



Docket: 40-8907

**GE Corporate
Environmental Programs**

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Mr. Mark Purcell
Superfund Division (6SF-LP)
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

October 27, 2004

Subject: Supplemental Feasibility Study (SFS), United Nuclear Superfund Site, Church Rock, NM
Administrative Order Docket No. CERCLA 6-11-89

Dear Mr. Purcell:

Please find enclosed two copies of the report entitled, "SUPPLEMENTAL FEASIBILITY STUDY ZONE 3 HYDROSTRATIGRAPHIC UNIT, CHURCH ROCK URANIUM MILL TAILING SITE". This report has been prepared by United Nuclear (UNC) in accordance with your request in a letter dated March 10, 2004. As of September 1997 United Nuclear Corporation became a wholly-owned, indirect subsidiary of General Electric Company. GE Corporate Environmental Programs has been retained through a separate administrative services agreement to assist UNC both technically and administratively with environmental issues at the Church Rock site.

Also, in your March 10, 2004 letter, EPA requested that UNC submit, by May 10 2004, a Technical Memorandum of the technologies that would be considered in the SFS and the screening process that was used to determine the potential alternatives. The Technical Memorandum was submitted on April 15, 2004. UNC prepared this SFS report to be consistent with the April 15th Technical Memorandum. The Technical Memorandum includes a chronology of events that led to UNC's initiative to aggressively develop remedy modifications or enhancements that might improve the performance of the remedy in Zone 3. As the Technical Memorandum states, UNC appreciates the proactive stance that USEPA and its stakeholders have taken during the development and implementation of the Zone 3 remedy enhancements. This has resulted in a significantly more rapid deployment of the hydraulic fracturing technology than might occur with traditional review cycles.

The SFS serves mainly to record the development of recommendations that are already underway. The recommendations that are memorialized in this SFS were developed in a formal WorkPlan (MACTEC, December 2003; revised by letter, March 2004), and have been approved in USEPA's correspondence to UNC dated May 21, 2004. UNC is pleased to report that the Work Plan is being successfully executed. In addition to the hydraulic fracturing of seven wells near the leading edge of the seepage-impacted area, UNC plans to install approximately five monitoring/recovery wells on or about November 15, 2004. Beginning in December, the wells will be brought "on-line", and during the following 6-12 months UNC will be evaluating the effectiveness of the remedy enhancement according to the Work Plan. The principal question to be answered will be whether these efforts (which constitute Alternative 6 -Cut-off/Containment Wells in the SFS) can be expanded into a full-scale dewatering of the seepage-impacted groundwater (Alternative 5 Enhanced Well Field).

UMSS01

One of the key findings of UNC's remedy modification initiative was the recognition of the value of dewatering the alluvial material that serves as a source of recharge to Zone 3. The hydraulic modeling that is reported in the SFS has shown that for any remedy enhancement to be effective (except Alternative 6 - Cut-off/Containment), the on-going recharge from the Southwest Alluvium to Zone 3 should be diminished. UNC plans to install two alluvial wells and perform pumping tests on them as soon as the area becomes accessible (higher than normal precipitation this year has rendered the area inaccessible to large drilling rigs). The data from this work will be used to design an alluvial dewatering system that would be implemented in the Zone 3 recharge area if and when Alternative 5 is found to be practicable.

Another prerequisite for the effectiveness of any Zone 3 remedy enhancement is that there is no longer a continuing source of seepage within the tailings impoundment. UNC reported on this topic (U S Filter, January 2004), concluding that the likelihood is extremely remote, but at the same time making a recommendation to install two piezometers in key locations that will answer the question with the certainty that UNC demands. This work has been completed. Data analysis is underway, and the results will be reported in the 2004 Annual Report.

We will continue to keep you informed of all developments.

Sincerely



Roy S. Blickwedel, PG.
Remedial Project Manager

Cc: William von Till, (2 copies)
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