



ENGINEERING AND CONSTRUCTION  
120 RADNOR ROAD  
STATE COLLEGE, PA 16801

TELEPHONE  
FACSIMILE  
WEBSITE

814-231-2170  
814-231-2174  
www.usfilter.com

January 14, 2004

Mr. Gary Janosko, Branch Chief  
Fuel Cycle Licensing Branch, FCSS  
c/o Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

40-8907

Mr. Mark D. Purcell  
Remedial Project Manager  
Superfund Division  
U.S. Environmental Protection Agency, Region 6  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202-2733

Re: License No. SUA-1475, 2003 Groundwater Corrective Action Annual Review Report  
United Nuclear Corporation's Church Rock Site, Gallup, New Mexico

Dear Messrs Leach and Purcell:

On behalf of United Nuclear Corporation (UNC), USFilter Engineering & Construction (USFilter) has prepared this annual performance review of the groundwater corrective action at UNC's Church Rock Mill and Tailings Site near Gallup, New Mexico, pursuant to License Condition 30C. This report is for the 2003 operating year and represents the period from October 2002 through October 2003.

This report, similar to the 2002 report, focuses on the groundwater performance of the natural systems without active remediation. As indicated in the U.S. Environmental Protection Agency's *First Five-Year Review Report* (September 1998) and by the approvals to decommission or temporarily shut off the three corrective action systems, the agencies recognized that the corrective actions have reached the limit of their effectiveness in Zone 1 and Zone 3, and may have reached their limit of effectiveness in the Southwest Alluvium. Also, the presentations and reports prepared to document the geochemical processes in each hydrostratigraphic unit (Earth Tech, 2000d and 2002c (Southwest Alluvium); General Electric Company, 2000 (Zone 3); and Earth Tech, 2000c (Zone 1); full reference citations are provided in the *2003 Annual Review Report*) show that the natural geochemical mechanisms are at least as effective as the active remediation systems in controlling the migration of constituents of concern. The *2003 Annual Review Report* focuses on how these natural processes are performing. EPA's *Second Five-Year Review Report* (September 2003) recommended that a Focused Feasibility Study should be done to assess what future actions should be taken.



## RECOMMENDATIONS

Based on the results of the 2003 annual performance evaluation, the following recommendations are provided for each of the three hydrostratigraphic units at the Site.

### Southwest Alluvium

1. Decommission the pumping wells.
2. Continue to perform monitoring on an annual basis because the water quality is stable.
3. Closure of the Southwest Alluvium corrective action program using a combination of:
  - Monitored Natural Attenuation (MNA) – for chloride, chloroform, metals, and radionuclides
  - Technical Impracticability (TI) Waiver – for sulfate and total dissolved solids (TDS) in the proposed TI zone

### Zone 3

Continue Zone 3 remediation using the natural system and allow time for the natural system to stabilize the seepage impacts. The revised monitoring program requested by the NRC and implemented in 2001, combined with the plume boundary wells that United Nuclear installed in 2002, will be a useful tool for evaluating the migration of the seepage and the performance of the natural system in attenuating constituents. In addition, UNC is performing exploratory studies to evaluate remedies to enhance the extraction potential within the impacted area of this hydrostratigraphic unit, and to prevent the seepage from migrating offsite (MACTEC, December 2003).

### Zone 1

Proceed to closure of the Zone 1 corrective action program using a combination of:

1. MNA – for metals and radionuclides
2. TI Waiver – for sulfate, TDS, and manganese in the proposed TI zone
3. Institutional Controls – for support of MNA and TI Waiver.

Messrs. Gary Janosko and Mark D. Purcell  
January 14, 2003  
Page 3

Please contact Mr. Roy Blickwedel (General Electric Corporation) at (610) 992-7935 if you have any questions or need additional information.

Sincerely,



Mark Jancin, P.G.  
Project Manager

Enclosures (2 copies for each addressee)

cc: Bill von Till, Nuclear Regulatory Commission  
Robyn Brown, New Mexico Environment Department  
Diana Malone, Navajo Nation Superfund  
Larry Bush, United Nuclear Corporation  
Roy Blickwedel, General Electric Corporation