PSNH PUBLIC SERVICE
Company of New Hampshire

SEABROOK STATION
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June 21, 1984
SBN- 672
T.F. B7.1.2

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United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

References: (a) Construction Permits CPPR-135 and CPPR 136, Docket Nos. 50-443 and 50-444
(b) USNRC Letter, dated June 11, 1984, "Inspection 50-443/84-06", T. T. Martin to R. J. Harrison

Subject: Unit 1 Preservice Inspection Program Plan; Reactor Vessel and Balance of Plant

Dear Sir:

The following documents are submitted in response to the Safety Evaluation Report Outstanding Issue No. 4, "Preservice and Inservice Inspection and Testing Programs", as it relates to the preservice examinations of the reactor vessel, balance of plant (Classes 1, 2, and 3 piping components/supports), and piping subjected to augmented inspections.

One copy of each of the following documents is enclosed.

Seabrook Station - Unit 1, Balance of Plant, Preservice Inspection Program Plan

Seabrook Station - Unit 1, Reactor Pressure Vessel, Preservice Inspection Program Plan

For Class 2 piping, it is our intent to adopt the ASME, Section XI, Winter 1983 Addenda proposed Code Case entitled, "Alternative Rules for Examination of Class 2 Piping". This proposed Code Case is attached for your convenience, as are revisions to FSAR Section 6.6.1, which reflect our intent to adopt this proposed Code Case for inservice inspection of Class 2 piping.

Also attached is a revised version of FSAR Section 6.6.8, "Augmented In-Service Inspection to Protect Against Postulated Piping Failures". Piping lines within the scope of the augmented inspection are incorporated in the Balance of Plant Program Plan (with the exception of CS-360-09-3") and are identified in FSAR Section 6.6.8 as revised.

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The Reactor Vessel inspection effort is approximately 80% complete. This activity is temporarily suspended; however, upon completion our records will be available for your review at our facility. It is not our intent to submit revisions to the Plan as it evolves. Region I representatives have inspected this activity [Reference (b)].

The Balance of Plant and Augmented Inspections have been initiated; their completion will be consistent with and determined by construction schedules. Records will be available for your review at our facility. Until such time that the Balance of Plant inspections are completed, the Program Plan must necessarily be treated as preliminary (e.g., absent as-built drawings, inspection results, and exemptions). Region I representatives have inspected this activity [Reference (b)].

A preliminary Inservice Inspection Program Plan has been developed. As is traditionally done, the Inservice Inspection Program Plan will be fully developed based on the completed preservice inspections and the appropriate code edition and addenda, and submitted in advance of the initial inspections.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

John DeVincentis
Engineering Manager

Enclosures

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Retype of proposed Code Case:

"Alternate Rules for Examination of Class 2 Piping"

(1)

Inquiry: When determining the components subject to examination and establishing examination requirements for Class 2 piping under Section XI, Division 1, what alternative exemptions to those stated in IWC-1220 and what alternative examination requirements to those stated in IWC-2500, Category CF, may be used?

Reply: It is the opinion of the committee that the following alternative rules may be used for determining components subject to examination and establishing examination requirements for Class 2 piping under Section XI, Division 1:

1. The following components (or parts of components) of RHR, ECC, and CHR systems (or portions of systems)[1] are exempt from the volumetric and surface examination requirements of IWC-2500:

   (a) Vessels, piping, pumps, valves, and other components NPS 4 and smaller in all systems except high pressure safety injection systems of pressurized water reactor plants.

   (b) Vessels, piping, pumps, valves, and other components NPS 1-1/2 and smaller in high pressure safety injection systems of pressurized water reactor plants.

   (c) Component connections NPS 4 and smaller (including nozzles, socket fittings, and other connections) in vessels, piping, pumps, valves, and other components of any size in all systems except high pressure safety injection systems of pressurized water reactor plants.

   (d) Component connections NPS 1-1/2 and smaller (including nozzles, socket fittings, and other connections) in vessels, piping, pumps, valves, and other components of any size in high pressure safety injection systems of pressurized water reactor plants.

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1. RHR, ECC, and CHR Systems are the Residual Heat Removal, Emergency Core Cooling, and Containment Heat Removal Systems, respectively.

(e) Vessels, piping, pumps, valves, other components, and component connections of any size in statically pressurized, passive (i.e., no pumps) safety injection systems[2] of pressurized water reactor plants.

(f) Piping and other components of any size beyond the last shutoff valve in open-ended portions of systems that do not contain water during normal plant operating conditions.[3]

2. The following components (or parts of components) of systems (or portions of systems) other than RHR, ECC, and CHR Systems are exempt from the volumetric and surface examination requirements of IWC-2500:

(a) Vessels, piping, pumps, valves, and other components NPS 4 and smaller.

(b) Component connections NPS 4 and smaller (including nozzles, socket fittings, and other connections) in vessels, piping, pumps, valves, and other components of any size.

(c) Vessels, piping, pumps, valves, other components, and component connections of any size in systems or portions of systems that operate (when the system function is required) at pressure equal to or less than 275 psig and at a temperature equal to or less than 200°F.

(d) Piping and other components of any size beyond the last shutoff valve in open-ended portions of systems that do not contain water during normal plant operating conditions.[3]

3. For welds in austenitic stainless steel or high alloy piping, the requirements of attached Table 1 Examination Category CF-1, Pressure Retaining Welds in Austenitic Stainless Steel High Alloy Piping, shall be used as an alternative to the requirements of Table IWC-2500-1, Examination Category C-F, Pressure Retaining Welds in Piping.

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2. Statically pressurized, passive safety injection systems of pressurized water reactor plants are typically called by such names as:

- o Accumulator tank and associated system
- o Safety injection tank and associated system
- o Core flooding tank and associated system

3. Normal plant operating conditions include reactor startup, operation at power, hot standby, and reactor cooldown to cold shutdown conditions, but do not include test conditions.

4. For welds in carbon or low alloy steel piping, the requirements of attached Table 2, Examination Category CF-2, Pressure Retaining Welds in Carbon and Low Alloy Steel Piping shall be used as an alternative to the requirements of Table IWC-2500-1, Examination Category CF, Pressure Retaining Welds in Piping.

5. The examination requirements of Figures 1 and 2 shall apply to all surface and volumetric examinations, including piping less than 1/2-inch thick.

6. The examination requirements for pipe branch connections provided in Figures IWC-2500-9 through IWC-2500-13 of the 1983 Edition of Section XI shall apply to pipe branch connections NPS 2 and larger.

Applicability

This case is applicable to Section XI Editions beginning with the 1974 Edition and through the Summer 1983 Edition.

Application Justification

NDE Requirements for Class 2 Systems were first included in the 1974 Edition. The provisions of this case were issued as part of the code in the Winter 1983.

6.6 INSERVICE INSPECTION OF CLASS 2 AND 3 COMPONENTS

The inservice inspection program for Class 2 and 3 components is defined in Chapter 16, Technical Specifications. In general, this program meets all the requirements of the ASME Code, Section XI, Edition and Addenda as required in 10CFR50.55a. The references to ASME Section XI contained in paragraphs 6.6.x are from the 1977 Edition Summer 1978 Addenda.

6.6.1 Components Subject to Examination

All Class 2 components that do not meet the exemption requirements of IWC-1220, except the containment spray piping beyond the last downstream valve, will be examined in accordance with the requirements of IWC-2000, using the methods listed in Table IWC-2500-1.

Containment spray piping beyond the last downstream valve is exempted from inservice inspection for the following reasons:

a. These lines are normally empty and are required to function only in the unlikely event of a major LOCA or a main steam line break.

b. These lines are not subject to fluctuating stresses, so that propagation of cracks due to defects in the pipe is unlikely.

c. Spray piping welds are examined by radiography during fabrication, so that large defects that could cause catastrophic failure during system operation will be detected and repaired during fabrication and installation of the piping.

d. This piping contains hundreds of open nozzles so that splits or cracks which do not directly cause catastrophic failure would not have a marked effect on the function of the system.

e. System pressure is low, so that pressure stresses in the piping would be unlikely to cause failure in the presence of small defects.

All Class 3 components shall be examined per the requirements of Sub-article IWD.

Safety classifications of all components are presented in Subsection 3.2.

6.6.2 Accessibility

The design and arrangement of Class 2 and Class 3 components provides adequate clearances to conduct the required examinations at the Code-required inspection interval.

The design guidelines used for inservice inspection provisions for Class 2 and 3 components are presented in Appendix 6A of this section.

(4)

or the alternatives allowed by the Winter 1983 Addenda proposed Code Case entitled "Alternative Rules for Examination of Class 2 Piping"

(5)

The FSAR Section 6.6.8 will be revised to read as follows:

6.6.8 Augmented In-Service Inspection to Protect Against Postulated Piping Failures

The main steam and feedwater system piping between the first pipe whip restraint inside containment and the first pipe whip restraint outside containment, is subject to augmented in-service inspection as defined in the in-service inspection program required by the Station Technical Specifications. The three-inch letdown line is inspected between the containment penetration and the outermost containment isolation valve.

The augmented inspection consists of examination of essentially 100% of the longitudinal and circumferential piping welds within the defined boundaries during each inspection interval. The augmented lines are:

MS-4000-02-30"
MS-4000-41-30"
MS-4001-02-30"
MS-4001-41-30"
MS-4002-02-30"
MS-4002-37-30"
MS-4003-02-30"
MS-4003-37-30"

FW-4606-03-18"
FW-4607-03-18"
FW-4608-03-18"
FW-4609-03-18"
CS-360-09-3"