



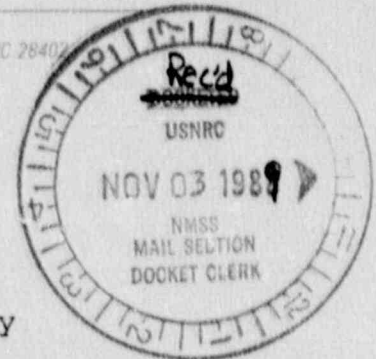
70-1113

GE Nuclear Energy

General Electric Company  
Castle Hayne Road, Wilmington, NC 28402



October 20, 1989



Mr. L. C. Rouse, Chief  
Fuel Cycle Safety Branch  
Division of Industrial and Medical Nuclear Safety  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Rouse:

Subject: Planned Activities Not Affecting Licensee Provisions

- References:
- 1) NRC License SNM-1097, Docket # 70-1113
  - 2) Telephone conference, TP Winslow et al and ED Flack et al, 10/11/89

Pursuant to activities conducted under NRC Materials License SNM-1097, General Electric's Nuclear Fuel and Components Manufacturing (NF&CM) is planning to modify the existing Calcium Fluoride (CaF<sub>2</sub>) treatment operation by installing drying equipment, scrubber, and material handling equipment. The purpose of this letter is to describe the planned modification and request NRC concurrence with NF&CM's position that the changes do not require prior NRC approval. A description of our present CaF<sub>2</sub> treatment process, proposed modifications, and concurrence request are included as an attachment to this letter.

If you should need additional information or would like to discuss this matter further, please contact me at (919) 675-5461.

Sincerely,

GE NUCLEAR ENERGY

*T. Preston Winslow* 10/20/89  
T. Preston Winslow, Manager  
Licensing & Nuclear Materials Management

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/sbm

Attachment

cc: Malcom Ernst  
Region II

1/1  
DF03

addit info 26048

Mr, L. C. Rouse  
October 20, 1989  
Attachment  
Page 1 of 2

## ATTACHMENT

### PRESENT PROCESS

The process for chemical conversion of uranium hexafluoride to uranium dioxide generates an ammonium fluoride waste liquid. After being processed to remove residual uranium, the fluoride liquid which is very nearly free of uranium is reacted with lime at the waste treatment plant. Ammonia is recovered in a steam stripping column for reuse in the conversion process. A calcium fluoride ( $\text{CaF}_2$ ) slurry is discharged from the bottom of the stripping column.

The  $\text{CaF}_2$  slurry from the stripping column is treated with a flocculant, settled in a clarifier tank, and then dewatered in a plate and frame filter press. The dewatered sludge, at 40% to 45% solids, is discharged to a trailer below for transport off-site as a non-radioactive waste. This facility is physically located in a separate building approximately one hundred feet west of our waste treatment facility and southwest of the process lagoons. The  $\text{CaF}_2$  treatment building is not an airborne-controlled area (per SNM-1097) because of the very low level concentrations of uranium handled in the facility. These levels are less than 30 pCi/gram on a dry weight basis.

### PROPOSED MODIFICATION

The proposed process improvement will involve the installation of two steam jacketed dryers under the existing  $\text{CaF}_2$  filter press. A water type scrubber will be installed to remove dust from the dryer offgas. Also, compartment-type conveyors will be installed to transfer the dried sludge from the dryers to the transport trailer. The trailer will be loaded inside the  $\text{CaF}_2$  building.

Each proposed dryer has 40 cubic feet of working capacity. The two dryers will accept the total volume of sludge discharged from the filter press. Steam for the dryers will be supplied by the existing boiler at our waste treatment plant.

The scrubber is a high efficiency, perforated plate, water scrubber. The scrubber will vent to the atmosphere. A separate air permit request from the State of N.C. for the scrubber and stack is in process.

Mr. L. C. Rouse  
October 20, 1989  
Attachment  
Page 2 of 2

REQUEST

NF&CM is requesting NRC concurrence that the proposed changes described in this letter do not require prior NRC authorization. They are neither major changes nor additions as described in GE's NRC Material License SNM-1097, Section 1.8.1. Also, we believe that the license requirements for HEPA filters as described in Sections 3.2.2.4 and 5.1.1.1 do not apply to the planned changes because the building in which the  $\text{CaF}_2$  is dried is not considered a uranium processing area. Environmental impacts from these changes are expected to be minimal.