon impacted groundwater. Giant also pumps out 14 collection wells located on the north side of Hammond Ditch. The groundwater recovered with these systems is transferred to the API Separator for treatment.

This discharge typically ranges from 9,000 to11,000 gallons per day.

Diesel/Kerosene Salt Dryers

Three salt wash vessels are used to remove impurities from diesel and kerosene product streams. Occasionally, the salt must be replaced and, at that time, the vessels are drained. Wastewater containing dissolved solids and trace hydrocarbons are discharged to the process sewer.

This discharge typically ranges from 300 to 1,000 gallons per event when replacing salt. This event occurs 2 –3 times per year.

Sources of solid waste include the following. Most of these waste are generated intermittently and then removed, collected, containerized, and stored until shipped off-site for recycling or disposal.

Fluid Catalytic Cracking Unit (FCCU) Catalyst

A metallic (alumina) catalyst is used within the FCCU to convert hydrocarbon molecules. The material is a dry, metallic solid and is non hazardous. This catalyst is periodically replaced and the spent catalyst and fines are deposited in the on-site landfill and covered with soil.

Approximately 200 to 300 tons of spent FCCU catalyst is generated every year.

Naphtha Hydrotreating Unit (NHT) and Sulfur Guard Catalyst

There are two reactors that contain metallic catalyst in this unit. One reactor is used to convert hydrocarbon molecules and the other is used to adsorb sulfur molecules. The catalysts are periodically replaced and the spent catalyst is recycled by an off-site metal recovery service. This material is a dry, metallic solid and is shipped as a K-171 hazardous waste and as a self-heating solid.

Dump and screen procedures occur about every two years. Approximately 2 -- 3 tons of catalyst is generated every two years.

Reforming Unit Catalyst

A metallic (platinum) catalyst is used in the reforming unit to convert hydrocarbon molecules. This catalyst is periodically replaced and the spent catalyst is recycled by an off-site metal recovery service. This material is a dry, metallic solid and is shipped with a hazardous waste code of K-171 and as a self-heating solid.

Catalyst is changed out every ten years. However, some dump and screen procedures occur periodically. Reformer catalyst is generated on an average of 0.3 tons per year.

Polymerization Unit

A phosphoric acid catalyst is used to convert LPG olefins into an intermediate gasoline feedstock. This catalyst is periodically replaced and disposed of at an off-site landfill. The spent catalyst is a dry solid and is non hazardous.

Approximately 40 to 60 tons of polymerization catalyst is generated every year.

Diesel Hydrotreating Unit (DHT) Catalyst

Metallic catalyst is used in this unit to convert hydrocarbon molecules. DHT catalyst has not been replaced in 12 years. October 2006 is the compliance date for the new Ultra Low Sulfur Diesel (ULSD) regulations. This new regulation will significantly increase the generation of DHT catalyst. This catalyst is a dry, metallic solid and will be shipped off as a K-171 hazardous waste.

Approximately 10 tons of DHT catalyst will be generated every two years after the ULSD regulations are in place.

Sulfur Byproduct

An elemental sulfur byproduct is regularly generated at the SRU. This solid non hazardous residue is disposed of in the on-site landfill and covered with soil.

Approximately 300 to 400 tons of sulfur byproduct is generated each year.

Heat Exchanger Bundle Cleaning Sludge

Heat exchanger bundles are occasionally cleaned in order to restore heat transfer performance. This cleaning is conducted on a concrete curbed pad that incorporates a wastewater accumulation sump. Sediment and sludge collects in the bottom of the sump and the wastewater is removed and discharged into the process sewer.

The sludge (K-051) is removed from the sump, contained in 55 gallon drums, and disposed of at an off-site hazardous waste disposal facility. The quantity of this waste ranges from 0 to 3 tons per year.

Main Column Bottoms Sludge

Periodic cleanout of pump screens and piping in the FCCU generates main column bottom sludge. It is classified as K-170 hazardous waste and is shipped to an off-site hazardous waste disposal facility.

The quantity of this waste ranges from 1 to 12 tons per year.

API Separator Sludge

Oily sediment and sludge accumulates at the bottom of the API Separator. The Separator is taken out of service annually and the bottom sludge removed via vacuum truck. This sludge remains in the truck and is shipped off-site for recycling.

Approximately 300,000 to 500,000 pounds of API Separator sludge is recycled as a feedstock to a petroleum coker at the Norco Refinery annually. This refinery is located in Louisiana.

Maintenance Shop

Most process equipment and mobile equipment is repaired and maintained at the refinery maintenance shop. Waste oils are collected and stored in a 250 gallon tote and recycled periodically.

The quantity of this waste ranges from 600 to 800 gallons per year.

Process Filters

Process filters throughout the refinery are periodically replaced and are disposed of as special waste at the San Juan County Landfill. TCLP analysis on the filters indicates that the waste is non hazardous.

Approximately 16 yards of material is generated every year.

Section 8.0 Description of Current Liquid and Solid Waste Collection / Storage / Disposal Procedures

The following procedures are used to manage the wastewater effluents and solid waste that are generated within the refinery as described in Section 7.0.

Process Wastewater

Process wastewater is generated at various refinery processing units, storage tanks, utility systems, and maintenance activities. This water is collected in a segregated sewer system located throughout the refinery processing and tankage areas. This collection system is substantially composed of concrete paving and curbing, concrete catch basins and trenches, and buried concrete and carbon steel pipe. Process wastewater flows by gravity to the API Separator where solids, sludge, and floating scum are removed. From the API Separator, the effluent flows a series of three aeration lagoons that act as benzene strippers. Wastewater is then either evaporated at the evaporation ponds or injected underground at the Class I injection well. This well injects into portions of the Cliff House and Upper Menefee formations (3,600 feet deep). It operates under Discharge Permit Number GW – 130.

API Separator Sludge

Oily sediment and sludge accumulates at the bottom of the API Separator. The separator is taken out of service annually and the bottom sludge is removed via vacuum trucks. This sludge is shipped off-site for recycling.

API separator sludge is recycled as a feedstock to a petroleum coker at the Norco Refinery:

Motiva Enterprises, LLC – Norco Refinery
15536 River Road
Norco, LA. 70079
EPA ID: LAD008186579

Heat Exchanger Bundle Cleaning Sludge

Oily sludge accumulates at the bottom of the cleaning pad sump. At the conclusion of the exchanger cleaning operation, the sludge is removed, placed in 55 gallon drums, then shipped off-site as a K050 hazardous waste for treatment and disposal.

Burlington Environmental, Inc.
20245 77th South
Kent, Washington 98032
EPA ID: WAD991281767

PSC/21st Century EMI
2095 Newlands Drive East
Fernley, Nevada 89408
EPA ID: NVD980895338

Main Column Bottoms Sludge

This sludge is stored in 55 gallon drums after removal from the FCCU. It is classified as K-170 hazardous waste and is shipped to an off-site hazardous waste disposal facility.

Burlington Environmental, Inc.
20245 77th South
Kent, Washington 98032
EPA ID: WAD991281767

PSC/21st Century EMI
2095 Newlands Drive East
Fernley, Nevada 89408
EPA ID: NVD980895338

Spent Reformer Catalyst

This material is a dry solid that is stored in drums or flowbins after removal from the Reformer. Occasionally it is reprocessed on-site and then placed back into the Reformer. On other occasions, it is shipped out via truck as a D018 and self-heating solid hazardous waste and then reprocessed at an off-site facility.

Gulf Chemical
302 Midway Road
Freeport, Texas 77542
EPA ID: TXD074195678

Eurecat US, Inc.
13100 Bay Park Road
Pasadena, Texas 77507
EPA ID: TXD106829963

Spent NHT Catalyst

This material is a dry solid that is stored in drums or flowbins after removal from the unit. It is then shipped out via truck as a K171 and self-heating hazardous waste and recycled at an off-site facility.

Gulf Chemical
302 Midway Road
Freeport, Texas 77542
EPA ID: TXD074195678

Eurecat US, Inc.
13100 Bay Park Road
Pasadena, Texas 77507
EPA ID: TXD106829963

Polymerization Unit

This catalyst is periodically replaced. It is a dry solid and stored on concrete containment and covered with a tarp until removal to an off-site landfill via truck.

Clean Harbors Grassy Mountain
3 Miles East, 7 Miles North of Knolls
Clive, Utah 84029
EPA ID: UTD991301748

Spent FCCU Catalyst

This material is a non hazardous dry solid that is disposed of in the on-site landfill and covered with soil.

Sulfur Byproduct

An elemental sulfur byproduct is regularly generated at the SRU. This solid non hazardous residue is disposed of in the on-site landfill and covered with soil.

Maintenance Shop

During equipment maintenance, waste oils are collected and stored in a 250 gallon tote located on a concrete pad. Periodically, this material is shipped off-site via vacuum truck for recycling.

Mesa Oil, Inc
7239 Bradburn Blvd.
Denver, Colorado 80030
EPA ID: COD982581993

Process Filters

Process filters are a solid non hazardous waste. When replaced, the used filters are stored on a concrete pad until dry and then are disposed of as special waste at the San Juan County Landfill. The material is transported by dump truck.

San Juan County Regional Landfill
#78 CR 3140
Aztec, New Mexico 87410
NMED Registration #: 241102

Section 9.0 Proposed Modifications

New Monitoring Well Installations

At the request of NMED and OCD, three new wells were installed on the north side of Hammond Ditch in 2003. These wells are designated as MW #45, MW #46, and MW #47. An attempt was made to drill a background well up gradient from the refinery, however it was a dry hole. In 2004, NMED and OCD authorized drilling two new wells (MW #48 & MW #49) to replace P-4 & P-5 at the River Terrace. Drilling logs are available in Appendix F and well locations are indicated in Appendix A.

OCD Emergency Action Directive

In August 2004 recent emergence of active petroleum hydrocarbon seeps were found in two small tributaries (draws) on the north side of the refinery. Hydrocarbon staining had migrated down the draws toward the San Juan River. Upon receiving the Emergency Action Directive, Giant implemented the following tasks. The visually contaminated soils were removed and the vertical and horizontal extent of the contamination was investigated. Daily progress reports were sent to the agencies. Compacted soil barriers were constructed in each tributary to prevent migration into the river. Lined collection and barrier systems were installed at the point of the seeps. The collection points are monitored and pumped for recovery. Giant prepared a Monitoring and Contingency Plan, which stipulated river sampling and monitoring of the draws.

The river was sampled at the mouth of the draws on a monthly basis and analyzed for BTEX/MTBE (8021), TPH (8015 DRO and GRO), WQCC metals, semi-volatiles organics (8270) and general chemistry. After four months of sampling and no evidence of pollutants the sampling frequency was reduced to quarterly. All analysis results were below the NM WQCC standards. BTEX and MTBE results for September through December were all below the WQCC standards.

Starting in August 2004, all draws were inspected every other week. The inspection focuses on hydrocarbon staining or any release that could result in contamination leaving the property boundary. Giant has prepared an inspection checklist to be completed and signed by the environmental employee conducting the inspection. Completed inspection sheets are kept onsite.

North Boundary Barrier Wall

In November Giant submitted a voluntary Corrective Measures Plan to install a containment barrier wall (soil-bentonite slurry wall) and a fluid collection system approximately 2,600 feet in length along the north side of the Hammond Ditch and extending from County Road 4990 to a location approximately 200 feet east of the pipeline corridor. The plan is a corrective measure to mitigate further migration of petroleum hydrocarbons towards the San Juan River and beyond the northern property boundaries of the refinery. The plan was approved by OCD and NMED in December.

The Construction of the North Boundary Barrier Wall was completed in April of 2005. Currently fluids are extracted manually from the collection wells three times per week.

Observations wells were installed on the North side (river side) of the slurry wall and are used to evaluate the effectiveness of the wall.

River Terrace Sheet Pile Area (RTSPA)

In 1999 Giant installed a sheet piling and bentonite slurry wall adjacent to the San Juan River north of the refinery. The sheet pilings extend around the perimeter of the riverbank to the river inlet station. The purpose of the sheet piling and the slurry wall is to prevent any SPH and dissolved-phase hydrocarbons in the groundwater from migrating to the west, into the San Juan River. Two piezometers (P-4 & P-5) were installed with P-5 located on the riverside of the sheet piling. Both piezometers were sampled regularly to monitor BTEX levels and both piezometers have shown levels above WQCC standards.

In October 2004, a field investigation was performed in the river terrace sheet-pile area. The purpose of the investigation was to 1) install two new monitoring wells at the river terrace to replace P-4 and P-5 and 2) evaluate the presence and extent of fuel hydrocarbons in groundwater on the refinery side of the sheet-pile barrier. The investigation involved the installation of eight temporary well points (TP-1 through TP-8) and two permanent wells (MW-48 and MW-49). Five additional temporary well points were installed in March-April of 2005 (TP-9 through TP-13).

On the refinery side of the sheet-pile barrier, the groundwater sampling results indicate fuel hydrocarbon contamination extends from the barrier to the east to temporary well point TP-4. Fuel hydrocarbons were also reported in well point TP-3, the farthest east well point, but the concentrations were low compared to the results closer to the barrier.

Comparing the groundwater sampling results from well MW-49 (river side of barrier) to those from MW-48, fuel hydrocarbons were reported to be significantly lower on the riverside of the barrier. The data indicates the sheet-pile wall is acting as a significant barrier against fuel hydrocarbon migration to the river.

Low concentrations of diesel and gasoline-range organics were reported in the soil samples taken from monitoring wells MW-48 and MW-49. The depth of occurrence appears to be similar in both locations, suggesting the existence of these hydrocarbons in the soil predates the barrier installation. The concentrations reported in the soil samples from MW-49 (river side of barrier) are generally one-half those reported from MW-48.

Separate phase hydrocarbon (SPH) was not observed during the installation of the two monitoring wells (MW-48 and MW-49) and eight temporary well points (TP-1 through TP-8) in the River Terrace.

An aquifer (pump) test was performed in December 2004 On MW #48. Malcolm Pirnie, an independent environmental engineering firm, was contracted to administer the test. The purpose of the pump test was to obtain aquifer hydraulic properties of the river terrace alluvial aquifer below the refinery.

After running multiple iterations of the capture zone model, Malcolm Pirnie determined that an adequate capture zone could be obtained at a pumping rate of 2 to 5 gpm.

In November 2004, Giant submitted a voluntary Corrective Measures Plan to investigate options to reduce the concentrations of petroleum hydrocarbons, and mitigate further migration of petroleum hydrocarbons towards the San Juan River in the River Terrace Sheet Pile Area. This plan was approved, by OCD and NMED in December 2004. It was determined that a Bioventing system would be the best technology for this area. Giant received approval to proceed with the project from OCD and NMED June 30, 2005. The Bioventing system installation is anticipated for the 3rd Quarter of 2005.

East Outfall

The east outfall is collected into a pipe, which flows, to Tank #38 and then to Tank #33 located just south of the western fresh water pond. Hydrocarbons are skimmed off the top of the tank into a secondary tank, which is emptied with a vacuum truck and taken to the oil water separator. The remaining water from Tank #33 is then piped to the fresh water pond.

Groundwater Monitoring Plan

On August 11, 2004 a meeting was held at the Bloomfield Refinery that included representatives from the refinery, OCD, NMED, and the EPA. An agreement was reached that in Giant's August sampling event all monitoring and recovery wells would be sampled unless separate phase product was present. All wells that did not have separate phase product were sampled August 16-25, 2004 and all analytical results were presented to OCD and NMED in the 2004 Groundwater Remediation and Monitoring Annual Report dated April 2005. NMED'S REVIEW

Discussion between OCD, NMED and Giant will take place to determine what wells and analysis will be monitored in future sampling events. The agencies will receive the results and conclusions of the analysis in the Annual Report that is completed in April of every year. Giant proposes that the April Annual report replace the September report date stated in the Discharge Permit Approval Conditions (19.A).

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Section 10.0 Inspection, Maintenance, & Reporting

Refinery personnel and contractors routinely conduct inspection, maintenance, and repair of all processing units, systems, tanks, equipment, instrumentation, valves, piping, and other items necessary for the continued operation of the refinery. Some of these activities are conducted under the auspices of applicable regulations (e.g. 29 CFR 1910.119 – OSHA Process Safety Management Standard) and involve detailed recordkeeping and reporting. Specific procedures that relate to sources of liquid effluent and solid waste are described as follows.

Process Wastewater Collection System

Paving, curbing, catch basins, and trenches are routinely inspected for integrity. As required by OCD, Giant utilizes the pressure test technique to verify the integrity of sewer system components. Giant conducts pressure testing in increments of 20% per year over a period of five years, until the entire system has been checked. The 20% increment will be based on nominal sewer pipe length. This test program will use the OCD methodology and criteria.

The API Separator is emptied and inspected annually. If a problem is found, it is repaired before placing the API Separator back in service.

Refinery operations personnel routinely conduct visual surveillance of process areas and monitor the integrity of concrete paving, curbing, catch basins, and trenches. Problems with containment systems are reported to the appropriate department for repair.

Storm Water Collection System

Storm water system "Best Management Practices" from the refinery's Storm Water Pollution Prevention Plan (SWPPP) are included in Appendix D.

Storage Tanks, Petroleum and Chemical Storage Areas

Refinery Operations, Warehouse, Safety, Environmental, Technical Services, and Laboratory personnel routinely conduct visual surveillance of storage areas and monitor the integrity of containment and check for leakage or other problems. All incidents and near misses are reported to refinery management and appropriate actions are taken. Additional information can be found in the refinery's ICP and SPCC.

Section 11.0 Spill/Leak Prevention & Reporting Procedures (Contingency Plans)

San Juan Refining Company - Giant – Bloomfield has developed, implemented, and is currently utilizing an Integrated Contingency Plan (ICP) as described in the Federal Register Notice "The National Response Team's Integrated Contingency Plan Guidance (One Plan) dated June 5, 1996 (Volume 61, Number 109, pages 28641 – 28664). This document describes the recommended method for developing and adopting a comprehensive and integrated contingency plan for complying with the numerous and overlapping safety and environmental requirements of OSHA, DOT, EPA, USCG, and other federal and state regulations. This includes the following regulations.

- EPA Spill Prevention, Control, & Countermeasures Plan (40 CFR Part 112.7)
- EPA Facility Response Plan (40 CFR Part 112.20 & 112.21)
- EPA Risk Management Program (40 CFR Part 68)
- EPA Contingency Planning Requirements (40 CFR Part 264, 265, 279.52)
- USCG Facility Response Plan (33 CFR Part 154, Subpart F)
- RSPA Pipeline Response Plan (49 CFR Part 194)
- DOT Emergency Response Plans (49 CFR Part 130 & 172)
- OSHA Process Safety Management Standard (29 CFR 1910.119)
- OSHA Emergency Action Plan (29 CFR 1910.38)
- OSHA Training & Response Requirements (29 CFR 1910.120)

Included within the ICP is a plan for addressing Spill Prevention, Control, and Countermeasures (SPCC) as required by the Oil Pollution Act (40CFR Part 112.7). The requirements of the ICP and SPCC encompass and comply with the requirements of NMOCD Rule 116 and WQCC Section 1203.

In addition, a Storm Water Pollution Prevention Plan (SWPPP), as required by Clean Water Act NPDES Multi-sector General Permit requirements, has been developed and implemented.

A copy of the Giant Refinery – Bloomfield ICP and SWPP are kept in the Environmental Managers office.

Section 12.0 Site Characteristics

Bloomfield, New Mexico is a town of 5000 residents located in the Four Corners Region of northern New Mexico. San Juan Refining Company – Giant – Bloomfield is located one mile south of Bloomfield on a bluff overlooking the San Juan River. The facility is comprised of approximately 285 acres with surface vegetation consisting of native grasses, shrubs, cacti, and small trees. Bordering the facility is a combination of federal and private properties.

The topography of the site is generally flat with low-lying spots to the east of the process area. Unnamed arroyos frame the eastern and western borders of the facility. The majority of the processing facility resides on a bluff 100 feet above the San Juan River.

Surface water in the vicinity of the refinery includes the San Juan River (to the north) and the Hammond Ditch along the north property boundary. The Navajo Dam (20 miles upstream) controls the flow of the San Juan River. The town of Bloomfield and the surrounding areas derive their potable water from the river.

Hammond Ditch is a concrete lined canal that is used for irrigation and watering livestock and not intended for human consumption. On the northern boundary of the refinery, Hammond Ditch has a French Drain system installed to prevent water build-up underneath the liner. As indicated on the plant site drawing in Appendix A, there are four outfalls associated with this drain system. The French Drain Recovery System and the #1 East Outfall flow into recovery tanks and are pumped back to the facility. The #2 and #3 East Outfalls flow freely to the San Juan River.

In addition, the refinery's man-made evaporation ponds, fresh water ponds, and aeration lagoons comprise the surface water in the area.

Giant – Bloomfield is located within the San Juan Basin, a sub-province of the Colorado Plateau physiographic province. There are three distinct stratigraphic units that underlay the refinery. From oldest to youngest these units are: the Nacimiento Formation, the Jackson Lake Terrace, and an unnamed structureless loess unit composed of silts and fine windblown sand that has been deposited as the result of eolian deposition.

The underlying Jackson Lake Terrace deposits consist of coarse-grained fluvioglacial outwash. It is primarily composed of well-rounded gravels, cobbles, and sand sized rocks. Cobbles and boulders are commonly observed in the deposits.

The Nacimiento Formation consists of inter-bedded carbonaceous mudstone/siltstone. It has very low permeability and effectively serves as an aquitard below the Jackson Lake Terrace Formation.

In general, groundwater flows from east to west within the Jackson Lake Terrace. As illustrated in Appendix E, surface contour models indicate that troughs or depressions exist within the Nacimiento Formation surface underlying the facility. These surface contours likely influence the migration and accumulation of groundwater beneath the refinery.

Shallow groundwater located above the Nacimiento Formation aquitard is mostly man-made and also most likely to be affected by any discharge at the refinery. Groundwater at this site is irregular and intermittent.

Due to the irregular surface topography of the Nacimiento Formation, depth to groundwater is highly variable. It may be encountered in as little as 4 feet below ground surface (River Terrace) and as much as 45 feet in the southeast portion of the tank farm.

Sampling and analysis of the shallow groundwater has been ongoing at the refinery since the 1980's and this data has been supplied to the OCD in the annual groundwater report. The predominant type of contaminant at the refinery is petroleum hydrocarbons.

Soil types are a sand and sand/clay mix throughout the refinery. Information obtained from the New Mexico State Engineer's Office indicates that there is not a significant, useable aquifer in the vicinity of the refinery. Bedrock depth ranges from exposed on the northern portion of the site to 44 feet below ground surface at the southeast section of the tank farm.

Flooding potential is minimal as the refinery is perched on a bluff 100 feet above the San Juan River. Berms, dikes, and storm water retention ponds protect against flooding due to a precipitation and/or run-off event.

Section 13.0 Other Compliance Information

The Bloomfield Refinery was constructed in the mid-1950's and has been in near continuous operation since that time. Over the years , various releases of petroleum-based products and other materials have occurred, largely as a result of minor spills, equipment leaks and former impoundments and disposal sites. As a result, surface soil, subsurface soil, and groundwater have been impacted at various locations and over various time periods spanning the past 50 years.

Bloomfield Refinery has 12 Solid Waste Management Units (SWMUs) with 4 remaining active and 8 either closed or in-active. Currently, Giant is working with NMED on assessing the status of Bloomfield Refinery's (SWMUs). A list and location of these SWMUs can be found in Appendix G.

Table 6.1 - Materials Stored in Atmospheric Storage Tanks

Tank No.	Contents	Material	Construction Date	Volume BBLS	Location
2	Water	Carbon Steel	Jan-78	67,000	Tank Farm
3	Mid-Grade Gas	Carbon Steel	Sep-66	10,000	Tank Farm
4	Mid-Grade Gas	Carbon Steel	Sep-66	10,000	Tank Farm
5	Isomerate	Carbon Steel	Sep-66	10,000	Tank Farm
8	Slop Oil	Carbon Steel	Dec-87	460	Tank Farm
9	Slop Oil	Carbon Steel	Dec-87	460	Tank Farm
10	Spent Caustic	Carbon Steel	Jan-86	400	Treater
11	Reformate	Carbon Steel	Dec-82	55,000	Tank Farm
12	Poly/Cat Gas	Carbon Steel	Dec-82	55,000	Tank Farm
13	No Lead Gas	Carbon Steel	Sep-87	30,000	Tank Farm
14	No Lead Gas	Carbon Steel	Sep-87	30,000	Tank Farm
17	Reduced Crude	Carbon Steel	Feb-61	40,000	Tank Farm
18	Diesel	Carbon Steel	Jan-74	55,000	Tank Farm
19	Diesel	Carbon Steel	Jan-75	36,000	Tank Farm
20	Out of Service	Carbon Steel	Jan-76	5,000	Tank Farm
22	Out of Service	Carbon Steel	Jan-80	1,500	Tank Farm
23	Base Gas	Carbon Steel	Jan-62	40,000	Tank Farm
25	Out of Service	Carbon Steel	Jan-77	10,000	Tank Farm
26	Naphtha	Carbon Steel	Dec-67	4,000	Tank Farm
27	Residual Oil	Carbon Steel	Jan-67	10,000	Tank Farm
28	Crude Oil	Carbon Steel	Apr-69	80,000	Tank Farm
29	Diesel/FCC Slop	Carbon Steel	Jan-74	17,000	Tank Farm
30	Blend Stock	Carbon Steel	Jan-74	17,000	Tank Farm
31	Crude Oil	Carbon Steel	Aug-77	110,000	Tank Farm
32	Premium Gas	Carbon Steel	Apr-88	20,000	Tank Farm
33	Recovered Water	Carbon Steel		400	Tank Farm
34	Water	Carbon Steel		400	Inj. Well
35	Reformer Feed	Carbon Steel	Apr-88	55,000	Tank Farm
36	Poly/Cat Gas	Carbon Steel	Apr-88	55,000	Tank Farm
37	Recovered Water	Carbon Steel	Jan-02	120	Hammond Ditch
38	Recovered Water	Carbon Steel	Oct-03	300	Hammond Ditch
41	Crude Oil	Carbon Steel	May-02	2,800	Terminals
43	Crude Oil	Carbon Steel	Jan-79	560	Terminals
44	Sweet Naphtha	Carbon Steel	Jan-88	2,000	Terminals
45	MTBE	Carbon Steel	Jan-94	5,000	Terminals

Table 6.2 - Materials Stored in Pressurized Storage Tanks

Tank No.	Contents		Construction Date	Volume BBLS	Location
B-01	Out of Service	Carbon Steel		286	
B-02	Out of Service	Carbon Steel		430	
B-12	Out of Service	Carbon Steel	Jan-60	692	Terminals
B-13	LPG	Carbon Steel	Jan-60	500	Terminals
B-14	LPG	Carbon Steel	Jan-60	500	Terminals
B-15	LPG	Carbon Steel	Jan-60	714	Terminals
B-16	LPG	Carbon Steel	Jan-78	714	Terminals
B-17	LPG	Carbon Steel	Jan-78	714	Terminals
B-18	LPG	Carbon Steel	Jan-78	714	Terminals
B-19	LPG	Carbon Steel	Jan-78	714	Terminals
B-20	LPG	Carbon Steel	Jan-78	714	Terminals
B-21	LPG	Carbon Steel	Oct-83	714	Terminals
B-22	LPG	Carbon Steel	Apr-88	714	Terminals
B-23	LPG	Carbon Steel	Apr-88	714	Terminals

Table 6.3 - Significant Materials Chemical Inventory

Product	Maximum Volume	Ingredients	Location	Physical State
Acetylene	3 - 207 lb cylinders	Acetylene	Storage yard/ Weld shack	Gas
Acetone	1 - 55 gallon drum	Acetone	Lab	Liquid
Antifreeze/coolant	3 - 55 gallon drums	Ethylene Glycol. Water	West storage yard	Liquid
Antimony	1 - 55 gallon drum	Antimony	FCC	Liquid
Argon	2 - 177 lb cylinders	Argon	Lab	Gas
Ammonium Thiosulfate	2 - 250 gallon tote	Ammonium Thiosulfate	SRU building/storage yard	Liquid
Betz 2W157	521 gallon tote	Aromatic Solvents	Boiler house	Liquid
Betz 5K7	521 gallon tote	Proprietary Blend	Boiler house	Liquid
Betz 8Q107	2 - 55 gallon drums	Proprietary Blend	Storage yard/Process area	Liquid
Betz 8Q33	3000 gallon tank	Aromatic Solvents	Process area	Liquid
Bio - Flora	250 gallon tote	Humega, Fulvic Acid, Bioscrubber II	API Separator	Liquid
Caustic	4500 gallons	Sodium Hydroxide, Water	Treater/SRU	Liquid
Chlorine	1 - 2000# cylinder	Chlorine	Cooling tower	Gas
Chlorine	5 - 150# cylinder	Chlorine	Cooling tower/Storage yard	Gas
Chevron OGA72015	2000 gallon tank	Solvent Naphtha	Terminals	Liquid
Carbon Dioxide	4 - 20 lb cylinders	Carbon Dioxide	Lab	Gas
Conoco 6476	2000 gallon tank	Solvent Naphtha	Terminals	Liquid
Conoco 68	1 - 55 gallon drum	Superier Hydrolic Oil	Storage yard	Liquid
Conoco SAE 15W-40	1-55 gallon drum	Proprietary Blend	Storage Yard	Liquid
Conoco Transformer Oil	1-55 gallon drum	Proprietary Blend	Storage Yard	Liquid
Dectol 100	2 - 55 gallon drums	Turbine oil, Proprietary Blend	Storage yard	Liquid
Dectol 150	2 - 55 gallon drums	Turbine oil, Proprietary Blend	Storage yard	Liquid

Table 6.3 - Significant Materials Chemical Inventory

Product	Maximum Volume	Ingredients	Location	Physical State
Dixichlor Max	2 - 55 gallon drums	Sodium hypochlorite	Storage Yard	Liquid
DPW CA-100	1 - 550 gallon tote	Proprietary Blend	SRU building	Liquid
Dow CA-2102	4 -550 gallon tote	Proprietary Blend	SRU building	Liquid
Dow CA-299	1 - 550 gallon tote	Ethanol, Surfactants	SRU building	Liquid
Dow CA - 2003	2-425 lb barrels	Isopropanol, Alcohol	Storage Yard	Liquid
Dow IC-110	2,500 gallon tank	Aminocaboxylato Iron	SRU building	Liquid
Dow IC-210	2,500 gallon tank	Aminocarboylate Sodium Salt I	SRU building	Liquid
Du Pont Antioxidant #22	3 - 55 gallon drums	N,N-D-SecButyl-P-Phenylenediamine	Storage yard/Process area	Liquid
Du Pont Stadis 425	1 - 300 gallon tote	Toluene	Process area	Liquid
Ethyl Hitec 3023	10,000 gallon tank	Petroleum Distillates	Terminals	Liquid
Ethyl Hitec 6560	2000 gallon tank	Proprietary Blend	Terminals	Liquid
Ethyl Hitec 6531	7000 gallon tank	Proprietary Blend	Terminals	Liquid
Exxon XD30 motor oil	2 - 55 gallon drums	Distillates, hyrotreated heavy paraffinic	Storage yard/Firehouse	Liquid
Fire Fighting Foam (ATC/AFFF)	6 - 250 gal. Totes 55 - 5 gal Buckets 12 - 5 gal Buckets	Diethylene Glycol Butyl Ether, Water	Filter House Tank #2 Firehouse	Liquid
Helium	2 - 145 lb cylinders	Helium	Lab	Gas
Hydrogen	2 145 lb cylinders	Hydrogen	Lab	Gas
Hydrogen Peroxide	2-500 lb drums	Hydrogen peroxide, water	Storage Yard	Gas
Ice Melt	10 - 20 lb bags	Potasium Chloride, Sodium Chloride	Storage yard/Process area	Solid
Isopropyl	1 - 55 gallon drum	Isopropyl	Lab	Liquid

Table 6.3 - Significant Materials Chemical Inventory

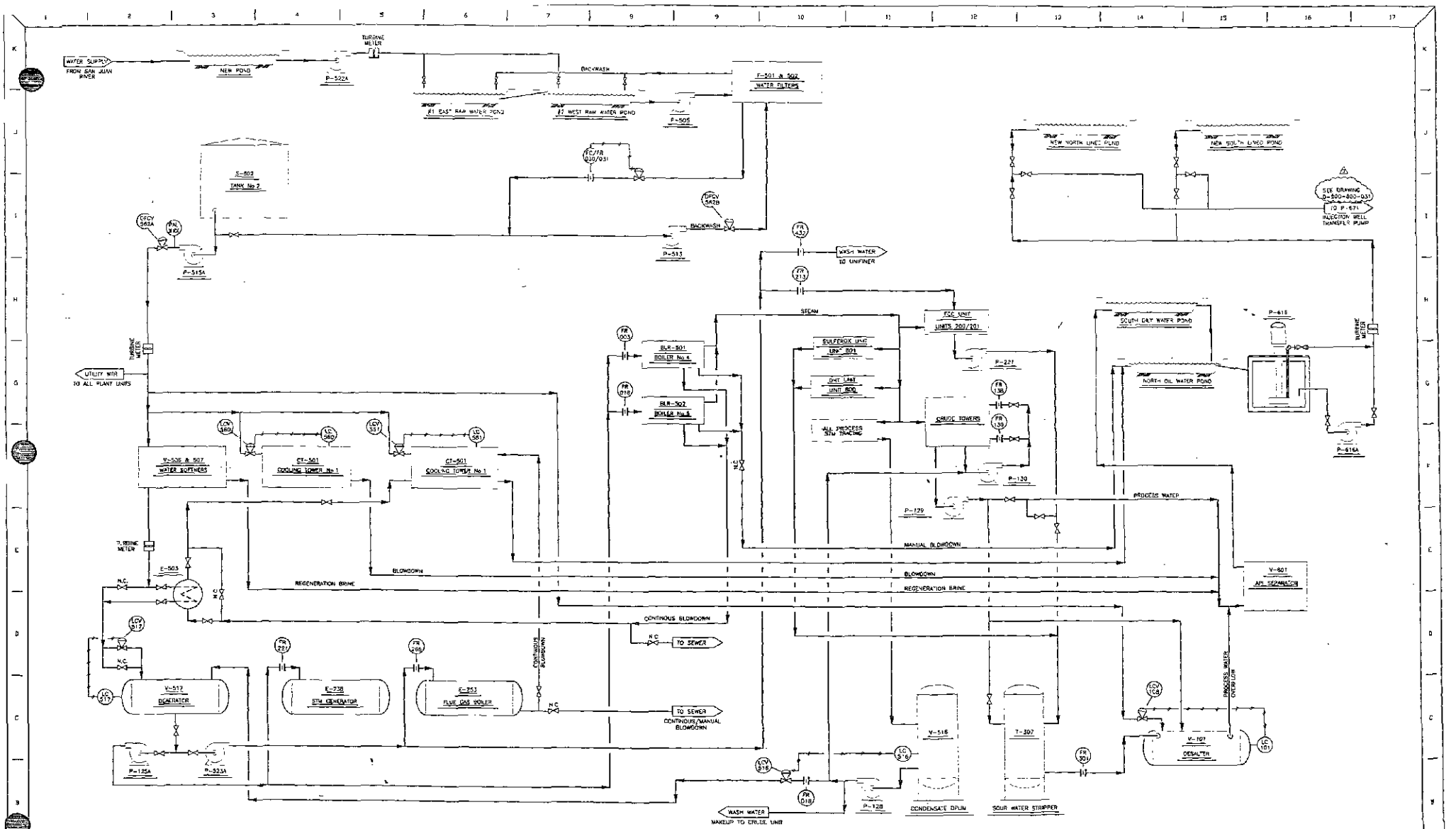
Product	Maximum Volume	Ingredients	Location	Physical State
Infineum F7589	500 gallon tank	Naphthalene	Terminals	Liquid
Ketjenfine	1 - 55 gallon drum	MO/NI/Alumina Silica Catalyst	Storage yard	Solid
Methanol	4 - 55 gallon drums	Methanol	Storage yard/Process area	Liquid
Muriatic Acid	1-55 gallon barrel	Hydrochloric Acid	Storage yard	Liquid
Nalco 7356	3 - 200 gallon tote	Phosphoric acid	Storage yard/Cooling Towers	Liquid
Nalco 71D5+	2 - 400 gallon tote	Kerosene	Storage yard/Cooling Towers	Liquid
Nalco Eliminox 02	2 - 400 gallon tote	Carbohyrazide	Storage yard/Boiler house	Liquid
Nalco NexGuard 22310	2 - 400 gallon tote	Acrylate Polymer, NaOH, Water	Storage yard/ Boiler house	Liquid
Nalco 23268	2 - 400 gallon tote	Sodium Tolytriazole	Storage yard/Cooling Towers	Liquid
Nalco 7308	1 - 55 gallon drum	Polyglycol, Ethoxylated Nonyl-phenol	Laboratory	Liquid
Nalco 7348	1 - 55 gallon drum	Ethoxylated Nonyl-phenol	Storage yard/Laboratory	Liquid
Nalco 7338	1 - 55 gallon drum	Glutaraldehyde	Storage yard/Laboratory	Liquid
Nalco Tri-act 1804	2 - 400 gallon tote	Cyclohexylamine, Water	Storage yard/Boiler house	Liquid
Nalcolyte 8157	2 - 250gallon tote	Aluminum Hydroxy Chloride	Storage yard/Pump house	Liquid
Nitrogen	18 - 165 lb cylinders	Nitrogen	Storage yard/Process area	Gas
Octane	2-55 gallon drums	PRF Octane Blend	Storage yard	Liquid
Octel Oil Red B liquid dye	540 gallon tank, 250 gallon tote	Organic Die in Xylene	Storage yard/Terminal	Liquid
Octel MO-1	2000 gallon tank	Propreitary Polymer, Xylene	Terminal	Liquid
Oxygen	4 - 150 lb cylinders	Oxygen	Storage yard/ Weld shack/Lab	Gas
Perchloroethylene	3 - 55 gallon drums	Tetrachloroethylene	Storage yard/Process area	Liquid

Table 6.3 - Significant Materials Chemical Inventory

Product	Maximum Volume	Ingredients	Location	Physical State
Pennzoil motor oil	2 - 55 gallon drums	Proprietary Blend	Storage yard	Liquid
Phillips 80 Octane	2 - 55 gallon drums	Isooctane, N-Heptane	Storage yard/Laboratory	Liquid
Phillips Isooctane	2 - 55 gallon drums	2,2,4-Trimethylpentane	Storage yard/Laboratory	Liquid
Phillips Toluene	*10 gallons*	*Toluene, Benzene*	Laboratory	Liquid
Philips Heptane	2 - 5 gallon pails	Heptane	Laboratory	Liquid
Philips Scentinel A	80 gallon tank	Ethyl Mercaptan	Terminal	Liquid
Phosphoric Acid	2 - 55 gallon drums	Phosphoric Acid	Storage Yard	Liquid
Purple K Dry Chem Extinquishing Agent	12 - 5 gal Buckets	Proprietary Blend of Potassium Bicarbonate	Tank #2 & Firehouse	Solid
Royal Flush 46	2 - 55 gallon drums	Proprietary Blend	Storage Yard	Liquid
SynGear Barrier Fluid 5	3 - 5 gallon tote	Proprietary Blend	Process area/ Storage yard	Liquid
SynGear 7.5 Oil	2 – 250 gallon tote	Proprietary Blend	Storage Yard/Compressors	Liquid
SynGear 7032 Oil	2 – 55 gallon drums	Proprietary Blend	Storage Yard/Terminals	Liquid
SynGear 7.00 Oil	2 – 250 gallon tote	Proprietary Blend	Storage Yard/Reformer	Liquid
Safety Kleen 105 Solvent	25 gallons	Parts Washer Solvent	Warehouse/Shop	Liquid
Stoddard solvent	3 - 55 gallon drums	Stoddard solvent	Storage yard	Liquid
Sulfuric acid	2 - 500 gallon tanks	Sulfuric acid	Cooling towers	Liquid
Sullair	1 - 55 gallon drum	Compressor fluid	Storage yard	Liquid
Synesstic 100	2 - 55 gallon drums	Proprietary Blend	Storage yard	Liquid
Syngear SH 7032	1 - 55 gallon drum	Proprietary Blend	Storage yard	Liquid
Terrestic 32	4 - 55 gallon drums	Distillates, hyrotreated heavy paraffinic	Compressor building	Liquid

Table 6.3 - Significant Materials Chemical Inventory

Product	Maximum Volume	Ingredients	Location	Physical State
Terrestic 100	1 - 55 gallon drum	Distallates, turbine oil	Storage Yard	Liquid
Unichem 7055	521 gallon tote	Polyethylbenzene Residue	Boiler House	Liquid
Unichem 7219	521 gallon tote	Aromatic Solvent	Boiler House	Liquid
Unichem 7376	521 gallon tote	Alkylamines	Boiler House	Liquid
Unichem 7533	3 - 55 gallon drums	Proprietary Blend, silver corrosion inhibitor	Storage yard/Process area	Liquid
Unichem 7543	800 gallons	Proprietary Blend	Storage yard/Process area	Liquid
Ultimate Degreaser	3 - 55 gallon drums	Trisodium Phosphate, Water	Storage yard/Process area	Liquid
Unocal ATF Dextron R II	6 - 55 gallon drums	Oil Mist	Storage yard/Process area	Liquid
X - Course Salt	16 - 2000 lb sacks	Sodium Chloride	Storage yard/Process area	Solid
Xylene	1 - 55 gallon drum	Xylene	Lab	Liquid
Z-seal	4 - 55gallon drum	Ethalene glycol	Storage Yard	Liquid
Zep + E Chemical	3 - 55 gallon drums	Potassium Dodecylbebzene Sulfonate	Storage yard/Process area	Liquid



NOTES

NO	REVISION	JOB NO.	BY	DATE	BY	DATE	BY	DATE	ENGR	BY	DATE	P.E. NO.
			DRAWN		INITIAL CHK.		FINAL CHK.			APPROVED		
3	Revised As Per Work-Up (Cotton)		NHB	3/93								
2	REDRAWN AND UPDATED		ATM	2/93								
1	REDRAWN AND UPDATED											

REFERENCE DWGS

SCALE	NONE
DATE	12/7/89
DRAWN BY:	ATM
INITIAL CHK	
FINAL CHK	
ENGR.	
APPR. BY	
P.E. NO.	

Bloomfield Refining Company
A Gary Energy Corporation Subsidiary

TITLE: PROCESS FLOW DIAGRAM WATER AND WASTEWATER

DWG. NO. D-500-800-016

REV. 3

Best Management Practices (BMPs)

In order to minimize potential contact between storm water and significant materials, the following operating, maintenance, and management practices have been implemented at the Bloomfield Refinery.

Best Management Practice #1: Good Housekeeping

Good housekeeping shall be practiced at the Bloomfield Refinery.

1. Refinery operations personnel shall maintain a clean and orderly work environment within the Process Area, Tank Farm, and the terminal facilities. Similarly, employees of the Transportation Maintenance Facility shall also conduct good housekeeping practices. Chemical drums, pails, and containers shall be placed in safe locations and used properly in order of minimize the risk of a spill or leak. At least once each month, employees shall police and clean-up their area of responsibility. Oily waste materials, rags, sample containers, and other debris shall be placed in appropriate disposal bins. All minor spills shall be cleaned up as soon as practicable, but not more than two days after occurrence. The Operations Managers shall oversee compliance with this task. At least once each quarter, the managers shall conduct an inspection with employees in order to confirm good housekeeping practices are being implemented satisfactorily.

2. Refinery maintenance personnel shall maintain a clean and orderly work environment within maintenance shops, roads, and unclassified sections of the refinery. Maintenance-related drums, pails, and other containers shall be stored and stacked properly in order of minimize the risk of a spill or leak. At least once each month, employees shall police and clean-up their area of responsibility. Oily waste materials, rags, and other debris shall be placed in appropriate disposal bins. All minor spills shall be cleaned up as soon as practicable, but not more than two days after occurrence. The Maintenance Manager shall oversee compliance with this task. At least once each quarter, the manager shall conduct an inspection with employees in order to confirm good housekeeping practices are being implemented satisfactorily.

3. Refinery warehouse and office personnel shall maintain a clean and orderly work environment within the warehouse and main office building. At least once each month, these employees shall police and clean-up their area of responsibility. All minor spills shall be cleaned up as soon as practicable, but not more than two days after occurrence. The Administration Manager shall oversee compliance with this task. At least once each quarter, the manager shall conduct an inspection with employees in order to confirm good housekeeping practices are being implemented satisfactorily.

Best Management Practice #2: Spill Prevention

Design and standard operating practices shall be used to minimize the likelihood of leaks, spills, or releases occurring within the refinery.

1. Process equipment, vessels, tanks, and piping shall be engineered to safely and reliably contain applicable process fluids under normal operating conditions. Appropriate industry standards and engineering practices shall be used in the design, construction, and maintenance of all equipment.

2. Process vessels, equipment, and piping shall be protected against over-pressure and rupture by installation of properly sized safety relief valves.

3. All petroleum storage tanks shall be constructed of carbon steel, or approved equal, and protected against corrosion.

4. Storage tanks shall be gauged daily and recorded. Tank inventory shall be checked against input and output quantities to detect potential leakage.

5. Portable storage tanks and drums used within the refinery shall be placed within secondary containment pads or dikes.

6. All terminal operations shall be performed in compliance with DOT regulations and shall be attended full-time.

7. The refinery maintains an SPCC plan that contains measures to prevent and control product spills, including those resulting from human operational error or equipment failure. The refinery also maintains an LDAR (Leak Detection and Repair) program that requires testing, inspection and monitoring for equipment leaks.

8. Transportation and Truck Shop policy states that tankers will not contain product while parked overnight at the Regional Office or at the Truck Shop.

Best Management Practice #3: Process Surveillance & Visual Inspections

Routine visual inspections shall be conducted at the Bloomfield Refinery.

1. At least once per shift, operations personnel shall conduct a visual inspection of the Process Area, Tank Farm, and the Terminal Facility. Surveillance rounds shall include process equipment, vessels, tanks, piping, containment berms, and facility grounds. Each area shall be visually inspected for signs of abnormal conditions, leakage, or spills.

2. At least once per day, maintenance personnel shall conduct a visual inspection of maintenance areas, vehicle parking areas, and unclassified areas of the refinery. Each area shall be visually inspected for signs of abnormal conditions, leakage, or spills.

3. Leaks or spills shall be immediately reported to the Shift Supervisor.

4. At least once per month, maintenance personnel shall conduct a visual inspection of storm water control facilities; including berms, drains, culverts, ditches, swales, and detention ponds. A work order shall be generated whenever any signs of equipment damage, failure, plugging, obstruction, or contamination have been discovered. Repairs shall be implemented as soon as practicable. The Environmental Manager shall be notified if contamination is discovered.

Immediately!

Best Management Practice #4: Leak and Spill Controls

The following controls have been installed to contain potential leaks and spills.

1. All petroleum storage tanks are located within full encirclement earthen containment dikes constructed of low permeability soil. All basins are sized to contain the maximum volume of the largest tank within the dike, plus an additional freeboard height of at least 6 inches. Tank dikes are not equipped with drains. Precipitation is infrequent and stormwater trapped within diked areas typically evaporates. Spills are removed via vacuum trucks or portable pumping systems. Recovered material is transferred to a slop tank or the WWTU, as appropriate.

2. Refinery processing units are located in the Process Area. Within this area, all vessels, pumps, piping, and related equipment are located within curbed concrete containment pads. Most containment pads drain directly to the WWTU. Some containment pads drain to sealed collection sumps which can then be pumped to either a slop tank or the WWTU, as appropriate.

3. Terminal stations are located within curbed containment pads equipped with sumps and drains. All terminal stations drain to earthen pits. Contaminated storm water is pumped to the WWTU.

4. Portable containers located within the west storage yard are handled as follows. Drums are placed within a special secondary containment structure located at the south end of the yard. Totes are placed within a curbed concrete containment pad, which drains to a sealed sump.

5. Transfer piping and other spill sources located within the refinery but outside of containment structures are located such that surface topography will cause spills to flow to various retention basins as shown on the storm water site map.

6. Spilled material, which accumulates in any retention basin, is removed via portable skimmers and pumps, and then transferred to either a slop tank or the WWTU, as appropriate.

Are petrol slop Tanks connected with TB?

Best Management Practice #5: Preventative Maintenance

Refinery equipment shall be inspected, maintained, and repaired as necessary in order to reduce the likelihood of containment failure.

1. Pressure vessels, drums, tanks, pumps, piping, and other containment equipment shall be routinely inspected for mechanical integrity. Inspection procedures and schedules are described in the refinery Process Safety Management (PSM) program.

2. Tank berms and secondary containment structures shall be routinely inspected for stability and integrity.

3. Storm water collection piping, culverts, ditches, channels, swales, diversion boxes, valves, and other control devices shall be routinely inspected for obstructions, plugging, leaks, damage, stability, and integrity.

4. Inadequate facilities shall be repaired or replaced in a timely fashion.

5. Transportation personnel conduct equipment inspections on a daily basis. Inspection procedures are covered in the Transportation Handbook Supplement.

Best Management Practice #6: Spill Response & Clean-up

In the event that a spill occurs, the following procedures shall be followed:

1. Safety is the first priority. Alert fellow employees. Notify the Shift Supervisor. Assess and respond to imminent safety hazards first. If flammable materials are involved, eliminate area ignition sources and assign a fire watch to the site. Assure that all persons involved in the clean-up use appropriate PPE.

2. When safe to do so, the Shift Supervisor will devise a plan and implement an appropriate spill response. All response actions are incident specific, but may include the following key elements:

   a) If a spill threatens to escape refinery boundaries, an emergency response under the Integrated Contingency Plan must be initiated; otherwise,

   b) Stop the source of the spill,

   c) If not already contained, stop the spread of the spill,

   d) Recover free product and absorb residual product, and

   e) Remove impacted soil and sorbents to containers or onto a plastic lined holding pile in a safe location. Or remediate in place if appropriate.

3. The appropriate managerial authority will investigate the cause of the spill, document the circumstances and response, and if appropriate, make recommendations to the Refinery Manager to prevent a recurrence.

Best Management Practice #7: Sediment and Erosion Control

The regional surface soil layer is composed of alluvial and fluvial silts and clays. The associated pollutants include TSS, TDS, and Turbidity. Areas with a high potential for significant soil erosion include unpaved plant roads and earthen berms.

Soil erosion and sediment build-up shall be controlled in order to prevent failure of the storm water controls.

1. Build-up of sediment within drains, culverts, ditches, swales, and detention ponds can undermine the operation of storm water controls. Accumulated sediment shall be removed, as necessary, to allow for proper operation of these facilities. All drains, culverts, ditches, swales, and detention ponds shall be inspected monthly. Remedial actions shall be implemented as soon as practicable, but not more than two weeks after discovery. Ditches and swales shall be cleared and reconstructed as necessary to ensure proper flow control and storm water containment.

2. Soil and bank stabilization shall be employed, wherever necessary, in order to inhibit excessive erosion.

   Approved methods include the following:

   - Reconstruct berm sidewalls to eliminate erosion gaps and cuts,
   - Minimize slope and grade of barren areas,
   - Installation of silt fences or straw bales,
   - Use of rock, stone, or other form of rip rap,
   - Use of vegetative coverings in areas where a grass fire will not negatively impact fire protection and plant safety.

Best Management Practice #8: Cooling Tower Water

Treatment of water to the cooling tower shall be controlled so as to prevent contamination of the environment via the dispersal of water vapor and mist from the cooling towers.

1. All water treatment chemicals shall be reviewed and approved by the Environmental Manager prior to use.

2. No chromate-based chemicals shall be used to treat cooling tower make-up water.

Best Management Practice #9: Self-Audits & Annual Compliance Evaluations

Compliance with the provisions of 40 CFR Part 122.26 and this SWPPP shall be demonstrated annually via a self inspection audit conducted as follows:

1. The Environmental Manager, or other appropriate person(s) designated by the Refinery Manager, will conduct the self inspection audit each year.

2. A written inspection report shall be prepared and used to record findings and recommendations. Recommendations, if any, must be promptly reported to the Refinery Manager for review and evaluation. As necessary and appropriate, the Refinery Manage shall promptly direct that remedial or corrective actions be implemented.

3. The inspection report must be signed and dated by the inspector and the Refinery Manager, and kept on file in Appendix E for at least five years.

Best Management Practice #10: Employee Training

All employees shall receive general safety and environmental compliance training at the beginning of employment and prior to performing normal duties and assignments. In addition, specific SWPPP training shall be provided to all process and maintenance employees that may become involved in SWPPP related activities. This training shall cover the provisions of this plan and include the following topics:

(This is only an outline of the training. The detailed training materials can be found in the pertinent records section of the SWPPP.

- Goals and components of the SWPPP.
- Best Management Practices (Good Housekeeping, Spill Prevention, Process Surveillance & Visual Inspections, Leak and Spill Controls, Preventive Maintenance, Spill Response & Cleanup, Sediment and Erosion Control, Cooling Tower Water)
- Location of potential spill sources
- Location and proper use of spill response equipment and supplies.
- Relationship between SWPPP, SPCC (Spill Prevention and Countermeasure Control Plan), and LDAR (Leak Detection and Repair).

In addition to initial employment training, all employees shall receive annual refresher training which must include the following topics:

- Review of spill prevention, detection, and response procedures,
- Review of changes in facilities or operations during the previous year, and
- Review of spill events and response actions during the previous year.

Best Management Practice #11: Recordkeeping

As required by applicable regulations, records shall be kept and maintained as follows:

1. Self audit reports and documentation. Appendix E of the SWPPP.
2. Spill reports and documentation. Appendix E of the SWPPP.
3. Preventative maintenance and equipment inspection records. This documentation will be included in the PSM program records.
4. SWPPP updates, revisions, and modifications.
5. Storm water sampling and analysis data. Appendix D of the SWPPP.
6. Quarterly visual examination of storm water discharges. Appendix D of the SWPPP.
7. Transportation maintenance, inspection, and training records will be kept in the Dispatch Office and Administration Office of the Regional Office Building.

LEGEND

EXPRESS

EXISTING MAINTENANCE HOLE
(CONTROL INTERVAL)

EXISTING MAINTENANCE HOLE
(CONTROL INTERVAL)

GOLDBORING

NEGATIVE MONITORING WELL

POSITIVE (OR WHERE SEPARATE PHASE
MEASUREMENT IS APPLICABLE)

NO FREE PRODUCT OR DRAFT OR ANY
INDICATIONS OF PRODUCT WERE DETECTED

SAN JUAN ROAD

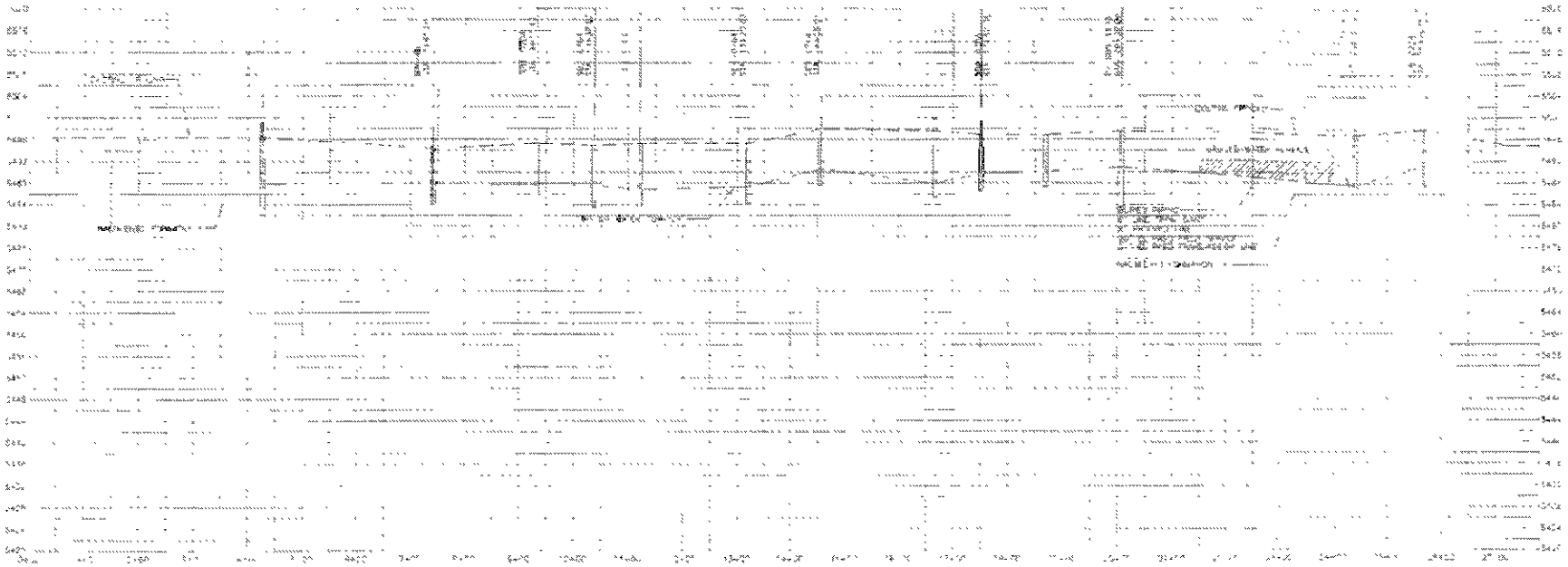
PLACITAS

SCALE

DEVELOPMENT PLAN FOR SUBDIVISION

OCTOBER 2020

WILDFLOWER
FARMS



SECTION A-A

LEGEND:

SOIL BORING WHERE SEPARATE PHASE HYDROCARBON (SPH) WAS DETECTED

MONITORING WELL WHERE SEPARATE PHASE HYDROCARBON (SPH) WAS DETECTED

100 0 200

SCALE: 1" = 200'

MALCOLM PIRNIE

NORTH BOUNDARY BARRIER CROSS SECTION A-A

NOVEMBER 2002

FIGURE 5

SHEET 1 of 1

PRECISION ENGINEERING, INC.

File #: 03-015

Bore Point: PLANT COORDINATES
N5660.33 E6410.00
Water Elev: NOT ENCOUNTERED

LOG OF TEST BORINGS

Site: Giant Refinery
Bloomfield, NM
Elevation:

Boring No.: 03015-B1

Date:1-17-03

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	SAMPLER	MATERIAL CHARACTERISTICS (MOISTURE,CONDITION,COLOR,GRAINSIZE,ETC.)	%M	L	PI	CLASS.
	0-2.0		**0**0		G	**GRAVEL**, VERY SANDY, SILTY, SLIGETY CLAYEY,				
			00		G	MOIST, LIGHT BROWN-BROWN, MEDIUM DENSE-DENSE				
			00							
	2.0-4.0		**0**0			MORE SANDY @2', CLAYEY				
			00	2.5						
			00							
			00							
			00							
	4.0-7.0		**0**0			**GRAVEL**, VERY COBBLY, VERY DENSE, DAMP-DRY,				
			00	5.0		LIGHT GREY				
			00		S					
			00		S					
			00		S	NACIMIENTO FORMATION				
	7.0-10.0		--_--_		S	**MUDSTONE**, SILTSTONE, WEAK, DRY, DARK GREEN, DA				
			-- --	7.5	S					
			-- --		S					
			-- --							
			-- --							
			--_--_							
			-- --							
	10.0		-- --	10.0						
	TOTAL DEPTH									
				15.0						
				20.0						

Size & Type of Boring:4 1/4" ID HOLLOW STEMMED AUGER

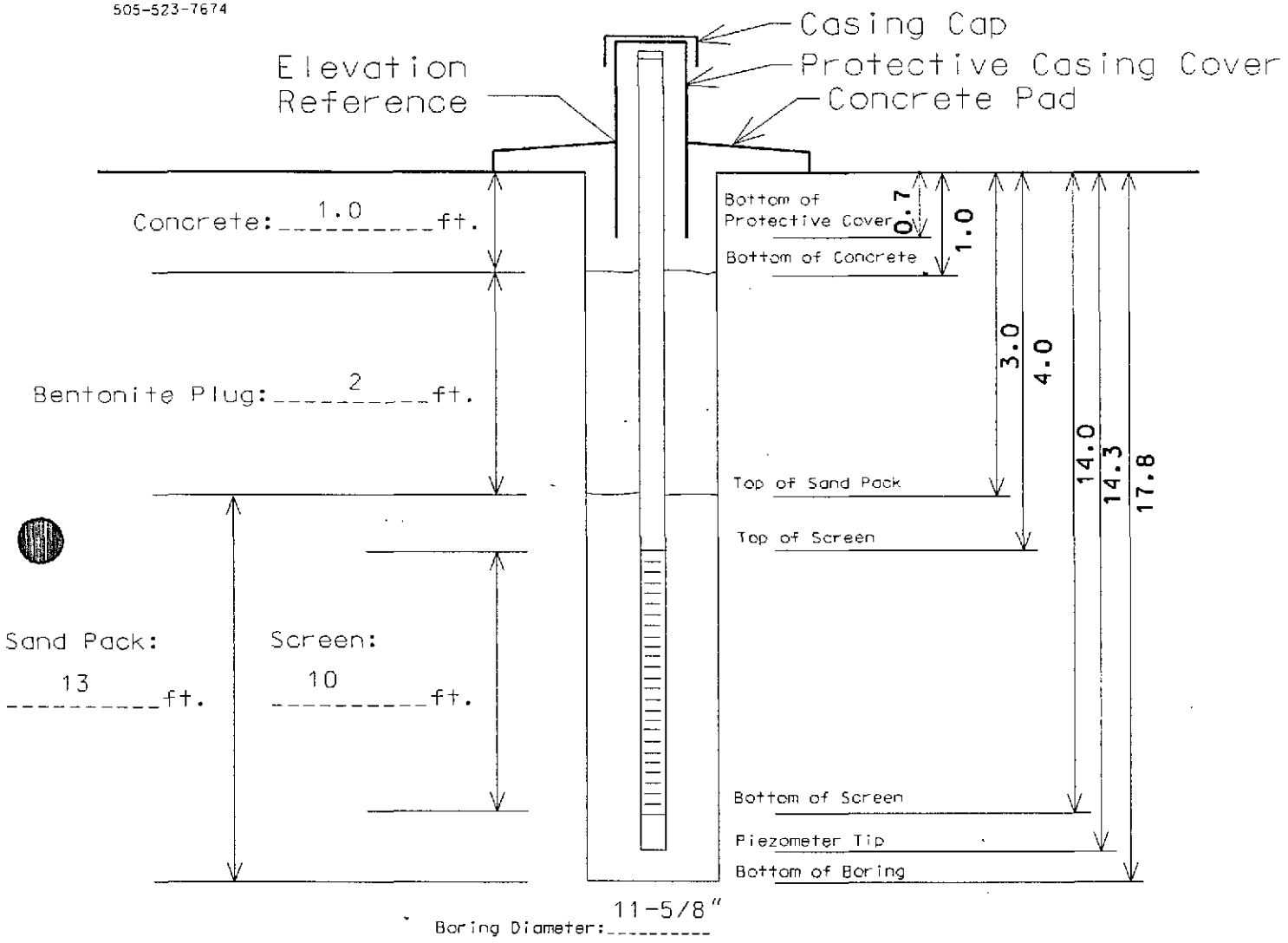
Logged By: WHK

PRECISION ENGINEERING, INC.

505-523-7674

Installation Diagram

Monitoring Well No. MW - 45



Boring Diameter: 11-5/8"

Sand Type: 10-20 Silica

Bollards, Type/Size: Steel, 3" min.

Bentonite: 3/8" Chip

Screen Type/Size: 4" PVC Sch. 40, 0.010" Slotted

Cement/Grout: ---

Riser Type/Size: 4" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: 5790.85

Other: N/A

Bottom Cap Used? Yes

Site Easting: 2837.78

Project #: 03-015

Project Name: Bloomfield Wells

Elevation: 5496.33

Sh 1 of 1

PRECISION ENGINEERING, INC.

File #:03-015

Bore Point:N5790.85'
E2837.78
Water Elev: 9.54'

LOG OF TEST BORINGS

Site:Giant Refinery
Bloomfield, NM
Elevation: 5496.33

Boring No.: MW 45

Date:1-15-03

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	SAMPLE	MATERIAL CHARACTERISTICS (MOISTURE,CONDITION,COLOR,GRAINSIZE,ETC.)	%M	L	PI	CLASS.
	0-1.0	Grab	00*00*		G	**GRAVEL**, TO 12", SANDY, DENSE, DAMP				
	1.0-5.0		00*00*		G					
			00*00*		G					
			00*00*		G					
			00*00*	2.5	G					
			00*00*		G					
			00*00*		G					
			00*00*		G					
			00*00*		G					
			00*00*	5.0	G					
	5.0-6.5	6-14-32	00*00*		S					
			00*00*		S					
	6.5-7.0	7-60	00*00*		S					
			00*00*		S	NACIMIENTO FORMATION				
	7.0-8.5	37-27-31	--*--*	7.5	S	**MUDSTONE**, SANDY, DENSE, WET, DARK GREEN				
			--*--*		S					
			--*--*		S					
	9.0-10.0	14-65	--*--*		S	SAME, HYDROCARBON ODOR (GASOLINE)				
			--*--*		S					
			--*--*	10.0	S					
	10.0-11.0	16-60-60(4)	--*--*		S					
			--*--*		S					
			--*--*							
			--*--*							
			--*--*							
			--*--*							
			--*--*							
			--*--*							
	14.0-14.7	54-50(1")	--*--*		S	SOME LAMINATION, LIGHTER IN COLOR				
			--*--*	15.0	S					
			--*--*							
			--*--*							
			--*--*							
			--*--*							
	17.0-17.8	36-50(3")	--*--*		S	**SANDSTONE**, WEAK, SILTY, MUDDY, WHITE/LIGHT				
	17.8		--*--*		S	BROWN, VERY DENSE, WET-MOIST				
	TOTAL DEPTH									
				20.0						

Size & Type of Boring:4 1/4" ID HOLLOW STEMMED AUGER

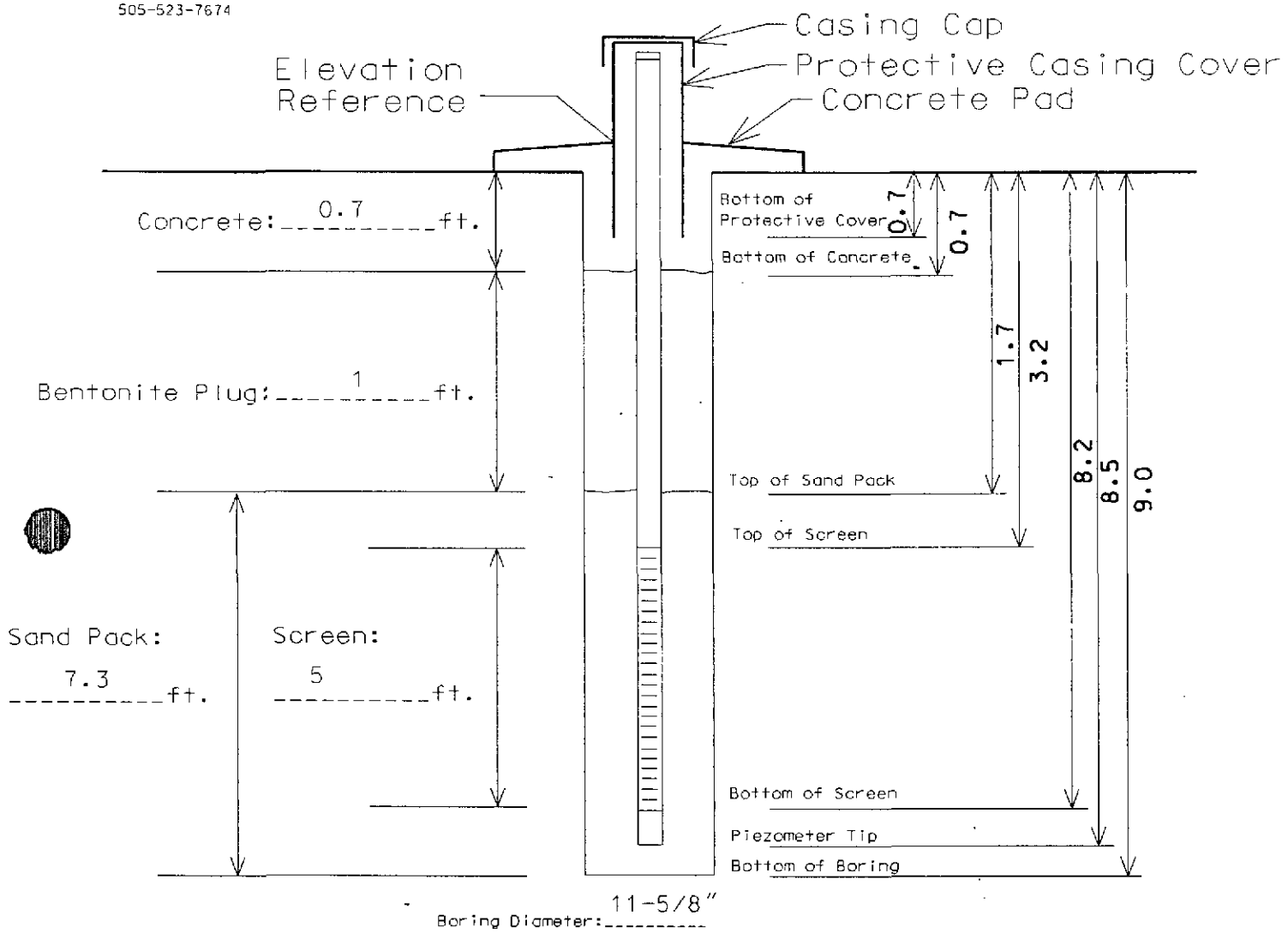
Logged By: WHK

PRECISION ENGINEERING, INC.

505-523-7674

Installation Diagram

Monitoring Well No. MW - 46



Boring Diameter: 11-5/8"

Sand Type: 10-20 Silica

Bollards, Type/Size: Steel, 3" min.

Bentonite: 3/8" Chip

Screen Type/Size: 4" PVC Sch. 40, 0.010" Slotted

Cement/Grout: ---

Riser Type/Size: 4" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: 5560.48

Other: N/A

Bottom Cap Used? Yes

Site Easting: 2576.06

Project #: 03-015

Project Name: Bloomfield Wells

Elevation: 5496.43

Sheet: 1 of 1

PRECISION ENGINEERING, INC.

File #:03-015

Bore Point:N5560.48'
E2576.06

LOG OF TEST BORINGS

Site:Giant Refinery
Bloomfield, NM

Water Elev:

Elevation: 5496.43

Boring No.: MW 46

Date:1-16-03

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	SAMPLE	MATERIAL CHARACTERISTICS (MOISTURE,CONDITION,COLOR,GRAINSIZE,ETC.)	%M	L	PI	CLASS.
	0-1.0	Grab	**0**0		G	**SAND**, VERY GRAVELLY, COBBLY, LIGHT BROWN,				
			00		G	LOOSE				
			00							
			00							
			00	2.5						
			00							
			00							
			00							
			00							
			00	5.0						
	5.0-6.5	3-4-4	**0**0		S	SAME				
			00		S					
			00		S	NACIMIENTO FORMATION				
	6.5-8.0	13-18-18	--_--_		S	**MUDSTONE**, SILTY, HARD, DRY, LIGHT GREEN				
			-- --	7.5	S					
			-- --		S					
			-- --							
			-- --							
	9.0		-- --							
	TOTAL DEPTH									
				10.0						
				15.0						
				20.0						

Size & Type of Boring:4 1/4" ID HOLLOW STEMMED AUGER

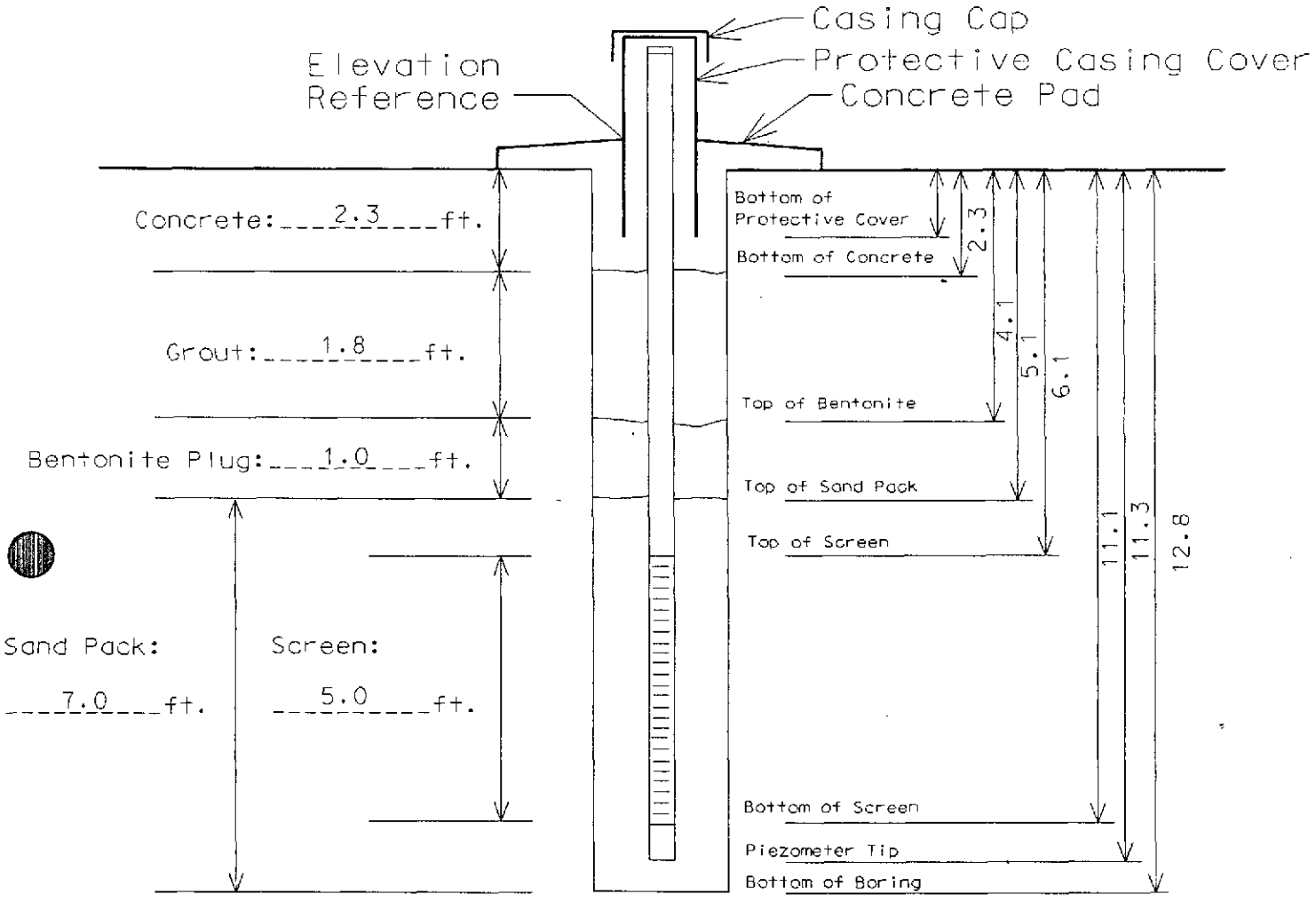
Logged By: WHK

PRECISION ENGINEERING, INC.

505-523-7674

Installation Diagram

Monitoring Well No. Seep 5 (MW 47)



Boring Diameter: 8 5/8"

Sand Type: 10-20 Silica

Bollards, Type/Size: Steel, 3"

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: 6% Bentonite

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: 5413.57

Other: N/A

Bottom Cap Used? Yes

Site Easting: 2220.90

Giant Refining Co.

Project #: 03-015

Project Name: Bloomfield Wells

Elevation: TBD

Sheet: 1 of 1

PRECISION ENGINEERING, INC.

File #: 03-015

Bore Point: PLANT COORDINATES
N5413.7 E2220.90
Water Elev: 7.49'

LOG OF TEST BORINGS

Site: Bloomfield Refinery
Elevation: TO BE DETERMINED

Boring No.: Seep 5 (MW #47)

Date: 3-6-03

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	SAMPLE	MATERIAL CHARACTERISTICS (MOISTURE,CONDITION,COLOR,GRAINSIZE,ETC.)	%M	LL	PI	CLASS.
	0.0-5.0	GRAB	o0**0o		G	**GRAVEL**, MEDIUM SANDY, LIGHT BROWN, SOME				
			o0**0o		G	COBBLES TO BOULDER SIZE, DENSE				
			o0**0o		G					
			o0**0o		G					
			o0**0o	2.5	G					
			o0**0o		G					
			o0**0o		G					
			o0**0o		G					
			o0**0o		G					
			o0**0o	5.0	G					
	5.0-6.5	8-18-18	o0**0o		S	**GRAVEL**, MEDIUM SANDY, LIGHT BROWN, SOME				
			o0**0o		S	COBBLES TO BOULDER SIZE, DENSE				
			o0**0o		S					
			o0**0o							
			o0**0o	7.5						
			o0**0o							
			o0**0o							
			o0**0o							
	9.0-9.7	9-100(1)	o0**0o							
			o0**0o	10						
	10.2-11.3		------		S	**NACIMIENTO FORMATION**				
			------		S	**MUDSTONE**, SILTSTONE, FISSLE, BLACK, HARD, WET				
			------		S					
	11.3-12.8	13-37-60	------							

	12.8		------							
	TOTAL DEPTH									
				15						
				20						

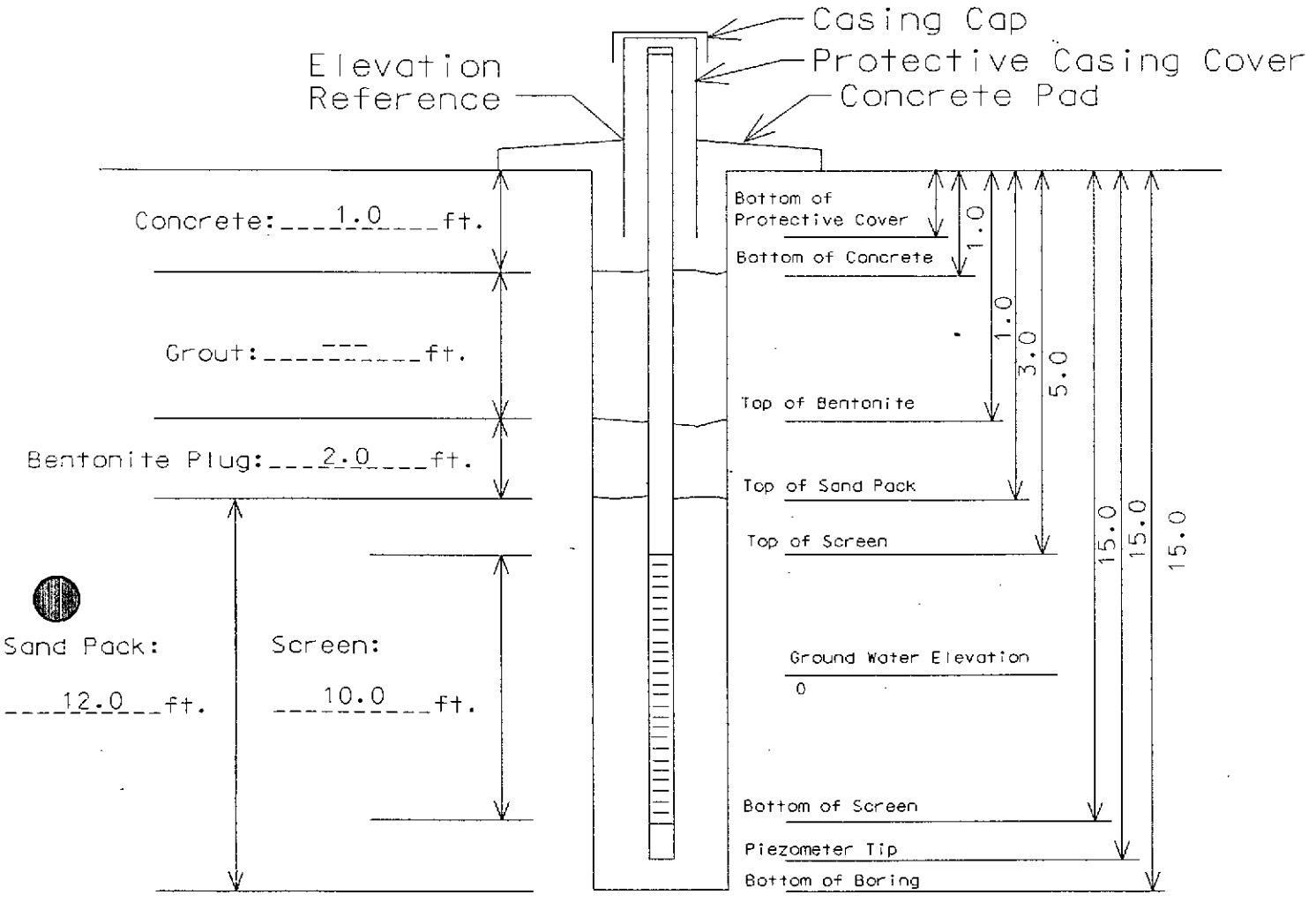
Size & Type of Boring: 4-1/4" ID Hollow Stemmed Auger

Logged By: WHK

PRECISION ENGINEERING, INC.
505-523-7674

Installation Diagram

Monitoring Well No. MW-48



Boring Diameter: 12 5/8"

Sand Type: 8-12 Silica

Bollards, Type/Size: Steel, 3"

Bentonite: 3/8" Chips

Screen Type/Size: 4" PVC Sch. 40, 0.020" Slotted

Cement/Grout: ---

Riser Type/Size: 4" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: 6204.63

Other: N/A

Bottom Cap Used? Yes

Site Easting: 2700.70

Giant Refining Co.

Project #: 03-122

Project Name: Bloomfield Wells

Elevation: not surveyed

Sheet: 1 of 1
Bore Point: See plan
[illegible]ter Elevation: 7.70
Boring No.: MW-48

Precision Engineering, Inc.
P.O. Box 422
Las Cruces, NM 88004
505-523-7674

File #: 03-122
Site: Bloomfield
Giant Refining
Elevation:
Date: 10/28/2004

Log of Test Borings

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	MATERIAL CHARACTERISTICS (MOISTURE, CONDITION, COLOR,ETC.)	%M	LL	PI	CLASS.
	0-1		*-**-*-*		**Silt**, sand, very fine to fine, brown, damp, a few				
			*-*O-*-*		cobbles				
	1-15.0		*-*o-*-*		**Sand**, silty, very fine to fine, brown, damp,				
			*-*o-*-*		gravelly				
	2.0		*-*o-*-*	2.5	Black with hydrocarbon odor				
			*-*o-*-*						
			*-*o-*-*						
			*-*o-*-*						
			********		medium to coarse sand				
			********	5.0					
			********						
			********						
			********						
			********						
			********	7.5					
			********		water bearing				
			********						
			********						
			********						
			o*	10.0	some gravel				
			o*						
			o*						
			o*						
			o*						
			o*						
			o*						
			o*						
			o*						
			o*	15.0					
					T.D. 15.0				
					Bottom of well 15'				
					Placed 4" PVC, 10' factory slotted .020" screen				
					Sanded with 8-12 Silica Sand to 3' bgs				
					Bentonite Plug to 1' bgs				
				20.0					

SIZE & TYPE OF BORING: 4 1/4" ID HOLLOW STEMMED AUGER   LOGGED BY: KM

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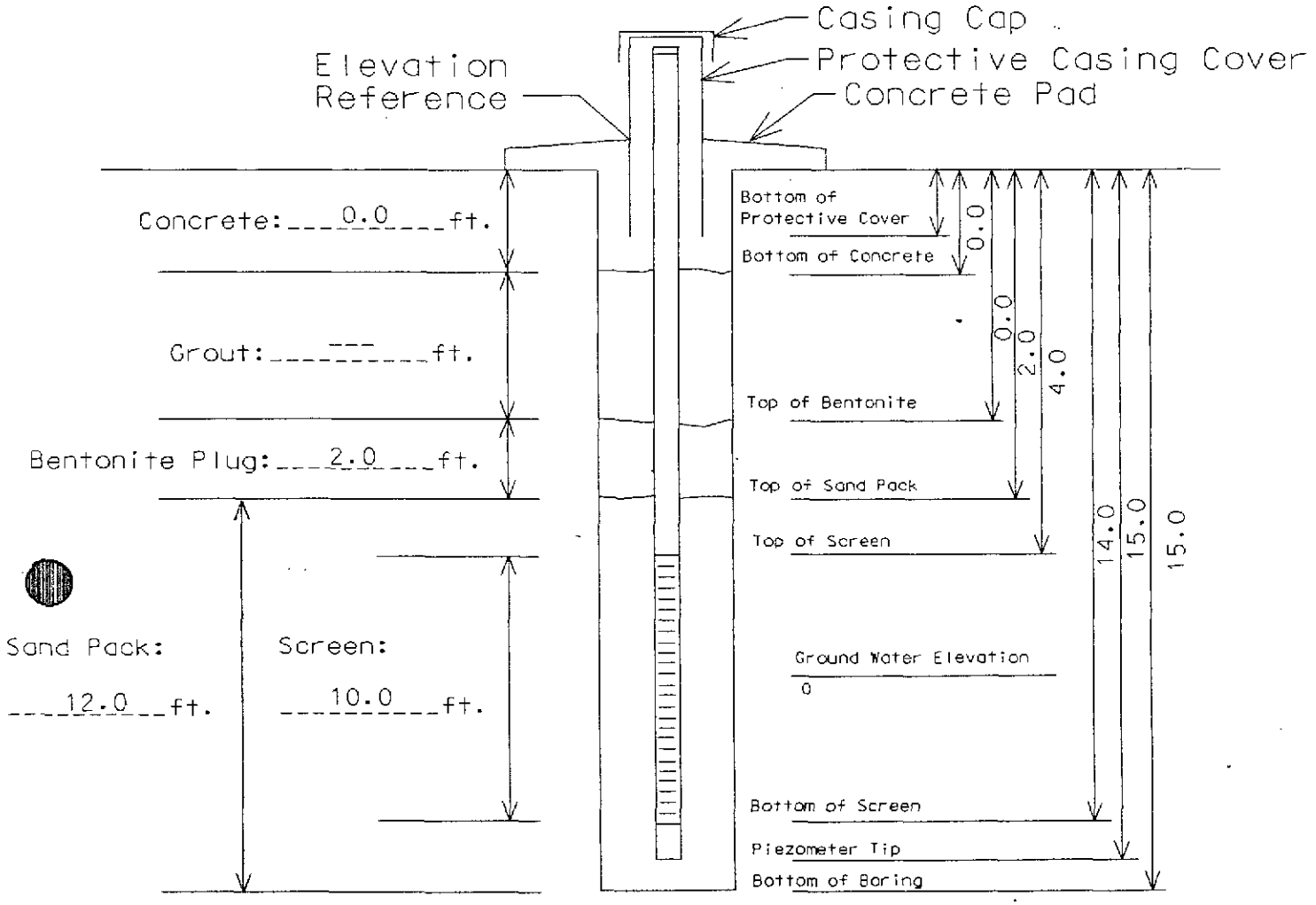
PRECISION ENGINEERING, INC.
505-523-7674

Installation Diagram

Monitoring Well No. MW-49



Boring Diameter: 12 5/8"

Sand Type: 8-12 Silica

Bollards, Type/Size: Steel, 3"

Bentonite: 3/8" Chips

Screen Type/Size: 4" PVC Sch. 40, 0.020" Slotted

Cement/Grout: ---

Riser Type/Size: 4" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: 6196.16

Other: N/A

Bottom Cap Used? Yes

Site Easting: 2653.14

Giant Refining Co.

Project #: 03-122

Project Name: Bloomfield Wells

Elevation: Not Surveyed

Sheet: 1 of 1
Bore Point: See plan
Water Elevation: 9.00
Boring No.: MW49

Precision Engineering, Inc.
P.O. Box 422
Las Cruces, NM 88004
505-523-7674

File #: 03-122
Site: Bloomfield
Giant Refining
Elevation:
Date: 10/28/2004

Log of Test Borings

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	MATERIAL CHARACTERISTICS (MOISTURE, CONDITION, COLOR,ETC.)	%M	LL	PI	CLASS.
	0-3		*O*-*-O *O*-*-O *O*-*-O *O*-*-O *O*-*-O *O*-*-O	2.5	**Cobbles**, sand, very fine to fine, gravel, brown, damp, cobbles				
	3-15.0		*-*o-*-* *-*o-*-* ******** ******** ******** ******** ******** **O**O* **O**O* **O**O* ******** ******** ******** ******** ******** ******** ******** ******** ******** ******** ******** ******** ********	5.0 7.5 10.0 15.0	**Sand**, silty, very fine to fine, brown, moist, fine to medium sand Black with hydrocarbon odor, wet some cobbles water bearing medium to coarse sand, grey				
				20.0	T.D. 15.0 Bottom of well 14' Placed 4" PVC, 10' factory slotted .020" screen Sanded with 8-12 Silica Sand to 2' bgs Bentonite Plug to gs				

SIZE & TYPE OF BORING: 4 1/4" ID HOLLOW STEMMED AUGER — LOGGED BY: KM

C:\Documents and Settings\cindyh\Local Settings\Temporary Internet Files\OL

GIANT
REFINING COMPANY

Certified Mail # 7099 3220 0010 2242 4061

December 29, 2003

Dave Cobrain
NMED Hazardous Waste Bureau
2905 Rodeo Park Drive East
Bldg. 1
Santa Fe, NM 87505

Re: Evaluation of Giant Bloomfield's SWMUs 1 through 12

Dear Dave:

Enclosed is the evaluation and assessment report of the Bloomfield refinery solid waste management units (SWMUs) 1 through 12, as requested in your letter of January 6, 2003, item #18. This report includes historical site use, investigation results, analytical results and correspondance between the agencies and Giant in regards to each SWMU.

Four of the SWMUs are active, six are closed and two are difficult to identify and should be dropped.

The four active SWMUs are:

SWMU No. 1: SOWP and NOWP now designated as the double lined aeration lagoons.
SWMU No. 5: the heat exchanger bundle cleaning area.
SWMU No. 10: the fire training area.
SWMU No. 12: the API separator.

The six closed SWMUs are:

SWMU No. 2: the former drum storage area.
SWMU No. 4: the transportation terminal sump.
SWMU No. 7: the evaporation ponds.
SWMU No. 8: the landfill.
SWMU No. 9: the landfill pond.
SWMU No. 11: the spray irrigation area.

Uncertainty exists in correspondance, records and regulatory documents as to the exixtence of SWMUs No. 3 and 6, underground piping. There is very little underground piping and Bloomfield has no knowledge that these pipelines have leaked.

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

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

GIANT
REFINING COMPANY

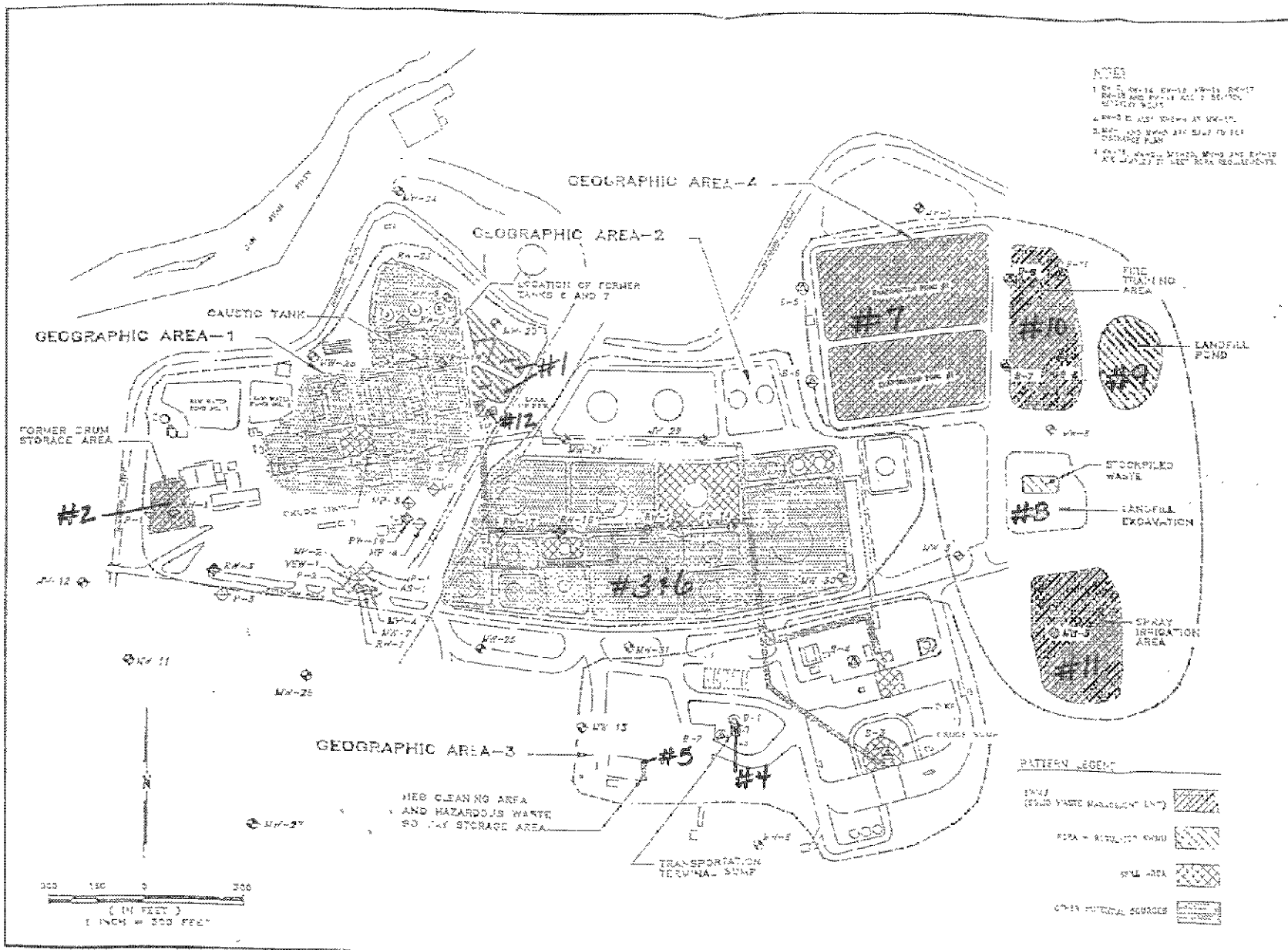
Giant requests that SWMUs No. 2,3,4,6,7,8,9 and 11 be removed as corrective action units.

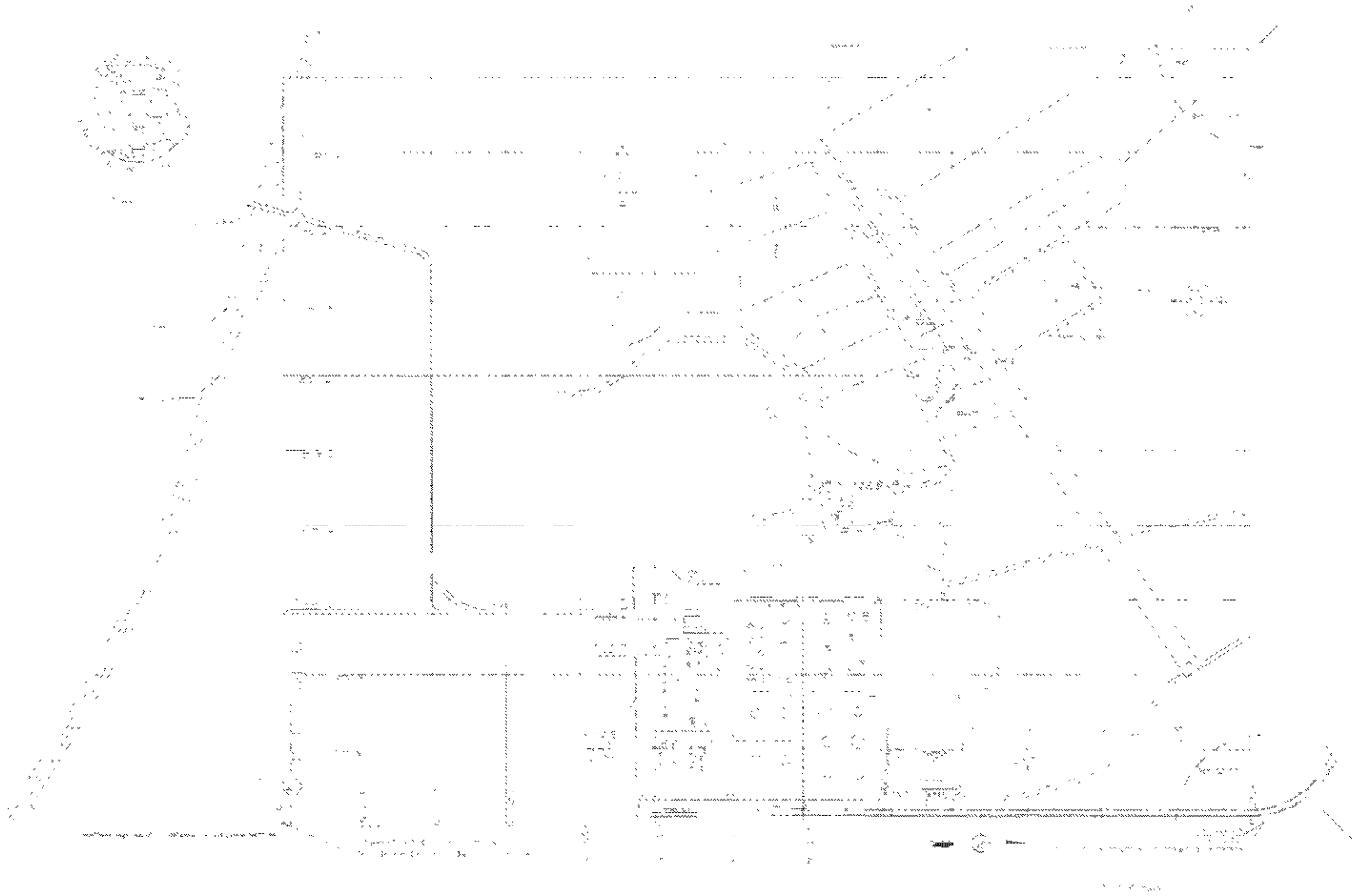
If I can be of further assistance please contact me at (505) 632-4171

Sincerely,

James R. Schmaltz

C: C. King w/o enclosure
E. Riege w enclosure


GEOGRAPHIC AREA-4
GEOGRAPHIC AREA-2
GEOGRAPHIC AREA-1
GEOGRAPHIC AREA-3
CAUSTIC TANK
LOCATION OF FORMER TANKS 6 AND 7
FORMER DRUM STORAGE AREA
FIRE TRAINING AREA
LANDFILL POND
STOCKPILED WASTE
LANDFILL EXCAVATION
SPRAY IRRIGATION AREA
#1
#2
#3
#4
#5
#7
#9
#10
#11
#12
#13
TRANSPORTATION TERMINAL SUMP
NOTES
LEGEND
ATTENTION
PATTERN LEGEND
SOLID WASTE MANAGEMENT UNITS AND POTENTIAL SOURCE AREAS
FIGURE 17



3R0258

MALCOLM PIRNIE

MALCOLM PIRNIE, INC.
INDEPENDENT ENVIRONMENTAL ENGINEERS, SCIENTISTS & CONSULTANTS

RECEIVED

JUL 28 2005

Oil Conservation Division
Environmental Bureau

June 30, 2005

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Frances Drive
Santa Fe, NM 87505

Dear Mr. Price:

As discussed in our June 29, 2005 telephone call, Malcolm Pirnie is sending you the enclosed documents on behalf of Giant Refining:

- July 2001 report of Monitoring Well Installation, Ground Water Sampling and Bioventing Pilot Test for the Bloomfield Crude Station.
- March 2005 Annual Report for Bloomfield Crude Station.

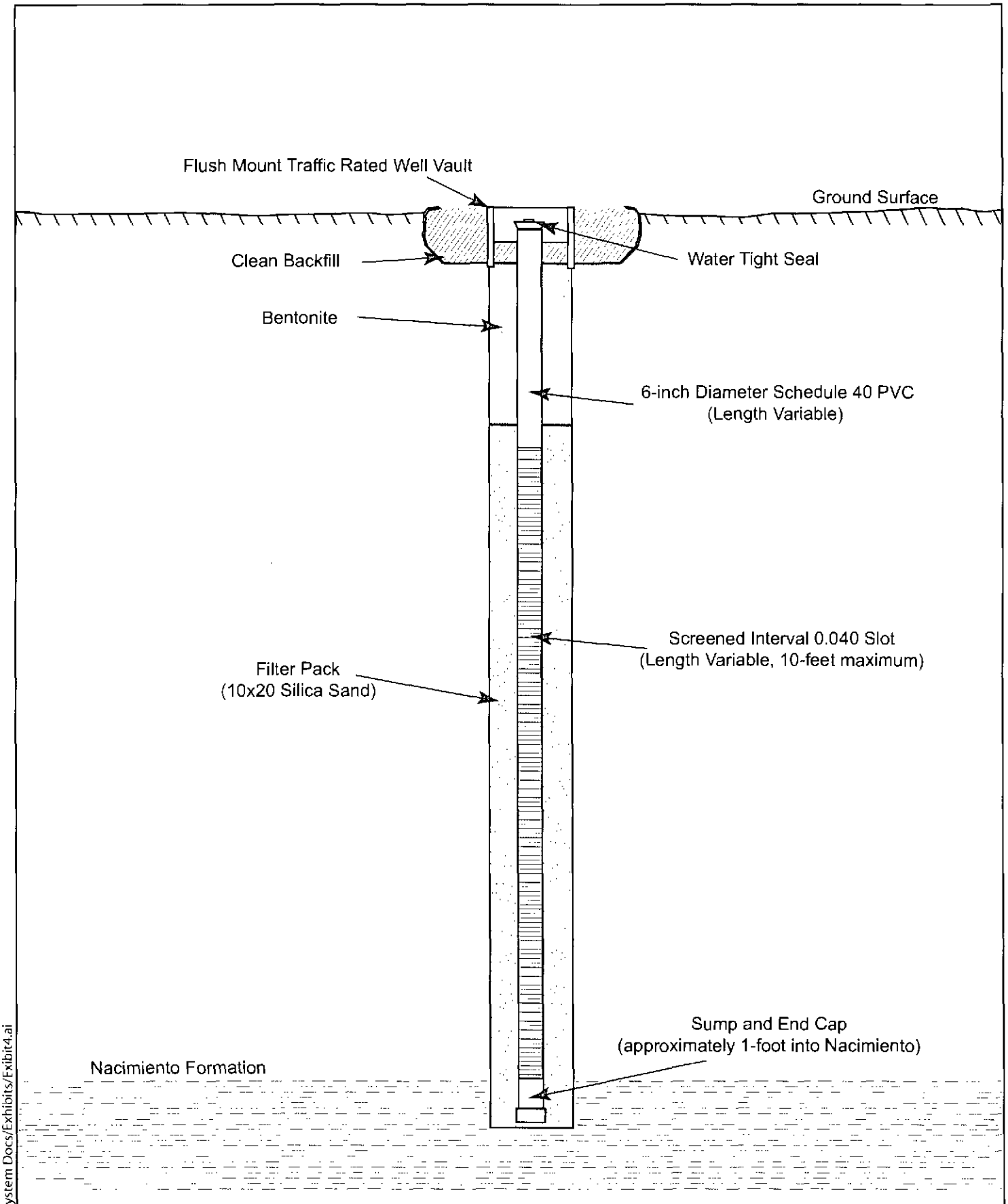
Sincerely,

MALCOLM PIRNIE INC.

Dennis L. Tucker, P.E., DEE
Senior Associate

c: Randy Schmaltz, Giant Refining
Ed Riege, Giant Refining

4646 E. VAN BUREN STREET SUITE 400 PHOENIX, AZ 85008-6945 602 241-1770 fax 602-231-0131 http://www.pirnie.com



*not to scale

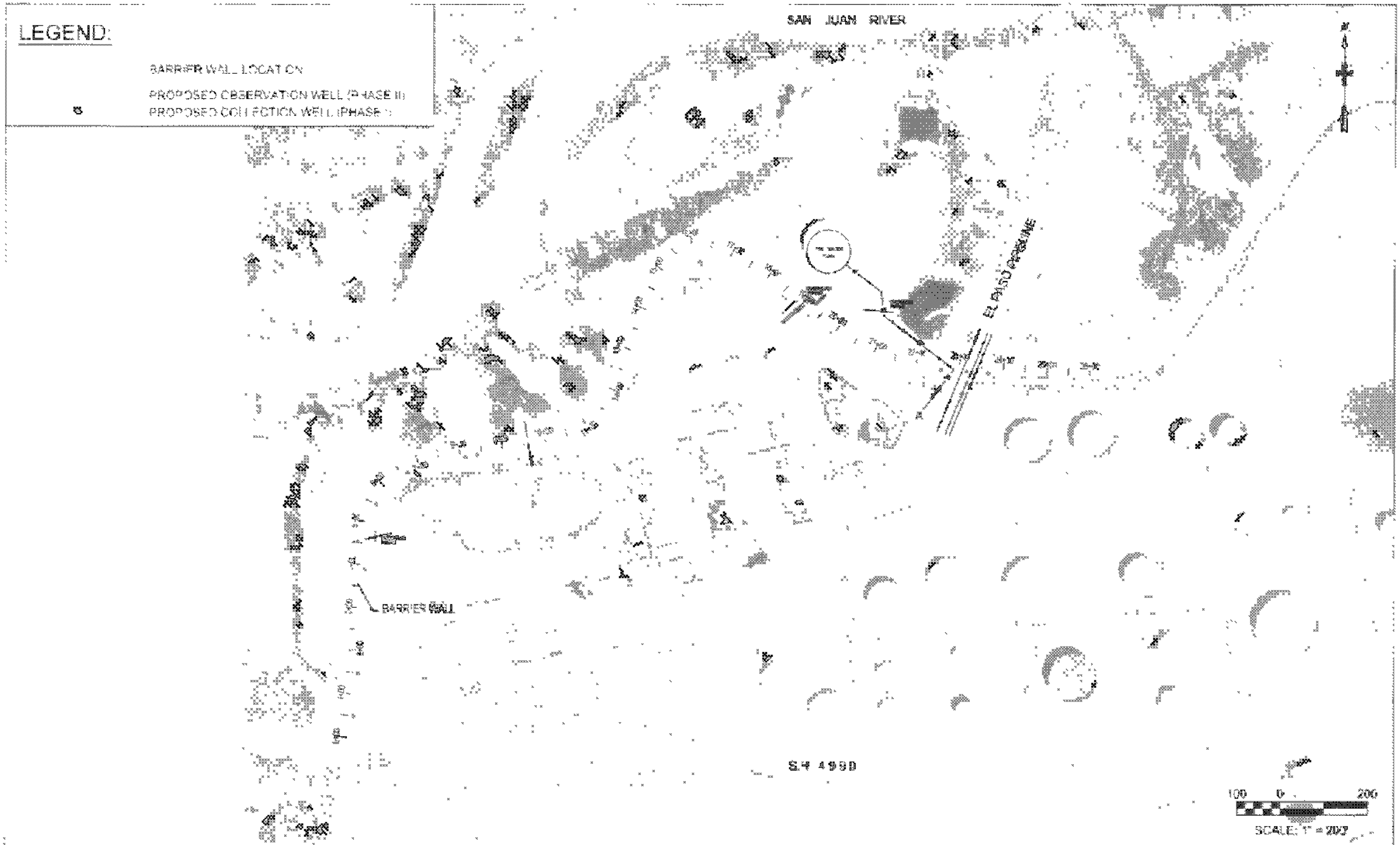
m:/5127001/Collection System Docs/Exhibits/Exibit4.ai

MALCOLM PIRNIE

Schematic Collection Well Design
Giant Refinery Bloomsfield, New Mexico

Malcolm Pirnie, Inc.

Figure 1

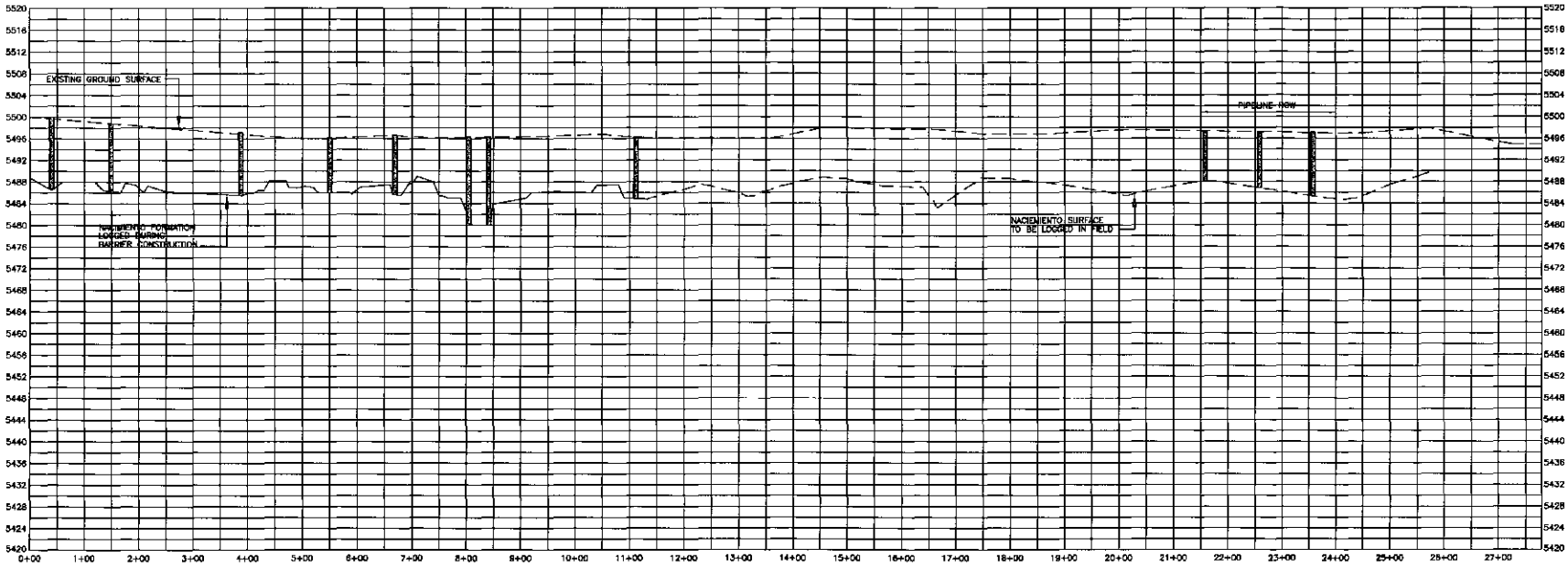


CORRECTIVE ACTION PLAN

PHASE I COLLECTION WELL LOCATIONS

MARCH 2005

FIGURE 2

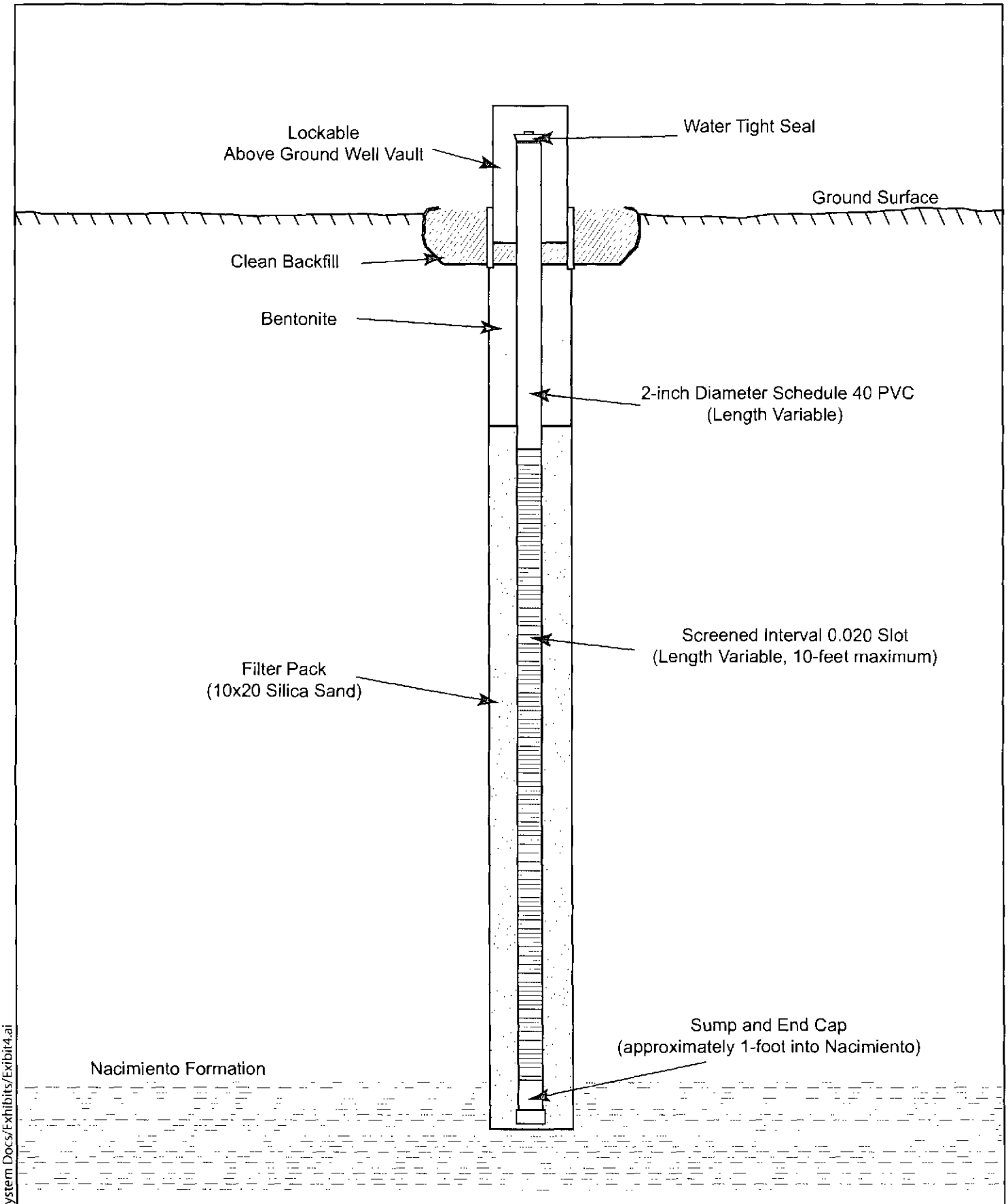


NACIMIENTO SURFACE PROFILE

100 0 200

SCALE: 1" = 200'

MALCOLM PIRNIE	GIANT REFINERY BLOOMFIELD, NEW MEXICO COLLECTION SYSTEM PLAN	NORTH BOUNDARY BARRIER CROSS SECTION PHASE I COLLECTION WELLS SCALE:1"=200'	MALCOLM PIRNIE, INC. MARCH 2005 FIGURE 3



*not to scale

m:/5127001/Collection System Docs/Exhibits/Exibit4.ai

MALCOLM PIRNIE

Schematic Observation Well Design
Giant Refinery Bloomsfield, New Mexico

Malcolm Pirnie, Inc.

Figure 4

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Bill To
NMED-HWB 2905 Rodeo Park Drive East, Bldg. 1 Santa Fe, NM 87505-6303 Client #: 810-128

Date	Invoice #
03/02/2005	89700

COPY

P.O. No.	Terms	Project #	Project Name
850454519	Net 30	(None)	Giant Bloomfield

Quantity	Description	Rate	Amount
1	Line 29 Method 8015 Gas/8021 BTEX/MtBE	54.00	54.00T
1	Line 31 Method 8015 Direct Inject (GC/FID)	54.00	54.00T
	subtotal		108.00
	Line 160 Rush 2 (1 week)	50.00%	54.00T

RECEIVED
MAR 2005
NMED Hazardous Waste Bureau

Remit to: Pinnacle Laboratories, Inc.
2709-D Pan American Freeway NE
Albuquerque, NM 87107

Accession #: 502149
Authorized By: Dave Cobrain/Hope Monzeglio

Sales Tax (6.75%)	$10.94
Total	$172.94

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
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Pinnacle Lab ID number **502149**
March 02, 2005

NMED-HWB
2905 RODEO PARK DR. EAST BLDG. 1
SANTA FE, NM 87505

Project Name GIANT BLOOMFIELD
Project Number (NONE)

Attention: DAVE COBRAIN/HOPE MONZEGLIO

On 02/23/2005 Pinnacle Laboratories Inc., (ADHS License No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: NMED-HWB	PINNACLE ID	: 502149
PROJECT #	: (NONE)	DATE RECEIVED	: 02/23/2005
PROJECT NAME	: GIANT BLOOMFIELD	REPORT DATE	: 03/02/2005

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
502149 - 01	TANK 33 OUTFALL	AQUEOUS	02/23/2005

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021B
CLIENT : NMED-HWB
PROJECT # : (NONE)
PROJECT NAME : GIANT BLOOMFIELD

PINNACLE I.D. : 502149
ANALYST : DSR / BP

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	TANK 33 OUTFALL	AQUEOUS	02/23/2005	NA	02/24/2005	5

PARAMETER	DET. LIMIT	UNITS	TANK 33 OUTFALL
BENZENE	**0.5**	**UG/L**	**25**
TOLUENE	0.5	UG/L	< 2.5
ETHYLBENZENE	**0.5**	**UG/L**	**18**
TOTAL XYLENES	**1.0**	**UG/L**	**21**
METHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**52**

SURROGATE:
BROMOFLUOROBENZENE (%) 97
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015B GRO
CLIENT : NMED-HWB
PROJECT # : (NONE)
PROJECT NAME : GIANT BLOOMFIELD

PINNACLE I.D. : 502149
ANALYST : DSR / BP

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	TANK 33 OUTFALL	AQUEOUS	02/23/2005	NA	02/24/2005	1

PARAMETER	DET. LIMIT	UNITS	TANK 33 OUTFALL
FUEL HYDROCARBONS	**100**	**UG/L**	**3700**
HYDROCARBON RANGE			**C6-C10**
HYDROCARBONS QUANTITATED USING			**GASOLINE**

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021B	PINNACLE I.D.	: 502149
BLANK I.D.	: 022405	DATE EXTRACTED	: N/A
CLIENT	: NMED-HWB	DATE ANALYZED	: 02/24/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: GIANT BLOOMFIELD	ANALYST	: DSR / BP

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
METHYL-t-BUTYL ETHER	UG/L	<2.5

SURROGATE:
BROMOFLUOROBENZENE (%) 99
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 502149
BLANK I.D.	: 022405B	DATE EXTRACTED	: N/A
CLIENT	: NMED-HWB	DATE ANALYZED	: 02/24/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: GIANT BLOOMFIELD	ANALYST	: DSR / BP

PARAMETER	UNITS	
FUEL HYDROCARBONS	UG/L	<100
HYDROCARBON RANGE		C6-C10
HYDROCARBONS QUANTITATED USING		GASOLINE

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

2709-D Pan American Freeway NE ,
Albuquerque, New Mexico 87107
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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 502149
BATCH #	: 022405B	DATE EXTRACTED	: N/A
CLIENT	: NMED-HWB	DATE ANALYZED	: 02/24/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: GIANT BLOOMFIELD	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<100	1000	890	89	912	91	2	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING	GASOLINE								

CHEMIST NOTES:
N/A

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

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

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PINNACLE LABORATORIES

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 502149
MSMSD #	: 502149-01	DATE EXTRACTED	: N/A
CLIENT	: NMED-HWB	DATE ANALYZED	: 02/24/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: GIANT BLOOMFIELD	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	3700	1000	4580	88	4270	57 - **M4**	7	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING		GASOLINE							

CHEMIST NOTES:
M4 = % REC is outside of PLI criteria.

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

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

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021B	PINNACLE I.D.	: 502149
BATCH #	: 022405	DATE EXTRACTED	: N/A
CLIENT	: NMED-HWB	DATE ANALYZED	: 02/24/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: GIANT BLOOMFIELD	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	20.2	101	20.1	101	0	(80 - 120)	20
TOLUENE	<0.5	20.0	20.3	102	20.2	101	0	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.2	101	20.0	100	1	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	60.8	101	60.0	100	1	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	19.4	97	19.2	96	1	(70 - 133)	20

CHEMIST NOTES:
N/A

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

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

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PINNACLE LABORATORIES

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B	PINNACLE I.D.	: 502149
MSMSD #	: 502150-01	DATE EXTRACTED	: N/A
CLIENT	: NMED-HWB	DATE ANALYZED	: 02/24/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: GIANT BLOOMFIELD	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	21.3	107	20.5	103	4	(80 - 120)	20
TOLUENE	25	20.0	45.5	103	44.8	99	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.1	106	20.6	103	2	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	63.8	106	62.9	105	1	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	20.4	102	19.5	98	5	(70 - 133)	20

CHEMIST NOTES:
N/A

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

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

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015 MODIFIED (DIRECT INJECT)
CLIENT : NMED-HWB
PROJECT # : (NONE)
PROJECT NAME : GIANT BLOOMFIELD

PINNACLE I.D. : 502149
ANALYST : DSR

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	TANK 33 OUTFALL	AQUEOUS	02/23/2005	02/25/2005	02/25/2005	1

PARAMETER	DET. LIMIT	UNITS	TANK 33 OUTFALL
FUEL HYDROCARBONS, C6-C10	2.0	MG/L	**3.5**
FUEL HYDROCARBONS, C10-C22	1.0	MG/L	< 1.0
FUEL HYDROCARBONS, C22-C36	1.0	MG/L	< 1.0
CALCULATED SUM:			**3.5**
SURROGATE:			
O-TERPHENYL (%)			94
SURROGATE LIMITS	(70-130)		

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
EXTRACTION BLANK

TEST	: EPA 8015 MODIFIED (DIRECT INJECT)	PINNACLE I.D.	: 502149
BLANK I.D.	: 022505	DATE EXTRACTED	: 02/25/2005
CLIENT	: NMED-HWB	DATE ANALYZED	: 02/25/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: GIANT BLOOMFIELD	ANALYST	: DSR

PARAMETER	UNITS	
FUEL HYDROCARBONS, C6-C10	MG/L	< 2.0
FUEL HYDROCARBONS, C10-C22	MG/L	< 1.0
FUEL HYDROCARBONS, C22-C36	MG/L	< 1.0

SURROGATE:		
O-TERPHENYL (%)		102
SURROGATE LIMITS	(70-130)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8015 MODIFIED (DIRECT INJECT)	PINNACLE I.D.	: 502149
LCS/LCSD #	: 022505	DATE EXRACTED	: 02/25/2005
CLIENT	: NMED-HWB	DATE ANALYZED	: 02/25/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: GIANT BLOOMFIELD	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<1.0	33.0	32.6	99	31.2	95	4	(70-130)	20

CHEMIST NOTES:
N/A

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

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

402149

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 2/23/05 PAGE: ___ OF: ___

PROJECT MANAGER: Dave Cobrain / Hope Monzeglio

COMPANY: NMED Hazardous Waste Bureau
ADDRESS: 2905 Rodeo Drive East Bld. 1
Santa Fe NM 87505
PHONE: 505-428-2545
FAX: 505 428 2567

BILL TO: Same As above
COMPANY:
ADDRESS:

Sample ID	Container / Date	Qty / Time	Matrix / Pres.	Lab ID	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject DRO		(M8015) Gas/Purge & Trap GRO/DRO	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☒MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐/DBCP ☐		8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics ☐PBMS	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:	
Tank 33 outfall	40 mL voa	2	W	01						X																						
	2/23/05	1315	HCl	↓																												
Tanks 33 outfall	40 mL voa	[illegible]	W/HCl					X	[illegible]																							
Tank 33 outfall	40 voa	1	W/HgCl	↓		X		[illegible]	[illegible]																							
	2/23/05	1315																														

1
1
2

WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.

PROJ. NO.:
PROJ. NAME: Giant Bloomfield
P.O. NO.:
SHIPPED VIA:

(RUSH) ☐24hr* ☐48hr* ☐72hr* ☒1 WEEK (NORMAL) ☒ NO AE 2/24
*NOT AVAILABLE ON ALL ANALYSES

CERTIFICATION REQUIRED ☐NM ☐SDWA ☐AZ ☐OTHER

METHANOL PRESERVATION ☐ METALS ☐TOTAL ☐DISSOLVED

COMMENTS:
3 voas preserved w/ HCl
1 voa preserved w/ HgCl2
4
Y
Y
Y
8.3 c Direct from field

Hope Monzeglio called 2/24/05 to change to 1 week
RUSH!
AE 2/24/05

Signature: Hope Monzeglio Time: 6:05
Printed Name: Hope Monzeglio Date: 2/23/05
Company: NMED
See Reverse side (Force Majeure)

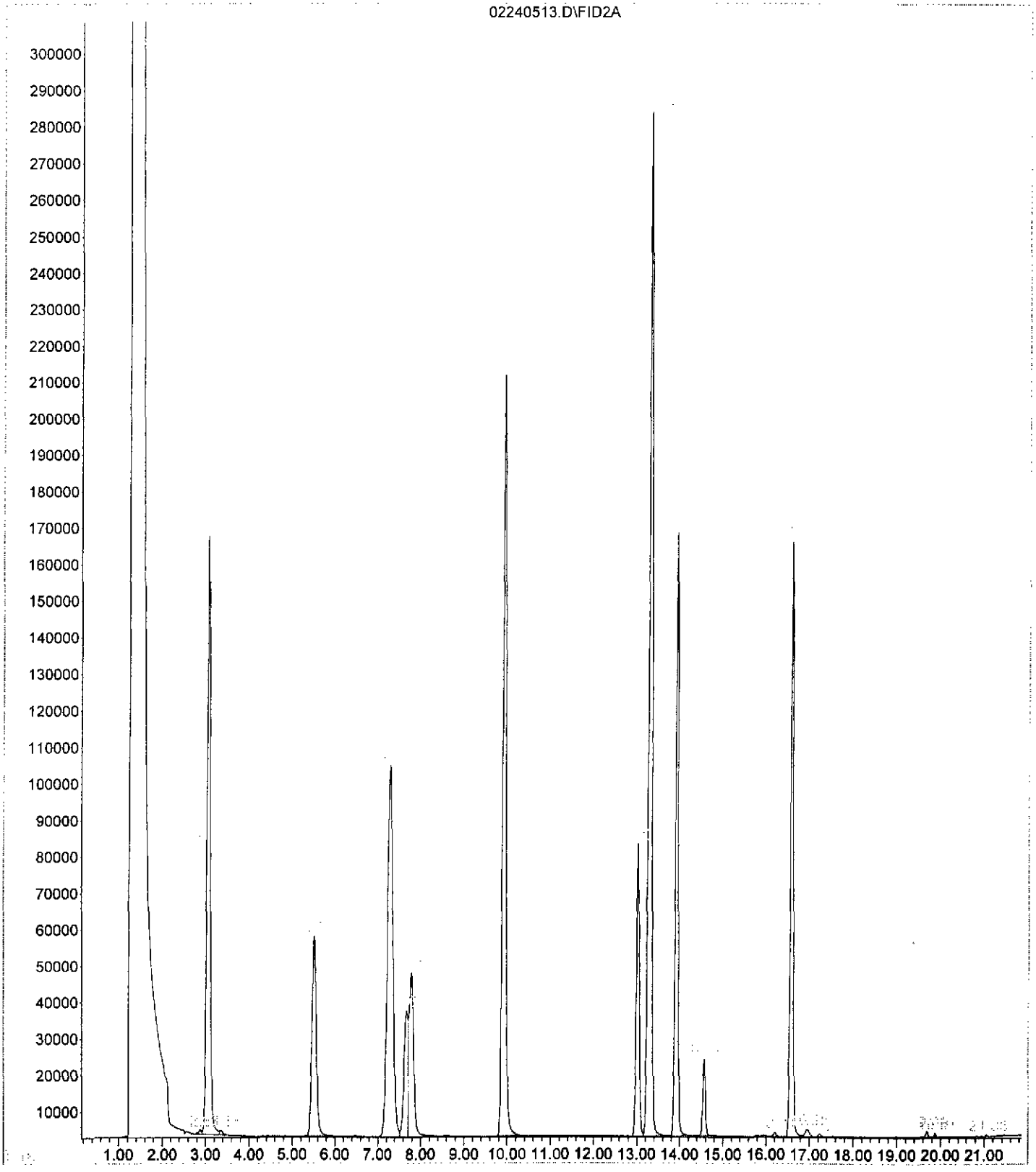
Signature: Francine Tarino Time: 1805
Printed Name: Francine Tarino Date: 2/23/05
Company:

Signature: Time:
Printed Name: Date:
Company:

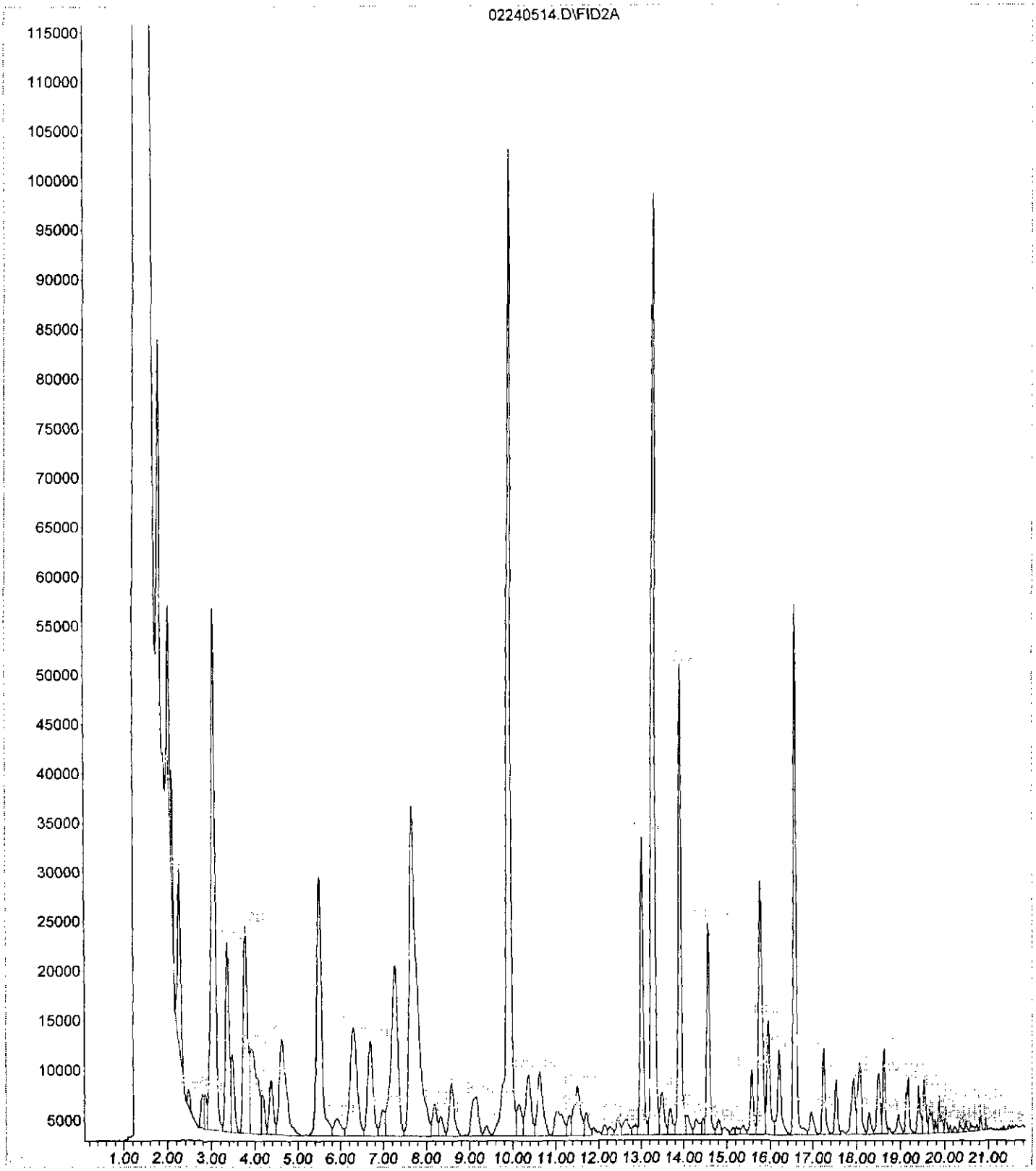
PLEASE FILL THIS FORM IN COMPLETELY.

DISTRIBUTION: White - PLI, Canary - Originator

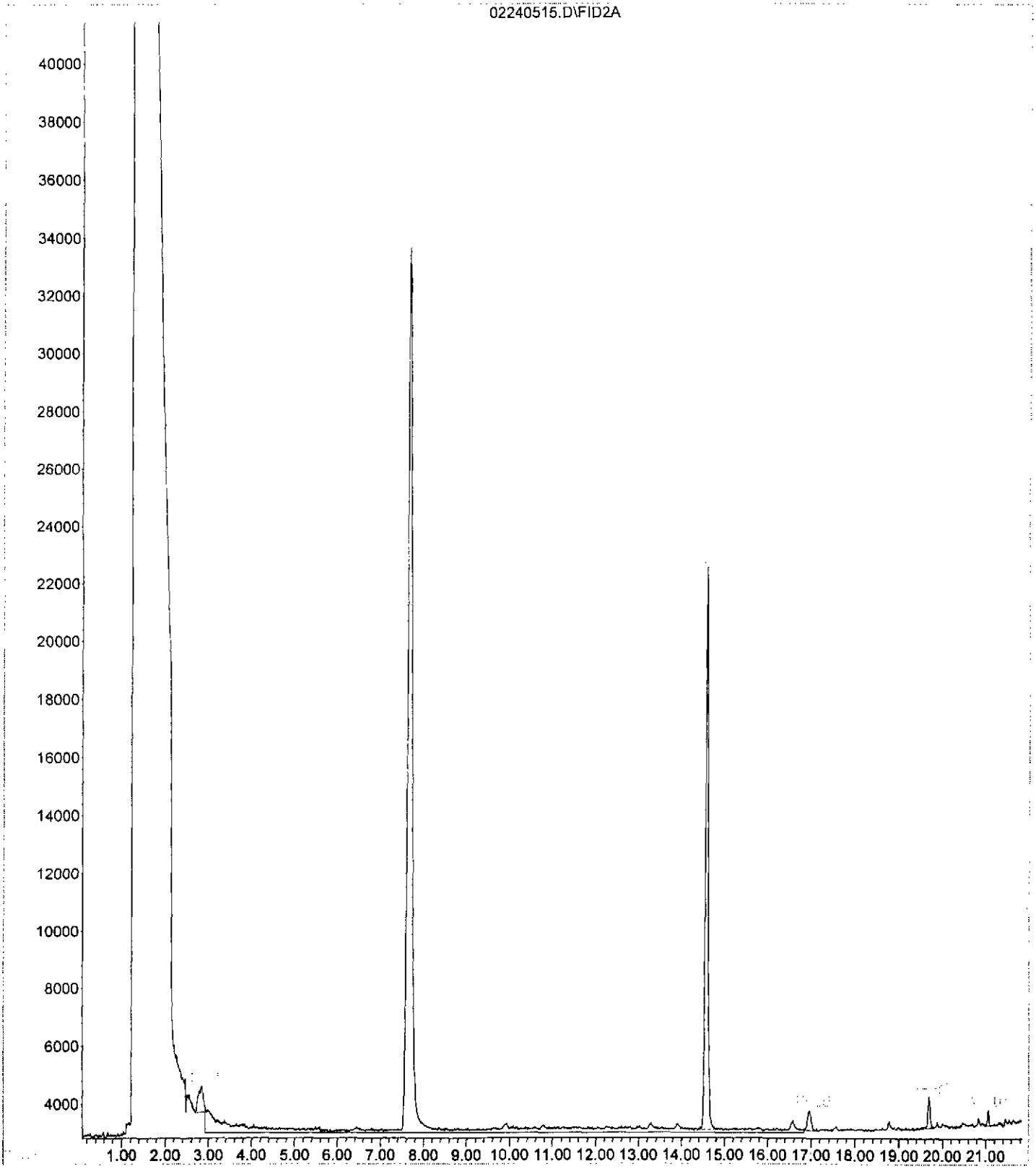
File : C:\HPCHEM\1\DATA\022405\02240513.D
Operator : DSR/BP
Acquired : 24 Feb 2005 19:50 using AcqMethod BG121904.M
Instrument : GC-2
Sample Name: GRO RT STD
Misc Info : 10uL MS4-25-07
Vial Number: 13



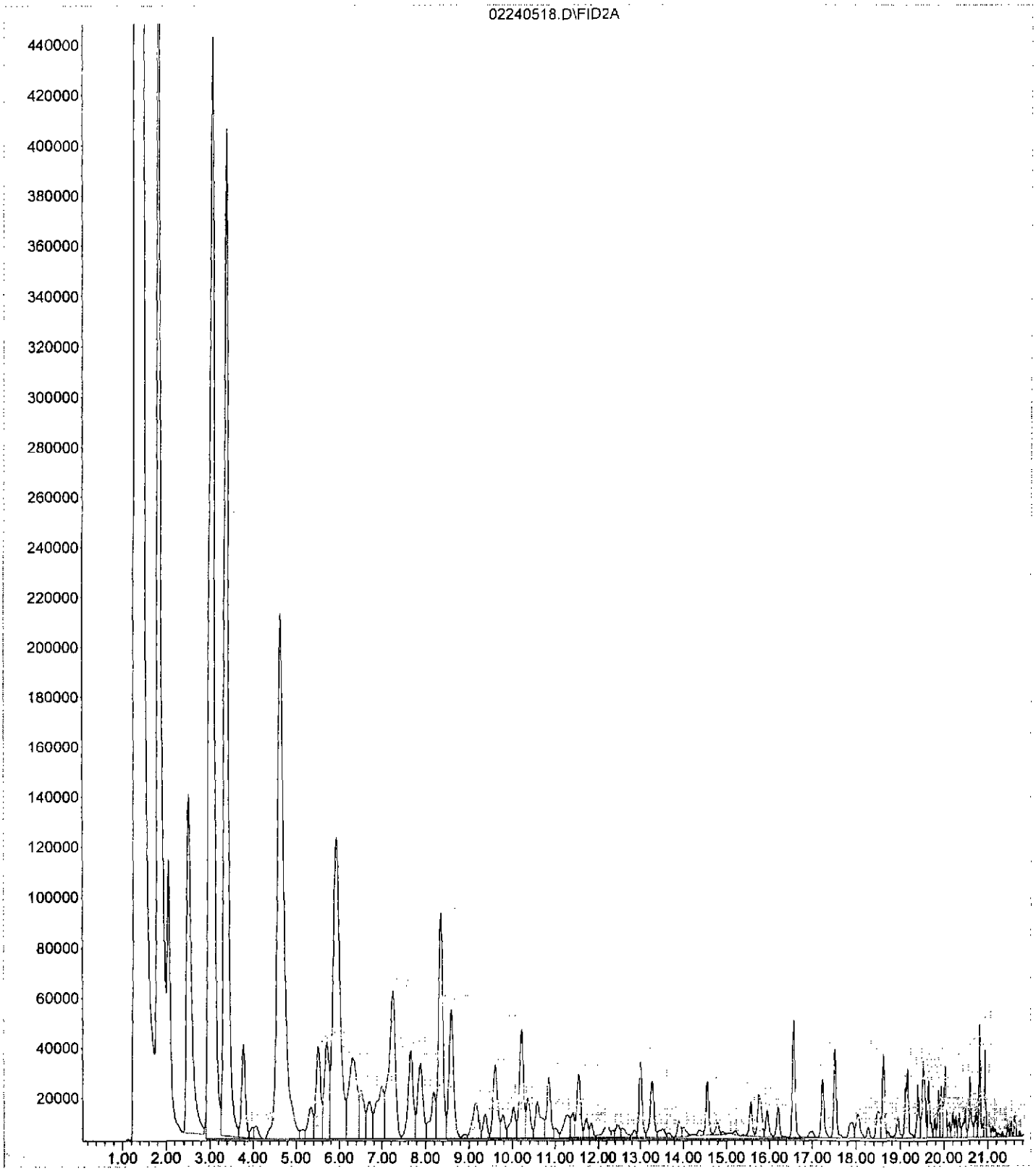
File : C:\HPCHEM\1\DATA\022405\02240514.D
Operator : DSR/BP
Acquired : 24 Feb 2005 20:21 using AcqMethod BG121904.M
Instrument : GC-2
Sample Name: GRO CCV 1000ppb
Misc Info : 10uL MS4-25-10
Vial Number: 14



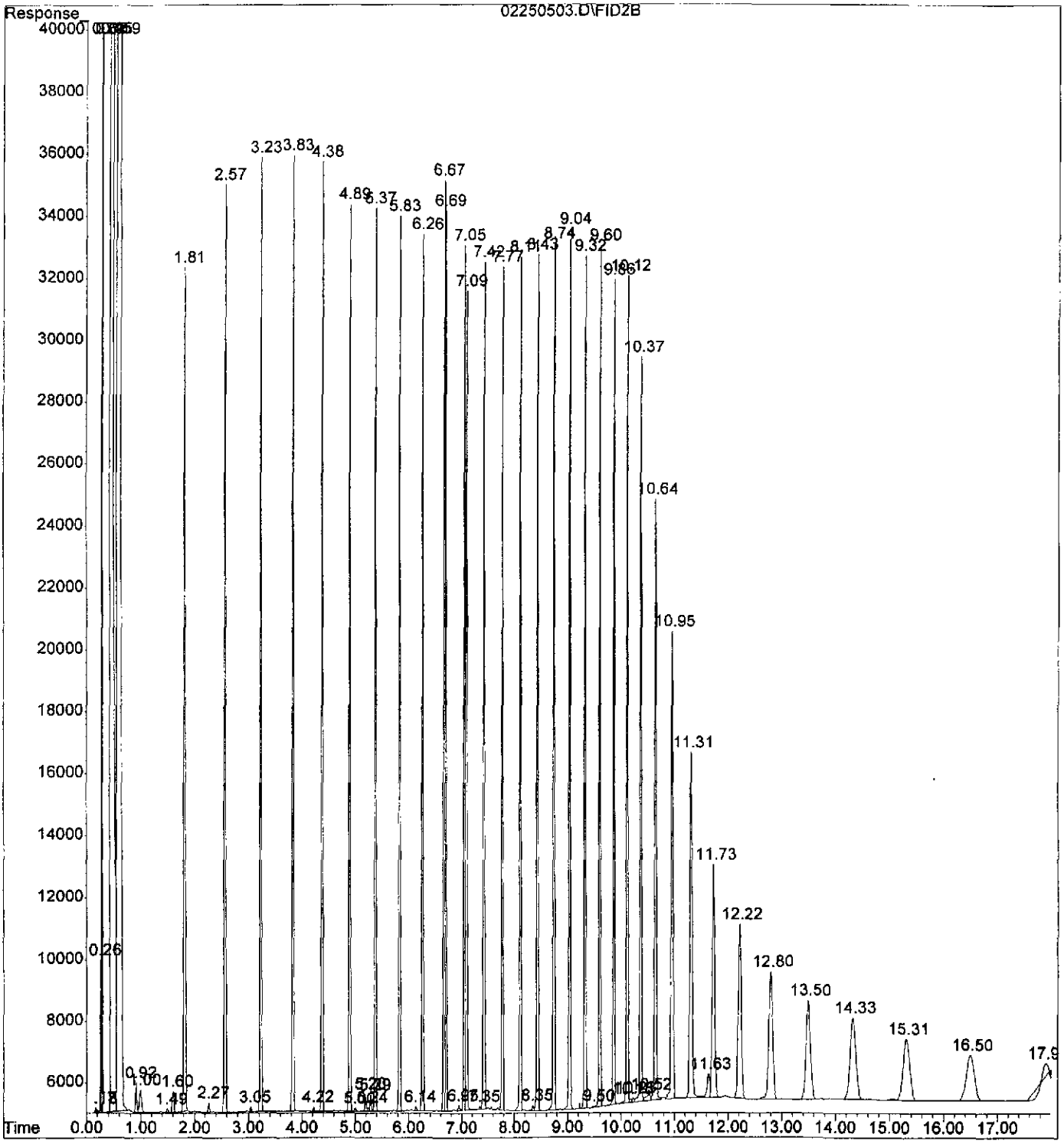
File : C:\HPCHEM\1\DATA\022405\02240515.D
Operator : DSR/BP
Acquired : 24 Feb 2005 20:52 using AcqMethod BG121904.M
Instrument : GC-2
Sample Name: REAGENT BLANK
Misc Info : 10uL MS4-25-12 / 10uL MS4-25-14 GRO
Vial Number: 15



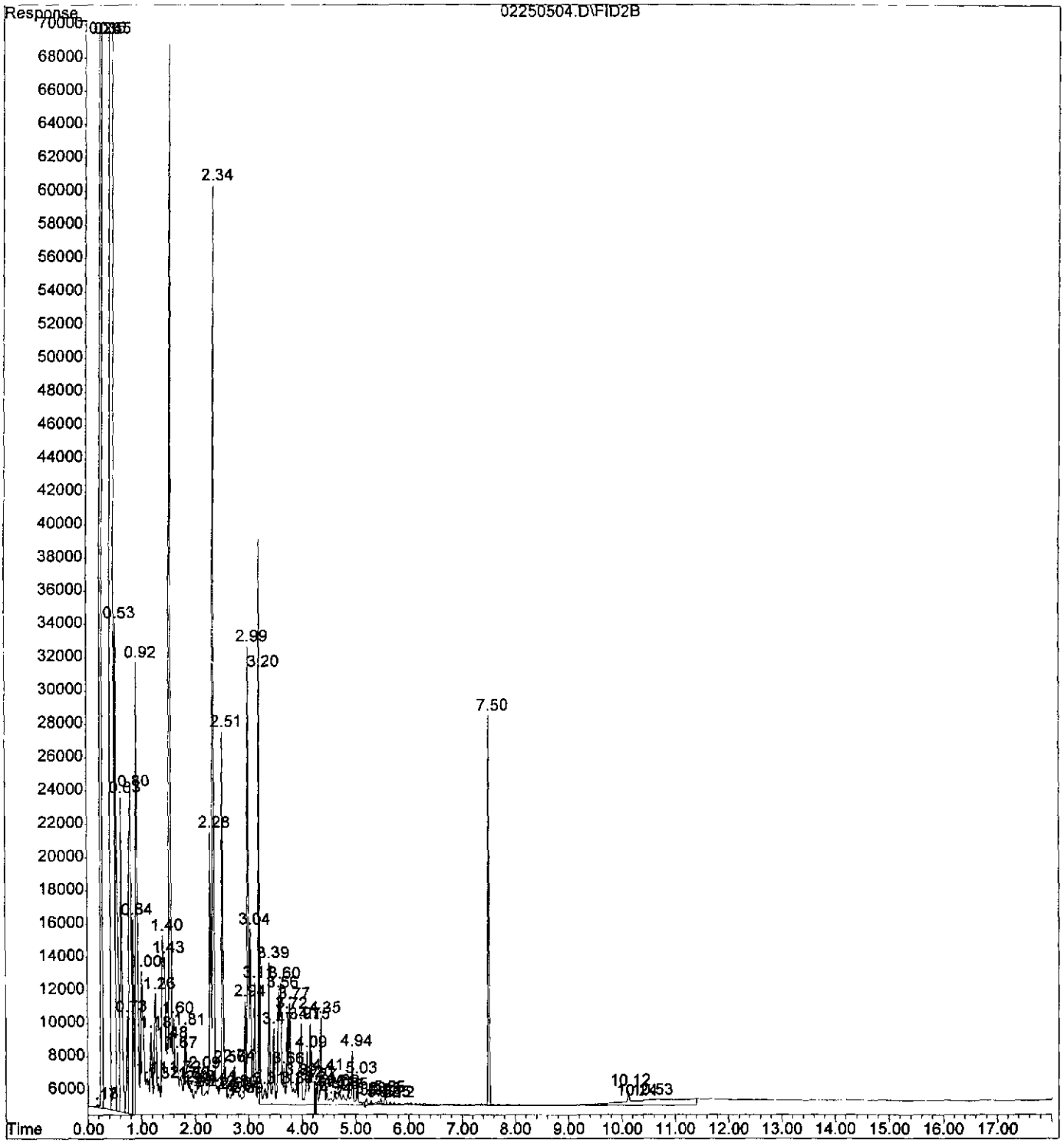
File : C:\HPCHEM\1\DATA\022405\02240518.D
Operator : DSR/BP
Acquired : 24 Feb 2005 22:26 using AcqMethod BG121904.M
Instrument : GC-2
Sample Name: 502149-01 1X
Misc Info : 5mL GRO
Vial Number: 2



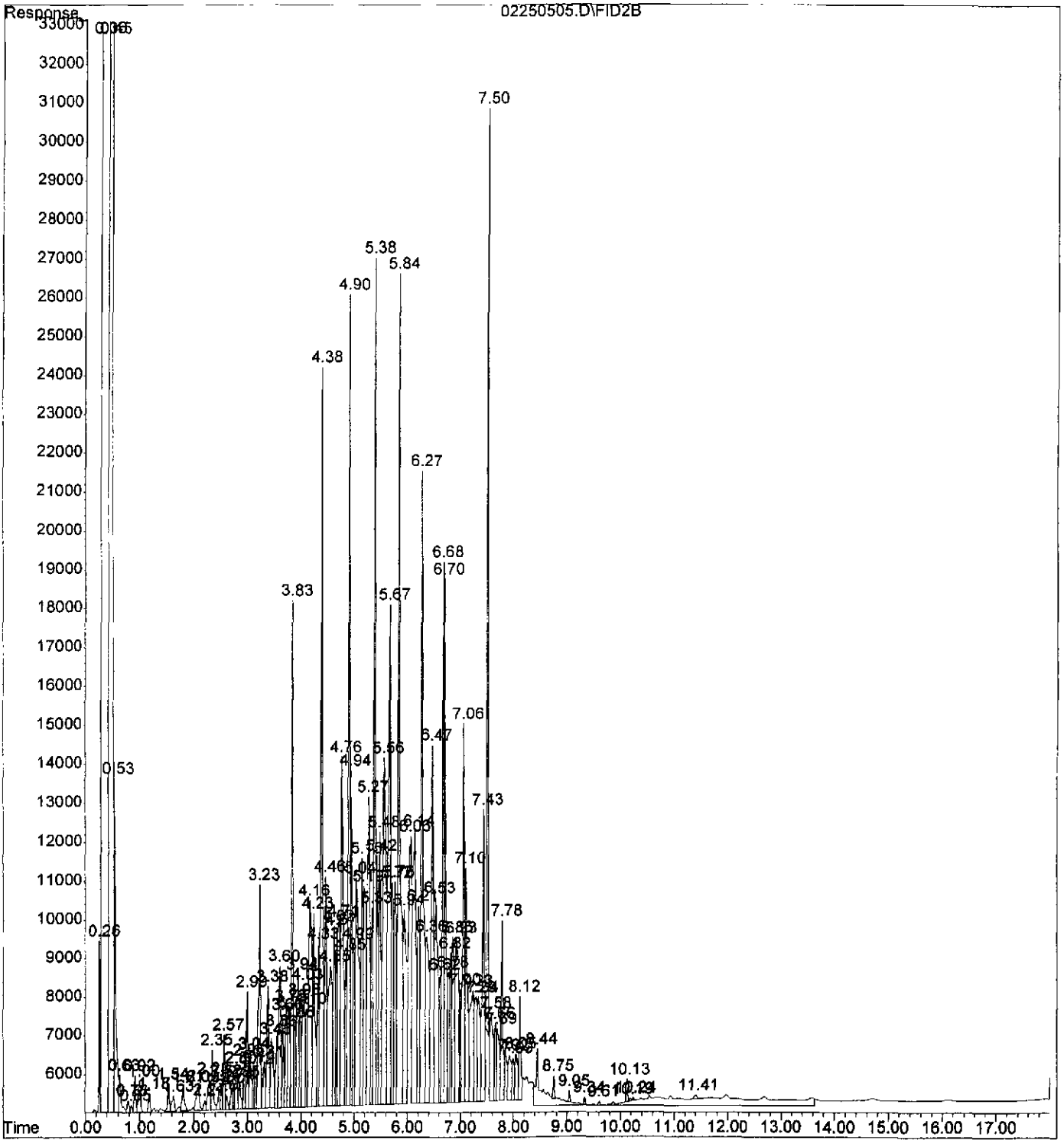
File : C:\HPCHEM\2\DATA\022505F\02250503.D
Operator : DSR
Acquired : 25 Feb 2005 10:44 using AcqMethod TPH0131.M
Instrument : FID-1
Sample Name: RT
Misc Info : GC5-10-14
Vial Number: 2



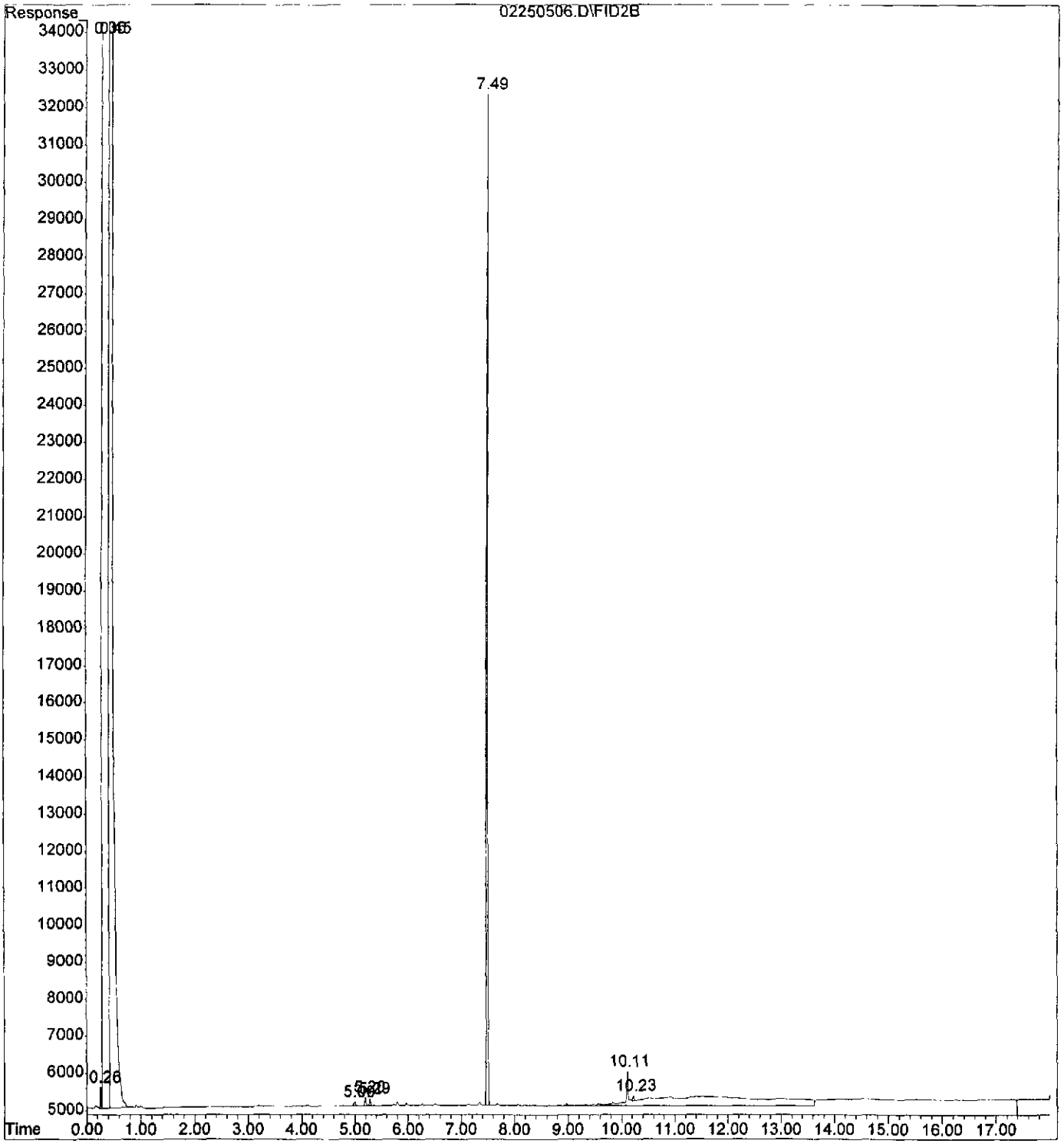
File : C:\HPCHEM\2\DATA\022505F\02250504.D
Operator : DSR
Acquired : 25 Feb 2005 11:11 using AcqMethod TPH0131.M
Instrument : FID-1
Sample Name: GRO CCV 200PPM
Misc Info : GC5-12-09
Vial Number: 3



File : C:\HPCHEM\2\DATA\022505F\02250505.D
Operator : DSR
Acquired : 25 Feb 2005 11:38 using AcqMethod TPH0131.M
Instrument : FID-1
Sample Name: DRO CCV 200PPM
Misc Info : GC5-12-13
Vial Number: 4



File : C:\HPCHEM\2\DATA\022505F\02250506.D
Operator : DSR
Acquired : 25 Feb 2005 12:05 using AcqMethod TPH0131.M
Instrument : FID-1
Sample Name: WRB 022505
Misc Info : 30ML/3ML 02/25
Vial Number: 5



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Operator : DSR
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Instrument : FID-1
Sample Name: 502149-01
Misc Info : 30ML/3ML 02/25
Vial Number: 8