



GRB 2002 ENTERED Giant Bloomfield

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

December 30, 2002

CERTIFIED MAIL
RETURN RECEIPT NO. 7001-1940-0004-7923-0629



Mr. Barry Holman
Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

RE: SITE INVESTIGATION AND ABATEMENT PLAN
GIANT BLOOMFIELD REFINERY (GW-001)

Dear Mr. Holman:

The New Mexico Oil Conservation Division (NMOCD) has reviewed Giant Refining Company's (Giant) September 2001 "DISCHARGE PLAN APPLICATION, SITE INVESTIGATION AND ABATEMENT PLAN CMS VOLUME II", September 2002 "SUPPLEMENT TO BLOOMFIELD REFINERY DISCHARGE PLAN APPLICATION, SITE INVESTIGATION AND ABATEMENT PLAN CMS, VOLUME I" and December 18, 2002 "PROPOSED WELL LOCATIONS". These documents contain Giant's proposals for additional site investigations and Giant's long term remediation and monitoring proposal for contaminated soil and ground water at the refinery.

The above-referenced investigation, remediation and monitoring proposals are approved under the conditions contained in the attached document. Please be advised that NMOCD approval does not relieve Giant of responsibility if the proposal fails to adequately contain, remediate or monitor contamination related to Giant's facilities. In addition, NMOCD approval does not relieve Giant of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please contact me at (505) 476-3491.

Sincerely,
[Signature]
William C. Olson
Hydrologist
Environmental Bureau

cc: Denny Foust, NMOCD Aztec District Office
Dave Cobrain, NMED Hazardous and Radioactive Materials Bureau
Robert Wilkinson, EPA Region VI

**ATTACHMENT**

**DISCHARGE PLAN GW-1**

**NMOCD APPROVAL CONDITIONS  
FOR  
GROUND WATER REMEDIATION AND MONITORING**

**BLOOMFIELD REFINERY  
GIANT REFINING COMPANY**

**December 30, 2002**

1. Giant shall install three monitoring wells (MW-44, MW-45 and MW-46) at the locations shown in Giant Refining Company's memorandum dated December 18, 2002. The monitoring well installation and subsequent soil and ground water monitoring and sampling shall fulfill the requirements as set out below.
2. Giant shall obtain a soil sample from every five foot interval from the surface to total depth and at the top of the water table during the drilling of monitor wells MW-44 and 45. Each soil sample shall be sampled and analyzed for volatile organic compounds (VOCs) using EPA Method 8260 and gasoline-, diesel- and oil-range organics (GRO, DRO and ORO, respectively) using modified EPA Method 8015.
3. During the drilling of background monitor well MW-46, Giant shall obtain a soil sample from the top of the water table. The sample shall be analyzed for volatile organic compounds (VOCs) using EPA Method 8260, gasoline-, diesel- and oil-range organics (GRO, DRO and ORO, respectively) using modified EPA Method 8015, New Mexico Water Quality Control Commission (WQCC) metals and semi-volatile organic compounds (SVOCs) using EPA Method 8270.
4. Giant shall complete proposed monitor wells MW- 44, 45 and 46 as follows:
  - a. At least 20 feet of well screen shall be placed across the water table interface with at least 5 feet of well screen above the water table.
  - b. An appropriately sized gravel pack shall be set in the annulus around the well screen from the bottom of the hole to 2-3 feet above the top of the well screen.
  - c. A 2-3 foot bentonite plug shall be placed above the gravel pack.
  - d. The remainder of the hole shall be grouted to the surface with a cement grout containing 3-5% bentonite.
  - e. A concrete pad and locking well cover shall be placed around the well casing at the surface.

5. The monitoring wells shall be developed after construction by pumping, surging, bailing, or a combination of these methods after construction. Development of each well shall continue until the water is as free of sediment as practicable with respect to the composition of the subsurface materials within the screened interval. The removal rate and amount of ground water removed shall be recorded during well development. The pH, electrical conductance and temperature of the water shall be monitored during development. The monitoring wells shall be considered satisfactorily developed when the water is free of sediment, the pH, conductivity and temperature values do not vary by more than 10 percent for at least three measurements, and at least five borehole volumes of water have been removed from the well
6. No less than 24 hours after the wells are developed, ground water from monitor wells MW-44, 45 and 46 shall be purged, sampled and analyzed for concentrations of aromatic and halogenated volatile organics using EPA method 8260, SVOC's using EPA method 8310, and total dissolved solids (TDS), major cations and anions and dissolved WQCC metals using appropriate EPA approved methods.
7. Giant shall provide the construction details for monitoring point S-5 in the next annual report. If the well casing for monitoring point S-5 does not contain a sufficient amount of screen across the water table for the detection of free phase product, Giant shall provide a proposed work plan in the annual report for replacement of monitoring point S-5.
8. Giant shall measure the water table and product elevations in all facility monitoring wells on a semi-annual basis. The water/product levels shall be measured to an accuracy of 0.01 foot. A corrected water table elevation shall be determined for all wells containing phase-separated hydrocarbons.
9. Giant shall collect groundwater samples on a semi-annual basis from monitoring wells MW-1, MW-6, MW-12, MW-13, MW-20, MW-24, MW-32, MW-33, MW-35, MW-37, MW-38, MW-44, MW-45; seep S-5; piezometers P-4, P-5; and, all Hammond Ditch french drain outfalls along the refinery property. The samples shall be analyzed for concentrations of benzene, toluene ethylbenzene and xylene (BTEX), and methyl tertiary butyl ether (MTBE).
10. Giant shall collect groundwater samples on an annual basis from wells RW-1, RW-15, RW-18, RW-23, MW-3, MW-4, MW-5, MW-8, MW-9, MW-11, MW-26, MW-27, MW-28, MW-34 MW-42, MW-43 and MW-46. The samples shall be analyzed for concentrations of BTEX and MTBE.
11. On an annual basis ground water from all the monitor wells listed in items 9 and 10 above shall also be analyzed for concentrations of TDS, cations and anions, dissolved WQCC metals, nitrate/nitrite, dissolved oxygen and oxidation-reduction potential (ORP).

12. All soil and water quality samples shall be obtained and analyzed using EPA approved methods and quality assurance/quality control (QA/QC) procedures.
13. All monitor wells shall be appropriately purged prior to water sample collection. Basic water quality parameters such as pH, electrical conductivity and temperature shall be monitored during purging of monitoring wells. The monitoring wells should be considered satisfactorily purged when the pH, conductivity and temperature values do not vary by more than 10 percent for at least three measurements, and at least three well casing volumes of water have been removed from the well.
14. All investigation and remediation generated wastes shall be disposed of at an NMOCD approved facility.
15. All below-grade lines used to convey contaminated fluids shall be pressure tested to a minimum of 3 psi above operating pressure prior to operation
16. All above ground tanks used to store any fluids other than fresh water shall be bermed to contain one and one-third times the volume of the largest tank or all interconnected tanks
17. Each year Giant shall submit a comprehensive annual report on all investigation, remediation and monitoring activities. The report shall be submitted to the NMOCD Santa Fe Office by April 1 of each respective year with a copy provided to the NMOCD Aztec District Office. The annual report shall include:
  - a. A description of all soil and ground water remediation and monitoring activities which have occurred during the previous calendar year including conclusions and recommendations.
  - b. Semi-annual water table potentiometric maps showing well locations, corrected water table elevations, pertinent site features, and the direction and magnitude of the hydraulic gradient.
  - c. Semi- annual product thickness maps showing well locations, measured product thickness in each well and pertinent site features.
  - d. Semi-annual isopleth maps for contaminants of concern.
  - e. Summary tables of all soil and ground water quality sampling results during the past calendar year including copies of all recent laboratory analytical data sheets and associated QA/QC data.
  - f. Summary tables of the semi-annual amount of fluids recovered from each recovery well and the total volume recovered to date.

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- g. Concentration versus time plots of contaminants of concern for each monitoring well.
  - h. The disposition of all wastes generated.
  - i. The results of any below grade line testing.
  - j. The results of any investigation actions conducted during the prior calendar year.
18. Giant shall notify the NMOCD at least 2 weeks in advance of all scheduled activities such that the NMOCD has the opportunity to witness the events and split samples
19. Giant shall notify the NMOCD of the discovery of separate-phase hydrocarbons or the exceedance of a WQCC standard in any downgradient monitor well where separate-phase hydrocarbons were not present or where contaminant concentrations did not exceed WQCC standards during the preceding monitoring event pursuant to NMOCD Rule 116.