State of New Mexico
ENVIRONMENT DEPARTMENT
Ground Water Quality Bureau
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2918
Fax (505) 827-2965
Fed Ex (87505)

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

July 12, 2004

Mr. William von Till
Senior Project Manager
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20852-2738
Mailstop T-8A33

Re: Comments on the January 2004 Report Titled "Rationale and Field Investigation Work Plan to Evaluate Recharge and Potential Cell Sourcing to the Zone 3 Plume Church Rock site, Gallup, New Mexico". -Docket 40-8907

Dear Mr. von Till:

Thank you for providing the New Mexico Environment Department (NMED) with the opportunity to comment on USFilter's January 2004 field investigation work plan. Our main concern with this Work Plan is that it *only* considers ground water that is already present in the system. We agree with the proposal to test whether or not ground water is flowing through the tailings and thus causing an on-going source of ground water contamination; however we are also concerned with other possible ongoing sources. One possible ongoing source is perched water that drains into the aquifer. Another possibility is that contaminated water which is sprayed over the cap may move through the cap and infiltrate through the tailings. Our understanding is that UNC has designed the evaporation system using mass balance calculations of rainfall and evapotranspiration, but that the design has not been checked through field measurements. If there is historical information on field measurements used to test the evaporation system, NMED requests that UNC provide the names of documents where we can find this information. Possible field measurements to test the system could include using a tracer in the irrigation water or installing lysimeters. In addition to field verification, soil-atmospheric models may be used to demonstrate or calculate cover effectiveness.

NMSS01

NMED's specific comments are below:

Section 2.3, bottom of page 7. The conclusion of this paragraph is that drainage from the tailings into the alluvium has ceased. Even though there is a significant unsaturated zone between the bottom of the tailings and the water table, there is still a possibility that water is perched in the tailings and that seepage from the perched water may be providing an on-going source to the ground water in Zone 3.

Section 3.0, p. 10: The text states that if water doesn't recover after a pumping test, this will indicate that there is not a continuous source. Piezometric measurements should be collected and evaluated at least through the restarting of the evaporation/cap irrigation system, for the following reasons:

- Conductivities may be so low that recovery is very slow.
- Drought conditions may cause ground water to be lower at the time of testing than in the future, and, because the entire hydrologic system is draining, the water levels may never recover to the initial state.
- The irrigation system may provide a continuous source that is not present when the system is not being used.

Additionally, analytical measurements should continue to be collected and evaluated because if concentrations in the tailings are very high, even a very low flux of contaminated water may significantly influence ground water concentrations.

Section 3.0, p. 10: The text states that the arrows on Figure 3-5 for alluvial recharge and tailings seepage are inconsistent with Zone 3 flow directions. These areas may be providing seepage at high concentration without providing significant recharge.

Please let me know if you have any questions on these comments or any other issues concerning the UNC Church Rock Site. I can be reached by telephone at (505) 827-2434 or by e-mail at: robin_brown@nmenv.state.nm.us.

Sincerely,

For

Robin Brown
Environmental Scientist and Specialist
Superfund Oversight Section

Xc: Mark Purcell, Remedial Project Manager, EPA Region 6
Diana Malone, Navajo Superfund Program, Navajo Nation EPA
Jerry Schoeppner, Bureau Chief, GWQB, NMED
George Schuman, Program Manager, Superfund Oversight Section, GWQB, NMED
Kevin Myers, Mining Environmental Compliance Section, GWQB, NMED