



Northeast Utilities System

DOCKET NUMBER  
PROPOSED RULE PR 50  
(59FR 979)

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April 25, 1994

Docket Nos. 50-213

50-245

50-336

50-423

50-4830

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APR 26

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Secretary of the Commission  
U.S. Nuclear Regulatory Commission  
Attention: Docketing and Service Branch  
Washington, DC 20555

DEPT OF ENERGY  
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REGULATORY BRANCH

DOCKETED  
USNRC

Haddam Neck Plant  
Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3  
Proposed Rule Regarding "Codes and Standards for Nuclear Plants;  
Subsection IWE and Subsection IWL,"  
59 Federal Register 979 - January 7, 1994,  
Opportunity for Public Comment

On January 7, 1994,<sup>(1)</sup> the NRC published in the Federal Register (FR) a notice seeking comments and suggestions regarding a proposed rule amending its regulations to incorporate by reference the 1992 Edition with the 1992 Addenda of Subsection IWE, "Requirements for Class MC and Metallic Liners of Class CC Components of Light-Water Cooled Power Plants," and Subsection IWL, "Requirements for Class CC Concrete Components of Light-Water Cooled Power Plants," of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code with specified modifications and a limitation. On March 28, 1994,<sup>(2)</sup> the NRC extended the comment period to April 25, 1994. Connecticut Yankee Atomic Power Company (CYAPCO) and Northeast Nuclear Energy Company (NNECO) welcome the opportunity to provide comments on this proposed rulemaking.

- (1) 59 Federal Register 979, Nuclear Regulatory Commission, Proposed Rule; 10CFR Part 50; "Codes and Standards for Nuclear Power Plants; Subsection IWE and Subsection IWL," dated January 7, 1994.
- (2) 59 Federal Register 14373, Nuclear Regulatory Commission, Proposed Rule; 10CFR Part 50; "Codes and Standards for Nuclear Power Plants; Subsection IWE and Subsection IWL: Extension of Comment Period," dated March 28, 1994.

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The nuclear power industry has compiled comments for submittal on this proposed rulemaking through the Nuclear Energy Institute (NEI). We endorse NEI's comments. Furthermore, the Nuclear Utility Backfitting and Reform Group (NUBARG) has examined the NRC's position that a backfitting analysis need not be prepared for this proposed rule. We endorse the NUBARG conclusion that the application of the compliance exception to this rulemaking is inappropriate, and that the proposed rule constitutes a backfit for which a systematic and documented analysis pursuant to 10CFR50.109(c) should be performed.

Notwithstanding the NEI and NUBARG comments, CYAPCO and NNECO have elected to respond to this proposed rulemaking with our own specific comments, concerns, and suggestions. CYAPCO and NNECO anticipate estimated combined total costs of \$3.4 million, combined total exposure of 200 REM, and other less quantifiable burdens, such as extended refueling outage schedules should this proposed rule be promulgated as currently drafted. Attachment 1 provides our comments on the General Background Provisions of the proposed rule and includes the bases of these estimates.

Attachment 2 addresses the contents of the proposed rule on a part by part basis, and in Attachment 3 we have itemized our detailed comments on the actual code subsections proposed for incorporation. Finally, in Attachment 4, we have summarized the potential impact on each of our plants along with comments which illustrate the existing means by which we maintain compliance with the current rules governing containment design, testing, and inspection.

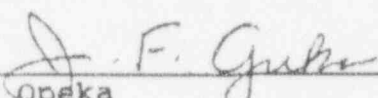
Our general position on this issue is that we believe the proposed rule only provides a perceived qualitative increase in safety. If this proposed rule is incorporated into the regulations, it will require a significant increase in our resource commitments and documentation over the existing requirements, and benefits will not be commensurate with the Staff's anticipated gains. A comparison of the existing requirements versus the generic containment inspection requirements of Subsections IWE and IWL shows that many of the required examinations contained in these subsections are focused on items that have not been associated with industry problems. These requirements are overly conservative and can be best addressed by licensees on a plant specific containment design basis. Any proposed rule changes in this area should take these factors into account.

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We hope you find these comments helpful in your consideration of the proposed rule, and we appreciate the opportunity to participate in this rulemaking process.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY  
NORTHEAST NUCLEAR ENERGY COMPANY

  
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Attachment 1

Haddam Neck Plant  
Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3  
General Background Provisions of Proposed Rule

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Haddam Neck Plant  
Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3

General Background Provisions Of Proposed Rule

1. **SUMMARY 59 FR 979**

COMMENT: This paragraph states that the 1992 Edition including the 1992 Addenda of ASME Section XI, Subsections IWE and IWL will be used in the implementation of the proposed rule with specified modifications and a limitation. We believe that specifying this Edition and Addenda will present a problem to those plants which will be updating their Inservice Inspection (ISI) Programs in the near future. It is our understanding that the rule making process is already in progress to include the 1993 Addenda for all other Section XI requirements. It would be much easier for licensees to have their IWE and IWL scope of examinations written to the same requirements as the rest of their ISI Program activities.

SUGGESTION: Should the proposed rule be implemented then the ASME Section XI reference should be changed to incorporate the 1992 Edition up to and including the 1993 Addenda.

2. **SUMMARY 59 FR 979**

COMMENT: The 5 year expedited implementation schedule to complete the required IWE and IWL examinations and to develop this portion of the ISI Program is not realistic. Most of our plants are now on 18 month refuel cycles, and we are working to extend these to 24 months. This means that only two refueling outages will be available to meet the 5 year expedited schedule. We anticipate at least one of these outages will be needed to verify the written program and finalize any relief requests that will be needed to support the program. This will leave only one outage to complete all the required IWE and IWL examinations and will cause an increase in the duration of outage schedules. Additionally, we can find no direction in the proposed rule that would indicate how a plant is supposed to get back on their normal 10 year interval program schedule after they have completed the 5 year expedited schedule. Not providing this direction to a licensee will lead to considerable confusion.

SUGGESTION: Should the proposed rule be implemented then it should be changed to base the expedited implementation schedule on at least 3 refueling cycles in lieu of the 5 year requirement and provide some direction on how a licensee is expected to fit these examinations back into their normal 10 year interval program schedule.

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3. **SUPPLEMENTARY INFORMATION: Background 59 FR 979**

**CONCERN:** The Staff states that the purpose for this proposed rule is to continue to maintain or exceed minimum accepted design wall thicknesses and prestressing forces as provided for in industry standards and license conditions. They cite a needed enhancement to existing containment ISI examinations and requirements of GDC-16, GDC-53, Appendix A, and Appendix J of 10 CFR 50, insinuating that they are not adequate. Then, to support this contention, they describe fifty-six (56) occurrences of containment degradation that have been reported. To the contrary, we believe that the discovery and reporting of these occurrences amply demonstrates that the existing rules and regulations are sufficient to assure compliance with containment integrity requirements.

Regardless of whether the requirements of Subsections IWE or IWL are put into the regulations, identification of potential generic problems at one plant will be factored into the inspections at another plant through the existing process of Owners' Group actions, NRC Information Notices, Bulletins, and Generic Letters. In relation to this point, we find the Staff's statement that "[a]lmost one-half of these occurrences have been identified by the NRC through its inspections or audits of plant structures, or by licensees because they were alerted to a degraded condition at another site" to be very misleading. Our review of the actual occurrences of degradation that have been identified by the NRC, contained in the basis letter for this proposed rule, SECY-93-328 "Rulemaking Issue", shows that only four plant occurrences of containment degradation were actually found by the NRC.

**COMMENT:** We do not believe that this is a valid basis to be used in support of the proposed rule.

4. **SUPPLEMENTARY INFORMATION: Background 59 FR 981**

**COMMENT:** A statement is made in this section that proposed paragraphs (g)(6)(ii)(B)(2) and (g)(6)(ii)(B)(3) would each provide a mechanism for licensees to satisfy the requirements of the routine containment examinations and the expedited examinations without duplication. Our review of the referenced paragraph in ASME Section XI, IWA-2430(c) that is cited in paragraph (B)(2), shows no apparent relationship to the content of the words in this paragraph. **SUGGESTION:** Proposed paragraph (g)(6)(ii)(B)(2) needs some additional explanation and clarification in order to understand how it will be used to avoid a duplication of the requirements.

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5. **SUPPLEMENTARY INFORMATION: Paperwork Reduction Act Statement  
59 FR 982**

**COMMENT:** In this section the Staff estimated that 14,000 hours per plant would be needed to develop and implement a Subsection IWE and/or IWL ISI program. We reviewed the basis for this estimate that was contained in SECY-93-328 "Rulemaking Issue" and found it to be a relatively accurate average estimate. However, the Staff should be aware that depending on a plant's containment design, our review indicates that these hours may vary up or down by 25 percent.

During this same review we also identified that the Staff only applied these estimated hours to determine costs in dollars and did not believe that exposure was significant. We believe that in order for the Staff to accurately evaluate the impact of the proposed rule, all the costs should be evaluated. As such, we are providing the following information.

Since these estimated hours included 4,000 hours for program development and 10,000 hours for program implementation, we used these estimates to determine what our anticipated costs would be if the proposed rule is implemented without consideration of our comments, concerns and suggestions. We determined our costs as follows:

- (1) To determine our costs in dollars we assigned a \$60.00 per hour value (average cost per hour for disciplines needed) to each of the estimated 14,000 hours per plant and multiplied that number times our four plants to equal a total cost of \$3.4 million; and
- (2) To determine our costs in exposure we assigned a .005 REM per hour value (average general area dose rate inside containment) to each of our estimated 10,000 implementation exposure hours per plant, and multiplied that number times four plants to equal a total dose of 200 REM.

**SUGGESTION:** Prior to implementation of the proposed rule the Staff should evaluate all the costs involved. This evaluation should include both dollars and occupational exposure.

6. **SUPPLEMENTARY INFORMATION: Backfit Statement 59 FR 982 -  
CONCERN:** We are concerned that the use of paragraph 10 CFR 50.109(a)(4)(i) is an inappropriate basis to implement Subsections IWE and IWL. We believe that we are, and will remain, in compliance with the existing requirements and

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therefore this paragraph is not applicable. In our review of SECY-93-328 "Rulemaking Issue" we found that the Staff concluded that licensees are in compliance with the existing requirements and will be for the duration of the 5 year expedited implementation schedule of Subsections IWE and IWL.

SUGGESTION: The Staff should evaluate the proposed rule under the Backfit Rule, paragraph 10 CFR 50.109(c), and provide the appropriate systematic and documented analysis necessary to justify these new requirements.



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Attachment 2

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Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3

Contents of Proposed Rule

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Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3

Contents of Proposed Rule

1. **PROPOSED 50.55a(b)(2)(vi)**

COMMENT: This paragraph states that when using Subsections IWE and IWL, the 1992 Edition with the 1992 Addenda is the only acceptable Edition and Addenda. There is no direction provided in this paragraph to explain how other Subsections which are related to or referenced in these requirements are to be used such as Subsections IWA and IWF. All of our plant Inservice Inspection (ISI) Programs are written to earlier Editions and Addenda of ASME Section XI. Without additional clarification on this issue we must use the related or referenced requirements from the same specified 1992 Edition with the 1992 Addenda. This will create an excessive administrative burden on our plants by requiring two sets of rules to be applied to the same functional areas such as non-destructive examination procedures, personnel qualifications, and program records and reports.

SUGGESTION: Should the proposed rule be implemented, the Staff should consider a clarification of the requirements associated with the use of Subsections IWE and IWL contained in the 1992 Edition with the 1992 Addenda. This clarification could be presented similar to the one that is provided in 50.55a(g)(6)(ii)(A)(2) for augmented reactor vessel examinations.

2. **PROPOSED 50.55a(b)(2)(ix)(A)-(D)**

COMMENT: The background portion of the proposed rule states that the conditions cited in paragraphs (A)-(D) were added to the proposed rule to resolve one NRC concern regarding positions contained in Regulatory Guide 1.35. These conditions are not part of the specified 1992 Edition with the 1992 Addenda requirements of Subsection IWL which the Staff stated are the only acceptable versions of these requirements. They further stated that these conditions had been approved in a later Addenda of Section XI.

SUGGESTION: Should the proposed rule be implemented, the Staff should consider referencing the appropriate 1993 Addenda of Subsection IWL under paragraph 50.55a(b)(2)(vi) that includes these conditions instead of putting them in the regulations as separate requirements.

3. **PROPOSED 50.55a(b)(2)(X)**

COMMENT: The background portion of the proposed rule intended this paragraph to provide some relief for licensees

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who have less than 2 years remaining in their 120 month (10-year) inspection interval at the time this rule becomes effective. Unfortunately, the provisions of the paragraph only provide 4 years to complete the required Subsection IWE and IWL examinations. This time period is not realistic and is a year shorter than the 5 year expedited schedule that is addressed by our Item No. 2 of Attachment 1.

SUGGESTION: Should the proposed rule be implemented, the Staff should allow these licensees and those with less than 3 refueling cycles remaining within their inspection intervals to start their examinations at the beginning of their next 120 month interval. This suggestion is based on the following supportive facts and our belief that Subsections IWE and IWL have not been adequately justified:

- (1) It is going to take at least three refueling cycles to complete any kind of realistic expedited program without extending a normal refueling outage schedule;
- (2) The plants that are performing examinations under the expedited program will already be providing the necessary information to determine if real industry problems exist; and
- (3) The Staff always has the option of requiring a specific plant to perform these examinations if industry data actually shows a need for these requirements.

5. **PROPOSED 50.55a(b)(2)(x)**

COMMENT: The background portion of the proposed rule states that under this paragraph burdens on the licensees would further be reduced by not requiring the submittal of ISI Program Plans for Subsections IWE and IWL to the NRC for approval, but that the licensees will retain these plans at the site for audit. The words of this paragraph do not address this provision.

SUGGESTION: Should the proposed rule be implemented, the Staff should consider adding the words to this paragraph that will make it clear to licensees that ISI Program Plan submittals are not required for Subsections IWE and IWL.

6. **PROPOSED 50.55a(g)(4)(v)(B)**

COMMENT: This paragraph cites requirements associated with metallic shell and penetration liners and their integral attachments in concrete containments that must meet the inservice inspection, repair, and replacement requirements for components classified as ASME Code Class CC. The reference to ASME Code Class CC is not correct.

SUGGESTION: The paragraph should be corrected to indicate ASME Code Class MC in lieu of ASME Code Class CC.

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Attachment 3

Haddam Neck Plant  
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Subsections IWE and IWL

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Subsections IWE and IWL

1. **IWF-1220(b) COMPONENTS EXEMPTED FROM EXAMINATION**

COMMENT: There is a conflict between the exemption requirements of this paragraph and paragraph IWE-1232 "Inaccessible Surface Areas". IWE-1220(b) states that embedded or inaccessible portions of containment vessels, parts, and appurtenances that met the requirements of the original Construction Code are exempt. IWE-1232 does not allow this exemption unless additional requirements are addressed for these components which may or may not have been addressed at an old plant. Even if an old plant had met its Construction Code this point of compliance with IWE-1220(b) does not remove the requirements of IWE-1232. The IWE-1232 requirements are apparently written for a new plant and should not be applied to an old plant. Regardless of whether the additional requirements of IWE-1232 are addressed or not addressed, they do not change the fact that the components are inaccessible and cannot be examined. It appears the Staff has already tried to resolve this issue by providing an exception in the proposed rule under paragraph 50.55a(g)(4) which does not require the design and access provisions nor the preservice examination requirements of Section XI to be applied when using Subsections IWE and IWL.

SUGGESTION: Should the proposed rule be implemented, the Staff should clarify their exceptions to these requirements by the identification of specific paragraphs which do not apply. This clarification should also address which paragraphs of IWE-2200 "Preservice Examination" requirements apply following repairs and replacements.

2. **IWE-2420 SUCCESSIVE INSPECTIONS**

COMMENT: Subparagraphs IWE-2420(b) and IWE-2420(c) provide conflicting requirements associated with the number of periods that successive examinations are required to be performed following the evaluation of acceptable flaws, degradation, or repairs in accordance with IWE-3000. Additionally, both paragraphs cite that these requirements are only applicable to Examination Category E-C and we do not believe that this is the intent of these requirements.

SUGGESTION: Should the proposed rule be implemented, the Staff should clarify these requirements through the ASME prior to their implementation into the regulations such that licensees would not be placed in noncompliance.

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3. **IWE-2430(b) ADDITIONAL EXAMINATIONS**

COMMENT: This subparagraph states that when additional flaws or areas of degradation are found to exceed the acceptance standards of Table IWE-3410-1 in the first expanded scope of IWE-2430(a) that "[a]ll of the remaining examinations within the same category shall be performed to the extent specified in Table IWE-2500-1 for the inspection interval." We believe that this is not a reasonable requirement in light of the fact that no licensee evaluation is allowed to identify the failure mechanism prior to 100% examination. This requirement is even more restrictive than the existing Class 1 requirements under a similar situation.

SUGGESTION: Should the proposed rule be implemented, the Staff should consider a more reasonable additional examination requirement.

4. **TABLE IWE-2500-1 EXAMINATION CATEGORY REQUIREMENTS GENERAL**

COMMENT: We have assumed that since the proposed rule mandates the use of the 1992 Edition with the 1992 Addenda of Subsections IWE and IWL then all other referenced Subsection requirements will come from this same Edition and Addenda. When Visual, VT-1, (VT-2 per IWE-5240/IWA-5246), or VT-3 examinations are required to be performed in accordance with the Examination Category requirements of this Table then the visual examination requirements of TABLE IWA-2210-1 must be met. Table IWA-2210-1 specifies requirements associated with direct visual examinations which include maximum direct visual examination distances, minimum illumination levels, and lower case character sizes that must be resolved in order to achieve an acceptable direct visual examination. When performing visual examinations of containment components long distances usually exist between the components and the nearest available access point for an examiner. This condition makes a remote visual examination the only viable method to be used to perform these examinations. In accordance with IWA-2210 remote visual examinations will have to be demonstrated that they are equivalent to the direct visual examination requirements of TABLE IWA-2210-1 by using the same minimum illumination levels and being able to identify the same lower case characters at longer distances. The requirements that must be met at these longer distances are as follows:

- (1) A 0.044" lower case character for Visual, VT-1 Examinations, @ 50 foot candles;
- (2) A 0.158" lower case character for Visual, VT-2 Examinations, @ 15 foot candles; or

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- (3) A 0.105" lower case character for Visual, VT-3 Examinations, @ 50 foot candles.

When visual examinations are required in Subsection IWE these resolution requirements will make remote visual examinations virtually impossible to perform without the erection of staging and the use of highly sophisticated telescopic devices and lighting equipment. We believe that these requirements are an excessive burden on licensees and would add substantially to the costs associated with this proposed rulemaking.

SUGGESTION: Should the proposed rule be implemented, the Staff should specify visual resolution requirements that are more realistic to the components being examined.

5. **TABLE IWE-2500-1 EXAMINATION CATEGORY E-A, CONTAINMENT SURFACES**

COMMENT: In accordance with Item No. E1.11 "Accessible Surface Areas" a general visual examination is required to be performed prior to each 10 CFR 50 Appendix J, Type A Test. This examination requirement is a duplicate of the one specified in Appendix J. We understand the Staff's intent is to enhance the Appendix J examination by implementing Subsection IWE requirements and the specific method requirements of IWE-3510.1 (See Item No. 6). Nevertheless, this examination would be identified as a requirement in two places under the provisions of 10 CFR 50.

SUGGESTION: Should the proposed rule be implemented, the Staff should consider deleting this examination requirement from Appendix J at the same time they impose it under Subsection IWE.

6. **IWE-3510.1 VISUAL EXAMINATIONS - GENERAL**

COMMENT: This requirement states that the general visual examination shall be performed by or under the direction of a Registered Professional Engineer (RPE) or other individual, knowledgeable in the requirements for design, inservice inspection, and testing of Class MC and metallic liners of Class CC components. In general we disagree with the necessity of requiring a RPE to be used in this capacity. This requirement is excessive considering that elsewhere in the Code a RPE is not required to perform a Reactor Pressure Vessel fracture mechanics analysis, but is in this section to evaluate paint flaking on a containment liner. Our review of 10 CFR 50 and Section XI requirements shows only one other requirement similar to this one. It is contained in IWL-2320, and is addressed later below. At least under the IWE-3510.1 requirement some other individual may be used with similar qualifications and knowledge, but

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we are not clear on how we would administratively approach proof of this equivalency in an audit situation.

SUGGESTION: Should the proposed rule be implemented, the Staff should consider taking an exception to this requirement, or identify specifically why this requirement is necessary.

7. TABLE IWE-2500-1 EXAMINATION CATEGORY E-A, CONTAINMENT SURFACES (Cont'd)

COMMENT: In accordance with Item No. E1.12 "Accessible Surface Areas" and Item No. E1.20 "Vent System Accessible Surface Areas" a Visual, VT-3 examination is required at the end of each inspection interval. This examination must include the coverage requirements specified in Note (4) of this Table which references paragraph IWE- 1231(a)(4). Under IWE-1231(a)(4) 80% of the containment surface area must be available for examination. At the Haddam Neck Plant this will not be possible without removing a considerable amount of asbestos insulation. In this circumstance, a relief request from this requirement would likely be filed.

SUGGESTION: Should the proposed rule be implemented, the Staff should consider the burden associated with requiring insulation removal from a containment to meet this requirement.

8. TABLE IWE-2500-1 EXAMINATION CATEGORY E-B, PRESSURE RETAINING WELDS AND EXAMINATION CATEGORY E-F, PRESSURE RETAINING DISSIMILAR METAL WELDS

COMMENT: These categories apply to the VT-1, Visual and Surface examinations of certain containment welds that we must assume are more susceptible to degradation than other welds because they have been listed specifically in Subsection IWE. We cannot identify a supportive risk assessment or justification that has been presented in the SECY-93-328 "Rulemaking Issue" or the background information of the proposed rule. Furthermore we are not aware of any inservice problems that have been associated with these welds and visual examinations will be performed several times during an inspection interval because they are already covered under the requirements of Examination Category E-A. Our review of the visual examination requirements for these welds covered under Category E-A indicates that they are less stringent than the requirements of Categories E-B and E-F, but have essentially the same visual acceptance criteria. In order to meet the requirements for these welds, a substantial number of relief requests may be required, because many of the welds are leak chased and not accessible for examination. Based on the information supplied above we are requesting that the following suggestion be considered by the Staff.



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SUGGESTION: Should the proposed rule be implemented, the Staff should consider taking exception to these requirements unless further justification is identified to support their use.

9. TABLE IWE-2500-1 EXAMINATION CATEGORY E-C, CONTAINMENT SURFACES REQUIRING AUGMENTED EXAMINATION

COMMENT: The examination requirements of this category cover a scope that should be reviewed for inclusion in any containment ISI program. The areas of concern are presented in the form of a list under paragraph IWE-1240, but they at least seem to be based on some industry experience and allow a licensee to determine which ones are applicable to their particular containment. Additionally, these requirements represent a living program that allows the identified areas of concern to be examined for a specified period of time and then removed from the program if no degradation is occurring. We believe that these requirements are the only ones in Subsection IWE that have a potential of providing an increased level of quality over the existing requirements of Appendix J, but some consideration for plants that have been performing these examinations should be given. For example, Millstone Unit No. 1, a BWR plant, has a Mark I type containment. Because of the identified industry concerns with Mark I containments many of the areas addressed under the requirements of Category E-C have already been examined and are continuing to be examined.

SUGGESTION: Should the proposed rule be implemented, the Staff should consider allowing some credit for previously completed examinations which have met the requirements of this category.

10. TABLE IWE-2500-1 EXAMINATION CATEGORY E-D, SEALS, GASKETS, AND MOISTURE BARRIERS

COMMENT: Visual, VT-3 examinations of seals and gaskets required under Item Nos. E5.10 and E5.20 provide very little added value over the existing test requirements of Appendix J. The idea that a visual examination of a seal or gasket will ensure its ability to maintain containment integrity over a leak test does not appear to be well founded. These examination requirements should not be part of Subsection IWE.

SUGGESTION: Should the proposed rule be implemented, the Staff should consider taking an exception to these requirements.

11. TABLE IWE-2500-1 EXAMINATION CATEGORY E-D, SEALS, GASKETS, AND MOISTURE BARRIERS (Cont'd)

COMMENT: Item No. E5.30 "Moisture Barriers" is considered an area of concern for certain containments depending on the

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environmental conditions that are present, but is not applicable to others. We believe that if degradation of these barriers could cause degradation of adjacent containment surfaces then they should be examined under the requirements of Examination Category E-C. The requirements of Category E-C would allow a licensee to evaluate and assess the real need to perform these examinations. SUGGESTION: Should the proposed rule be implemented, the Staff should consider specifying that moisture barriers be addressed under the requirements of Examination Category E-C.

12. **TABLE IWE-2500-1 EXAMINATION CATEGORY E-G, PRESSURE RETAINING BOLTING**

COMMENT: Visual, VT-1 examination requirements are specified in this category for bolted connections following disassembly. This requirement seems to be a good practice, but the necessity of regulating a good practice is questionable when each connection will receive a local leak rate test under existing Appendix J requirements following reassembly. Bolt torque and tension tests are also required under this category on bolted connections that are not disassembled during an inspection interval. Most of the bolted connections which would be subjected to these tests are painted. No valid torque or tension test can be performed on painted bolting without paint removal and/or subsequent disassembly. We believe that examination of containment bolting is adequately covered under our existing plant maintenance programs and the testing requirements of Appendix J. We see no value added by these requirements. SUGGESTION: Should the proposed rule be implemented, the Staff should consider taking an exception to all the requirements of this category.

13. **TABLE IWE-2500-1 EXAMINATION CATEGORY E-P, ALL PRESSURE RETAINING COMPONENTS**

COMMENT: This entire category represents a reinstatement of Appendix J requirements. It is repetitious and not necessary.

SUGGESTION: Should the proposed rule be implemented, the Staff should take exception to this category. It is not necessary to have requirements published in Appendix J and endorsed in Section XI.

14. **IWE-3122.4 ACCEPTANCE BY EVALUATION versus IWE-3512.3 ULTRASONIC EXAMINATION**

COMMENT: These subparagraphs conflict in the provisions required to evaluate wall loss discovered during containment examinations. Under IWE-3122.4 if wall loss of any amount is discovered during supplemental examinations (e.g., those

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extra examinations that are required to fully determine the nature of a flaw or degradation that could be performed by visual, eddy current, ultrasonic, radiographic, or other examinations) performed in accordance with IWE-3200, then these areas of wall loss must be analyzed to satisfy the requirements of the Design Specifications to be acceptable. Under IWE 3512.3 only wall loss areas that exceed 10% of nominal containment wall thickness or areas of wall loss that could exceed 10% of the nominal containment wall thickness prior to their next examination need to be evaluated for acceptance. To require evaluation of any wall loss only during supplemental examinations and then to require evaluation of a specified wall loss under ultrasonic examination appears inconsistent.

SUGGESTION: Should the proposed rule be implemented, the Staff should clarify the intent of these wall loss evaluation requirements.

15. **ARTICLE IWE-5000 SYSTEM PRESSURE TESTS**

COMMENT: This article tries to address additional visual examination requirements and an exception to the leakage test criteria that is contained in 10 CFR 50, Appendix J following minor repairs and modifications. We believe that Subsection IWE should not provide exceptions to Appendix J criteria. The additional visual examination requirements that are cited in this article were to be applied from paragraph IWA-5246. This paragraph required the use of VT-2 type examinations when leakage tests are performed in accordance with Appendix J. This paragraph does not exist in the referenced 1992 Edition with the 1992 Addenda of ASME Section XI that is required to be used under the proposed rule.

SUGGESTION: Should the proposed rule be implemented, the Staff should consider taking an exception to this entire article and changing the requirements of Appendix J to address leakage tests following minor repairs and modifications. Additionally, prior to considering the use of the old IWA-5246, the Staff should review our previous comments associated with visual resolution requirements addressed under Item No.4 of this attachment.

16. **IWL-2100 INSPECTION**

COMMENT: This paragraph states that examinations shall be verified by an Inspector. Verification is a process of determining that a particular action has been performed in accordance with the rules of this Subsection by either witnessing the actions/examinations or by reviewing records of examinations. Although no requirements exist to have Authorized Nuclear Inservice Inspectors trained in

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Subsection IWL, we do not believe they should be verifying requirements without adequate knowledge of the subject.

Furthermore, if repairs or replacements of concrete are performed under this Subsection, it appears that we may have to have an Authorized Nuclear Inspector with a "C" endorsement cover these activities. It is our present understanding that the National Board no longer has a course to provide personnel with this endorsement and only a limited number of these personnel are available in the industry.

SUGGESTION: We believe the Staff should evaluate the roles and responsibilities of the Authorized Inspection Agency personnel prior to implementation of the proposed rule.

17. **IWL-2310 VISUAL EXAMINATION AND PERSONNEL QUALIFICATION**

COMMENT: The paragraphs in this section define VT-1C and VT-3C examinations. However, as previously addressed in Item No.4 of this attachment the direct visual examination requirements of Table IWA-2210-1 for illumination levels and distances used still must be demonstrated to be equivalent to those of a VT-1 or VT-3 remote visual examination when employed to examine concrete containments. We believe that these requirements are excessive for remote visual examinations, because of the increased lighting and sophisticated optical equipment that will have to be used.

SUGGESTION: Should the proposed rule be implemented the Staff should specify visual resolution requirements that are more realistic to the components being examined.

18. **IWL-2320 RESPONSIBLE ENGINEER**

COMMENT: This paragraph states that a Responsible Engineer shall be a Registered Professional Engineer (RPE) experienced in evaluating the inservice condition of structural concrete and provides no alternatives to a licensee, but to use this type of individual. We disagree with this requirement because we do not believe that a RPE is required to fill this role and there are only a limited number of these individuals available in the industry. Our position on this issue is basically the same as stated in Item No.6 of this attachment.

SUGGESTION: Should the proposed rule be implemented the Staff should consider taking an exception to this requirement or identify specifically why this requirement is necessary.

19. **TABLE IWL-2521-1 NUMBER OF TENDONS FOR EXAMINATION**

COMMENT: This table provides the numbers of tendons that are required to be examined during an IWL inspection period. Note (2) states that the reduced sample size listed for the

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10th year and subsequent inspections is applicable only if the acceptance criteria of IWL-3221.1 are met during each of the earlier inspections. This requirement appears to be excessive because there is no way a plant who had problems early in their plant life can ever get to a reduced sample size no matter what actions they took previously to correct the problem.

SUGGESTION: Should the proposed rule be implemented the Staff should consider relaxing this requirement depending on corrective actions that a licensee took and past or future evidence provided by additional inspections that would indicate the problems are resolved and not recurring.

20. **IWL-5230 LEAKAGE TEST**

COMMENT: This paragraph states that if a repair or replacement penetrates a containment liner or otherwise breaches a containments leak-tight integrity, a leakage rate test shall be conducted as required by IWE-5000. Since IWE-5000 provides rules for leakage tests following repairs or modifications with provisions for deferral of leakage tests under IWE-5222 that do not penetrate a containment liner or otherwise breach a containments leak-tight integrity, these requirements are in conflict.

SUGGESTION: Should the proposed rule be implemented the Staff should consider taking an exception to this requirement.

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Attachment 4

Haddam Neck Plant  
Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3  
Plant Summaries and Comments

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Haddam Neck Plant  
Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3

Plant Summaries & Comments

HADDAM NECK PLANT

Summary

Based on a review of the, Haddam Neck Plant's containment design, plant maintenance history, inspection scope and implementation schedule of the proposed rule change; we believe the burden and costs of implementing the proposed rule change clearly outweighs any potential benefits.

Comments

1. Existing Inspection - At least once per 18 months Technical Specifications 4.5.1.d(2) requires visual inspection of the containment sump and drain trench for structural degradation and abnormal corrosion which is implemented per SUR 5.1-149. In addition, general areas of the containment are inspected during power on a monthly basis per PMP 9.1-22 which will detect any condition which could lead to degradation of the containment structure and containment liner.

During each scheduled Appendix J, Integrated Leak Rate Test, (ILRT) a pre and post test inspection is performed on the containment structure, the liner and other structural components for evidence of degradation. If unanticipated areas of concern are encountered in the future the existing inspection procedure ENG 1.7-92 can be easily expanded to incorporate these areas if deemed appropriate.

2. Maintenance History - During the 1991 Refueling Outage, repairs were made to the containment dome for cracks developed as a result of water seeping through the cold joints and no further structural degradation has been noted since.

The Haddam Neck Plant's containment is a reinforced concrete cylinder with a steel liner. Of the occurrences of structural degradation at nuclear power plants cited in the Federal Register only one occurred at a plant with a similar design. At Salem Unit 2, minor corrosion was noted on the containment liner by plant personnel during a pre-ILRT inspection. Based on industry experience, the majority of structural degradation occurrences can be attributed to poor

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quality control during initial containment construction and not to a lack of inadequate inspection requirements.

MILLSTONE UNIT NO. 1

Summary

Millstone Unit No. 1 is a boiling water reactor (BWR) plant with a Mark I containment. Specific comments on this issue as related to BWRs have been provided to the Staff through the BWR Owners' Group. Millstone Unit No. 1 believes the "BWROG Model Containment Inspection Program" is a workable alternative to Subsection IWE, and should be fully considered by the Staff prior to promulgation of these new requirements.

MILLSTONE UNIT NO. 2

Summary

Given the present surveillance requirements as detailed in the following two comments, the need for additional requirements at Millstone Unit No. 2 seems unnecessary.

Comments

The bases for the comments that follow are a review of the Millstone Unit No. 2 Technical Specifications Section 3/4-6 and Final Safety Analysis Report, Section 5.29, "Containment Testing And Surveillance".

1. ILRTs are performed periodically per the requirements of 10 CFR 50, Appendix J.
2. The tendon surveillance on the post-tensioning steel complies with the requirements of Regulatory Guide 1.35. The surveillance program that is now in place has provided sufficient historical evidence to attain a high level of confidence that the integrity of the structure is not in question and has been maintained.

MILLSTONE UNIT NO. 3

Summary

Millstone Unit No. 3 believes that the proposed rule is not necessary based on the existing tests and inspections that are being performed under 10 CFR 50, Appendix J.



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Comments

1. As indicated by our review of the Staff's background information in the proposed rule change, what the Staff is hoping to achieve is early identification of degradation problems which have recently been observed in containment structures. The problems which have been identified consist of degradation in steel BWR containments and post tensioning systems of concrete containments. Millstone Unit No.3's containment is a steel lined, conventionally reinforced concrete containment structure, protected from weather by a containment enclosure building, and is not subject to these issues.
2. Millstone Unit No. 3's Appendix J program presently covers containment penetration inspections, and in conjunction with the ILRTs, the accessible portions of the containment concrete surfaces are inspected.
3. If Subsection IWL is implemented into the regulations existing lighting in the containment enclosure building will have to be upgraded to satisfy the requirements. Additionally, much of the dome area is not readily accessible.
4. Additional costs associated with procedure development, personnel training, improved accessibility and implementation will be required for compliance with the new requirements. Based on the marginal benefits obtained by the additional inspections at Millstone Unit No. 3, the additional costs do not appear to be warranted.
5. Should the proposed rule be implemented the Staff should consider simultaneously reducing some of the Appendix J penetration and containment ILRT, inspection requirements that are presently in place. In addition reduced inspection requirements for conventional reinforced concrete containments that are not readily accessible should be addressed.