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ENTERED



RON CURRY
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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 on or before December 22, 2006.

Comment 1

Section 3.0 (Scope of Activities) and Section 7.0 (Summary) of the Report addresses various sampling activities that occurred during the first 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 &

Messrs Schmaltz and Riege
November 2, 2006
Page 2

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 through 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.

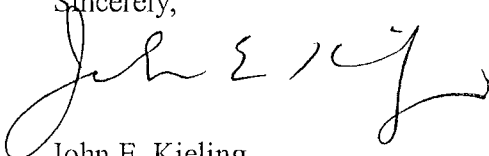
Comment 14

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 ($\mu\text{g/L}$).

Messrs Schmaltz and Riege
November 2, 2006
Page 5

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

Sincerely,

A handwritten signature in black ink, appearing to read "John E. Kieling". The signature is fluid and cursive, with the first name "John" being the most prominent.

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