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ACCESSION NBR: 9201310134 DOC. DATE: 92/01/22 NOTARIZED: NO DOCKET #
FACIL: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light Co 05000261
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SUBJECT: Requests specific relief from requirements of 1986 edition of ASME boiler & pressure vessel code, Section XI for certain activities during third 10-yr interval pressure testing program at facility.

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Carolina Power & Light Company

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SERIAL: NLS-92-015

G. E. VAUGHN
Vice President
Nuclear Services Department

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO DPR-23
RELIEF REQUESTS - THIRD 10-YEAR INTERVAL PRESSURE TESTING PROGRAM

Gentlemen:

The purpose of this letter is to request specific relief, in accordance with 10CFR50.55a(g)(5), from the requirements of the 1986 Edition of the ASME Boiler and Pressure Vessel Code, Section XI for certain activities during the Third 10-Year Interval Pressure Testing Program at H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR2). The enclosures to this submittal identify the specific reliefs requested, including the Code requirements, the bases for the relief, and the alternative testing proposed. The text of the ASME Code Articles referenced are included, following Relief Request No. 2, as an aid for your review.

The reliefs involve the pressure testing of the Class I boundary that is scheduled during Refueling Outage 14. Planning and scheduling for Refueling Outage 14 have progressed significantly; and application of these reliefs is expected to enhance personnel safety, eliminate a thermal cycle on the plant, and provide an opportunity to simplify the scheduling of this outage resulting in a five to seven day reduction of outage length. Carolina Power and Light Company (CP&L) believes that the proposed alternatives to the licensed Code requirements are safe in that they provide adequate assurance of detection of degradation of bolted connections to ensure that required system integrity is maintained. Approval of these reliefs on an expedited basis is requested to support Refueling Outage 14, currently scheduled to begin on March 28, 1992. CP&L will arrange to meet with the NRC staff to facilitate the review if needed. Should you have any questions regarding this matter, please contact Mr. R. W. Prunty at (919) 546-7318.

Yours very truly,

G. E. Vaughn

JSK/jbw

Enclosures

cc: Mr. S. D. Ebnetter
Mr. L. Garner
Mr. R. Lo

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P PDR

(1474RNP)

Relief Request 1Request for Relief:

1986 Edition of Section XI ASME Code

Code Requirements:

Paragraph IWA-5242(a):

"For systems borated for the purpose of controlling reactivity, insulation shall be removed from the pressure-retaining bolted connections for visual examination VT-2"

Table IWB-2500-1, Category B-P, Footnote 5:

"The system leakage test (IWB-5221) shall be conducted prior to plant start-up following each reactor refueling outage."

Code Relief Request:

Relief is requested from performing VT-2 visual examination of bolted connections on the Class I boundary while the system is pressurized, as required by paragraph IWA-5242(a) and Table IWB-2500-1, Category B-P.

Licensee's Basis for Requesting Relief:

In order to achieve the test pressure (2235 psig) required by paragraph IWB-5221, heat-up limitations of the Technical Specifications would require an RCS temperature of no less than 500 degrees. It is not considered prudent from a personnel safety standpoint to reinstall insulation under these elevated temperature and pressure conditions. With elevated ambient temperatures limiting stay times in the area and contact temperatures on pressure boundary components approaching 500 degrees, reinstallation of bolted connection insulation under these conditions is considered impractical.

Per paragraph IWA-5245, a cooldown for the purpose of conducting the visual examination (and subsequent insulation installation) is an allowed option provided the test pressure and holding period are satisfied. As stated above, this would require raising the RCS to full operating pressure and temperature and then proceeding through a cooldown operation to allow insulation replacement. This is considered an unnecessary hardship and would require an undesired RCS thermal cycle to accomplish. The time required to depressurize/cool down, replace insulation, and return to normal operating temperature and pressure is estimated at five days.

The proposed alternative is considered to supplement and enhance the IE Bulletin 82-02 and Generic Letter 88-05 programs currently in place that address bolting integrity.

Relief Request 1 (continued)Alternative Examinations:

Insulated, pressure-retaining, bolted connections shall have the insulation removed for VT-2 examination. The examination shall be conducted at the Table IWB-2500-1 frequency (each refueling outage). However, the bolted connection VT-2 examination need not be performed in conjunction with the pressure test or while the system is at pressure.

In keeping with paragraphs IWA-2212 and IWA-5242(c), the VT-2 examination on these bolted connections will focus on discoloration, residue, boric acid accumulations, etc., or other evidence of borated water leakage.

Prior to plant start-up following each refueling outage, these bolted connections will be reinsulated, and the entire Class I boundary will be pressure tested in accordance with paragraph IWB-5221 and Table IWB-2500-1.

Relief Request 2Request for Relief:

1986 Edition of Section XI ASME Code

Code Requirement:

ASME Section XI 1986 Edition, paragraph IWA-5250(a)(2): "If leakage occurs at a bolted connection, the bolting shall be removed, VT-3 visually examined for corrosion, and evaluated in accordance with IWA-3100."

Code Relief Request:

Relief is requested to use the 1990 Addenda of ASME Section XI, paragraph IWA-5250(a)(2).

Licensee's Basis for Requesting Relief:

The requirement to remove all bolting when leakages are detected is not considered to be consistent with good ALARA practice, particularly regarding new assemblies such as would be the case during refueling outages. The exposure, costs, and manpower saved by use of the 1990 Addenda would be approximately 90 percent for each assembly in question.

Various programs/procedures are currently in place at H. B. Robinson to monitor for leakage and corrosion such that there would be no additional nuclear safety concerns created by the use of the 1990 Addenda as requested.

The proposed alternative is judged to be as capable of detecting any significant problems as the 1986 Code requirement.

Alternative Examination:

As required by the 1990 Addenda of ASME Section XI, paragraph IWA-5250(a)(2), "If leakage occurs at a bolted connection, one of the bolts shall be removed, VT-3 examined, and evaluated in accordance with IWA-3100. The bolt selected shall be the one closest to the source of leakage. When the removed bolt has evidence of degradation, all remaining bolting in the connection shall be removed, VT-3 examined, and evaluated in accordance with IWA-3100."

boiler and pressure vessel insurance in the United States;

(2) where the power plant is in Canada, by an Inspector employed by a Canadian Province or, if authorized by the Province in which the power plant is located, by an Inspector regularly employed by an insurance company licensed to write boiler and pressure vessel insurance in that Province;

(3) by an Inspector employed by other enforcement authorities in the United States or Canada having jurisdiction over the designated power plant.

(b) The Authorized Inspection Agency, including its staff of Authorized Nuclear Inservice Inspector Supervisors and the Inspectors, shall meet the requirements of ANSI/ASME N626.

IWA-2130 ACCESS FOR INSPECTOR

The Owner shall arrange for an Inspector to have access to all parts of the plant as necessary to make the required inspections. The Owner shall keep the Inspector informed of the progress of the preparatory work necessary to permit inspections and shall notify the Inspector at a time reasonably in advance of when the components will be ready for inspection.

IWA-2200 EXAMINATION METHODS

(a) The three types of examinations used during inservice inspection are defined as visual, surface, and volumetric. The examination method to be used is specified in Tables IWB-, IWC-, IWD-, IWE-, and IWF-2500-1. If a component must be examined in a high radiation area, remotely controlled equipment may be advisable.

(b) When preparation of a surface for nondestructive examination is required, the preparation shall be by a mechanical method. Such surfaces shall be blended into the surrounding area as may be required to perform the examination. The wall thickness shall not be reduced below the minimum thickness required by design.

IWA-2210 VISUAL EXAMINATIONS

IWA-2211 Visual Examination VT-1

(a) The VT-1 visual examination shall be conducted to determine the condition of the part, component, or surface examined, including such conditions as cracks,

wear, corrosion, erosion, or physical damage on the surfaces of the part or components.

(b) Direct VT-1 visual examination may be conducted when access is sufficient to place the eye within 24 in. of the surface to be examined and at an angle not less than 30 deg. to the surface. Mirrors may be used to improve the angle of vision. Lighting, natural or artificial, shall be sufficient to resolve a $\frac{1}{32}$ in. black line on an 18% neutral gray card.

(c) Remote VT-1 visual examination may be substituted for direct examination. Remote examination may use aids, such as telescopes, borescopes, fiber optics, cameras, or other suitable instruments, provided such systems have a resolution capability at least equivalent to that attainable by direct visual examination.

IWA-2212 Visual Examination VT-2

(a) The VT-2 visual examination shall be conducted to locate evidence of leakage from pressure retaining components, or abnormal leakage from components with or without leakage collection systems as required during the conduct of system pressure or functional test.

(b) The VT-2 visual examination shall be conducted in accordance with IWA-5240.

IWA-2213 Visual Examination VT-3

(a) The VT-3 visual examination shall be conducted to determine the general mechanical and structural condition of components and their supports, such as the verification of clearances, settings, physical displacements, loose or missing parts, debris, corrosion, wear, erosion, or the loss of integrity at bolted or welded connections.

(b) The VT-3 examination shall include examinations for conditions that could affect operability or functional adequacy of snubbers, and constant load and spring type supports.

(c) For component supports and component interiors, the visual examination may be performed remotely with or without optical aids to verify the structural integrity of the component.

IWA-2215 Replication

Surface replication methods shall be considered acceptable, provided the surface resolution is at least equivalent to that obtainable by direct visual observation.

IWA-5223 System Inservice Test Boundary

The boundary subject to test pressurization during a system inservice test [IWA-5211(c)] shall extend to those pressure retaining components under operating pressures during normal system service.

IWA-5224 System Hydrostatic Test Boundary

(a) The boundary subject to test pressurization during a system hydrostatic test [IWA-5211(d)] shall be defined by the system boundary (or each portion of the boundary) within which the components have the same minimum required classification and are designed to the same primary pressure rating as governed by the system function and the internal fluid operating conditions, respectively.

(b) Systems which share safety functions for different modes of plant operation, and within which the component classifications differ, shall be subject to separate system pressure tests of each portion of the system boundary having the same minimum required component classifications.

(c) Systems designed to operate at different pressures under several modes of plant operation or post-accident conditions shall be subject to a system pressure test within the test boundary defined by the operating mode with the higher pressure.

(d) Where the respective system primary pressure ratings on the suction and discharge sides of system pumps differ, the system test boundary shall be divided into two separate boundaries (such as suction side and discharge side test boundaries). In the case of positive displacement pumps, the boundary interface shall be considered as the pump. In the case of centrifugal pumps, the boundary interface shall be the first shutoff valve on the discharge side of the pump.

IWA-5240 VISUAL EXAMINATION**IWA-5241 Noninsulated Components**

(a) The visual examination VT-2 shall be conducted by examining the accessible external exposed surfaces of pressure retaining components for evidence of leakage.

(b) For components whose external surfaces are inaccessible for direct visual examination VT-2, only the examination of surrounding area (including floor areas or equipment surfaces located underneath the components) for evidence of leakage shall be required.

IWA-5242 Insulated Components

(a) For systems borated for the purpose of controlling reactivity, insulation shall be removed from pressure retaining bolted connections for visual examination VT-2. For other components, visual examination VT-2 may be conducted without the removal of insulation by examining the accessible and exposed surfaces and joints of the insulation. Essentially vertical surfaces of insulation need only be examined at the lowest elevation where leakage may be detectable. Essentially horizontal surfaces of insulation shall be examined at each insulation joint.

(b) When examining insulated components, the examination of surrounding area (including floor areas or equipment surfaces located underneath the components) for evidence of leakage, or other areas to which such leakage may be channeled, shall be required.

(c) Discoloration or residue on surfaces examined shall be given particular attention to detect evidence of boric acid accumulations from borated reactor coolant leakage.

IWA-5243 Components With Leakage Collection Systems

Where leakages from components are normally expected and collected (such as valve stems, pump seals, or vessel flange gaskets) the visual examination VT-2 shall be conducted by verifying that the leakage collection system is operative.

IWA-5244 Buried Components

(a) In nonredundant systems where the buried components are isolable by means of valves, the visual examination VT-2 shall consist of a leakage test that determines the rate of pressure loss. Alternatively, the test may determine the change in flow between the ends of the buried components. The acceptable rate of pressure loss or flow shall be established by the Owner.

(b) In redundant systems where the buried components are nonisolable, the visual examination VT-2 shall consist of a test that determines the change in flow between the ends of the buried components. In cases where an annulus surrounds the buried components, the areas at each end of the buried components shall be visually examined for evidence of leakage in lieu of a flow test.

(c) In nonredundant systems where the buried components are nonisolable, such as return lines to the heat sink, the visual examination VT-2 shall consist only of a verification that the flow during operation is not impaired.

IWA-5245 Elevated Temperature Tests

The visual examination of system components requiring a test temperature above 200°F during the system pressure test may be conducted after the pressure holding period of IWA-5213 is satisfied, and the pressure is lowered to the level corresponding with a temperature of 200°F, in accordance with allowable cooldown rates established by fracture prevention criteria.

IWA-5246 Repaired or Replaced Components and Alteration of a System

The visual examination VT-2 following a repair or replacement of a component, or the alteration of a system, may be limited to the repaired or replaced components, or the altered portion of the system, but shall include any connection made to the existing system.

IWA-5250 CORRECTIVE MEASURES

(a) The source of leakages detected during the conduct of a system pressure test shall be located and evaluated by the Owner for corrective measures as follows:

(1) buried components with leakage losses in excess of limits acceptable for continued service shall be repaired or replaced;

(2) if leakage occurs at a bolted connection, the bolting shall be removed, VT-3 visually examined for corrosion, and evaluated in accordance with IWA-3100;

(3) repairs or replacements of components shall be performed in accordance with IWA-4000 or IWA-7000, respectively.

(b) If boric acid residues are detected on components, the leakage source and the areas of general corrosion shall be located. Components with local areas of general corrosion that reduce the wall thickness by more than 10% shall be evaluated to determine whether the component may be acceptable for continued service, or whether repair or replacement is required.

IWA-5260 INSTRUMENTS FOR PRESSURE TESTS

IWA-5261 Type

Any pressure measuring instrument or sensor, analog or digital, including the pressure measuring instrument of the normal operating system instrumentation (such as control room instruments), may be used, provided the requirements of IWA-5260 are met.

IWA-5262 Accuracy

The pressure measuring instrument or sensor used in pressure testing shall provide results accurate to within 0.5% over the calibrated range for digital instruments.

IWA-5263 Calibration

All pressure measuring instruments shall be calibrated against a standard deadweight tester or calibrated master gage. The test gages shall be calibrated before each test or series of tests. A series of tests is a group of tests that use the same pressure measuring instruments and that are conducted within a period not exceeding 2 weeks.

IWA-5264 Ranges

(a) Analog pressure gages used in testing shall have dials graduated over a range of at least 1.5 times, but not more than 4 times, the intended maximum test pressures.

(b) Digital pressure measuring instruments used in testing shall be selected such that the intended maximum test pressure shall not exceed 70% of the calibrated range of the instrument.

IWA-5265 Location

(a) When testing an isolated component, the pressure measuring instrument or sensor shall be connected close to the component.

(b) When testing a group of components or a multicomponent system, the pressure measuring instrument or sensor shall be connected to any point within the pressure boundary of the components or system such that the imposed pressure on any component, including static head, will not exceed 106% of the specified test pressure for the system.

only of a verification that the flow during operation is not impaired.

IWA-5245 Elevated Temperature Tests

The visual examination of system components requiring a test temperature above 200°F during the system pressure test may be conducted after the pressure holding period of IWA-5213 is satisfied, and the pressure is lowered to the level corresponding with a temperature of 200°F, in accordance with allowable cool-down rates established by fracture prevention criteria.

IWA-5246 Repaired or Replaced Components and Alteration of a System

The visual examination VT-2 following a repair or replacement of a component, or the alteration of a system, may be limited to the repaired or replaced components, or the altered portion of the system, but shall include any connection made to the existing system.

ASO IWA-5250 CORRECTIVE ACTION

(a) The source of leakages detected during the conduct of a system pressure test shall be located and evaluated by the Owner for corrective action as follows.

(1) Buried components with leakage losses in excess of limits acceptable for continued service shall be repaired or replaced.

(2) If leakage occurs at a bolted connection, one of the bolts shall be removed, VT-3 examined, and evaluated in accordance with IWA-3100. The bolt selected shall be the one closest to the source of leakage. When the removed bolt has evidence of degradation, all remaining bolting in the connection shall be removed, VT-3 examined, and evaluated in accordance with IWA-3100.

(3) Repair or replacements of components shall be performed in accordance with IWA-4000 or IWA-7000, respectively.

(b) If boric acid residues are detected on components, the leakage source and the areas of general corrosion shall be located. Components with local areas of general corrosion that reduce the wall thickness by more than 10% shall be evaluated to determine whether the component may be acceptable for continued service, or whether repair or replacement is required.

IWA-5260 INSTRUMENTS FOR PRESSURE TESTS

IWA-5261 Type

Any pressure measuring instrument or sensor, analog or digital, including the pressure measuring instrument of the normal operating system instrumentation (such as control room instruments), may be used, provided the requirements of IWA-5260 are met.

IWA-5262 Accuracy

The pressure measuring instrument or sensor used in pressure testing shall provide results accurate to within 0.5% of full scale for analog gages and 0.5% over the calibrated range for digital instruments.

IWA-5263 Calibration

All pressure measuring instruments shall be calibrated against a standard deadweight tester or calibrated master gage. The test gages shall be calibrated before each test or series of tests. A series of tests is a group of tests that use the same pressure measuring instruments and that are conducted within a period not exceeding 2 weeks.

IWA-5264 Ranges

(a) Analog pressure gages used in testing shall have dials graduated over a range of at least 1.5 times, but not more than 4 times, the intended maximum test pressures.

(b) Digital pressure measuring instruments used in testing shall be selected such that the intended maximum test pressure shall not exceed 70% of the calibrated range of the instrument.

IWA-5265 Location

(a) When testing an isolated component, the pressure measuring instrument or sensor shall be connected close to the component.

(b) When testing a group of components or a multicomponent system, the pressure measuring instrument or sensor shall be connected to any point within the pressure boundary of the components or system such that the imposed pressure on any component, including static head, will not exceed 106% of the specified test pressure for the system.

TABLE IWB-2500-1 (CONT'D)
EXAMINATION CATEGORIES

EXAMINATION CATEGORY B-P, ALL PRESSURE RETAINING COMPONENTS							
Item No.	Parts Examined	Test Requirements ³	Examination Method ⁴	Acceptance Standard	Extent and Frequency of Examination		Deferral of Inspection to End of Interval
					1st Inspection Interval	Successive Inspection Intervals, 2nd, 3rd, 4th	
B15.10	Reactor Vessel Pressure Retaining Boundary	System leakage test ^{1,7} (IWB-5221)	Visual, VT-2	IWB-3522	Each refueling outage ⁵	Each refueling outage ⁵	Not permissible
B15.11	Pressure Retaining Boundary	System hydrostatic test ² (IWB-5222)	Visual, VT-2	IWB-3522	One test ⁶	One test per interval ⁶	Permissible
B15.20	Pressurizer Pressure Retaining Boundary	System leakage test ^{1,7} (IWB-5221)	Visual, VT-2	IWB-3522	Each refueling outage ⁵	Each refueling outage ⁵	Not permissible
B15.21	Pressure Retaining Boundary	System hydrostatic test ² (IWB-5222)	Visual, VT-2	IWB-3522	One test ⁶	One test per interval ⁶	Permissible
B15.30	Steam Generators Pressure Retaining Boundary	System leakage test ^{1,7} (IWB-5221)	Visual, VT-2	IWB-3522	Each refueling outage ⁵	Each refueling outage ⁵	Not permissible
B15.31	Pressure Retaining Boundary	System hydrostatic test ² (IWB-5222)	Visual, VT-2	IWB-3522	One test ⁶	One test per interval ⁶	Permissible
B15.40	Heat Exchangers Pressure Retaining Boundary	System leakage test ^{1,7} (IWB-5221)	Visual, VT-2	IWB-3522	Each refueling outage ⁵	Each refueling outage ⁵	Not permissible
B15.41	Pressure Retaining Boundary	System hydrostatic test ² (IWB-5222)	Visual, VT-2	IWB-3522	One test ⁶	One test per interval ⁶	Permissible
NOTES: See Notes at end of Examination Category B-P.							

TABLE IWB-2500-1 (CONT'D)
EXAMINATION CATEGORIES

EXAMINATION CATEGORY B-P, ALL PRESSURE RETAINING COMPONENTS (CONT'D)							
Item No.	Parts Examined	Test Requirements ³	Examination Method ⁴	Acceptance Standard	Extent and Frequency of Examination		Deferral of Inspection to End of Interval
					1st Inspection Interval	Successive Inspection Intervals, 2nd, 3rd, 4th	
B15.50	Piping Pressure Retaining Boundary	System leakage test ^{1,7} (IWB-5221)	Visual, VT-2	IWB-3522	Each refueling outage ⁵	Each refueling outage ⁵	Not permissible
B15.51	Pressure Retaining Boundary	System hydrostatic test ² (IWB-5222)	Visual, VT-2	IWB-3522	One test ⁶	One test per interval ⁶	Permissible
B15.60	Pumps Pressure Retaining Boundary	System leakage test ^{1,7} (IWB-5221)	Visual, VT-2	IWB-3522	Each refueling outage ⁵	Each refueling outage ⁵	Not permissible
B15.61	Pressure Retaining Boundary	System hydrostatic test ² (IWB-5222)	Visual, VT-2	IWB-3522	One test ⁶	One test per interval ⁶	Permissible
B15.70	Valves Pressure Retaining Boundary	System leakage test ^{1,7} (IWB-5221)	Visual, VT-2	IWB-3522	Each refueling outage ⁵	Each refueling outage ⁵	Not permissible
B15.71	Pressure Retaining Boundary	System hydrostatic test ² (IWB-5222)	Visual, VT-2	IWB-3522	One test ⁶	One test per interval ⁶	Permissible

NOTES:

- (1) The pressure retaining boundary during the system leakage test shall correspond to the reactor coolant system boundary, with all valves in the normal position, which is required for normal reactor operation startup. The VT-2 examination shall, however, extend to and include the second closed valve at the boundary extremity.
- (2) The pressure retaining boundary during the system hydrostatic test shall include all Class 1 components within the system boundary.
- (3) System pressure tests of the reactor coolant system shall be conducted in accordance with IWA-5000. System pressure tests for repaired, replaced, or altered components shall be governed by IWA-5214(c).
- (4) Visual examination of IWA-5240.
- (5) The system leakage test (IWB-5221) shall be conducted prior to plant startup following each reactor refueling outage.
- (6) The system hydrostatic test (IWB-5222) shall be conducted at or near the end of each inspection interval.
- (7) A system hydrostatic test (IWB-5222) and the accompanying VT-2 examination are acceptable in lieu of the system leakage test (IWB-5221) and VT-2 examination.

ARTICLE IWB-5000

SYSTEM PRESSURE TESTS

IWB-5200 SYSTEM TEST REQUIREMENTS

IWB-5210 TEST

(a) The pressure retaining components shall be tested at the frequency stated and visually examined by the method specified in Table IWB-2500-1, Examination Category B-P:

(1) system leakage test, IWA-5211(a);

(2) system hydrostatic test, IWA-5211(d).

(b) The system pressure tests and visual examinations shall be conducted in accordance with IWA-5000 and this Article. Reactor coolant shall be used as the pressurizing medium.

IWB-5220 PRESSURE

IWB-5221 System Leakage Test

(a) The system leakage test shall be conducted at a test pressure not less than the nominal operating pressure associated with 100% rated reactor power.

(b) The system test pressure and temperature shall be attained at a rate in accordance with the heat-up limitations specified for the system.

IWB-5222 System Hydrostatic Test

(a) The system hydrostatic test may be conducted at any test pressure specified in Table IWB-5222-1 corresponding to the selected test temperature, provided the requirements of IWB-5230 are met for all ferritic steel components within the boundary of the system (or portion of system) subject to the test pressure (see IWA-5245).

(b) Whenever a system hydrostatic test is conducted in which the reactor vessel contains nuclear fuel and the vessel is within the system test boundary, the test pressure shall not exceed the limiting conditions specified in the plant Technical Specifications.

TABLE IWB-5222-1
TEST PRESSURE

Test Temperature, °F	Test Pressure ^{1,2}
100 or less	1.10 P_o
200	1.08 P_o
300	1.06 P_o
400	1.04 P_o
500 or greater	1.02 P_o

NOTES:

(1) P_o is the nominal operating pressure corresponding with 100% rated reactor power.

(2) Linear interpolation at intermediate test temperatures is permissible.

(c) The pressure measuring instrument used for measuring system hydrostatic or pneumatic test pressure shall meet the requirements of IWA-5260.

IWB-5230 TEMPERATURE

(a) The minimum test temperature for either the system leakage or system hydrostatic test shall not be lower than the minimum temperature for the associated pressure specified in the plant Technical Specifications.

(b) The system test temperature shall be modified as required by the results obtained from each set of material surveillance specimens withdrawn from the reactor vessel during the service lifetime.

(c) For tests of systems or portions of systems constructed entirely of austenitic steel, test temperature limitations are not required to meet fracture prevention criteria. In cases where the components of the system are constructed of ferritic and austenitic steels that are nonisolable from each other during a system leakage or system hydrostatic test, the test temperature shall be in accordance with (a) above.