



**BILL RICHARDSON**  
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State of New Mexico  
**ENVIRONMENT DEPARTMENT**

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**ENTERED**



**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".

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**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

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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  
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.