



Point Beach Nuclear Plant
6610 Nuclear Rd.
Two Rivers, WI 54241
Phone 920 755-2321

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Document Control Desk
U.S. NUCLEAR REGULATORY COMMISSION
Mail Station P1-137
Washington, DC 20555

Ladies/Gentlemen:

DOCKETS 50-266 AND 50-301
ASME SECTION XI PRESSURE TEST PROGRAM
RELIEF REQUEST PTP-3-09
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

In accordance with 10 CFR 50.55a(a)(3), Point Beach Nuclear Plant (PBNP) is requesting relief from the requirements of ASME Section XI Code, 1986 Edition, Table IWD-2500-1, Examination Category D-B, Item D 2.10, system pressure testing of Class 3 pressure retaining components once each period and hydrostatic testing once each interval. The alternatives proposed by PBNP in the attached Relief Request PTP-3-09, Revision 1, utilize the existing Technical Specifications surveillance testing as an acceptable alternative to performing ASME XI-required pressure testing on subsystems supporting the standby emergency diesel generators (EDG). The WE letter to the NRC dated October 12, 1998 requested relief from the Code-required 10-minute run time when performing a functional pressure test on the diesel fuel oil transfer piping and components. Relief request PTP-3-07, will be retracted upon Commission approval of PTP-3-09, Revision 1.

Revision 1 to PTP-3-09 is being submitted to clarify the frequency at which discharge flow is measured and recorded from the fuel oil transfer pumps to their respective day tank. Changes to our original submittal are identified by bars in the left margin.

The proposed alternatives of PTP-3-09, Revision 1, are similar to the alternatives to the Code requirements that have been approved by the NRC via a Safety Evaluation issued October 24, 1997, to Wolf Creek for acceptance of their second 10-year inspection interval pressure test program.

If you have questions or require additional information, please contact us.

Sincerely,

A. J. Cayia
Manager,
Regulatory Services & Licensing

Attachment

cc: NRC Resident Inspector
NRC Regional Administrator

NRC Project Manager
PSCW

A047

RELIEF REQUEST PTP-3-09, Revision 1

Components:

Class 3 Standby Emergency Diesel Generator Subsystems

Drawings:

M-209 CBD Sh.12, Emergency Diesel Air Starting Sys (G01 & G02)

M-209 CBD Sh.14, Starting and Service Air Sys Diesel Generator Bldg (G03)

M-209 CBD Sh.15, Starting Air Sys Diesel Generator Bldg (G04)

M-219 CBD Sh. 1, Fuel Oil System (G01 & G02)

M-219 CBD Sh. 2, Fuel Oil System (G01 & G02)

M-219 CBD Sh. 3, Fuel Oil System (G03 & G04)

M-227 CBD Sh.1, Glycol Cooling Sys Diesel Generator Bldg (G03)

M-227 CBD Sh.1, Glycol Cooling Sys Diesel Generator Bldg (G04)

ASME Section XI (1986 Edition) Requirements:

Table IWD-2500-1, Examination Category D-B, Item D 2.10 requires system pressure testing of Class 3 pressure retaining components once each period and hydrostatic testing once each interval.

Proposed Alternate Testing:

As an alternate to performing ASME XI required pressure testing on subsystems supporting the standby Emergency Diesel Generators (EDG), PBNP proposes utilizing Plant Technical Specifications surveillance testing as an acceptable alternative to that required by the Code.

Basis for Relief:

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is being requested from the Code required system pressure test for diesel generator Class 3 subsystems on the basis that the proposed alternate testing would provide an acceptable level of quality and safety.

The primary intent of Plant Technical Specification (TS) surveillance testing is slightly different from Code required examinations. TS 15.4.6 is intended to demonstrate component operability, whereas TS 15.4.2.B.1 (ISI) is intended to demonstrate pressure boundary integrity. There are no VT-3 visual examinations imposed on EDG subsystems due to pressure/temperature or size exemptions as allowed IWD-1220.2. Therefore, verification of pressure boundary structural integrity on EDG subsystems is not included in the PBNP ISI Long Term Plan. Successful EDG operability testing requires the associated subsystems to maintain pressure boundary integrity and therefore deemed to provide an equivalent level of quality and safety to that of ASME Section XI inspections. Those auxiliary support subsystems addressed within the scope of this request for relief include the; starting air system, fuel oil system and glycol cooling system (G03 and G04 only for glycol cooling).

The repeatability of auxiliary subsystem instrumentation (pressure, level and temperature) recorded during surveillance testing provides supporting data for the 'indirect verification of component integrity'. Furthermore, operations personnel are specifically trained in the testing of the standby EDGs and are aware of the necessity to maintain the pressure boundary of the auxiliary subsystems and also of the necessity to maintain unobstructed flow characteristics for components discharging to a tank vented to atmosphere as do the diesel fuel oil transfer pumps. Although not a specific signoff step in the surveillance procedure, verification of component pressure boundary integrity is administratively required of the operations personnel performing standby EDG operability testing. If evidence of leakage is identified during the test, a Condition Report and/or work order is initiated with corrective actions or repairs implemented and follow-up confirmatory testing performed.

The following paragraphs provide specific procedural actions which support the use of alternative operability testing in lieu of ASME Section XI system pressure testing and VT-2 visual examination.

Starting Air Auxiliary Subsystem

PBNP Surveillance Test Procedures TS-81, -82, -83 and -84 are performed monthly to demonstrate EDG operability. As part of these procedures, the pressures of both right bank and left bank air receivers are recorded prior to and subsequent to starting the engine with the drop in pressure verified to occur at the air start motor outlet ports. The satisfactory completion of this test demonstrates the skid-mounted air start components are properly performing their function and also provides positive indication that the pressure boundary integrity of the starting air subsystem is intact. In addition to the monthly testing, Inservice Test Procedure IT-100 performs quarterly reverse exercising of the right/left bank air start receivers' inlet check valves. During the performance of this procedure, each air compressor is isolated with a vent path provided upstream of the air receivers' supply check valves. Receiver pressure is observed for 15 minutes with stringent leakage criteria applied. If a through wall or otherwise excessive leak were to occur in the pressure boundary, seat leakage acceptance criteria for the check valves would be exceeded resulting in the determination of the source of the leak and repair/replacement. This data also provides a positive indication that pressure boundary integrity is being maintained for the starting air subsystem. Based on the monthly and quarterly frequencies and the data collected during these alternative tests, PBNP considers that testing performed to satisfy the Technical Specification Surveillance Requirements provide an acceptable level of quality and safety as an alternative to ASME Section XI system pressure testing.

Fuel Oil Transfer Subsystem

For the Fuel Oil Transfer subsystem, an acceptable ASME Section XI pressure test would consist of a VT-2 visual examination on the outlet piping from the day tank to the engine when the day tank is filled to design capacity as well as a demonstration of the transfer pump's ability to provide adequate makeup flow to the day tank during system operation due to the day tank being vented to atmosphere. During the monthly performance of TS-81, -82, -83 and -84 fuel oil inventory in the day tank is drained down to the low level setpoint for pump actuation. The pump is verified to automatically start and allowed to replenish day tank inventory to the high level set point with verification that the pump automatically stops. During this process procedural steps require recording of the percentage of tank level when the transfer pump automatically starts as well as percentage of tank level upon cessation of pump operation.

In addition, pump flow rate is recorded during replenishment of day tank inventory for G03 and G04 with acceptance criteria applied to recorded flow rate values. Discharge flow rate for G01 and G02 transfer pumps is not measured during the monthly performance of TS-81 and TS-82 as there is no flow instrumentation in the pump discharge lines to G01 and G02 day tanks. The flow rate to G01 and G02 day tanks is measured each unit 1 refueling outage, utilizing an ultrasonic flow meter during inservice testing of fuel oil transfer pump unloader valves FO-3982A and FO-3983A. This data provides a positive indication that pressure boundary integrity is being maintained. Based on the Technical Specification surveillance testing frequency and the data collected during these alternative tests, PBNP considers the testing performed to satisfy the Technical Specification surveillance requirements provide an acceptable level of quality and safety as an alternative to ASME Section XI system pressure testing.

Glycol Cooling Subsystem (G03 and G04 Only)

Standby Emergency Diesel Generators G03 and G04 are provided with a glycol cooling subsystem consisting of a coolant to air type heat exchanger. During the monthly performance of TS-83 and TS-84 coolant tank level as well as multiple point temperature indication is recorded prior to starting the engine, after 30 minutes of loaded run time and prior to shutdown or hourly for extended runs. Normal values for all acquired data are provided in the procedure logsheet as well as limits for the data recorded. Again, this data provides a positive indication that pressure boundary integrity is being maintained. Based on the monthly frequency and data collected during these alternative tests, PBNP considers that testing performed to satisfy the Technical Specification Surveillance Requirements provide an acceptable level of quality and safety as an alternative to ASME Section XI system pressure testing.

In addition, per Surveillance Requirement 15.4.6.A.4, each Standby Emergency Diesel Generator is subject to an inspection in accordance with procedures prepared per the manufacturer's recommendation. These inspections will provide added assurance that the components within the Starting Air, Fuel Oil Transfer and Glycol Cooling subsystems demonstrate pressure boundary integrity and the ability to provide adequate flow for satisfactory Standby Emergency Diesel Generator operation.

Based on the information provided, PBNP requests relief from the ASME Section XI requirement to perform system pressure testing on the ISI Class 3 Standby Emergency Diesel Generator subsystems listed above on the bases that Technical Specification Surveillance Requirements of 15.4.6 provide an acceptable level of quality and safety and provide an acceptable alternative to ASME Section XI system pressure testing.