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

Perry Nuclear Power Plant  
Docket No. 50-440  
Revision Of In-Service Examination Program Relief Request IR-041

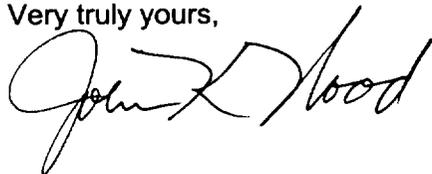
Ladies and Gentlemen:

By letter dated April 17, 2000 (PY-CEI/NRR-2491L), several relief requests were submitted for the Perry Nuclear Power Plant (PNPP) In-Service Examination Program. One of those Relief Requests, IR-041, addressed the Alternate Requirements for Containment (IWE/IWL) Repair/Replacements. This relief request is being revised in its entirety as a result of discussions with the NRC staff. Attachment 1 contains the proposed revision.

Also, additional information is included in Attachment 2 that supports the proposed IR-041 relief request. Attachment 2 contains a comparison of the requirements in American Society of Mechanical Engineers, Section XI, Subsections IWA-4140 and IWA-4910 against the PNPP's Repair Replacement program.

There are no regulatory commitments contained in this letter or its attachments. If you have questions or require additional information, please contact Mr. Gregory A. Dunn, Manager - Regulatory Affairs, at (440) 280-5305.

Very truly yours,



Attachments

cc: NRC Project Manager  
NRC Resident Inspector  
NRC Region III

A047

## **REVISION OF RELIEF REQUEST NO. IR-041**

### **I. Identification of Components**

All Class MC (IWE) and CC (IWL) pressure retaining components.

### **II. American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Section XI Requirements**

ASME Section XI, 1992 Edition, 1992 Addenda, Subsections IWE and IWL

### **III. Relief Requested**

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested from the documentation requirements of subarticles IWA-4140, "Repair/Replacement Program and Plan," and IWA-4910, "Reports and Records," of the 1992 Edition, 1992 Addenda of ASME Section XI for repairs, replacements and modifications to Class MC (IWE) and CC (IWL) components.

### **IV. Basis for Relief**

#### **Summary**

In the Federal Register dated August 8, 1996 (61 FR 41303), the Nuclear Regulatory Commission (NRC) amended its regulations to incorporate the 1992 Edition, 1992 Addenda of Section XI when performing containment examinations. In addition to the requirements of Subsection IWE and IWL, this also imposes the requirements of the 1992 Edition, 1992 Addenda of Subsection IWA-4000 for containment repairs/replacements. As clarified in NRC Information Notice 97-29, "Containment Inspection Rule," the IWE and IWL requirements for repair/replacement became effective September 9, 1996. The NRC had considered relief from the Repair/Replacement requirements up to September 9, 1997 as reasonable.

The PNPP holds a National Board Nuclear Repair (NR) Certificate of Authorization for repairs/replacements to Class 1, 2, 3, and MC components. This Certificate of Authorization is based on PNPP's repair/replacement program, which is written to the requirements of the 1989 Edition with no Addenda of ASME Section XI for PNPP's second 10-year inspection interval. PNPP's repair/replacement program does not currently incorporate the documentation requirements within Subsection IWA-4000, 1992 Edition, 1992 Addenda for containment repairs/replacements. Because the likelihood of a containment repair/replacement becoming necessary at the PNPP is considered to be very remote, addressing the repair/replacement documentation requirements imposed by the NRC's amended containment examination regulations has been deferred until NRC review and approval of this relief is completed.

It is understood that if a containment repair/replacement becomes necessary, the PNPP staff would have to address all the repair/replacement requirements of the 1992 Edition, 1992 Addenda of Subsection IWA-4000, or gain relief.

#### Details

In accordance with 10 CFR 50.55a(g)(4)(ii), PNPP's In-Service Inspection (ISI) and Repair/Replacement (R/R) programs were recently updated to the 1989 Edition of Section XI for PNPP's second 10-year inspection interval.

To simplify the process, the R/R documentation requirements for all components within the scope of Section XI were updated to the requirements of the 1989 Edition with no Addenda. The documentation requirements are given in subarticles IWA-4800, "Records" (for Repairs), and IWA-7520, "Reports and Records" (for Replacements). They are essentially the same as those from the 1983 Edition, Summer 1984 Addenda, which was the reference code for PNPP's previous inspection interval, and they did not require the generation of any new procedures or record types. However, the documentation requirements in the 1992 Edition, 1992 Addenda are different. They are given in subarticles IWA-4140, "Repair/Replacement Program and Plan," which describes activities that are to be documented in a formal R/R Plan, and in IWA-4910, "Reports and Records." There was a major restructuring of the R/R rules by the 1992 Edition, 1992 Addenda, with R/Rs all consolidated under IWA-4000. Most of the changes in the 1992 Edition, 1992 Addenda were clarifications of the previous requirements, not new requirements. An exception was a new requirement within subarticle IWA-4140 to have a formal R/R Plan for each R/R activity. R/R Plans increase the documentation requirements associated with R/R activities. Also, Subarticle IWA-4910 added a list of "as applicable" R/R record requirements, rather than simply providing reference to IWA-6000, "Records and Reports," as IWA-4800 did in the 1989 Edition. Note that PNPP holds a National Board Nuclear Repair (NR) Certificate of Authorization and PNPP's R/R program currently meets the intent of the IWA-4140 and 4910 requirements through the NR Manual and various supporting instructions. However, the requirements are documented in various quality records (e.g., Corrective Action documents, Design Change Packages, etc.) rather than being documented and/or summarized in a formal R/R Plan. If applied to the IWE and IWL components, the IWA-4140 and IWA-4910 requirements would require the revision and/or development of new procedures and record types. As R/R Plans are not required by subarticles IWA-4800 or IWA-7520 of the 1989 Edition, such plans are not required for IWB, IWC, IWD, and IWF examinations. Therefore, for consistency, PNPP proposes to use the documentation requirements of IWA-4800 and IWA-7520 of the 1989 Edition for all components that are within the scope of Section XI until PNPP updates to a later version of the code in accordance with 10 CFR 50.55a(g)(4)(ii). In this manner, the documentation requirements for Class MC (IWE) and CC (IWL) components will be no different than those for Class 1, 2 and 3 components. It will eliminate the need to create new R/R Plan records and the administrative burden associated with the processing and maintenance of those records.

Based on the previous discussion, relief is requested in accordance with 10 CFR 50.55a(a)(3)(i). Compliance with the repair and replacement documentation requirements of the 1989 Edition will provide an acceptable level of quality and safety.

V. Alternative Examination

For Class MC (IWE) and CC (IWL) components, PNPP's R/R program will comply with all the requirements of the 1992 Edition, 1992 Addenda of ASME Section XI except the documentation requirements of subarticles IWA-4140 and IWA-4910. In their place, the documentation requirements of subarticles IWA-4800 and IWA-7520 of the 1989 Edition will be used for Repair/Replacements to the containment vessel until PNPP updates to a later version of the code in accordance with 10 CFR 50.55a(g)(4)(ii).

The following table provides a comparison of the requirements in IWA-4140 and IWA-4910 (1992 Edition & Addenda) against the equivalent requirements in PNPP's Repair/Replacement (R/R) program, the National Board Nuclear Repair (NR) Manual and supporting procedures.

1992 Edition with 1992 Addenda Requirements	Perry Nuclear Power Plant (PNPP) Program/Procedure(s) that Meet the Intent of the 1992 Edition with 1992 Addenda Requirements
<p><b><u>IWA-4140 Comparison</u></b></p> <p>(a) Repairs and replacement of items shall be completed in accordance with the Repair/Replacement (R/R) Program. The program is a document or set of documents that defines the managerial and administrative control for completion of repairs or replacement of items.</p>	<p>NR Manual statement of policy states in part that PNPP recognizes the need for a formal and comprehensive Quality Assurance (QA) Program for R/Rs, and modification of nuclear code-stamped items in accordance with the requirements of American Society of Mechanical Engineers (ASME), Section XI, National Board Inspection Code (NBIC), RA-2300, and 10CFR50, for the "NR" Certificate of Authorization.</p>
<p>(b) As part of the R/R Program, repairs and replacement of items shall be made in accordance with R/R Plans that include the essential requirements for completion of the repair or replacement. A R/R Plan shall identify the following:</p>	<p>R/Rs are made in accordance with the NR Manual and the supporting site procedures and instructions.</p>
<p>(1) Applicable code edition, addenda, and code cases of Section XI;</p>	<p>Plant Administrative Procedure (PAP) 1001, "Inservice Examination Program," Section 6.1, "Compliance Requirements," details the code edition, addenda and code cases of Section XI that are used for Section XI activities. Accordingly, they are documented within the applicable Non-Conforming Condition (NCC) Condition Report or Design Change documents.</p>
<p>(2) Construction code edition, addenda, and code cases used to construct the item being repaired or replaced;</p>	<p>Nuclear Engineering Instruction (NEI) 0356, "ASME Design Documents For Pressure-Retaining Equipment, Vessels, And Piping" addresses construction code requirements. It is written to the 1974 edition of the ASME Boiler and Pressure Vessel (B&amp;PV) Code, however, design requirements of specific components may be to a different code of record. In those instances, equivalent requirements based on the component code of record shall be used.</p>

<p align="center"><b>1992 Edition with 1992 Addenda Requirements</b></p>	<p align="center"><b>Perry Nuclear Power Plant (PNPP) Program/Procedure(s) that Meet the Intent of the 1992 Edition with 1992 Addenda Requirements</b></p>
<p><b><u>IWA-4140 Comparison</u></b></p> <p>(3) Construction code edition, addenda, and code cases applicable to the repair or replacement;</p>	<p>Same (1) and (2) on previous page.</p>
<p>(4) For a repair, description of the flaw and the nondestructive examination method used to detect the flaw;</p>	<p>The IWA-4140 requirements are the same as IWA-4130 (a) (1), 1989 Edition, which is the code of reference for our current program.</p> <p>PAP-1608, "Condition Report Process," Attachment 12, requires ASME failures to be evaluated per IWA-4130.</p> <p>Also, see (6) below for control of all ASME work.</p>
<p>(5) For a repair, the flaw removal method, method of measurement of the cavity created by removing the flaw, and requirements for reference points during and after the repair.</p>	<p>The IWA-4140 requirements are the same as IWA-4130 (a) (2), 1989 Edition, which is the code of reference for our current program.</p> <p>Also, see (4) above.</p>
<p>(6) Description of the work to be performed on the item;</p>	<p>NR Manual, Section 9, states in part that the Work Order (WO) is the controlling document for all R/Rs in accordance with the NR Manual (a Warehouse Job Ticket may be used in place of a WO for repairs/replacements on work performed outside of operating plant areas). The WO shall contain the following: Weld History Record, Weld Process Sheets, drawings, procedures, instructions and test procedures. The Authorized Nuclear Inservice Inspector (ANII) reviews the WO prior to ASME work and after the completion of ASME work.</p>
<p>(7) Applicable weld procedure, heat treatment, nondestructive examination, tests, and material requirements;</p>	<p>The IWA-4140 requirements are the same as IWA-4130 (a) (3), 1989 Edition, which is the code of reference for our current program. Also, see (4) and (6) above.</p> <p>Section 7 of the NR Manual describes the controls established to assure that purchased materials and items are in compliance with the requirements of the code and Purchase Order.</p>

<p align="center"><b>1992 Edition with 1992 Addenda Requirements</b></p>	<p align="center"><b>Perry Nuclear Power Plant (PNPP) Program/Procedure(s) that Meet the Intent of the 1992 Edition with 1992 Addenda Requirements</b></p>
<p><b><u>IWA-4140 Comparison</u></b></p> <p>(8) Applicable examination, test, and acceptance criteria to be used to verify acceptability;</p>	<p>NR Manual, Section 11, contains the Test Control requirements. This section requires that all testing activities shall be performed in accordance with written instructions which address acceptance criteria, including those specified in the code, design documents and procurement documents. Non Destructive Examination (NDE) requirements are listed on the Weld History Record, and the NDE acceptance criteria are listed in the associated Nuclear Quality Instruction (NQI). Pressure testing requirements following a R/R are identified in Technical Administrative Instruction (TAI) 1106-2, "Section XI Pressure Testing Program – Repair And Replacement."</p>
<p>(9) Intended life of the repair or the item to be used for replacement when less than the remainder of the design life of the item;</p>	<p>This is included as part of IWA-4130 (a) (4), 1989 Edition, which is the code of reference for our current program.</p> <p>Also, see (4) on previous page.</p>
<p>(10) For replacement, whether application of the ASME code symbol stamp is required in accordance with IWA-4920;</p>	<p>No comparison necessary as IWA-4920 neither requires nor prohibits stamping for installation.</p>
<p>(11) Documentation in accordance with IWA-4900 and IWA-6000.</p>	<p>This is met in part by IWA-6000, and IWA-7520 (1989 Edition) of our current program. The evaluation report for repair would be documented on an NCC Condition Report per PAP-1608 or a Design Change document. Form NIS-2 is addressed in Section 13 of the NR Manual and also by NQI-1741, "Preparing And Processing NIS-2/NR-1 And Form R Reports."</p>
<p>(c) The Repair Replacement Program, plans, and evaluations required by IWA-4150 shall be subject to review by enforcement and regulatory authorities having jurisdiction at the plant site.</p>	<p>No comparison required as paragraph does not contain any requirements.</p>

<p align="center"><b>1992 Edition with 1992 Addenda Requirements</b></p>	<p align="center"><b>Perry Nuclear Power Plant (PNPP) Program/Procedure(s) that Meet the Intent of the 1992 Edition with 1992 Addenda Requirements</b></p>
<p><b><u>IWA-4910 Comparison</u></b></p> <p>(a) The reports and records required by IWA-4130 and IWA-6000 shall be completed for all repairs and replacements.</p>	<p>See (11) on previous page.</p>
<p>(b) The following reports and records shall, to the extent required by the construction code and this Article, be maintained by the Owner, as applicable:</p> <ul style="list-style-type: none"> <li>(1) Certified Design Specification</li> <li>(2) Certified Design Report</li> <li>(3) Design Report</li> <li>(4) Overpressure Protection Report</li> <li>(5) Manufacturers Data Report</li> <li>(6) Material Certification</li> <li>(7) Evaluation Report required by IWA-4150</li> </ul>	<p>These IWA-4910 requirements are the same as IWA-7520 (a), items 1 through 7, 1989 Edition, which is the code of reference for our current program.</p> <p>The identified records are identified as Quality Assurance records within procedures PAP-0231, "Configuration Management Program," or PAP-0309, "Configuration Change Processes," and their supporting instructions. As such, they are maintained in accordance with PAP-1701, "Records Management Program," which meets Quality Assurance record keeping requirements of 10CFR50, Appendix B.</p>
<p>(c) Revisions to existing reports, records, and specifications may be shown as an amendment, or as a supplement, and attached to the original record or report to provide an up to date record of the repair or replacement.</p>	<p>This IWA-4910 requirement is the same as IWA-7520 (b), 1989 Edition, which is the code of reference for our current program.</p> <p>The documents discussed are safety related documents for which revision controls are in place under PNPP's 10CFR50, Appendix B, Quality Assurance and Configuration Management Control programs.</p>
<p>(d) Form NIS-2 shall be completed for all replacements</p>	<p>This IWA-4910 requirement is the same as IWA-7520 (a) (8), 1989 Edition, which is the code of reference for our current program.</p> <p>Section 13 of the NR Manual requires the completion of NR-1 and NIS-2 reports. Details for preparing the NIS-2/NR-1 reports are given in NQI-1741.</p>