

# GENERAL ELECTRIC

NRC REGIONAL  
ATLANTA, GEORGIA

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NUCLEAR ENERGY  
PRODUCTS DIVISION

WILMINGTON MANUFACTURING  
DEPARTMENT

June 13, 1980

Mr. James P. O'Reilly, Director  
U. S. Nuclear Regulatory Commission, RII  
101 Marietta Street, NW - Suite 3100  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

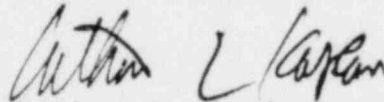
References: (1) NRC Inspection Report RII:PWS, 70-1113/80-3, 3/4/80  
(2) Letter, AL Kaplan to JP O'Reilly, 4/9/80  
(3) NRC License SNM-1097, Docket #70-1113

With reference to your inspection report dated March 4, 1980, your staff has requested further information related to our answer to that report dated April 9, 1980. This information is enclosed as an attachment to this letter.

General Electric personnel would be pleased to discuss this matter with you and your staff as you may deem necessary.

Very truly yours,

GENERAL ELECTRIC COMPANY



Arthur L. Kaplan, Manager  
Licensing & Compliance Audits  
M/C J26

ALK:bmw

Attachment

NSD-I

cc: Document Management Branch

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ADDITIONAL INFORMATION RELATED TO  
NRC INSPECTION REPORT RII:PWS, 70-1113/80-3, 3/4/80

The following is the additional information requested by the NRC Region II staff, related to our response to inspection report RII:PWS, 70-1113/80-3, 3/4/80.

1. *Does anyone take control of and track the receipt of UF<sub>6</sub> cylinders before they are unloaded from overpacks?*

Yes, in the following manner:

- 1) The trailer is logged in and out on a log sheet by the guards located at the Emergency Control Center. Everyone going to or coming from the fuel manufacturing area must pass through this point.
- 2) In addition, these same guards will have a large board posted in their office at the Emergency Control Center, on which each trailer with UF<sub>6</sub> overpacks are tracked by trailer number, as to whether or not they are in the controlled access area. This will be implemented by July 14, 1980.
- 3) The fuel support foreman receives the UF<sub>6</sub> cylinder trailer from the truck driver. He verifies the trailer number and he verifies that the seals affixed to the cylinder overpacks by the enrichment facility are intact. He then affixes a verification sticker to the short-form bill of lading which accompanies the shipment.

If one seal on an overpack were broken, he would receive the shipment. If both seals on an overpack were broken, he would hold the driver and call his unit manager (Manager-Fuel Support) for further instructions.

- 4) The fuel support foreman then notifies the radiation protection office that a shipment has been received and is awaiting monitoring. Notification time is documented on the verification sticker.

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2. *How does the above (i.e., answer to Question #1) fit into your material control and accounting program? Is a log kept on their location in the yard?*
  - 1) Cylinders are stored on the trailers after their receipt. The trailers are located in the roadway behind (on the west side of) the fuel manufacturing building, until they are removed from their overpacks, weighed, and their weights entered into MICS.
  - 2) Our control over these cylinders prior to their removal from the overpacks and entry of their weights into MICS, with respect to our material control and accounting program, is exercised by the receipt procedure and the log sheet tracking procedure described in Item 1.
  - 3) The presence or absence of a trailer by identification number, is noted in the guard log and will be tracked on the status board maintained by the guards as described above.
  - 4) The guard log sheet and status board and the receipt and verification procedure carried out by the fuel support foreman for trailers carrying full UF<sub>6</sub> cylinders, provide the link in our material control and accounting program between shipment of the UF<sub>6</sub> by the vendor and entry of the cylinder weights into MICS.
  - 5) The log described above only specifies whether or not a particular trailer is in the fuel manufacturing area, but not specifically where in that area. We believe that this control, plus all of the other new controls implemented on the handling of UF<sub>6</sub> cylinders that are full or empty, or contain less quantities, and also the relatively small size of area in which these trailers are stored, all preclude the necessity of another log specifying the exact location of a trailer in the fuel manufacturing area.

3. *Relative to the following paragraph (#1) on page 2 of inspection report 80:03:*

*"We are concerned about the implementation of your management and nuclear material control systems that permitted this occurrence. In addition to your response to the specific items of apparent noncompliance, please provide us a written description of those actions taken or planned, including implementing schedules, to improve the effectiveness of your management and nuclear material control systems."*

*More information is requested relative to management and nuclear material control systems, i.e., policies, higher level procedures than Nuclear Safety Instructions, etc.*

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As a result of this incident, the Section Manager of Quality Assurance quickly called for a full-scale investigation to establish the cause and to determine corrective actions required to prevent recurrence.

The first step of this investigation was establish the cause. From this investigation, we have concluded the cause for the occurrence of this incident was the lack of documentation in procedures, instructions, etc., concerning the handling of trailers with empty UF<sub>6</sub> overpacks in our facility.

In order to prevent recurrence of this incident, we reviewed thoroughly the actual practices and written procedures and instructions related to all handling of incoming and outgoing UF<sub>6</sub> overpacks. As a result of this review, we improved the handling practices, especially those related to outgoing empty overpacks. We changed a number of existing procedures, including unit-level Traffic & Material Distribution (T&MD) procedures and two department-level Practices & Procedures (P/Ps) dealing with receiving and shipping UF<sub>6</sub> cylinder trailers. We also issued new instructions to shipping, fuel support and production control personnel involved in this activity.

This investigation was continued to cover handling practices and procedures related to other nuclear fuel shipping packages. However, after reading preliminary conclusions about the adequacy of the more frequently used packages, the team temporarily ceased its activities. The reason was that, in addition to the specific investigation related to the handling of UF<sub>6</sub> cylinders, the Section Manager of Quality Assurance also assembled a group of expert consultants not associated with the Wilmington plant or with General Electric (except for one of the three consultants who is a corporate level consultant on transportation matters) to study all our shipping and receiving practices and procedures related to all hazardous materials. The members of this group have completed their study and are in the process of submitting their findings to our management. We expect their report to be completed by July 11, 1980. The leader of this group is Mr. William A. Brobst, former Chief of the AEC and DOE transportation safety programs and former Deputy Director of the DOT's Office of Hazardous Materials.

After this incident occurred, a senior specialist in the Traffic & Material Distribution unit, who has a great deal of practical experience in packaging and transportation of radioactive materials, as well as a thorough familiarity with NRC and DOT requirements concerning the same subject, was assigned the full-time responsibility for administration of the shipment and receipt of all hazardous materials to assure compliance with NRC and DOT requirements.

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Management awareness of and concern for proper shipping and receiving of radioactive materials can be demonstrated by the above actions, as well as the upper-management policies, practices and procedures presently in place which require compliance with regulatory requirements in general, and which implement safe shipping and receiving of radioactive materials in particular. These include the following:

- NEBG OPGs  
 (Nuclear Energy Business Group Organization & Policy Guides)
  - 70- 4 Nuclear Safety in NEBG Operations
  - 70- 6 Safeguards Systems for Control of Nuclear Material
  - 70-17 Occupational Radiation Exposure
  - 70-18 Nuclear Criticality Safety
  - 70-32 Radiation Protection for Employees Working Offsite
  - 70-42 Reporting Defects & Noncompliance
  - 100- 2 Environmental Protection
  - 100- 5 Emergency Planning
  
- WMD P/Ps  
 (Wilmington Manufacturing Department Practices & Procedures)
  - 30- 3 Custodial Responsibilities for Nuclear Materials
  - 30- 7 Reporting Defects & Noncompliance
  - 30-31 Disposal of Surplus or Obsolete Equipment or Tooling
  - 30-41 Training for Low-Level Radioactive Waste Activities
  - 40- 1 Wilmington Technological Safety Council
  - 40- 2 Industrial Safety
  - 40- 3 Limiting Non-Essential Material in Controlled Areas
  - 40- 4 Nuclear Safety Design Criteria
  - 40- 5 Nuclear Safety Review System
  - 40- 6 Regulatory Compliance Audits
  - 40- 7 Occupational Radiation Exposure Control
  - 40- 8 Classification & Posting of Areas
  - 40- 9 Service Work in Controlled Areas
  - 40-10 Procurement, Use & Disposal of Radiation Sources & X-Ray Machines
  - 40-12 Nuclear & Environmental Incident Investigation
  - 40-13 Environmental Protection
  - 40-14 Final Process Effluent Control System
  - 40-15 Safety Responsibilities - Radiation Emitting Equipment
  - 40-16 Nuclear Safety
  - 40-17 General Nuclear Safety Requirements & Training
  - 40-18 Regulatory Compliance Administrative Action Guidelines
  - 40-19 Bioassay Program
  - 40-21 Radiation Protection for Offsite Work
  - 40-22 Respiratory Protection Program



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90- 1	Receiving & Shipping of Radioactive Materials
90- 3	Radioactive Material Shipping Containers
90- 5	Shipping Notices
140- 1	Uranium Physical Inventories
140- 2	Special Nuclear Material Scrap Control
140- 3	Preparation & Approval of NED 48 Documents
140- 4	Change Control of Safeguards System
140- 5	Special Nuclear Material Measurement Systems
140- 6	Measured Values of Metal Impurities in SNM
140- 7	SNM Replicate Sampling Program
140- 8	Measured Average Uranium & Isotopic Factors
140- 9	SNM Measurement Training & Qualification
140-10	Tampersafing Program
140-11	Application of Tamper-safe Seals
140-14	Measurement of Process Liquid Waste Streams
140-21	Operation of the NRC ND Assay Van
140-43	Station Inventory Action Limit Controls

4. *With reference to item of noncompliance C from inspection report 80-03:*

*"C. As required by 10 CFR 20.205(b)(1), 'Each licensee, upon receipt of a package of radioactive material, shall monitor the external surfaces of the package for radioactive contamination caused by leakage of the radioactive contents ... The monitoring shall be performed ... no later than three hours after the package is received at the licensee's facility if received during the normal working hours ...'*

*Contrary to the above, the licensee failed to monitor the external surfaces of packages containing radioactive material (cylinder overpacks) on trailer number 340217 received on January 23, 1980, prior to the subsequent shipment offsite of that trailer on January 24, 1980."*

*How do Radiation Protection personnel know when to perform surveys? These surveys have to be done after receipt (as defined above); and receipt is defined as when GE accepts responsibility for the shipment.*

Please see Section 1 above, specifically Items 3 and 4. Also, NSI O 17.0, Shipment & Receipt of Radioactive Materials, the instruction to Radiation Protection personnel on monitoring of

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incoming and outgoing radioactive materials packages, was modified to refer specifically to the requirement referred to in Item of Noncompliance C above.

"Normal working hours" pertains to the working hours of the fuel support foreman, who has the responsibility for accepting incoming shipments of full UF<sub>6</sub> cylinders. At present, a fuel support foreman is on duty twenty-four hours per day, seven days per week. If in the future, coverage by a fuel support foreman should be reduced for example to twenty-four hours per day, Monday through Friday, then an incoming shipment of full UF<sub>6</sub> cylinders on a Saturday or Sunday would not be received by GE (i.e., the fuel support foreman), until a fuel support foreman were next on duty on the following Monday. Under these conditions, the shipment would be logged in by guards at the Emergency Control Center as described above, and the trailers would be stored within the controlled access area until the fuel support foreman returns to work.

A. L. Kaplan  
:bmw