



SEABROOK STATION
Engineering Office

Public Service of New Hampshire

April 3, 1986

New Hampshire Yankee Division

SBN-988
T.F. E7.1.2

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Mr. Vincent S. Noonan, Project Director
PWR Project Directorate No. 5

References: (a) Construction Permits CPPR-135 and CPPR-136
Docket Nos. 50-443 and 50-444

(b) Environmental Qualification Site Audit,
February 24-27, 1986

Subject: Environmental Qualification; Post Accident Operability Time

Dear Sir:

As a result of the recent NRC EQ site audit, Reference (b), the Staff indicated they were not in agreement with the Seabrook methodology in applying the Arrhenius equation to calculate the post-accident operability time. In subsequent discussions, we proposed a more conservative approach to the Staff and provided examples of how this approach would be implemented. In a telecon on March 31, 1986, we were informed by the Staff that the examples were acceptable.

We have now completed recalculating the post-accident operability times for all the EQ equipment files currently issued (109 of a total 115 files). We have followed the same approach used in the examples provided to the Staff and in all cases have taken no credit for any portion of the test curve which enveloped the transient portion of the postulated accident profile. The results of this reanalysis indicate that, with the exception of the following, all files currently issued meet the 40-year normal operating life plus one-year post-accident life.

<u>EQ File Number</u>	<u>Description</u>	<u>Post-Accident Operating Time</u>	<u>Number of Items</u>
174-00-01	Foxboro Transmitters	100 days	13 items
252-38-01	ASCO Temperature Switches	30 days	4 items
600-01-01	Raychem HKV Motor Connector Kits	100 days	13 items
173-05-03	Maisoneilan E/P Converter	100 days	4 items
248-36-01	Borg-Warner Feedwater Isolation Valves	4 hours	4 items

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In all the above cases, the post-accident operating time has additional margin to meet the performance margin requirements of IEEE 323, 1974.

From our discussions with the Staff during the site audit, engineering justifications for post-accident operating times of 100 days or longer is not required. Therefore, the following is our engineering justification concerning the acceptability of the post-accident operating time for EQ File No. 252-38-01 (ASCO Temperature Switches) and EQ File No. 248-36-01 (Borg-Warner Feedwater Isolation Valves).

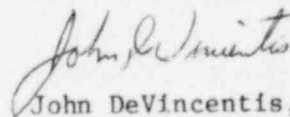
The Feedwater Isolation Valves (File 248-36-01) are required to close in a harsh environment created by a postulated nonmechanistic pipe rupture in the main steam and feedwater pipe chase. The feedwater and steam piping in this area is designed under the concepts of "Superpipe". Our engineering analysis conservatively has determined valve closure would occur in less than one minute. The plant would be safely shut down using the Auxiliary Feedwater System, which does not require operation of the Feedwater Isolation Valves. Control Room indication of these valves can be relied upon for a longer duration than four hours because the Namco 180 Limit Switches are qualified for one year post-accident operation. We have concluded that the four-hour post-accident operability qualification has sufficient margin to ensure the required safety function has been performed.

The ASCO Temperature Switches (File 252-38-01) are located in the Primary Auxiliary Building in the vicinity of the Primary Component Cooling Water Pumps. In the event of HELB in this area, the switches automatically start safety grade fans (PAH-FN-42 A and B) to provide HVAC services for the PCCW pumps. The fans have a continuous run feature that can be used to operate the fans if the temperature switches fail. Also, separate high temperature alarm and nonsafety grade HVAC fans normally provide cooling ventilation for the PCCW pumps. In conclusion, the 30-day post-accident operability qualification has sufficient margin for the required immediate safety function of providing safety grade HVAC cooling.

The remaining six EQ file packages are in final review. We will use the same methodology for determining post-accident operability times for these packages as previously discussed. We will notify you when our review is complete and will identify those items, if any, that do not meet the one-year post-accident operability.

The information provided in this letter is intended to satisfy the Staff on the Seabrook methodology used calculating post-accident operability time. Accordingly, we request that the acceptability of Seabrook's methodology for calculating post-accident operability time be reflected in the next supplement to Seabrook's SER.

Very truly yours,



John DeVincentis, Director
Engineering and Licensing

Enclosures

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