SNUPPS
Standardized Nuclear Unit
Power Plant System

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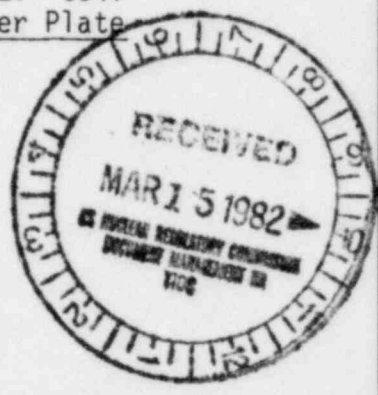
Nicholas A. Petrick
Executive Director

March 12, 1982

SLNRC 82-015 FILE: 0541
SUBJ: Spent Fuel Pool Liner Plate



Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Docket Nos: STN 50-482 and STN 50-483

Dear Mr. Denton:

Discussions with the NRC Staff (Dr. Gordon Edison) have indicated that additional information is required in order to resolve outstanding issue #11 in the Callaway Safety Evaluation Report. The attached FSAR change provides the requested information and will be included in the next revision to the SNUPPS FSAR.

Very truly yours,

N. A. Petrick

Nicholas A. Petrick

RLS/mtk

Enclosure: FSAR p. 9.1-11 and insert

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S1/1

The liner plate is fabricated from 1/4-inch 304L stainless steel, which has been hot rolled, annealed, pickled, and then cold rolled to provide a smooth finish. The joint welds are provided with a leakchase system for initial testing and subsequent monitoring of weld integrity. Following installation and testing, a breach of the liner plate (which could result in any significant loss of water through the leakchase system) is not considered credible.

A monitoring system is provided for the leakchase system, as described in Section 9.3.3. Any water collected is directed to the floor and equipment drain system and transferred to the liquid radwaste system for processing.

The liner plate is anchored to the concrete walls by welding to steel angles which are embedded in the concrete. An analysis has been performed which demonstrates that the liner plate will not, as a result of an SSE, break away from the walls and fall on top of the spent fuel racks. Consequently, the liner plate is prevented from either inflicting mechanical damage to the spent fuel or from blocking the flow of cooling water around the fuel. The watertight gates are also seismically designed to preclude their failure during an SSE and falling onto the spent fuel storage racks.

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The fuel pool cooling and cleanup system functions to limit the spent fuel pool temperature to 135 F during normal plant conditions with 6 cores stored, remove impurities from the water to improve visual clarity, and limit the radiation dose to the operating personnel to 2.5 mrem/hr during normal operations and 10 mrem/hr during refueling operations. A description of the spent fuel pool cooling and cleanup system is provided in Section 9.1.3.

During fuel handling operations, a controlled and monitored ventilation system removes gaseous radioactivity from the atmosphere above the spent fuel pool and processes it through HEPA and charcoal adsorber units to the unit vent. Refer to Section 9.4.5 for fuel building system operation and to Section 11.5 for the process ventilation monitor.

Section 9.1.4 discusses the load-bearing capability of all of the cranes serving the SFSF. Section 9.1.4 also provides an evaluation which demonstrates that the maximum uplift force is due to the spent fuel pool bridge crane and the maximum impact load that is due to a dropped fuel assembly. The racks are designed to withstand these loads with no increase in k_{eff}.

9.1.2.3 Safety Evaluations

The safety evaluations given below correspond to the safety design bases in Section 9.1.2.1.1.

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If weld repair of the liner plate is made in the future, the repair will be in accordance with the following:

a. Materials used, including weld rod, will be verified in accordance with ASTM specifications or equivalent,
b. Repair procedures will be in accordance with the original fabrication specifications or equivalent,
c. Welders will be qualified in accordance with ASME Section IX or equivalent, and
d. Non-destructive examination of the weld repairs will be in accordance with the original fabrication specification or equivalent.

Should repairs be necessary with water in the fuel pool, special procedures may be required and modifications to the above criteria may be required due to the particular circumstances.