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June 21, 1989
NRC-89-0101

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

References: Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

Subject: Relief Requests for Inservice Testing Program for Pumps and Valves

In accordance with 10CFR50.55a(g)(5)(iii), Detroit Edison is transmitting relief requests PR-11, PR-12, and VR-53 for the Fermi 2 Inservice Testing Program for Pumps and Valves.

Relief requests PR-11, PR-12, and VR-53 concern provisions for the conduct of tests which must be modified in order to make the conduct of the affected tests practical or meaningful. For this reason, the provisions of these relief requests have been incorporated into the Fermi 2 test program and are being applied to the on-going Fermi 2 IST program.

If you have any questions on this matter, please contact Mr. Bruce Sheffel at (313) 586-1848.

Sincerely,

Attachment

cc: A. B. Davis
R. C. Knop
W. G. Rogers
J. F. Stang

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RELIEF REQUEST NO. PR-11

PUMPS:

Applicable to all pumps in the Program.

PUMP NUMBERS:

See Inservice Testing Program ISI Class 1,2,3, and EX Pumps

CLASSES: 2,3,E4

FUNCTIONS:

Pumps needed to shutdown and cool down the reactor and to mitigate the consequences of design basis accidents

SECTION XI REQUIREMENTS:

Measure pump inlet pressure before starting the pump and during the test (Table IWP-3100-1)

BASIS FOR RELIEF:

If a pump being tested is in operation as a result of plant or system needs, it is unreasonable and impractical to reconfigure system lineups to provide for measurement of the static inlet pressure.

Inlet pressure prior to pump startup is not a significant parameter needed for evaluating pump performance or its material condition. This parameter is not used in pump performance calculations.

ALTERNATE TESTING:

When performing a test on a pump that is already in operation due to system requirements, inlet pressure will only be measured during pump operation.

RELIEF REQUEST PR-12

PUMPS:

Residual Heat Removal
Core Spray
High Pressure Coolant Injection
Emergency Equipment Cooling Water
Chilled Water/Control Center AC

PUMP NUMBERS:

E1102C002 A thru D
E2101C001A A thru D
E4101C001 A & B
E4400C001 A & B
T4100C040
T4100C041

CLASSES: 2,3, and E4

FUNCTION:

Pumps needed to cool down the reactor and to mitigate the consequences of design basic accidents.

SECTION XI REQUIREMENTS:

The full-scale range of each instrument shall be three times the reference value or less (IWP-4120)

BASIS FOR RELIEF:

The installed suction pressure gauge of a pump is generally sized to accommodate the maximum pressure it would experience under normal and emergency conditions. In many cases, this results in an instrument's range that exceeds the Code requirements since, under test conditions, high suction pressures are typically not experienced. Strict Code compliance would require the installation of temporary gauges that may not be suitable for routine or emergency pump operation.

Suction pressure measurements serve two primary functions. First they provide assurance that the pump has adequate suction head for proper operation. Secondly, the suction pressure is used to determine the pump differential pressure. For the determination of suction head, the accuracy and range requirements of the Code are overly restrictive. Since in most cases plant pumps are provided with a considerable margin of suction head, accuracy on the order of 0.5 to 0.75 psig should be adequate. When used in determining pump differential pressure, the accuracy of the suction pressure measurement normally has little or no effect on the calculation since, generally, the pump discharge pressure is higher than the suction pressure by 2 or 3 orders of magnitude.

ALTERNATE TESTING:

When measuring the suction pressure of a pump, in lieu of meeting the instrument range requirements of IWP 4120, instruments will be installed such that the accuracy meets the requirements set forth below:

- Accuracy will be at least $\pm$ .5 psi.
- The accuracy of the differential pressure calculation will be limited to $\pm$ 2 percent of the differential pressure calculated value.
- Accuracy of the suction pressure instrument will be better than $\pm$ 0.5 percent of the calculated differential pressure.

RELIEF REQUEST NO. VR-53

SYSTEM: NITROGEN INERTING

COMPONENTS: T2300-F400 A thru H
T2300-F400 J thru M

CATEGORY: A/C

FUNCTION: These valves open to prevent a differential pressure buildup between the torus and the drywell and close when drywell pressure is greater that torus pressure to prevent bypass of drywell atmosphere directly to the torus air volume.

TEST REQUIREMENTS:

For category A valves, seat leakage shall be measured and compared to a specified maximum allowable leakage. (IWV-3426)

For valves 6 inches NPS and larger, individual valve leakrates shall be trended and evaluated per IWV-3427.

BASIS FOR RELIEF: These are exposed check valves bolted to open flanges on the downcomer header in the suppression chamber. There is no practical way of applying pressure behind the valves in the downcomer header and testing from the torus side using a vacuum fitting would require considerable disassembly of valve components.

The requirements for leaktesting these valves is derived from Fermi Technical Specifications, Section 4.6.2.1.h that establishes a limit for drywell to torus bypass leakage - that is leakage from the drywell to the torus that is not ducted through the torus downcomers into the torus water. In this section, only a limit for aggregate leakage from all sources is imposed and individual valve leakage is considered insignificant from a quantitative perspective.

In consideration of the foregoing, analysis of test results per IWV-3427 is not considered applicable or meaningful.

ALTERNATE TESTING: Drywell - Torus bypass leakage will be measured in accordance with Fermi Technical Specification, Section 4.6.2.1.h. Individual seat leakage measurements of the subject valves will not be made nor will test results be analyzed in accordance with IWV-3427.