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January 28, 1983

Docket No. 50-348

Director, Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. S. A. Varga

Joseph M. Farley Nuclear Plant - Unit 1
Inservice Inspection Program for ASME
Code Class 1, 2 and 3 Components

Gentlemen:

On March 30, 1978, Alabama Power Company submitted Revision 1 of the subject program including requests for relief which were subsequently approved by the NRC as documented in A. Schwencer's letter of December 7, 1979. Since implementation of this program, Alabama Power Company has determined that certain other ASME Code requirements are impractical and therefore requests that additional relief from these requirements be granted.

In accordance with 10 CFR 50.55 a(g)(6)(i), Alabama Power Company hereby requests that relief be granted from certain requirements of the 1974 Edition through the Summer 1975 Addenda of the ASME Code, Section XI, Articles IWA-5000, IWB-5000, IWC-5000, IWD-5000, IWC-2000 and IWD-2000. A summary of the proposed relief request changes and additions (Attachment 1) and a complete description of the affected components, existing examination requirements, bases of relief request and proposed alternative examinations (Attachment 2) are attached.

Alabama Power Company's Plant Operations Review Committee has reviewed the proposed relief request changes and additions. It is respectfully requested that these relief requests be granted by September 1, 1983 since the Inservice Inspection (ISI) activities, required to be performed during October 1983, now currently include some of these impractical inspections.

A047 w/check $400

This relief request is designated as Class I in accordance with 10 CFR 170.22 requirements. Enclosed is a check for $400.00 to cover the total amount of fees required. This amount is remitted since this is a duplicate unit review with $4000.00 having been submitted with the Unit 2 request dated January 28, 1983.

Yours very truly,

for F. L. Clayton, Jr.

FLCJr/STB:lsh-D13
Attachments
cc: Mr. R. A. Thomas
Mr. G. F. Trowbridge
Mr. J. P. O'Reilly
Mr. E. A. Reeves
Mr. W. H. Bradford

ATTACHMENT 1
SUMMARY OF PROPOSED RELIEF REQUEST
CHANGES AND ADDITIONS

Alabama Power Company proposes that the following revisions or additions to the existing relief requests of the Unit 1 Inservice Inspection Program for ASME Code Class 1, 2 and 3 Components, Revision 1 be granted. Upon NRC approval, these relief requests will be incorporated into the existing program as Revision 2.

1.0 ASME CODE CLASS 1

1.1 Attachment I to the Class 1 Table Section 3

Item (iii) Revise the existing relief request to include valves Q1E21V079A, B & C which were omitted from Revision 1.

Item (vi) Add the CVCS auxiliary spray to pressurizer piping between check valve Q1E21V109 and valve Q1E21V245 to the existing relief request. This line will not be examined as part of the RCS pressure test.

Item (vii) Add the RCS normal charging piping between check valve Q1E21V110 and valve Q1E21V112 to the existing relief request. This line will not be examined as a part of the RCS pressure test.

Item (viii) Add the RCS alternate charging piping between check valves Q1E21V111 and Q1E21V113 to the existing relief request. This line will not be examined as part of the RCS pressure test.

1.2 Notes to the Class 1 Table

1.2.1 Note 18 the Class 1 Table

Add Note 18 to the Class 1 Table to request relief from performing a Class 1 hydrostatic test of the RCP seal injection piping from the RCP flanges to valve Q1E21V100A, B & C and the RCP No. 1 seal bypass piping from the RCP flanges to flow orifices Q1E21F06001A, B & C and valves Q1E21V106A, B & C. This Class 1 piping cannot be isolated from the adjoining Class 2 piping due to flow orifices at the Code Class change points. These lines will be tested in accordance with Class 2 requirements.

1.2.2 Note 19 to the Class 1 Table

Add Note 19 to the Class 1 Table to request relief from the four hour holding time required prior to performance of visual examinations for hydrostatic tests of noninsulated piping. Later NRC approved editions and addenda of the ASME Code, Section XI require only a ten minute holding time. Test pressures and temperatures will be maintained for a minimum of ten minutes prior to initiating the visual examination and will be maintained until completion of the examination.

2.0 ASME CODE CLASS 2

2.1 Attachment II to the Class 2 Table Section 4

Item (i) Delete item (i), reactor vessel flange leakoff line, from the existing relief request. The relief request for this line has been rewritten and added as Note 16 to the Class 2 Table since no alternative examination can be performed.

Item (ix) Add line numbers CCB-53 and 54 to the existing relief request.

Item (xv) Delete item (xv), RCP seal leakoff/bypass lines between valves Q1E21V256A, B & C, Q1E21V136A, B & C and the pump, from the existing relief request. The relief request for this line has been rewritten and added as Note 18 to the Class 1 Table. These lines will be tested, along with the Class 1 lines, in accordance with the Class 2 test requirements.

Item (xvi) Delete item (xvi), RCP seal water supply lines between valve Q1E21V144A, B & C and Q1E21V100A, B & C, from the existing relief request. The relief request for this line has been rewritten and added as Note 18 to the Class 1 Table. These lines will be tested, along with the Class 1 lines, in accordance with the Class 2 test requirements.

Item (xvii) Add the RPV head vent line between the Class 1 line and valves HV-1 and HV-3 to the existing relief request. This line will be examined, along with the adjoining Class 1 piping, in accordance with the Class 1 test requirements.

Item (xviii) Add the No. 1 leakoff lines from the RCP's to check valves Q1E21V589A, B & C to the existing relief request. These lines will be examined, along with the adjoining Class 1 piping, in accordance with the Class 1 test requirements.

2.2 Notes To The Class 2 Table

2.2.1 Note 13 to the Class 2 Table

Add Note 13 to the Class 2 Table to request relief from the 100°F minimum temperature requirements for the hydrostatic pressure test of Class 2 components. It is impractical and very difficult to heat the extensive water filled systems, especially during cold weather months. Later NRC approved editions and addenda of the ASME Code, Section XI remove the limit for austenitic stainless steel components and allow the use of fracture prevention criteria specified or owner specified temperatures for ferritic steel components. The Class 2 test will be conducted in accordance with the requirements of the later NRC approved code.

2.2.2 Note 14 to the Class 2 Table

Add Note 14 to the Class 2 Table to request relief from the performance of a hydrostatic test on the waste gas drain filter line to the volume control tank between isolation valve Q1G22V249 and check valve Q1G22V248. Performance of a hydrostatic test on this line could potentially result in overpressurization and subsequent damage of the waste gas filter; therefore, no alternative examination will be performed.

2.2.3 Note 15 to the Class 2 Table

Add Note 15 to the Class 2 Table which requests relief from the performance of hydrostatic tests on the charging pump suction piping from the boric acid filter between valves Q1E21V212 and Q1E21V264 and check valves Q1E21V211 and Q1E21V210, respectively, the charging pump suction piping from the chemical mixing tank between valve Q1E21V186 and check valve Q1E21V187, and the hydrogen and nitrogen supply piping to the volume control tank from check valve Q1E21V201 to isolation valves Q1E21V202, Q1E21V583 and Q1G22V260. Pressurization of these portions of system piping cannot be assured due to check valves which prevent flow from the test fill point to the specified boundary valves. These portions of piping will not be subjected to an alternative examination.

2.2.4 Note 16 to the Class 2 Table

Add Note 16 to the Class 2 Table to request relief from the performance of a hydrostatic test on the reactor vessel flange seal leakoff line from the reactor vessel to valves Q1B13V019 and Q1B13V018. Pressurization of the flange seal leakoff line could potentially result in damage to the reactor vessel flange seals; therefore, these lines will not be subjected to an alternative examination.

2.2.5 Note 17 to the Class 2 Table

Add Note 17 to the Class 2 Table to request relief from the performance of a Class 2 hydrostatic test on the boron injection recirculation pump discharge piping between valves Q1E21V005A, B & C and check valves Q1E21V006A & B and the adjoining drain piping. Performance of a hydrostatic test on the portion of the system described above requires the use of check valves as a hydrostatic test boundary. Leakage past these valves could potentially pressurize and overstress the adjoining Class 3 piping. These lines will be visually examined during operation as a part of the adjoining Class 3 system examination.

2.2.6 Note 18 to the Class 2 Table

Add Note 18 to the Class 2 Table to request relief from the required hydrostatic test pressure of 1.25 P_d. This requirement places undue stress on components of the Class 2 systems. Adequate levels of plant safety are assured by performing hydrostatic tests at the pressures specified in later NRC approved editions and addenda of the ASME Code. The Class 2 hydrostatic tests will be conducted at, as a minimum, 1.10 P_{sv} where design temperature is 200°F or less and 1.25 P_{sv} where design temperature is greater than 200°F, as specified in the later NRC approved ASME Code.

2.2.7 Note 19 to the Class 2 Table

Add Note 19 to the Class 2 Table to request relief from the four hour holding time required prior to performance of visual examinations for hydrostatic tests of noninsulated piping. Later NRC approved editions and addenda of the ASME Code, Section XI, require only a ten minute holding time. Test pressures and temperatures will be maintained for a minimum of ten minutes prior to initiating the visual examination and will be maintained until completion of the examination.

3.0 ASME CODE CLASS 3

3.1. Notes to the Class 3 Table

3.1.1 Note 13 to the Class 3 Table

Add Note 13 to the Class 3 Table to request relief from the required hydrostatic test pressure of 1.10 P_d. This requirement places undue stress on components of the Class 3 system. Adequate levels of plant safety are assured by performing hydrostatic tests at the pressures specified in later NRC approved editions and addenda of the ASME Code. The Class 3 hydrostatic tests will be conducted at, as a minimum, 1.10 P_{sv} where design temperature is 200°F or less and 1.25 P_{sv} where design temperature is greater than 200°F, as specified in the later NRC approved ASME Code.

3.1.2 Note 14 to the Class 3 Table

Add Note 14 to the Class 3 Table to request relief from the four hour holding time required prior to performance of visual examinations for hydrostatic tests of noninsulated piping. Later NRC approved editions and addenda of the ASME Code, Section XI require only a ten minute holding time. Test pressures and temperatures will be maintained for a minimum of ten minutes prior to initiating the visual examination and will be maintained until completion of the examination.

3.1.3 Note 15 to the Class 3 Table

Add Note 15 to the Class 3 Table to request relief from the performance of a hydrostatic test on the auxiliary feedwater pump minimum flow piping between flow orifices Q1N23F03214A & B and Q1N23F03219 and valves Q1N23FV3212A & B and Q1N23FV3218. The Class 3 portions of these lines cannot be isolated from adjoining non-code piping; therefore, performance of a hydrostatic test on these lines would overpressurize the lower pressure, non-code piping downstream of the flow orifices. These lines will receive a visual examination during normal operation at system operating temperature and pressure.

ATTACHMENT 2

PROPOSED RELIEF REQUEST
CHANGES AND ADDITIONS

1.0 ASME CODE CLASS 1

1.1 Attachment 1 to the Class 1 Table

Revise the existing Section 3 Item as follows:

(iii) COMPONENT: CODE CLASS: 1

High Head Safety Injection to hot legs between check valves Q1E21V077A, B & C, Q1E21V078A, B & C, Q1E21V079A, B and C and Low Head Safety Injection to check valves Q1E21V076A & B.

EXAMINATION RQUIREMENT:

Article IWB-5210 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a system leakage test be performed prior to startup following each reactor refueling outage.

BASIS FOR RELIEF:

Where portions of Class 1 systems are contained between two check valves or two normally closed valves and where pressure applied to the reactor coolant system will be retained at the first valve in the line, a system leakage test cannot be conducted.

ALTERNATIVE EXAMINATION:

No alternative inspection is proposed.

Add items to Section 3 as follows:

(vi) COMPONENT: CODE CLASS: 1

CVCS auxiliary spray to pressurizer piping between check valve Q1E21V109 and valve Q1E21V245.

EXAMINATION REQUIREMENT:

Article IWB-5210 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a system leakage test be performed prior to startup following each reactor refueling outage.

BASIS FOR RELIEF:

Where portions of Class 1 systems are contained between two check valves or two normally closed valves and where pressure applied to the reactor coolant system will be retained at the first valve in the line, a system leakage test cannot be conducted.

ALTERNATIVE EXAMINATION:

No alternative inspection is proposed.

(vii) COMPONENT: CODE CLASS: 1

RCS normal charging piping between check valves Q1E21V110 and Q1E21V112.

EXAMINATION REQUIREMENT:

Article IWB-5210 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a system leakage test be performed prior to startup following each reactor refueling outage.

BASIS FOR RELIEF:

Where portions of Class 1 systems are contained between two check valves or two normally closed valves and where pressure applied to the reactor coolant system will be retained at the first valve in the line, a system leakage test cannot be conducted.

ALTERNATIVE EXAMINATION:

No alternative inspection is proposed.

(viii) COMPONENT: CODE CLASS: 1

RCS alternate charging piping between check valves Q1E21V111 and Q1E21V113.

EXAMINATION RQUIREMENT:

Article IWB-5210 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a system leakage test be performed prior to startup following each reactor refueling outage.

BASIS FOR RELIEF:

Where portions of Class 1 systems are contained between two check valves or two normally closed valves and where pressure applied to the reactor coolant system will be retained at the first valve in the line, a system leakage test cannot be conducted.

ALTERNATIVE EXAMINATION:

No alternative inspection is proposed.

1.2 Notes To The Class 1 Table

1.2.1 Note 18 to the Class 1 Table

COMPONENT: CODE CLASS: 1

1. RCP seal injection piping from RCP flanges to valves Q1E21V100A, B & C (line no. CCA-1A, B & C)

2. RCP No. 1 seal bypass piping from RCP flanges to flow orifices Q1E21F06001A, B & C and valves Q1E21V106A, B & C (line no. CCA-32A, B & C).

EXAMINATION REQUIREMENT:

Article IWB-5222 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that the test temperature of Class 1 systems not be less than 100°F.

BASIS FOR RELIEF:

It is impractical to isolate the Class 1 portions of the piping listed from the Class 2 portions of these lines due to flow orifices at the Code Class change point. This piping is constructed of austenitic stainless steel which demonstrates minimal ductile-brittle transition characteristics; therefore, testing these lines at reduced temperatures will not adversely affect the fracture toughness of the piping.

ALTERNATIVE EXAMINATION:

These lines will be hydrostatically tested and visually examined as a part of the adjoining Class 2 piping and in accordance with the Class 2 requirements at ambient temperatures, since nil-ductility requirements do not apply. (Reference Note 13 to the Class 2 Table and Article 1WC-5230(c) of the ASME Code, 1980 Edition through Winter 1980 Addenda.) Since the Class 2 test pressure exceeds the Class 1 test pressure, the Class 1 pressure requirements will be met.

1.2.2 Note 19 to the Class 1 Table

COMPONENT: CODE CLASS: 1

ASME Code Class 1 noninsulated systems or components.

EXAMINATION REQUIREMENTS:

IWA-5210, of the ASME Code, Section XI, 1974 Edition through the Summer 1975 Addenda requires that the hydrostatic test temperature and pressure be maintained for at least four hours prior to the performance of the required visual examination.

BASIS FOR RELIEF:

This requirement is an unjustified hardship due to a potential extension of outage time for required delays prior to performance of examinations. These delays potentially increase the radiation exposure of test personnel. Examination of noninsulated piping can be adequately performed with a high level of assurance in accordance with the later NRC approved 1977 Edition through Summer 1978 Addenda of the ASME Code, Section XI, Article IWA-5213 which requires:

> "The holding time after pressurization to test conditions, before the visual examinations commence, shall be as follows: ...(d) system hydrostatic tests - 4 hours after attaining the test pressure and temperature conditions for insulated systems, and 10 minutes for noninsulated systems or components."

ALTERNATIVE EXAMINATION:

The hydrostatic test pressures and temperatures will be maintained as follows:

Test Temperature	Test Pressure
100°F	1.10 P_o
200°F	1.08 P_o
300°F	1.06 P_o
400°F	1.04 P_o
500°F	1.02 P_o

After a minimum holding time of 10 minutes, a visual examination will be performed. The required pressure and temperature will be maintained for the duration of the visual examination for a period of time sufficient to complete the visual examination of all portions of system components which are being subjected to the hydrostatic test.

2.0 ASME CODE CLASS 2

2.1 Attachment II To The Class 2 Table

Delete these sentences from Section 4 as shown:

(i) COMPONENT: CODE CLASS: 2

Reactor vessel flange leakoff line.

EXAMINATION REQUIREMENT:

Article IWC-2412 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a system pressure test be conducted on Class 2 components.

BASIS FOR RELIEF:

Performance of a hydrostatic test for this system is impractical because pressurization of the flange seal leakoff line could potentially result in damage to the reactor vessel flange seals.

ALTERNATIVE EXAMINATION:

No alternative inspection is proposed.

(xv) COMPONENT: CODE CLASS: 2

Reactor Coolant Pump seal leakoff/bypass lines between valves Q1E21V256A, B & C,Q1E21V136A, B & C and the pump.

EXAMINATION REQUIREMENT:

Article IWC-2412 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a system pressure test be conducted on Class 2 components.

BASIS FOR RELIEF:

It is impractical to isolate the Class 1 portions of the piping listed from the Class 2 portions of these lines due to flow orifices at the Code Class change point. This piping is constructed of austenitic stainless steel which demonstrates minimal ductile-brittle transition characteristics; therefore, testing these lines at reduced temperatures will not adversely affect the fracture toughness of the piping.

ALTERNATIVE EXAMINATION:

These lines will be hydrostatically tested and visually examined as a part of the adjoining Class 2 piping and in accordance with the Class 2 requirements at ambient temperatures, since nil-ductility requirements do not apply. (Reference Note 13 to the Class 2 Table and Article IWC-5230(c) of the ASME Code, 1980 Edition through Winter 1980 Addenda.)

(xvi) COMPONENT: CODE CLASS: 2

Reactor Coolant Pump seal water supply lines between valves Q1E21V144A, B & C and Q1E21V1090A, B & C.

EXAMINATION REQUIREMENT:

Article IWC-2412 of Secion XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a system pressure test be conducted on Class 2 components.

BASIS FOR RELIEF:

It is impractical to isolate the Class 1 portions of the piping listed from the Class 2 portions of these lines due to flow orifices at the Code Class change point. This piping is constructed of austenitic stainless steel which demonstrates minimal ductile-brittle transition characteristics; therefore, testing these lines at reduced temperatures will not adversely affect the fracture toughness of the piping.

ALTERNATIVE EXAMINATION:

These lines will be hydrostatically tested and visually examined as a part of the adjoining Class 2 piping and in accordance with the Class 2 requirements at ambient temperatures, since nil-ductility requirements do not apply. (Reference Note 13 to the Class 2 Table and Article IWC-5230(c) of the ASME code, 1980 Edition through Winter 1980 Addenda.)

Note: Item (i) has been revised and added as Note 16 to the Class 2 Table. Items (xv) and (xvi) have been revised and added as Note 18 to the Class 1 Table.

Clarification of existing Section 4 relief request:

(ix) COMPONENT: CODE CLASS: 2

Branch lines connecting the accumulator discharge lines to the accumulator test line (line nos. CCB-24, 53 and 54).

EXAMINATION REQUIREMENT:

Article IWC-2412 of Secion XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a system pressure test be conducted on Class 2 components.

BASIS FOR RELIEF:

It is impractical to conduct a Class 2 hydrostatic test on the portion of the system listed where the only means of pressurizing the Class 2 system is through the the Class 1 system or where the boundary between the two systems is a check valve arranged for flow from the Class 2 to the Class 1 system.

ALTERNATIVE EXAMINATION:

Visual examination for evidence of leakage will be conducted on this portion of the system at the test pressure in accordance with the requirements of IWB-5222 for the adjoining Class 1 system.

Add items to Section 4 as follows:

(xvii) COMPONENT: CODE CLASS: 2

RPV head vent line between Class 1 line and valves HV-1 and HV-3 (line no. CCB-63).

EXAMINATION REQUIREMENT:

Article IWC-2412 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a system pressure test be conducted on Class 2 components.

BASIS FOR RELIEF:

It is impractical to conduct a Class 2 hydrostatic test on the portion of the system listed where the only means of pressurizing the Class 2 system is through the the Class 1 system or when the boundary between the two systems is a check valve arranged for flow from the Class 2 to the Class 1 system.

ALTERNATIVE EXAMINATION:

Visual examination for evidence of leakage will be conducted on this portion of the system at the test pressure in accordance with the requirements of IWB-5222 for the adjoining Class 1 system.

(xviii) COMPONENT: CODE CLASS: 2

No. 1 leakoff lines from RCP's to check valves Q1E21V589A, B & C (line no. CCB-48A, B and C).

EXAMINATION REQUIREMENT:

Article IWC-2412 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a system pressure test be conducted on Class 2 components.

BASIS FOR RELIEF:

It is impractical to conduct a Class 2 hydrostatic test on the portion of the system listed where the only means of pressurizing the Class 2 system is through the the Class 1 system or where the boundary between the two systems is a check valve arranged for flow from the Class 2 to the Class 1 system.

ALTERNATIVE EXAMINATION:

Visual examination for evidence of leakage will be conducted on this portion of the system at the test pressure in accordance with the requirements of IWB-5222 for the adjoining Class 1 system.

2.2 Notes To The Class 2 Table

2.2.1 Note 13 to the Class 2 Table

COMPONENT: CODE CLASS: 2

ASME Class 2 Piping and Components

EXAMINATION REQUIREMENT:

IWC-5220 of the 1974 Edition through the Summer 1975 Addenda of the ASME Code Section XI, requires that a hydrostatic pressure test of Class 2 systems be conducted at a temperature not less than 100°F.

BASIS FOR RELIEF:

It is impractical for Alabama Power Company to meet the 100°F temperature requirement for the majority of the hydrostatic tests. Heating the extensive water filled piping systems to this temperature is an undue hardship, especially during the cold weather months when most outages are scheduled. Adequate levels of plant safety are assured by the application of the later NRC approved 1977 Edition through the Summer 1978 Addenda of Section XI of the ASME Code Article IWC-5230 which states:

"a) The system test temperature during a system hydrostatic test in systems containing ferritic steel components shall meet the requirements specified by fracture prevention criteria.

b) In systems containing ferritic steel components for which fracture toughness requirements were neither specified nor required in construction of the components, the system test temperature shall be determined by the owner.

c) No limit on system test temperature is required for systems constructed entirely of austenitic steel materials."

The conditions described in paragraph (a) above are applicable only to the Class 2 portions of the Main Steam and Feedwater Systems.

The conditions described in paragraph (b) above are applicable to the remainder of the ferritic steel Class 2 piping other than Main Steam and Feedwater piping.

The conditions described in paragraph (c) above are applicable to the remainder of the Class 2 systems.

ALTERNATIVE EXAMINATION

a) The Main Steam and Feedwater Systems shall be tested at temperatures which meet requirements specified by fracture prevention criteria.

b) In systems which contain ferritic steel components for which no fracture prevention criteria can be found, hydrostatic tests will be conducted at a test temperature of 60°F or greater.

c) Systems constructed entirely of austenitic steels will be hydrostatically tested at ambient temperatures, since no limit is required.

2.2.2 Note 14 to the Class 2 Table

COMPONENT: CODE CLASS: 2

Waste gas drain filter line to volume control tank between isolation valve Q1G22V249 and check valve Q1G22V248 (line no. HCB-92)

EXAMINATION REQUIREMENT:

Article IWC-2510 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that a hydrostatic test be performed on all Class 2 components.

BASIS FOR RELIEF:

Pressurization of this portion of the waste gas drain filter line would require check valve Q1G22V248 to hold the hydrostatic test pressure. Leakage through this valve could potentially result in overpressurization and subsequent damage of the waste gas filter.

ALTERNATIVE EXAMINATION:

No alternative examination is proposed for the Class 2 piping between valve Q1G22V249 and check valve Q1G22V248.

2.2.3 Note 15 to the Class 2 Table

COMPONENT: CODE CLASS: 2

1. Charging pump suction piping from the boric acid filter between valves Q1E21V212 and Q1E21V264, and check valves Q1E21V211 and Q1E21V210, respectively (line no. HCB-16).

2. Charging pump suction piping from the chemical mixing tank between valve Q1E21V186 and check valve Q1E21V187 (line no. HCB-11).

3. Hydrogen and nitrogen supply piping to the volume control tank from check valve Q1E21V201 to isolation valves Q1E21V202, Q1E21V583 and Q1G22V260 (line no. HCB-68).

EXAMINATION REQUIREMENT:

Article IWC-2510 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that hydrostatic tests be performed on all Class 2 components.

BASIS FOR RELIEF:

Pressurization of the portions of system piping listed above cannot be assured due to system design. The check valves listed prevent flow from the test fill point to the specified boundary valves.

ALTERNATIVE EXAMINATION:

No alternative inspection is proposed for the Class 2 piping between the valves and check valves listed above.

2.2.4 Note 16 to the Class 2 Table

COMPONENT

CODE CLASS: 2

Reactor vessel flange seal leakoff line from the reactor vessel to valves Q1B13V019 and Q1B13V018 (line no. CCB-36).

EXAMINATION REQUIREMENT:

Article IWC-2510 of Section XI of the ASME Code 1974 Edition through the Summer 1975 Addenda requires that hydrostatic tests be performed on all Class 2 components.

BASIS FOR RELIEF:

Performance of a hydrostatic test for this system is impractical because pressurization of the flange seal leakoff line could potentially result in damage to the reactor vessel flange seals.

ALTERNATIVE EXAMIATION:

No alternative inspection is proposed.

2.2.5 Note 17 to the Class 2 Table

COMPONENT: CODE CLASS: 2

Boron injection recirculation pump discharge piping between valves Q1E21V005A & B and check valves Q1E21V006A & B and the adjoining drain piping (line no. CCB-62).

EXAMINATION REQUIREMENT:

Article IWC-2510 of Section XI of the ASME Code 1974 Edition through the Summer 1975 Addenda requires that hydrostatic tests be performed on all Class 2 components.

BASIS FOR RELIEF:

Performance of a hydrostatic test on the portion of the system described above requires the use of check valves which are subject to leakage when used as a hydrostatic test boundary. Leakage past these valves could potentially pressurize and overstress the adjoining Class 3 piping.

ALTERNATIVE EXAMINATION:

These lines will be visually examined during operation as a part of the adjoining Class 3 system in accordance with IWD-2410(c).

2.2.6 Note 18 to the Class 2 Table

COMPONENT: CODE CLASS: 2

ASME Code Class 2 components

EXAMINATION REQUIREMENTS:

IWC-5220, of the ASME Code, Section XI, 1974 Edition through Summer 1975 Addenda requires that the hydrostatic test pressure for Class 2 components be at least 1.25 times the design pressure (P_d).

BASIS FOR RELIEF:

This hydrostatic test requirement places undue stress on components of Class 2 systems. Adequate levels of plant safety can be assured by the application of the later NRC approved 1980 Edition through Winter 1980 Addenda of the ASME Code, Section XI, Article IWC-5222, which states that Class 2 components shall be hydrostatically tested at a pressure of "at least 1.10 times system pressure P_{sv} for systems with Design Temperatures of 200°F or less and at least 1.25 times P_{sv} for systems with Design Temperatures above 200°F," where P_{sv} is "the lowest setting among the number of safety or relief valves provided for overpressure protection within the boundary of the system to be tested."

ALTERNATIVE EXAMINATION:

The hydrostatic test pressure for Class 2 components shall be at least 1.10 times P_{sv} for systems with Design Temperatures of 200°F or less and at least 1.25 times P_{sv} for systems with Design Temperatures above 200°F.

2.2.7 Note 19 to the Class 2 Table

COMPONENT: CODE CLASS: 2

ASME Code Class 2 noninsulated systems or components

EXAMINATION REQUIREMENTS:

IWA-5210, of the ASME Code, Section XI 1974 Edition with Addenda through Summer of 1975 Addenda requires that the hydrostatic test temperature and pressure must be maintained for at least four hours prior to the performance of the required visual examination required for the system hydrostatic tests.

BASIS FOR RELIEF:

This requirement is an unjustified hardship due to a potential extension of outage time for required delays prior to performance of examinations. These delays potentially increase the radiation exposure of test personnel. Examination of noninsulated piping can be adequately performed with a high level of assurance, in accordance with the later NRC approved 1977 Edition through Summer 1978 Addenda of the ASME Code, Section XI, Article IWA-5213 which requires:

> "The holding time after pressurization to test conditions, before the visual examinations commence, shall be as follows: ...(d) system hydrostatic tests - 4 hours after attaining the test pressure and temperature conditions for insulated systems, and 10 minutes for noninsulated systems or components."

ALTERNATIVE EXAMINATION:

The hydrostatic test temperature will be maintained as follows to meet nil-ductility requirements:

a) The Main Steam and Feedwater Systems shall be tested at temperatures which meet requirements specified by fracture prevention criteria.

b) In systems which contain ferritic steel components for which no fracture prevention criteria can be found, hydrostatic tests will be conducted at a test temperature of 60°F or greater.

c) Systems constructed entirely of austenitic steels will be hydrostatically tested at ambient temperatures, since no limit is required.

After the hydrostatic test pressure and temperature have been maintained for a minimum time of 10 minutes, a visual examination will be performed. The required pressure and temperature will be maintained for the duration of the visual examination for a period of time sufficient to complete the visual examination of all portions of system components which are being subjected to the hydrostatic test.

3.0 ASME CODE CLASS 3

3.1 Notes To The Class 3 Table

3.1.1 Note 13 to the Class 3 Table

COMPONENT: CODE CLASS: 3

ASME Code Class 3 components

EXAMINATION REQUIREMENTS:

IWD-5200 of the ASME Code, Section XI 1974 Edition through Summer 1975 Addenda requires that the hydrostatic test pressure for Class 3 components be at least 1.10 times the design pressure (P_d).

BASIS FOR RELIEF:

This requirement places undue stress on components of Class 3 systems. Adequate levels of plant safety can be assured by the application of the later NRC approved 1980 Edition through Winter 1980 Addenda of the ASME Code, Section XI, Article IWD-5223, which states that Class 3 components shall be hydrostatically tested at a pressure of "at least 1.10 times system pressure (P_{sv}) for systems with Design Temperatures of 200°F or less and at least 1.25 times P_{sv} for systems with Design Temperatures above 200°F," where P_{sv} is "the lowest setting among the number of safety or relief valves provided for overpressure protection within the boundary of the system to be tested."

ALTERNATIVE EXAMINATION:

The hydrostatic test pressure for Class 3 components shall be at least 1.10 times P_{sv} for systems with Design Temperatures of 200°F or less and at least 1.25 times P_{sv} for systems with Design Temperatures above 200°F.

3.1.2 Note 14 to the Class 3 Table

COMPONENT: CODE CLASS: 3

ASME Code Class 3 noninsulated systems or components

EXAMINATION REQUIREMENTS:

IWA-5210, of the ASME Code, Section XI, 1974 Edition through the Summer 1975 Addenda requires that the test temperature and pressure be maintained for at least four hours prior to the performance of the visual examination required for the system hydrostatic tests.

BASIS FOR RELIEF:

This requirement is an unjustified hardship due to a potential extension of outage time for required delays prior to performance of examinations. These delays potentially increase the radiation exposure of test personnel. Examination of noninsulated piping can be adequately performed with a high level of assurance, in accordance with the later NRC approved 1977 Edition through Summer 1978 Addenda of the ASME Code, Section XI, Article IWA-5213 which requires:

> "The holding time after pressurization to test conditions, before the visual examinations commence, shall be as follows: ...(d) system hydrostatic tests - 4 hours after attaining the test pressure and temperature conditions for insulated systems, and 10 minutes for noninsulated systems or components."

ALTERNATIVE EXAMINATION:

After the hydrostatic test pressure (normal operating pressure) and temperature (normal operating temperature) have been maintained for a minimum time of 10 minutes a visual examination will be performed. The required pressure and temperature will be maintained for the duration of the visual examination for a period of time sufficient to complete the visual examination of all portions of system components which are being subjected to the hydrostatic test.

3.1.3 Note 15 to the Class 3 Table

COMPONENT: CODE CLASS: 3

Auxiliary feedwater pump minimum flow piping between flow orifices Q1N23FO3214A & B and Q1N23FO3219 and valves Q1N23FV3212A & B and Q1N23FV3218.

EXAMINATION REQUIREMENT:

Article IWD-2410 of Section XI of the 1974 Edition through the Summer 1975 Addenda of the ASME Code requires that hydrostatic tests be performed on Class 3 components.

BASIS FOR RELIEF:

Performance of a hydrostatic test on the portions of the piping system listed above could overpressurize the lower pressure, non-code piping downstream of these flow orifices.

ALTERNATIVE EXAMINATION:

These lines will receive a visual examination during normal operation at system operating temperature and pressure.