



Public Service of New Hampshire

New Hampshire Yankee Division

February 24, 1986  
SBN-949  
T.F. J.4.2.99  
H.8.1.1  
B.7.1.2

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) PSNH Letter SNV-447, dated February 1, 1983, "Open Item  
Responses," J. DeVincentis to G. W. Knighton

Subject: Diesel Generator Control Panel Mounts (SER Confirmatory Issue  
C-30)

Dear Sir:

SER Confirmatory Issue C-30 (SER Section 9.5.4.1) involves an NRC concern with potential degradation from operational vibration of components mounted in a relay panel on the emergency diesel generators which could affect diesel operation. As provided in SER Section 9.5.4.1, this concern could be resolved by one of three methods; (1) independent vibration qualification, (2) moving the panel off the diesel skid, or (3) qualification by the component manufacturers. The method chosen to qualify the affected components was independent vibration qualification testing to the vibrational levels which the components would be exposed to during the life of the plant.

Three (3) types of control devices mounted in the relay panel were identified whose failure could degrade operation or cause shutdown of the engine: (a) Gould J13 control relays, (b) AGASTAT timing relays, and (c) a Synchrostart speed switch. The testing programs and test results for these devices are discussed below.

For Items (a) and (b), the testing was performed at the National Technical Systems (NTS) Laboratories (Acton Labs) and the results of the testing are documented in Test Report No. 21030-86N-1.

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The relays used for the NTS testing program were typical of those installed in the relay panel which is mounted on the emergency diesel generator skids at Seabrook Station. Baseline functional tests were conducted prior to testing to provide performance/acceptability data to be compared with intermediate and final functional test results. This provided a means of monitoring any relay functional degradation which might occur due to vibration.

Vibration test levels were based on the test levels specified by Colt Industries (diesel generator manufacturer) in their qualification plan for other components on the diesel generator. These values were compared to field vibration data which was measured by NTS during actual diesel generator operation. A time compressed composite worst-case acceleration curve was then developed for use as the test input level.

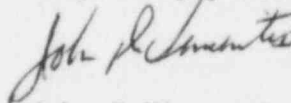
The components were vibration tested utilizing a shaker table. The shaker table input motion was sinusoidal and directed sequentially along three axes (two horizontal and one vertical) in equal time intervals.

The vibration qualification testing for Item (c) was performed at the Wyle Laboratories for Colt Industries (diesel generator manufacturer) as part of the overall Qualification Program for the diesel generators. The results are documented in Test Report R-206086-551. The test program was similar to the program described above for Items (a) and (b).

Vibration testing of these components to the above-described programs has been completed. The results of these tests demonstrate that these components are not degraded by the operational vibration which they would be exposed to during the life of the plant. NTS Report No. 21030-86N-1 for Items (a) and (b) and pertinent excerpts from Colt Qualification Report No. R-206086-551 for Item (c) will be made available for staff review out of our Bethesda office if requested.

This completes our response to the above referenced SER Confirmatory Issue. Accordingly, we request that the resolution of this confirmatory issue be reflected in the next supplement to Seabrook Station's SER.

Very truly yours,



John DeVincentis, Director  
Engineering and Licensing

Enclosures

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