



# Department of Environmental Quality

## LAND QUALITY DIVISION

HERSCHLER BLDG. - THIRD FLOOR  
122 WEST 25TH

TELEPHONE 307-777-7756

CHEYENNE, WYOMING 82002

June 7, 1985

Mr. Juan R. Velasquez, Manager  
Environmental Affairs  
UNC Mining and Milling  
P.O. Box 8480  
Santa Fe, New Mexico 87504-8480

RE: Leuenberger Project, Permit No. 522

Dear Mr. Velasquez:

The Department of Environmental Quality has reviewed the May 1, 1985 Decommissioning and Reclamation Plan for the Leuenberger in-situ project.

The only comment generated from the review of the decommissioning plan is that not all of the Water Quality Rules and Regulations, Chapter XI, Part G, Section 70 (Plugging and Abandonment) have been satisfied. These rules and regulations went into affect on May 11, 1984. It has been determined that any wells being plugged or abandoned after May 11, 1984 must meet the requirements of both the Water Quality and Land Quality Rules and Regulations. A copy of the Water Quality Rules and Regulations is attached for your use.

The April 24, 1985 letter in which UNC requests that Well MR-1 be allowed to be plugged and abandoned has also been reviewed by DEQ. The following comments are in response to the review:

1. Well 301 has two screened intervals separated by a blank. The first screened interval begins at 4874.3 feet above mean sea level and goes to a depth of 4839.3 feet MSL. This screened interval correlates with Well MR-1's screened interval of 4867.8 to 4842.8 feet MSL.

The second screened interval begins at 4819.3 feet MSL and ends at 4809.3 feet MSL.

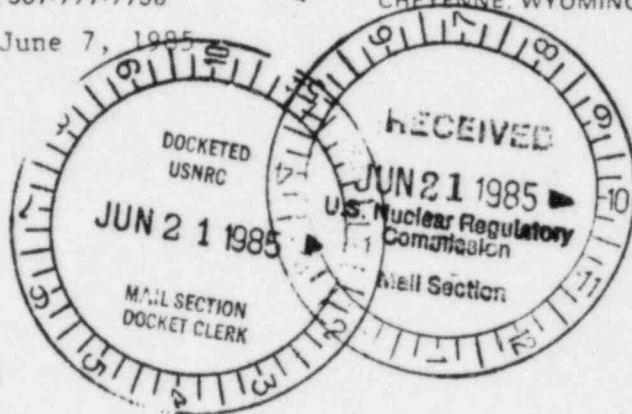
Due to the possible dilution caused by the second screened interval, this interval must be plugged before Well 301 could be used as a comparison for Well MR-1.

2. In regards to the commercial license, it needs to be proven that the Desulfibrio Desulficans bacteria and the related iron arsenide build-up can be eliminated, thereby reducing arsenic's concentration in Well MR-1.

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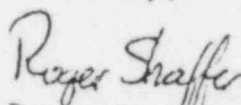
The following list includes suggestions for demonstrating restoration:

- a. Chemical treatment and purging as used by the oil and gas industry, may be used to destroy the bacteria and eliminate the iron arsenide deposit in and around the well bore.
- b. Prove that a different type of pipe would eliminate the arsenic/iron buildup, reducing arsenic's concentration.
- c. If Well 301's bottom interval is plugged, it could be used in conjunction with the Well MR-1's test to prove that the arsenic problem was confined to, in and around the well bore.

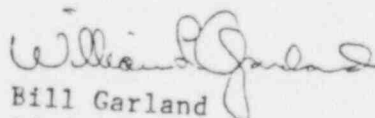
As it stated in Cathleen McCarty's February 28, 1985 letter "Well MR-1 cannot be reclaimed until the arsenic problem is cleaned up. In-situ mining of the "M" zone is precluded until the "M" zone is considered restored by the Department of Environmental Quality."

If you have any questions, please feel free to contact either Phil Pucel or Cathy McCarty.

Sincerely,



Roger Shaffer  
Acting Administrator



Bill Garland  
Administrator, Water Quality

RS:BG:jls

cc: Phil Pucel, WQD  
Cathy McCarty, LQD  
Dick Appel  
Sandra Wastler, NRC  
Lisa Geesey, LQD  
Kathy Ogle, LQD

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