

NOTICE OF VIOLATION

General Electric Company
Wilmington, NC

Docket No. 70-1113
License No. SNM-1097

During an NRC inspection conducted on December 4-8, 1996, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

1. License Condition Number (No.) S-1 of Special Nuclear Materials (SNM) License No. SNM-1097 requires that licensed materials be used in accordance with statements, representations, and conditions of Part I of the application dated October 23, 1987, and supplements thereto.

Part I, Chapter 4, Section 4.2, subsection 4.2.11 of License SNM-1097 requires that, "Engineered controls detect an undesired situation and implement corrective action without requiring human intervention. Engineered controls must be...capable of performing the criticality safety purpose for which they are specified."

Contrary to the above, on November 30, 1996, the engineered control associated with the Line 3 calciner tube failure did not detect the undesired situation and was not capable of performing the criticality safety purpose specified (i.e., preventing an accumulation of greater than 25 kilograms of uranium). The Active Engineered Control (AEC) in place relied upon the total breakage of the tube and the stoppage of tube rotation at the discharge end. As a result, material accumulation within the annulus of the calciner of 38.77 kilograms exceeded the analyzed safety basis.

This is a Severity Level IV violation (Supplement VI).

2. License Condition No. S-1 of SNM License No. SNM-1097 requires that licensed materials be used in accordance with statements, representations, and conditions of Part I of the application dated October 23, 1987, and supplements thereto.

Part I, Chapter 4, Section 4.2, subsection 4.2.4, Paragraph 4.2.4.3 of License SNM-1097 requires that, "Whenever criticality control is directly dependent on the integrity of a structure used to retain the geometric form of a fissile material accumulation ... the structure shall be designed with an adequate strength factor to assure against failure under foreseeable loads or accident conditions."

Contrary to the above, on November 30, 1996, criticality safety in the calciner operations was directly dependent on the integrity of the calciner tubes and the calciner tubes in all units were not designed

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with an adequate strength factor to assure against failure under a foreseeable load. A contributor to this was that there were no formal provisions (e.g., preventive maintenance) in place to adequately assure against such failures.

This is a Severity Level IV violation (Supplement VI).

3. License Condition No. S-1 of SNM License No. SNM-1097 requires that licensed materials be used in accordance with statements, representations, and conditions of Part I of the application dated October 23, 1987, and supplements thereto.

Part I, Chapter 4, Section 4.2, subsection 4.2.5, Paragraph 4.2.5.1 of License SNM-1097 requires that, "Where control of mass is used to provide criticality safety, the mass of uranium (or U^{235} or U^{238}) is administratively controlled based on measurement by one or more of the following techniques:

- The mass of uranium (or U^{235} or U^{238}) is determined as the product of the volume and the uranium (or U^{235} or U^{238}) concentration as measured by qualified counting methods.
- The mass of uranium (or U^{235} or U^{238}) is determined by qualified counting methods.
- The total mass or change in mass of a system is measured assuming the most reactive credible composition."

Contrary to the above, on November 30, 1996, mass was being administratively controlled to limit input to the calciners upon tube failure and measurements were not being performed as required. The amount of material present in the calciner during a tube breakage was being limited by an administrative control which involved an operator removing the ADU feed tube from the calciner.

This is a Severity Level IV violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, General Electric Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region II, and a copy to the Chief, Fuel Facilities Branch, Region II, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a

Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Atlanta, Georgia
this 28th day of January, 1997