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ENTERED

RON CURRY
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DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

November 17, 2004

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: REQUEST FOR SUPPLEMENTAL INFORMATION
GROUND WATER REMEDIATION AND MONITORING ANNUAL
REPORT APRIL 2004
GIANT REFINING COMPANY, BLOOMFIELD REFINERY
EPA ID NO. NMD089416416
HWB-GRCB-04-001

Dear Mr. Schmaltz and Mr. Riege:

The New Mexico Environment Department (NMED) has completed its review of the above-referenced Ground Water Remediation and Monitoring Annual Report (2004 Ground Water Report) for technical adequacy as required under 20.4.2.201.7 NMAC. The Ground Water Annual Report was submitted in April 2004 to fulfill the requirements for the Long-term Ground Water Monitoring Corrective Measure Study and Implementation (CMS/CMI) (Discharge Plan-Abatement Plan) in September 2001.

After reviewing the 2004 Ground Water Report, NMED requests additional information and provides requirements for future ground water reports. The information that must be addressed and future report requirements are described in Attachment A.



Giant Refining Company

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The requested information must be submitted to HWB within ninety days of receipt of this Request for Supplemental Information. Failure to respond within this time period will result in issuance of a Notice of Deficiency.

Please call me at 505-428-2545 if you have questions or need additional information.

Sincerely,



Hope Monzeglio
Project Leader

Attachment

cc: James Bearzi, NMED HWB
David Cobrain, NMED HWB
John Kieling, NMED HWB
Wayne Price, NMDEMNR OCD

file: Reading File and ~~GRCB 2004 File~~



ATTACHMENT A

GROUND WATER REMEDIATION AND MONITORING ANNUAL REPORT APRIL 2004

GIANT REFINING COMPANY BLOOMFIELD REFINERY EPA ID NO. NMD089416416

The "Ground Water Remediation and Monitoring Annual Report," April 2004 (2004 Ground Water Report) and the "Long Term Ground Water Monitoring Work Plan" May 29, 2003 (LTGWMWP) were submitted by Giant to fulfill the requirements in Attachment A "Requirements for Long-Term Ground Water Monitoring, Corrective Measure Study and Implementation (CMS/CMI) (Discharge Plan-Abatement Plan)" of the January 6, 2003 letter issued by the New Mexico Environment Department.

The NMED requires Giant to implement the following investigation and ground water monitoring actions during future ground water monitoring reports in addition to providing the following.

General Comments

1. The 2004 Ground Water Report, Executive Summary, p. i, paragraph 4 and p. ii, paragraph 1 references the boring logs and laboratory results in Attachments D and Attachment C of the document, respectively.

Note: the boring logs and laboratory results are located in Attachments C and F.

2. The 2004 Ground Water Report, Executive Summary, p. ii, paragraph 8, comments on the development of collection galleries and states "Diagrams and locations of the test holes are included in Attachment E and Plate 3."

Note: the east and west collection gallery diagrams are located in Attachment D.

3. Giant shall ensure the report's narrative represents the data presented in tables, figures, and attachments. The following are examples of inconsistencies:
 - a. MW-11 was sampled but never identified as sampled in the Monitoring and Analysis section of the report.
 - b. The Monitoring and Analysis section, p. v, paragraph 2, states MW-47 was sampled in March 2003; however, no analytical results for MW-47 could be presented in Table 1 for March because MW-47 had not been installed.
 - c. The Monitoring and Analysis section, p. v, paragraph 3 implies MW-45 was sampled in August of 2003, but the table "MW Field Data" presenting the August 2003 field data implies MW-45 was not sampled because it contained hydrocarbons.

Note: Giant does not need to collect water samples from monitoring wells containing separate-phase hydrocarbons (SPH) unless it is for fuel fingerprint analysis. Giant shall identify in the ground water report any water samples that were collected from monitoring and/or recovery wells containing SPH for fingerprinting purposes.

4. LTGWMWP, Site Map, p. 2, appears to have the locations of MW-45 and MW-46 mislabeled based on the map provided in the 2004 Ground Water Report, plate 3, which identifies MW-45 and MW-46 in reverse locations.
5. In the August 11, 2004 meeting between Giant, NMED, the Oil Conservation Division (OCD), and EPA, it was agreed that the August 2004 Sampling Event would include all facility monitoring and recovery wells unless SPH is present in a well. The results from the sampling event will then be used to determine what wells will be sampled in future ground water monitoring events.
6. Giant shall notify and request permission from NMED regarding any significant deviations from approved requirements when conducting investigations or sampling prior to implementing any changes.
7. NMED encourages Giant to follow the HWB's position paper "General Reporting Requirements For Routine Groundwater Monitoring at RCRA Sites" (www.nmenv.state.nm.us/hwb/guidance.html) when preparing groundwater monitoring reports.

Specific Comments

1. The 2004 Ground Water Report, Executive Summary, p. ii, paragraph 7, states "Giant installed a recovery system that employs a collection tank (Tank #38) and a pump at the #1 East outfall. The water/hydrocarbon is routed to a separator tank (Tank #33) that is set up for gravitational separation of the mixed hydrocarbon effluent. Recovered oil is routed to a 25000 gallon horizontal vessel (V-610). The underflow, clarified water, is routed to the refinery's raw water ponds."

Giant shall collect monthly effluent samples from the underflow outfall discharged to raw water ponds. NMED requires GRCB to analyze the effluent sample for BTEX using EPA method 8021B. If effluent samples exceed the WQCC levels, the effluent shall be treated prior to entering the raw water ponds. NMED may require additional analysis in the future.
2. The 2004 Ground Water Report, Monitoring and Analysis section, p. v, paragraph 3, states MW-36 was sampled in August of 2003. However, the report does not present any analytical results for this well.

Giant shall clarify if MW-36 was sampled and provide the analytical data. An explanation shall be provided if MW-36 was not sampled.

3. The 2004 Ground Water Report, Monitoring and Analysis section, p. v, paragraph 3, states MW-24 was dry during the August 2003 sampling event; however, Table 1 "Summary of Soil & Water Analysis," section 3, illustrates MW-24 was not sampled because the well contained hydrocarbons.

Giant shall clarify the reason for not collecting a sample from MW-24.

4. Attachment A, #4 a. - e. lists requirements of the proposed monitoring well installation procedures for MW-44, MW-45, and MW-46. Part a. states "approximately 20 feet of well screen are to be placed across the water table interface with at least 5 feet of well screen above the water table." The installation diagrams for the monitoring wells and boring logs presented in Attachment C do not indicate the depth of the water table.

Giant shall submit the depths to the water table for monitoring wells MW-45 and MW-47.

5. Attachment A, #5 addresses development of the new monitoring wells. Giant did not provide information in the 2004 Ground Water Report or the LTGWMWP pertaining to well development of MW-45 and MW-47. Giant shall provide the following:
 - a. The methods used for well development (e.g. pumping, surging, bailing) and the well development procedures.
 - b. The removal rate and volume of ground water removed during well development.
 - c. The water quality parameters (e.g., pH, electrical conductance, temperature) that were measured during well development and the frequency of measurement.
6. Attachment A, #9, states, "Giant shall measure the depths to water/product from the well casing rims in all facility wells on a semi-annual basis. The water/product levels must be measured to an accuracy of 0.01 foot. Giant shall calculate water table elevations by subtracting the depth to water from the surveyed well casing rim elevations. Giant shall provide a corrected water table elevation in wells containing phase-separated hydrocarbons by adding 0.8 times the measured product thickness to the calculated water table elevation. Giant shall prepare a facility site plan for each ground water monitoring event that presents the well locations, calculated water table elevations, phase-separated hydrocarbon thicknesses (where present) and facility features including aboveground storage tanks (ASTs) and process units." The following shall be presented in all future ground water reports.

- a. The water elevation table shall have columns with the following headings: date of measurement, well identification, well casing elevation, total well depth, depth to SPH, depth to water, groundwater elevation, and corrected water table elevation (if SPH are present).
- b. The semi-annual water table potentiometric surface maps must show well locations and the corresponding groundwater elevation, label contour lines with elevations or include flow direction arrows, and illustrate pertinent site features. The map should be developed from the data presented in the table described in item 6. a. above. The semi-annual water table potentiometric surface maps should be developed only from the data collected during the current sampling event.
- c. The semi-annual product thickness map must label each monitoring well with the measured SPH thickness and contain pertinent site features. The map must be developed from the data presented in the tables described in item 6. a. above. The semi-annual product thickness maps must only reflect data collected during the current sampling event.
- d. Note: The 2004 Ground Water Report, Plates 4 and 5 do not reflect the data collected during the semi-annual and annual sampling events that occurred in March and August but depict groundwater data collected in May and January.

Future ground water reports must include water table potentiometric surface and product thickness maps depicting data from the corresponding semi-annual and annual sampling events. Maps must still be developed from water/product measurements collected from all facility wells (e.g. Plate 4 & 5 May and January maps found in the 2004 Ground Water Report).

- e. All future maps and figures must contain a north arrow, scale, and an explanation for all abbreviations, symbols, and acronyms.
7. Attachment A, #11 states, "Giant shall collect ground water samples on an annual basis from the wells listed in Item 10 above and wells RW-1, RW-15, RW-18, MW-3, MW-4, MW-5, MW-8, MW-9, MW-26, MW-27, MW-28, MW-36, MW-42, MW-43 and the background well." According to the 2004 Ground Water Report, Table 2 Recovery System Volumes, MW-1, MW-9, MW-28, MW-42, and MW-43 have been converted into recovery wells. With the exception of MW-1 and MW-9, no other recovery wells were measured or sampled during the annual sampling event.

The LTGWMWP, Monitoring Plan, p. 5, bullet 5 states, "Recovery wells will not be sampled since they will give a distorted result."

Giant must sample the required recovery wells unless they contain SPH after pumping has been discontinued for 24 hours for all future groundwater sampling events. SPH measurements must be collected from recovery and monitoring wells containing SPH.

8. Attachment A, #11, states "Giant shall submit the ground water samples collected on an annual basis to an analytical laboratory for chemical analysis of, total and dissolved chromium by EPA Method 7191, total and dissolved lead by EPA Method 7421."

Giant analyzed the total and dissolved chromium and lead using EPA Method 6010C and not the methods required. Giant must use the recommended analysis stated in the requirements unless prior approval is given by NMED for use of a different method. Giant must provide an explanation why EPA Method 6010C was used instead of EPA Methods 7191 and 7421.

9. 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.

10. Attachment A, #15 a. – j. provides information that should be present in the annual ground water monitoring report. Giant shall ensure the following information is provided in future groundwater monitoring reports.
 - a. Giant must provide detailed descriptions of all soil and ground water remediation and monitoring activities, which have occurred during the previous calendar year. The description shall include conclusions and also recommendations if Giant intends to propose changes to the required work.
 - b. Giant must submit semi-annual isopleth maps for benzene, total BTEX, and MTBE. The maps must include the corresponding concentrations detected at the sampled monitoring wells.
 - c. Giant must provide summary tables of all soil and ground water quality sampling results during the past calendar year that compares detected contaminant

concentrations to applicable cleanup standards or screening levels and also copies of the laboratory analytical data reports and associated QA/QC data for the reporting period. Any data exceeding the cleanup standards or screening levels must be highlighted. The tables must provide the detection limits indicated in the laboratory results (e.g., <10) and not denote the detection limit as non detect (ND). The report should include a section discussing any exceedances of the cleanup standards and address any laboratory data quality exceptions or elevated detection limits.

- d. Giant must notify the NMOCD and the NMED of the exceedance of any WQCC standard or EPA maximum contaminant level (MCL) in any monitoring well where contaminant concentrations did not exceed WQCC standards or MCLs during the preceding monitoring event. The reporting to both agencies must be in accordance with NMOCD Rule 116.
- e. Plots of concentration versus time for BTEX and MTBE should include the y-axis displaying the "Concentrations (ppm)" to identify the concentrations. The x-axis of the time-plots presented in the 2004 Ground Water Report indicates a zero concentration line for some contaminants and other times does not indicate a zero concentration. Giant must be consistent with the data being presented.
- f. Waste disposition must identify the management and disposal of wastes generated during the groundwater sampling event and groundwater investigations that have occurred during the reporting period.
- g. Giant must include the results of any below grade line testing or provide an explanation as to why testing did not occur in the groundwater report.