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October 3, 2005

Mr. Mark Purcell
Remedial Project Manager
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200 (6SF-LP)
Dallas, Texas 75202-2733

**Re: Comments on the December 2004 Report Titled "Annual Review Report - 2004,
Groundwater Corrective Action, Church Rock Site, Church Rock, New Mexico".**

Dear Mr. Purcell:

Thank you for providing the New Mexico Environment Department (NMED) with the opportunity to comment on United Nuclear Corporation's 2004 annual report. NMED offers the following comments:

General text comments:

The terms "background water" and "background wells" were used incorrectly in the report. Water and wells believed to be not impacted by the contamination plume should be referred to as "non-impacted water" and "non-impacted wells", not "background water" or "background wells".

For the convenience of the reader, NMED recommends that future annual reports contain a figure which shows the locations of all wells that have been drilled at the site including their status and which aquifer zone they are located in. The figures in the 2004 annual report only include wells that are currently being monitored.

Text comments:

Section 1, page 1. The text states that by approval to temporarily shut off the three corrective action systems, the agencies recognized that the corrective actions have reached the limit of their

effectiveness. The agencies agreed to a temporary system shut down to evaluate the effectiveness, but did not agree that the corrective actions had reached their limit. UNC and the involved agencies (NMED), United States Environmental Protection Agency (USEPA), Navajo Environmental Protection Agency (NNEPA) and the Nuclear Regulatory Commission (NRC) met to discuss the natural attenuation test in the spring of 2004. At the meeting, the involved parties agreed that, since the main purpose of pumping wells was for containment, we could not determine the effects from stopping pumping in the SW alluvium until water had time enough to travel from pumping wells to down gradient wells. The 2004 annual report does not show calculations for the travel time to the down gradient wells, so there is no basis for determining when the chemistry in these wells should begin to change. As part of the evaluation on whether or not pumping is more effective than natural attenuation, trend analyses should be performed on the GW-series wells taking travel time into account.

Section 2.3.2 bullets, pages 8 to 9. These paragraphs discuss the results for well SBL 1. Also, in the meeting in May, some of UNC's consultants stated that they thought SBL 1 would be a good background well. NMED feels that SBL 1 is not appropriate as a background well because the chemistry of the water in SBL 1 is different from any other ground water collected in the area including the non-impacted areas. Because of the water chemistry at the well, the well also may not yield useful information as the plume passes through the area.

Section 2.3.5, page 15. This paragraph states "no change in trend was observed for sulfate because these are naturally equilibrated with gypsum"; however, sulfate trends did change after stopping pumping as is summarized in Table B.7 of the 2002 "Final Report and Technical Impracticability Evaluation, Southwest Alluvium Natural Attenuation Test, Church Rock Site" prepared by Earth Tech.

Section 2.3.5, p. 16, Calcium and Bicarbonate. The text points out that bicarbonate concentrations are increasing in the GW series of wells. This indicates that the pumping wells were more effective than natural attenuation in seepage containment.

Section 3.3, top of p. 26. This paragraph states that two piezometers were installed, yet the recommendations in 2004 "Rationale and Field Investigation Work Plan to Evaluate Recharge and Potential Cell Sourcing to the Zone 3 Plume" by USFilter, were to install two monitoring wells to monitor water quality as well as water levels. During the May 2005 meeting, UNC consultants indicated that these piezometers were dry. NMED requests that if liquid is ever found in the piezometers, that it be sampled.

Figures

Figure 37 and 46. Zone 3 and Zone 1 Potentiometric Surface Map. These maps indicate that in Zone 1 and Zone 3 ground water directly down gradient of the most contaminated regions is not being monitored. NMED requests that monitoring be performed in areas directly down gradient of highly contaminant regions or a statement be provided to explain why monitoring isn't necessary in these areas.

Appendices

Figure A-1. This figure shows that wells 808 and 805 are proposed for collecting water levels only. NMED requests that UNC continue water quality monitoring at well 808.

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@state.nm.us.

Sincerely,



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