STAFF EXHIBIT 42

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 26, 1997

Dr. Ralph Reda
Manager, Fuel and Facility Licenses
General Electric Company
P.O. Box 780, MC J26
Wilmington, NC 28402

SUBJECT: SAFETY EVALUATION REPORT: APPLICATION DATED SEPTEMBER 19, 1997, CHANGES TO TABLE 6.0 FOR THE DCP HF EFFLUENT RECOVERY AND STORAGE FACILITY (TAC NO. L31013)

Dear Dr. Reda:

In accordance with your application dated September 19, 1997, and supplement dated September 25, 1997, and pursuant to Part 70 of Title 10 of the Code of Federal Regulations, Special Nuclear Materials License SNM-1097 is hereby amended to allow General Electric Company (GE) to make changes to Table 6.0 regarding the Hydrogen Fluoride (HF) Effluent Recovery and Storage Facility for the Dry Conversion Process (DCP). Accordingly, Safety Condition S-1 is modified to include the dates of September 19, and September 25, 1997. All other conditions of the license shall remain the same.

Enclosed are copies of the revised Materials License SNM-1097 and the Safety Evaluation Report, which includes the Categorical Exclusion determination. If you have any questions, please contact Craig Hrabal (301-415-5424) of my staff.

Sincerely,

Michael F. Weber, Chief
Licensing Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

Docket 70-1113
License SNM-1097
Amendment 1

Enclosures: 1. Materials License SNM-1097
2. Safety Evaluation Report

SAFETY EVALUATION REPORT

FOR THE RENEWAL OF

SPECIAL NUCLEAR MATERIAL LICENSE SNM-1097

FOR THE

GENERAL ELECTRIC COMPANY

NUCLEAR ENERGY PRODUCTION

WILMINGTON, NORTH CAROLINA

DOCKET 70-1113

JUNE 1997

equipment in which multiple (at least two) parameters are controlled, the change will be made in accordance with established change control measures.

Records of such changes, tests or activities will be maintained, including technical justification and management approval, and available on site for inspection. A report containing a description of each change, test or activity and, where necessary, revised pages to the License Application will be submitted to the NRC within 3 months of implementing the change.

This authorization is consistent with the authorization granted to other fuel cycle facilities and, therefore, approval of the authorization is recommended because it provides licensees with flexibility without decreasing the level of protection or effectiveness.

13.1.2 Authorized Guidelines for Contamination-Free Articles

GE has requested authorization to release materials and equipment from contamination areas onsite to clean areas onsite, or from onsite or to unrestricted possession for use offsite in accordance with the conditions of the NRC's April 1993 document entitled, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material." GE originally received approval for this authorization on June 27, 1988, and continues to have this authorization. This request is consistent with accepted industry practice and ensures adequate protection of the public and environment provided adequate surveys are carried out to ensure compliance with the release levels. Therefore, continued approval of the authorization is recommended.

13.1.3 Authorized Transfer of Contamination-Free Liquids

13.1.3.1 Transfer of Hydrofluoric Acid (HF) for Testing

GE has requested authorization to transfer test quantities of HF to laboratories of potential buyers/customers for the purpose of analyzing, examination or evaluation, without continuing NRC controls as described in GE-Wilmington's letter to the NRC dated February 26, 1996.

Test quantities may not contain more than 3 PPM uranium with an enrichment not to exceed 5 percent U-235.

The recipients will be advised that this material is not a radiological hazard, but will be advised that the material should be handled carefully and in such a manner so as not to be consumed by humans nor used in products used on or in the body or in the food chain.

GE originally received approval for this authorization on April 15, 1996, and continues to have this authority. This request is consistent with accepted

industry practice and provides adequate protection of the public and environment. Therefore, continued approval of the authorization is recommended.

13.1.3.2 Transfer of Hydrogen Fluoride Acid as Product

GE has requested authorization, pursuant to 10 CFR 70.42(b)(3), to transfer liquid hydrofluoric acid to any commercial chemical company/supplier without either company possessing an NRC or Agreement State license for special nuclear material, provided that the concentration of uranium does not exceed three parts per million by weight of the liquid and the enrichment is less than or equal to 5 weight percent U-235.

The hydrofluoric acid is transferred and used in such a manner that the minute quantity of uranium does not enter into any food, beverage, cosmetic, drug or other commodity designated for ingestion or inhalation by, or application to, a human being such that the uranium concentration in these items would exceed that which naturally exists. Additionally, the acid is used in a process which will not release the low levels of radioactivity to the atmosphere as airborne material and whose residues will remain in a wastewater or other treatment system.

Prior to shipment, each transfer is sampled and measured to assure that the concentration does not exceed three parts per million of uranium.

GE-Wilmington shall maintain records under this condition of license including, as a minimum, the date, uranium concentration and quantity of hydrofluoric acid transferred.

GE originally received approval for this authorization on June 29, 1984, and continues to have this authorization. This request is consistent with accepted industry practice and ensures adequate protection of the public and environment. Therefore, continued approval of the authorization is recommended.

13.1.3.3 Transfer of Nitrate-Bearing Liquids

GE has requested authorization to transfer nitrate-bearing liquids, provided that the uranium concentration does not exceed a 30-day average of 5 parts per million by weight of the liquids and the enrichment is less than or equal to 5 weight percent U-235, by transport to an off-site liquid treatment system located at International Paper, Riegelwood, North Carolina, or similar commercial paper operation, in which decomposition of the nitrates will occur and from which the denitrified liquids will be discharged in the system effluent.

GE will take routine environmental samples to monitor effluents at the commercial paper site to ensure conformance with the above commitments and Federal and State regulations.

GE originally received approval for this authorization on June 29, 1984, and continues to have this authorization. This request is consistent with accepted industry practice and ensures adequate protection of the public and environment. Therefore, continued approval of the authorization is recommended.

13.1.4 Authorization to Transfer Test Quantities of Calcium Fluoride

GE has requested authorization to transfer test quantities of calcium fluoride (CaF_2) to potential buyers for the purpose of their examination and evaluation as described in GE-Wilmington's letter to the NRC dated September 24, 1992.

Test quantities may not contain more than 30 pCi per gram on a dry weight basis and are limited to 1 gram U-235 at each off-site location.

Test activities and end uses of the material will be limited to those that do not result in chemical separation of the uranium or entry of the product into the food chain.

GE originally received approval for this authorization on November 7, 1992, and continues to have this authorization. This request is consistent with accepted industry practice and ensures adequate protection of the public and environment. Therefore, continued approval of the authorization is recommended.

13.1.5 Authorization to Transfer CaF_2 to Vendors for Beneficial Reuse

GE has requested authorization to transfer quantities of industrial waste treatment products (primarily CaF_2) to commercial firms for the purpose of briquette manufacturing and use as a steel flux forming material in the production of steel as described in GE-Wilmington's letter to the NRC dated December 20, 1989.

Measurements are made using a sample plan to provide at a 95 percent confidence level that the population mean for each shipment is less than 30 pCi of uranium per gram of material on a dry weight basis. If one gram or more of U-235 is shipped at one time, GE's FNMCP requirements apply.

Activities and end use of the material will be limited to those that do not allow chemical separation of the uranium or entry of the product into the food chain.

GE originally received approval for this authorization on January 12, 1990, and continues to have this authorization. This request is consistent with

accepted industry practice and ensures adequate protection of the public and environment. Therefore, continued approval of the authorization is recommended.

13.1.6 Authorization to Dispose of Industrial Waste Treatment Products

GE has requested authorization to dispose of industrial waste treatment products without continuing NRC control if either of the two following conditions are met:

(1) The uranium concentration in the material shipped for disposal shall not exceed 30 pCi per gram after free-standing liquid has been removed.

The licensee shall possess authorization from appropriate state officials prior to disposing of the waste material. The authorization shall be available for inspection at the GE-Wilmington facility. Or

(2) The uranium concentration in the material shipped for disposal only at approved facilities such as Pinewood, South Carolina (permitted by the State of South Carolina), shall not exceed 250 pCi per gram of uranium activity, of which no more than 100 pCi per gram shall be soluble.

GE originally received approval for this authorization on June 27, 1984, and continues to have this authorization. The staff estimated the potential dose from this authorization and determined that even under conservative conditions, the resulting annual dose to an off-site resident through the groundwater pathway was less than 1 mrem/yr. This request is consistent with accepted industry practice and ensures adequate protection of the public and environment. Therefore, continued approval of this authorization is recommended.

13.1.7 Authorization to Store Sanitary Sludge Pending Final Disposal

GE has requested authorization to store treated sanitary sludge containing trace amounts of uranium in their sanitary sludge land application area.

When the GE-Wilmington site first started commercial operations in the late 1960s, the sanitary waste was treated in a basin system using natural aerobic treatment. The basins used for this work are located immediately on the north side of the Final Process Basins. In the early 1970s, the EPA rules changed and GE installed an extended aeration-activated sludge treatment system and changed the use of the original basin to perform the function of land application of the sanitary waste sludge. This continued until February 1995.

In February 1995, GE began collecting the sanitary waste sludge, drying it and shipping it to Pinewood, SC for disposal. At this point the land application stopped and the basin has been in essence in a temporarily idle state since.