

GRCB 070

ENTERED

**GIANT**  
REFINING COMPANY

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



Certified Mail: 7006 0810 0003 7020 5663

February 9, 2007

Re: Comments on Giant's Response to the 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 February 9, 2007 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 attachments will address NMED's requests.

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.

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Sincerely,  
*Cindy Hurtado*

Cindy Hurtado  
Environmental Coordinator – Giant Refining – Bloomfield

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

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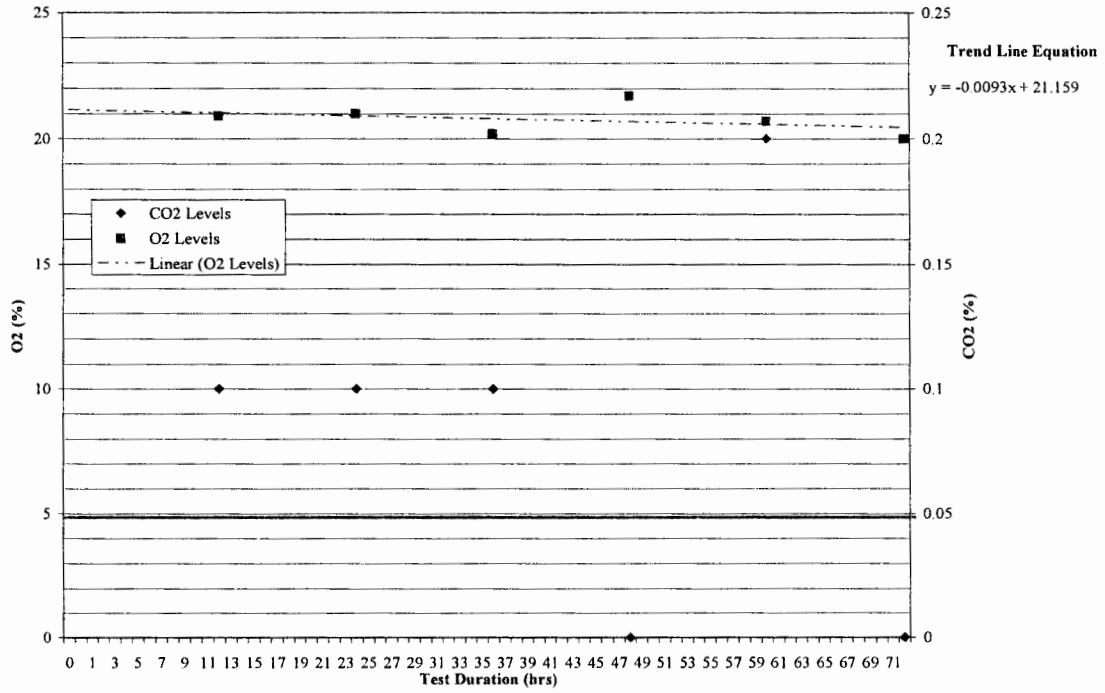
**Response to Comment 9b:**

The oxygen and carbon dioxide concentration versus time trend graphs showing the trend analysis based on field data collected during the in situ respiration test for BV-1, BV-3, and TP-9 are attached. A linear trend line was fitted to each O<sub>2</sub> data set using Microsoft Excel. The negative slope of the trend line is interpreted as the oxygen utilization rate, which by using soil properties and stoichiometry, translates into an estimate of the rate at which organics are being biodegraded by the soil microbes.

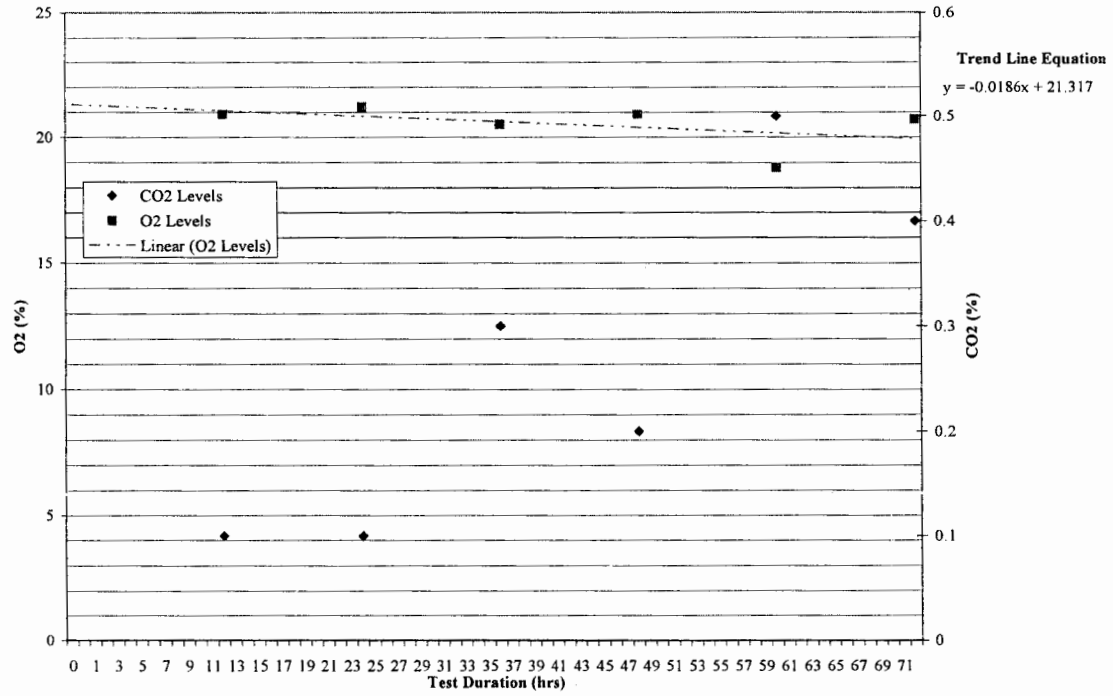
As requested by NMED, the data collected from BV-1, BV-3, and TP-9 was used to calculate the corresponding biodegradation rate using the equation and site-specific variables stated in the River Terrace Bioventing System In Situ Respiration Test Summary. The summary of the calculated results are provided below.

<b>Well ID</b>	<b>Oxygen Utilization Rate (%/hr)</b>	<b>Biodegradation Rate (mg/kg*day)</b>
BV-1	0.0093	0.15
BV-3	0.0186	0.30
TP-9	-0.0015	-0.02

BV-1 Respiration Test Data



BV-3 Respiration Test Data



TP-9 Respiration Test Data

