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ACCESSION NBR:8407170271 DOC.DATE: 84/07/13 NOTARIZED: NO DOCKET #
FACIL:50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315
50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
AUTH.NAME AUTHOR AFFILIATION
ALEXICH,M.P. Indiana & Michigan Electric Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Advises tha RCS vent sys solenoid valve not installed as tested.Design change reconfiguring solenoid installation to agree w/tested configuration will resolve problem.Extension of qualification deadline requested.

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TITLE: OR/Licensing Submittal: Equipment Qualification

NOTES: 05000315
OL:10/25/74
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INDIANA & MICHIGAN ELECTRIC COMPANY

P.O. BOX 16631
COLUMBUS, OHIO 43216

July 13, 1984
AEP:NRC:0775K

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
ELECTRICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION REGARDING RCS VENT SYSTEM SOLENOID VALVE

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

Dear Mr. Denton:

This letter follows a verbal report to your staff on May 21, 1984, in accordance with 10 CFR 50.49(h), concerning the environmental qualification of the solenoid operated isolation valve installed in the D. C. Cook Nuclear Plant Reactor Coolant System (RCS) vent system.

Our review of the environmental qualification test documentation has indicated that the RCS vent system solenoid valve was not installed exactly as tested. Information previously obtained from Westinghouse Electric Corporation (W) did not disclose all of the details regarding the test configuration. We are currently planning to modify the installation configuration to agree with the tested configuration. The identified concern and our proposed corrective action are described below in additional detail.

The solenoid operated isolation valves installed in the Donald C. Cook Nuclear Plant RCS vent system are Target Rock Corporation Model No. 79AB-007 valves. The wires leading from the electrical connection at the solenoid are routed out through the solenoid housing through a conduit attached to the housing. This conduit prevents the entrance of chemical spray into the solenoid housing, but may not prevent a steam environment from entering the housing and surrounding the electrical installation.

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Subsequent review of W test report No. WCAP-8687 [Supplement 2-H10A, Revision 0, Proprietary Class 2, "Equipment Qualification Test Report: Target Rock Isolation Solenoid Valve (One Inch) (Environmental and Seismic Testing)"], and W Equipment Qualification Data Package No. EQDP-HE-10A [Revision 0, Proprietary Class 3, "Head Vent System: Solenoid Operated Isolation Valve (HE-10A)"], has indicated that the Donald C. Cook Nuclear Plant installation configuration is not identical to the actual tested configuration. The primary difference between the two configurations involves the use of a Conax connector in the test program to effectively seal the inside of the solenoid housing from the steam environment of the test chamber. The tested solenoid installation was not, therefore, subjected to a steam environment as the current Donald C. Cook Nuclear Plant installations could be under postulated accident conditions.

At the present time we are unaware of any test information which would either conclusively qualify or disqualify the solenoid installation for steam conditions. It should be noted, however, that postulated failure of the electrical installations would not result in a spurious opening of the RCS vent system flow paths and subsequent blowdown of the primary system.

We are in the process of resolving this issue through a design change at the Donald C. Cook Nuclear Plant. This change will involve the reconfiguration of the solenoid installation to agree with the tested configuration. This will ensure the applicability of the W reports referenced above to the installed solenoid valves, and thereby ensure the operability of the RCS vent system during and following a postulated accident. The schedule for completion of this effort is provided below and is consistent with our schedule for implementing the new Donald C. Cook Nuclear Plant Emergency Operating Procedures (EOPs).

We are in communication with W and Conax Corporation in an effort to obtain additional information which will enable us to duplicate the tested configuration. Completion of the design effort, lead times for the procurement of required materials, and the lack of accessibility of the solenoid valves during power operation have, however, necessarily placed limitations on our schedule for completion of the corrective action. We anticipate that the installation will be performed in the Donald C. Cook Nuclear Plant Unit No. 1 during the refueling outage scheduled to begin in February 1985, and the Unit No. 2 installation should be performed during the ice basket surveillance outage scheduled for June 1985. Given these dates, it is our belief that an extension of qualification deadline should be requested in accordance with 10 CFR 50.49(g). We hereby request this extension.

This document has been prepared following Corporate procedures which incorporate a reasonable set of controls to ensure its accuracy and completeness prior to signature by the undersigned.

M. P. Alexich
Vice President 4-13-84

MPA/dam

cc: John E. Dolan
W. G. Smith, Jr. - Bridgman
R. C. Callen
G. Charnoff
E. R. Swanson - NRC Resident Inspector, Bridgman