

December 8, 1982

SEN-409
T.F. G.1.1.10
B7.1.2

United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

References: (a) Construction Permits CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) PSNH Letter, dated November 30, 1982, "Second Revision to
RAI 440.52 (Reactor System Branch)", J. DeVincentis to
G. W. Knighton

Subject: Reactor Coolant System Thermal Insulation

Dear Sir:

Reference (b) provided general information relative to the types of thermal insulation which will be utilized inside the Seabrook containment. In a telephone conversation with members of your Staff on December 3, 1982, it was determined that more specific information was necessary in order for the Staff to complete their review. The following provides this information.

There are two types of thermal insulation which will be utilized inside the Reactor Containment Building. They are: 1) metal reflective insulation manufactured by Transco, Incorporated, and 2) metal encapsulated fiberglass insulation manufactured by either Owens-Corning Fiberglass Corporation or Transco, Incorporated. At the present time, the final vendor selection for the fiberglass insulation has not been made. As described further, both manufacturers' products are similar and are equally acceptable from the standpoint of potential interaction with safety systems following a LOCA.

The metal reflective insulation is used on the reactor vessel. It is built of stainless steel panels and is attached using either buckle fasteners or self-taping screws.

The fiberglass insulation is used on all other primary system equipment or piping. It consists of a fiberglass insulating wool blanket encapsulated in a fiberglass cloth, reinforced with a fiberglass scrim and sewn with fiberglass thread. The insulation blankets are held in place by a Velcro hook/loop fastening system. Stainless steel protective jacketing is held in place with a stainless steel hook/loop fastening system.

3001

Both types of insulation are designed to remain in place during and after a seismic event and not be adversely affected by postulated accident environmental conditions. Following a LOCA, the only insulation that will be dislodged is that in the vicinity of a high energy line break or in the direct path of the resultant jet. Any dislodged metallic insulation will settle out of the water flow in the bottom of containment. Approach flow velocities are expected to be too low to transport heavy metallic assemblies. The fiberglass insulation assemblies have undergone substantial testing by both manufacturers being considered, to determine the behavior of the insulation under accident conditions and to ensure that containment sump operation is not impaired. The results of these tests demonstrate that this insulation is suitable for use inside containment and does not obstruct the flow through containment sump screens.

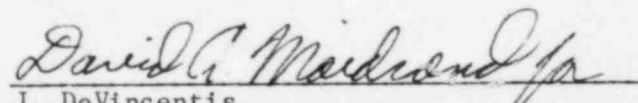
Owens-Corning Fiberglass submitted a topical report, OCF-1, to the NRC for review in August, 1977. This report documented the testing performed on their encapsulated fiberglass insulation. The NRC has reviewed the report and found this insulation acceptable for use in LWR containment applications.

Transco, Incorporated also manufactures an encapsulated fiberglass blanket insulation of essentially the same design as Owens-Corning and virtually the same materials as Owens-Corning (see attached letter, dated May 4, 1982, Transco, Incorporated to Public Service Company of New Hampshire). Additionally, Transco, Incorporated has performed tests similar to those described in the Owens-Corning Test Report, OCF-1, to verify the applicability of the OCF-1 test report to the Transco, Incorporated manufactured product (see attached Test Report, TTR-25N).

From the above information, it can be seen that the Fiberglass Thermal Insulation Systems to be supplied by either vendor for use in the Seabrook Containment Buildings will not interfere with the operation of safeguards systems following a postulated loss-of-coolant accident.

Should any further information be required, please feel free to contact us.

Very truly yours,


J. DeVincentis
Project Manager

JDV/PA/ba

Attachments

cc: Atomic Safety and Licensing Board Service List