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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV

Walnut Creek Field Office
1450 Maria Lane, Suite 300
Walnut Creek, California 94596-5368

March 5, 1998

B. N. Femreite, Vice President
Manufacturing
Siemens Power Corporation
2101 Horn Rapids Road
P.O. Box 130
Richland, Washington 99352-0130

SUBJECT: RESPONSE TO NRC INSPECTION REPORT 70-1257/97-07

Dear Mr. Femreite:

Thank you for your letter of February 13, 1998, in response to our letter and Notice of Violation dated January 16, 1998. We have reviewed your reply and find it responsive to the concerns raised in our Notice of Violation. We will review the implementation of your corrective actions during a future inspection to determine that full compliance has been achieved and will be maintained.

Sincerely,

Frank A. Wenslawski, Chief
Materials Branch

Docket: 70-1257
License: SNM-1227

cc:
Siemens Power Corporation
ATTN: L. J. Maas, Manager
Regulatory Compliance
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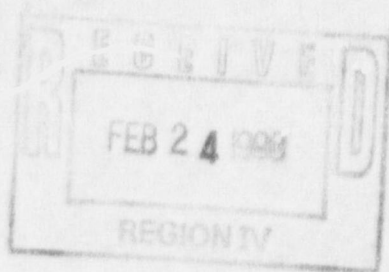
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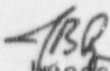
Subject: Reply to a Notice of Violation

Ref.: Letter, R.A. Scarano to B.N. Femreite, "NRC Inspection Report 70-1257/97-07 and Notice of Violation," dated January 16, 1998

Attached is Siemens Power Corporation's (SPC) reply to the notice of violation accompanying the referenced letter.

If you have questions or require more information, please contact me at 509-375-8663.

Very truly yours,


James B. Edgar
Staff Engineering, Licensing

/pg

cc: U.S. Nuclear Regulatory Commission
Regional Administrator, Region IV

U.S. Nuclear Regulatory Commission
Region IV Field Office

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98-0840

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ATTACHMENT

Violation

Safety Condition S-1 of License SNM-1227 authorizes the use of licensed materials in accordance with the statements, representations, and conditions contained in Part I of the licensee's application dated October 28, 1996, and supplements and revisions thereto.

Section 1.5, "Authorized Activities," Part I, of the license application states that specific locations of authorized activities involving special nuclear materials are identified in Table I-1.1.

The authorized activity for temporary storage facilities in Table I-1.1, "Specific Locations of Authorized Activities," specifies the storage of a planar array of closed containers of oxide pellets up to 5.0 wt. % U-235.

Contrary to the above, on December 18, 1997, the licensee discovered that uranium compounds other than oxide pellets were also being stored in temporary storage locations. Specifically, of 31 sea-land containers being used as temporary storage locations, 12 sea-land containers contained approximately 14,000 kg of uranium oxide powder.

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

Reason for the Violation

In order to ascertain how Siemens Power Corporation (SPC) became non-compliant with its license condition for temporary storage, it is necessary to review the history of this type of storage at SPC's plant. SPC first received an NRC license in 1970 under its name at that time, Jersey Nuclear Company. In its 1980 application for license renewal, one of the authorized activities was:

Location - Special Enriched Uranium Storage Trailer

SNM - UO_2 (5 to 19.99 w/o U-235)

Authorized Activity - Storage of closed containers of UO_2 powder which are externally free of significant contamination.

In the 1987 license renewal this activity was not included, but in 1989 SPC (then Advanced Nuclear Fuels Corporation) requested and was granted an amendment to establish temporary storage facilities (e.g., trailers, sea containers) to store "Uranium Oxide (up to 5 wt. % U-235)". Even though the authorized SNM description did not limit the form to pellets, the authorized activity description did by stating, "Storage of a planar array of closed containers of oxide pellets which are externally free of significant contamination." The activity was requested as such because the subject temporary facilities were envisioned to be used to store UO_2

pellets produced in Richland, and to be sent to SPC's sister plant in Linggen, Germany.

Because the company had earlier stored UO_2 powder in similar facilities and because such storage of powder as well as pellets had been analyzed for criticality safety, it appears that soon after sea containers were set up as temporary storage facilities, powder as well as pellets were stored there. Criticality safety postings at the storage locations were consistent with the criticality safety analysis and allowed storage of both powder and pellets. In addition, in the later 1980's SPC began to receive enriched uranium oxide scrap from other Siemens plants in Germany for uranium recovery. Such shipments arrived in sea containers and were often not unloaded from the sea containers, with the exception of samples for receipt measurements, for some months until the material could be scheduled into the scrap recovery process. The storage of powders in sea containers, albeit in these cases in transport packages inside the sea containers, was not unusual.

Based upon a review of records and conversations with personnel involved with such operations, the account above describes the series of events leading up to the storage of powder as well as pellets in the temporary storage facilities.

In summary, there are two contributing factors that led to this violation:

- The incorrect assumption by SPC personnel that trailers and sea containers, having once been authorized for powder storage, were still authorized for that same storage.
- The wording of the amendment for temporary storage facilities which was not entirely clear that only pellets were allowed.

Corrective Actions Taken

The violation was discovered by SPC and was reported both on 12/18/97 to the NRC inspector who was on plant at the time, and by telephone to NRC Headquarters the next day. Discussions were held with headquarters personnel as to the best way to establish compliance. Based on the fact that SPC had before the NRC an amendment request to authorize such storage in the new Operations Scrap Warehouse and that such storage in the sea containers had been analyzed from a criticality safety standpoint to be safe for both pellets and powders (analytical data were sent to NRC of 12/22/97), it was concluded by NRC and SPC that the most effective course of action was to expedite the issuance of the amendment for the warehouse and to take steps to make sure that no more powder could be added to the temporary storage locations. SPC, in a 12/29/97 letter to NRC Region IV, committed to keep the temporary storage containers locked except when removing material from them and to not add any unauthorized material to them. These conditions were clearly communicated to management and staff of the Traffic and Warehousing organization who control access to and use of the temporary storage facilities. In addition, the amendment authorizing the use of the Operations Scrap Warehouse was completed on 1/15/98 and SPC has begun the process of moving material from temporary storage into the warehouse. This process has been slowed

somewhat by late delivery, from the manufacturer, of storage rack material. As of today, 95% of the powder containers have been moved into the new warehouse.

In the past few years, SPC's methods of applying for license amendments has included reviews by personnel in the organizations affected by the proposed change, as well as the company safety organization, to confirm that the change encompasses current as well as future needs. In addition, amendments, when received, are routed to the applicable organizations to make them aware that the amendment is in place.

Corrective Action to be Taken to Avoid Further Violations

Once all of the powder containers are removed from the temporary storage facilities, the criticality safety limit cards which are displayed at those facilities will be revised to prohibit powder storage. At that time training on the revised limit cards will be given to affected personnel.

Although not necessary for compliance based upon the availability of the Operations Scrap Warehouse, SPC anticipates submitting an amendment request in the near future to allow storage of powder and other uranium compounds, in addition to pellets, in temporary storage facilities.

Date When Full Compliance will be Achieved

SPC expects to have all powder moved out of the temporary storage locations by 2/17/98 and training on the revised limit cards completed by 2/27/98.