

GRCB 07

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May 18, 2007

Certified Mail: 7006 0810 0003 7020 6073

Ms. Hope Monzeglio  
NMED Hazardous Waste Bureau  
2905 Rodeo Park Dr. East. BLDG 1  
Santa Fe, New Mexico 87505

Re: **Giant Refining Company, Bloomfield Refinery  
River Terrace Voluntary Corrective Measures – Bioventing System Annual  
Report (January 2006 through December 2006)  
NMD089416416 HWB-GRCB-05-002**

Dear Ms. Monzeglio:

Giant Refining Company Bloomfield (GRCB) received the April 18, 2007 letter from the New Mexico Environmental Department (NMED) approving the River Terrace Corrective Measures Bioventing System Annual Report (Report) dated January 2007. Based on our review of NMED's comments and Table 1 and Table 2 of the letter, GRCB requests clarification and approval of the following variations to the tables:

1. Table 1C of the Bioventing System Monitoring Plan (Revised) dated October 28<sup>th</sup>, 2005 and approved by NMED on November 23, 2005 summarizes system performance monitoring activities for groundwater and soil gas. On March 23, 2006, a revised Table 1C was submitted to NMED (as requested) that added a groundwater mercury analysis for monitoring well DW-1. NMED Table 1 of the April 18<sup>th</sup>, 2007 letter adds additional groundwater parameters beyond those listed in the revised Table 1C, specifically: quarterly monitoring of lead at each TP well; and, annual monitoring of chromium and barium at each TP well, MW-49, and DW-1.

While existing investigative data from the bioventing area indicate fugitive fuel products from a historic event may have potentially reached the River Terrace, chromium and barium are not constituents of fuel products manufactured at the GRCB refinery. Furthermore, the River Terrace has never been used for refinery process operations from which petroleum refining byproducts potentially could have been accidentally released. As such, GRCB requests clarification on the purpose for collecting the chromium and barium data, how those data are anticipated to contribute to furthering the technical understanding of the nature and

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extent of petroleum hydrocarbon impacts at the River Terrace, and the proposed screening levels for those data should they be obtained.

2. In Item #4, NMED compares TP #7 to DW #1. There should not be any comparison of the wells concerning water volume as their construction is drastically dissimilar. TP #7 is a 2" boring that is backfilled with native soil. DW #1 has a 12" borehole that is backfilled with silica sand with 6" casing. Pump-down tests for DW #1 indicated that it did not recharge well enough to become a dewatering well. TP #7 does not recharge quickly enough to pull three well volumes out of it during a sampling event. GRCB will attempt to sample TP #7 during the 2007 Second Quarter sampling event. However, if the well does not yield sufficient water volume then GRCB proposes that TP #7 be eliminated from future monitoring events.
3. The Table 1C of the NMED-approved Bioventing System Monitoring Plan summarizes the monitoring location and frequency for collecting quarterly soil gas parameters (CO<sub>2</sub>, O<sub>2</sub>, and VOCs) to evaluate the performance of the bioventing system. NMED Table 2 of the April 18<sup>th</sup>, 2007 letter adds quarterly soil gas monitoring of the bioventing (BV) wells.

BV Wells were constructed with a six inch borehole and backfilled with silica sand to facilitate air venting into the subsurface. The wells are not backfilled with native soil. The silica sand provides a barrier between the well and the native soil. Soil gas concentrations in the bioventing wells could possibly provide misleading results as the vapors must diffuse and equilibrate between the soil formation and the inside of the well bore.

GRCB intended the quarterly soil gas monitoring events to be conducted while the bioventing system is operating. Air samples obtained from the BV wells during those times would essentially be of the ambient air being injected into the subsurface. In order to obtain meaningful air samples from the BV wells, the bioventing system would need to be turned off and the subsurface conditions allowed to equilibrate for an extended period (e.g., several weeks). Since, turning the bioventing system off for an extended period would hinder progress of the remediation, GRCB requests to conduct the soil gas sampling in accordance with the approved Monitoring Plan and collect soil gas samples from the BV wells during the in-situ respiration tests as described in the approved Monitoring Plan.

4. An Addendum to the approved Bioventing Monitoring Plan (Revised) was submitted to NMED on May 18, 2006, and approved on May 22, 2006. The Addendum included a modified sampling frequency for conducting in-situ respiration tests at the River Terrace. The note at the bottom of NMED Table 2 in

River Terrace Voluntary Corrective Measures  
Bioventing System Annual Report  
May 8, 2007

Page 3 of 3

the April 18<sup>th</sup>, 2007 letter does not reflect the agreed-upon sampling frequency for the in-situ tests. GRCB previously explained the physical limitations surrounding the collection of more frequent samples during the test. As such, GRCB requests approval to perform the 2007 in-situ respiration test as outlined in the approved Addendum.

The note at the bottom of Table 2 also indicates the in-situ respiration test must be conducted during a river-flow stage that is similar to that during the May 2006 test. GRCB contacted Bureau of Reclamation (BOR) regarding the anticipated flows of the San Juan River during the summer months of 2007. According to the BOR, the river flows during the summer months of 2007 are anticipated to be greater than those of May 2006. As such, it is unlikely the May 2006 water level conditions will be replicated. GRCB will record the water levels in the River Terrace monitoring wells at the time of the respiration test and report them to NMED. Those water levels will be compared to those measured during the May 2006 respiration test.

GRCB looks forward to receiving NMED approval of the requested variations. Please feel free to call me at (505) 632-4161 if you have any questions.

Sincerely,



Cindy Hurtado  
Environmental Coordinator  
Giant Refining - Bloomfield

Cc: Wayne Price – NMOCD – Santa Fe  
Robert Wilkinson – USEPA – Region VI  
Ed Riege – Environmental Superintendent – Giant Refining  
Randy Schmaltz – Environmental Manager – Giant Refining - Bloomfield