



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION



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November 18, 1992

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. P-667-241-875**

Mr. David Roderick  
Refinery Manager  
Bloomfield Refining Company  
P.O. Box 159  
Bloomfield, New Mexico 87413

**RECEIVED**  
NOV 19 1992  
**OIL CON. DIV.)**  
**DIST. 3**

**RE: Discharge Plan GW-130, Class 1 Well**  
**Bloomfield Refining Company**  
**San Juan County, New Mexico**

Dear Mr. Roderick:

The Oil Conservation Division (OCD) has received and is in the process of reviewing the above referenced discharge plan application. The application submitted was a request for a modification to the discharge plan GW-1 for the Bloomfield Refining Company (BRC). The OCD has determined that a new discharge plan is required for the proposed Class 1 injection well since it is regulated under Part 5 of the Water Quality Control Commission regulations and the refinery is regulated under Part 3. The following comments and requests for additional information are based on the application dated September 10, 1992, and the supplemental information dated September 24, 1992. Submission of the following information will allow review of the discharge plan application to continue.

1. Chemical Analysis of Injection Fluids: BRC has proposed various annual and quarterly analyses of the injection fluids on page 3 of the disposal application. The OCD requires the following analyses of injection fluids on a quarterly basis:

- a. Aromatic and halogenated volatile hydrocarbon scan by either EPA method 8010/8020 or EPA method 8240.
  - b. General water chemistry to include calcium, potassium, magnesium, sodium, bicarbonate, carbonate, chloride, sulfate, total dissolved solids (TDS), pH, and conductivity.
  - c. Heavy metals using the ICAP Scan (EPA method 6010), and Arsenic and Mercury using atomic absorption (EPA methods 7060 and 7470).
2. Oily-Water Pond Sampling: The OCD requires that BRC sample the effluent discharged from the oily-water ponds to ensure that the waste streams to be injected for disposal do not fall under the jurisdiction of Federal Resource Conservation and Recovery Act (RCRA) regulations or State Hazardous Waste regulations. The south and north oily-water ponds are classified as a hazardous waste treatment unit by the New Mexico Hazardous and Radioactive Materials Bureau. Sampling will be performed weekly for three (3) months to establish a trend and then monthly thereafter unless the analyses show abnormal levels. The water samples will be taken from the sump on the immediate downstream side of the oily-water pond. Analyses will be done using the EPA Toxic Characteristic Leaching Procedure (TCLP) and the appropriate EPA analytical methods for all constituents listed except herbicides and pesticides. Analyses for constituents which are not detected for three months may be discontinued with OCD approval.
3. Quarterly Reporting: Quarterly reports must be signed and certified as provided in WQCC Section 5-101.H. which requires the signature be directly preceded by the certification "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment." The following reports must be submitted quarterly to both the OCD Santa Fe and Aztec Offices:
  - a. Results of the chemical analysis of the injection fluids (see 1. above).
  - b. Monthly average, maximum and minimum values for injection pressures; flow rate and flow volume; and, the annular pressure.
  - c. MIT results, submitted with the first quarterly report after completion of the MIT.
  - d. Well workovers, well stimulations, and any other tests, submitted with the first quarterly report after completion of the workover or test.

4. Monthly Reporting: Monthly reporting of the disposal of produced water will be in accordance with OCD Rule 1120 which requires monthly submittal of Form C-120-A to both the OCD Santa Fe and Aztec Offices. Item 4 on page 4 of your discharge plan application states that monthly reports will be in accordance with OCD Rule 704 and 1120. Please note that Rule 704 does not require submittal of monthly reports for a Class 1 well.
5. Area of Review: The OCD requires that all wells within the one-half mile area of review have the production casing cemented over the proposed injection zone. The top of the proposed injection zone is at 3294 feet. The OCD has calculated the top of cement (TOC) for the wells submitted by BRC which fall within the area of review. There are two wells within the area of review in which the calculated TOC is below or very near the top of the proposed injection zone. The calculated TOC for the 4-1/2 inch longstring in the Meridian Oil Calvin Well No. 1 is at 4,662 feet. The calculated TOC for the 4-1/2 inch longstring in the Amoco Davis Gas Com Unit-F well No. 1 is at 3192 feet. For these two wells in question BRC must either submit additional information confirming that there is adequate cement over the proposed injection zone or a plan and schedule for cementing these wells over the proposed injection zone.
6. Injection Pressure: BRC states that the Cliff House Formation will take fluids on a vacuum and that the well will be equipped with a pressure switch limiting the wellhead pressure to no more than the hydrostatic pressure from the storage tanks. Is it assumed that the well will operate on vacuum for its entire life? If not, submit a contingency plan to install the proper pressure regulating equipment so that the formation fracture pressure will not be exceeded.
7. Spill Containment: BRC has proposed that the injection well draw water from Pond 2 by a below grade pumping system, transfer the fluids to two above ground storage tanks, and run the water through a filtration system prior to injection. Construction of these facilities must be in accordance with the following OCD spill containment requirements: 1) all above ground storage tanks must be bermed to contain one and one-third times the volume of the largest tank or all interconnected tanks, 2) all below grade tanks and sumps must have secondary containment and leak detection system, 3) all chemical drums must be stored on a pad with curb-type containment, and 4) all areas which show evidence of continual leaks and spills must have pad and curb type containment.

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8. Chemical Analysis of Disposal Zone: On page 4, Section VII.,(5), BRC states that a chemical analysis of the disposal zone formation water from the Basin Disposal well is attached (see appendix). There is no chemical analysis located within the application. Please submit the referenced chemical analysis.
9. Plugging Bond: The OCD requires that all wells have a plugging bond approvable by the Division prior to commencing construction. Submit an estimate to plug the well according to the proposed closure plan. Include in the estimate closure of the surface facilities.
10. Discharge Plan GW-1 Requirements: The discharge plan GW-1 for the Bloomfield Refinery was renewed on February 4, 1992, and will expire on June 7, 1994. All commitments and requirements under this discharge plan remain in effect. Discharge plan GW-1 covers all facilities up to the discharge point from the double-lined ponds unless otherwise specified. Please address the following items concerning GW-1 in which a Class 1 injection well would impact:
  - a. Pond 1 and Pond 2: All discharge plan requirements in GW-1 for ponds 1 and 2 remain in effect. These include freeboard of the ponds, leak-detection monitoring and reporting, and any proposed spray or aeration systems. If the operation of an injection well would alter any of these commitments please submit a request for modification to discharge plan GW-1.
  - b. Clay-Lined Ponds & Spray Irrigation Area: The operation of an injection well for disposal of effluent at BRC would allow for the permanent closure of the two clay-line ponds and the spray irrigation area. The OCD requires that BRC cease operation of the clay-lined ponds and spray irrigation area within 30 days of operation of the proposed injection well. The OCD requires that BRC submit a detailed plan and schedule for closure of the two clay-lined ponds and spray irrigation area within 60 days of operation of the injection well. Please note that the OCD will not allow the ponds and spray irrigation area to remain open for emergency purposes.
  - c. South & North Oily Water Ponds: As specified in discharge plan GW-1, BRC will close the south and north single-lined oily water ponds. In a letter dated October 4, 1991, BRC proposed that in 1992 the ponds would either be replaced with a tank system or double-lined. Please submit an updated schedule and plan to close the south and north oily water ponds.

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Addressing the above items will allow review of your discharge plan application to continue.  
If you have any questions, please do not hesitate to contact me at (505) 827-5884.

Sincerely,

A handwritten signature in cursive script that reads "Kathy M. Brown". The signature is fluid and written in dark ink.

Kathy M. Brown  
Geologist

xc: Denny Foust, OCD Aztec Office  
Phillip Nobis, Tierra Environmental Co.