

# Niagara Mohawk

Richard B. Abbott  
Vice President  
Nuclear Engineering

January 13, 2000  
NMPIL 1495

Phone: 315.349.1812  
Fax: 315.349.4417

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

RE:           Nine Mile Point Unit 1  
              Docket No. 50-220  
                        DPR-63          

Nine Mile Point Unit 2  
Docket No. 50-410  
          NPF-69          

**Subject:       Use of 1998 Edition of ASME Code Section XI for Containment Inspections**

Gentlemen:

By letter dated October 28, 1999 (NMPIL 1477), Niagara Mohawk Power Corporation (NMPC) requested authorization to use the 1998 Edition of the ASME Boiler and Pressure Vessel Code as an alternative to the 1992 Edition of the Code with 1992 Addenda, for purposes of expedited containment inspections required by 10 CFR 50.55a(g). In a telephone discussion with NMPC on December 9, 1999, the NRC staff requested additional information in a table similar to that submitted by Texas Utilities for their Comanche Peak Units 1 and 2. This table would compare the containment inspection requirements of the two ASME Code Editions and contain information responsive to the NRC staff's queries during their review of the Comanche Peak relief requests. Attachments A and B provide this additional information for Nine Mile Point Units 1 and 2. It is requested that the NRC approve the Nine Mile Point Unit 2 relief requests by March 1, 2000, to support inspection activities during refueling outage number 7.

Very truly yours,



Richard B. Abbott  
Vice President Nuclear Engineering

RBA/IAA/jb  
Attachments

xc:   Mr. H. J. Miller, NRC Regional Administrator, Region I  
      Ms. M. K. Gamberoni, Acting Section Chief PD-I, Section 1, NRR  
      Mr. G. K. Hunegs, NRC Senior Resident Inspector  
      Mr. P. S. Tam, Senior Project Manager, NRR  
      Records Management

**Attachment A**  
**Nine Mile Point Unit 1 and Unit 2**  
**ASME Section XI**  
**IWE Code Comparison Table**

**IWE CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
IWE-1100	No change	N/A	N/A
IWE-1200	No change	N/A	N/A
IWE-1210	No change	N/A	N/A
IWE-1220	Changed "containment" to "containment system"	Non significant.	N/A
IWE-1230	No change	N/A	N/A
IWE-1231	<p>Removed item (3)-"single welded butt joints from the weld side"- as a specific item required to remain accessible for the life of the plant.</p> <p>Changed wording from "80% of the surface area" to "80% of the pressure retaining boundary" and stated exclusions from that 80%.</p> <p>Reworded paragraph (b)</p>	<p>These single welded butt joints were removed as a separately listed examination item and are now included within the item for the pressure retaining boundary as discussed in the changes to Table IWE-2500-1 below.</p> <p>NOTE: Examination of welds is optional in 10 CFR 50.55a.</p> <p>The exclusions from 80% incorporate an existing Table IWE-2500-1 note and clarify that areas made inaccessible during construction are also excluded.</p> <p>Change to (b) is for clarity and is non significant.</p>	<p>Containment welds and dissimilar metal welds will be examined by General Visual examination to the same criteria as general containment surfaces. For non-coated containment surfaces these criteria were developed from VT-3 procedures that are used for examination of ASME Code Class 1, 2, and 3 components such as the reactor vessel interior, pump casings and valve bodies. This includes examination for cracking, discoloration, structural distortion, wear, pitting, corrosion, gouges, dents or other surface discontinuities. For coated containment surfaces the recording criteria was developed from the NMP coatings Program. This includes examining for flaking, blistering, peeling, discoloration or other signs of distress.</p>

**IWE CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
IWE-1232	<p>ASME XI generic change from repair and/or replacement to repair/replacement activities.</p> <p>Deleted paragraph (a)(3) addressing inaccessible welded joints.</p>	<p>Non significant.</p> <p>Welded joints were removed as a separately listed examination item and are now included within the item for the pressure retaining boundary as discussed in the changes to Table IWE-2500-1 below.</p> <p>NOTE: Examination of welds is optional in 10 CFR 50.55a.</p>	<p>NMP will examine welds as part of the surface examination See IWE-1231.</p>
IWE-1240	<p>Added stiffeners and, by reference to IWE-2420, flaws accepted by evaluation as areas requiring augmented examination.</p>	<p>The additional areas subject to augmented examination further assure containment integrity.</p>	<p>NMP will examine stiffeners and flaws accepted by evaluation as areas requiring augmented examination.</p>
IWE-2000	<p>No change</p>	<p>N/A</p>	<p>N/A</p>
IWE-2100	<p>Added new Subarticle IWE-2100 - "General" - to provide reference to IWA-2000 with exceptions from IWA-2210, IWA-2300, IWA-2500 and IWA-2600.</p>	<p>The additional general requirements invoked by reference to IWA-2000 where none were referenced previously further assure containment integrity. The exceptions provided are significant in that related requirements have been incorporated into IWE-2310, IWE-2320 and IWE-2330. These changes are discussed below.</p>	<p>See IWE-2310 and IWE-2330.</p>
IWE-2200	<p>Deleted paragraph (c) which provided allowances for the use of shop or field examinations in lieu of on site preservice examinations.</p> <p>Deleted paragraph (g) which required the condition of new coating to be documented in the preservice examination record.</p> <p>ASME XI generic change from repair and or replacement to repair/replacement activities.</p>	<p>The deletion of an allowance for an alternative examination ensures that proper preservice examinations are performed and documented.</p> <p>The deletion of the requirement to document the condition of "new" non pressure-retaining coatings in the preservice examination record provides for more efficient program implementation without affecting component integrity.</p> <p>Non significant.</p>	<p>N/A</p> <p>See IWE-2500.</p>

IWE CODE COMPARISON TABLE

Code Paragraph	Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition	NMP Statement of Significance and/or Basis for Use as an Alternative Examination	NMP Disposition/Comments
IWE-2300	Added new Subarticle IWE-2300 -"Visual Examination, Personnel Qualification and Responsible Individual"	The paragraphs within this subarticle are considered significant and contain requirements that either did not previously exist or that were contained in other areas. Placing these requirements within Article IWE-2000 further ensures proper "Examination and Inspection" of areas important to containment integrity and provides consistency with Subsections IWB, IWC and IWD. The specific paragraphs added are discussed below.	<ol style="list-style-type: none"> <li>1. "General Visual Examination" criteria are developed from VT-3 procedures that are used to examine ASME Class 1, 2, and 3 components,</li> <li>2. Pressure retaining bolting recording criteria are developed from the VT-1 procedure used for Class 1 bolting,</li> <li>3. Moisture barriers are examined for tears, cracks, or damage that permits moisture to intrude,</li> <li>4. "Detailed Visual Examination" criteria are developed from VT-1 and VT-3 procedures, and</li> <li>5. The containment visual examination procedure qualification requirement for lighting and illumination are similar to, and developed from, the procedures used for VT-1 and VT-3 examinations of ASME Class 1, 2, and 3 components.</li> <li>6. In applications where remote visual examination systems are to be used, those systems will be demonstrated to have a resolution capability at least equivalent to that attainable by direct visual examination. <ul style="list-style-type: none"> <li>• Containment visual examination procedures will be demonstrated to the authorized nuclear inservice inspector for capability to detect flaws and degradation levels defined within the procedure, and</li> <li>• The containment visual examination program is developed from the guidelines of SNT-TC-1A and ANSI/ASME NQA-1. Certified personnel will have "demonstrated skill, demonstrated knowledge, documented training, and documented experience required to properly perform the duties of a specific job."</li> </ul> </li> </ol>

IWE CODE COMPARISON TABLE

Code Paragraph	Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition	NMP Statement of Significance and/or Basis for Use as an Alternative Examination	NMP Disposition/Comments
IWE-2310	<p>Added new paragraph IWE-2310 - "Visual Examinations"- which a) states that the owner shall define requirements for visual examination of containment surfaces;</p> <p>(b) and (c) Defines general and detailed visual examinations; and</p> <p>(d) and (e) Provide the requirements for the conditions of areas affected by repair/replacement activities, painted or coated areas, non coated areas, pressure retaining materials and moisture barriers.</p>	<p>(a) Added requirements for the owner to define visual examination requirements provides for more efficient containment ISI program implementation by allowing examinations that may be more consistent with existing ISI, containment coating, maintenance rule and Appendix J programs;</p> <p>(b) and (c) The VT general examination is performed to indicate the general condition of the containment. The VT detailed examination is performed to determine the magnitude and extent of any deterioration or distress. Referring to visual examinations by new VT general and VT detailed terms does not adversely affect the integrity of the containment components examined;</p> <p>(d) and (e) Previously these examination requirements did not exist within the Article IWE-2000 but rather only in the acceptance criteria of Article IWE-3000. Adding these specific attributes here ensure proper containment examinations.</p>	<p>The general and detailed visual examinations are essentially equivalent to the VT-3 and VT-1 examinations in terms of assessing the structural integrity and potential for degradation to the containment system. The use of the general and detailed examination methods allows for the involvement of qualified engineering personnel with backgrounds in areas such as containment coatings, Maintenance Rule, Appendix J, containment design, materials engineering and containment degradation mechanisms. Procedures for inspection and qualification are reviewed by a NMP NDE Level III. Procedures must be demonstrated to the ANII for capability to detect flaws and degradation levels as defined in the inspection procedures.</p> <p>Containment visual examinations will be performed in accordance with procedures written specifically for the Containment ISI Program. Examiner qualification requirements for IWE will be VT-1 and VT-3 certification. Examiner qualification for IWL will be VT-1 and VT-3 with additional documented experience and/or training in concrete inspection. The containment visual examination procedure qualification requirements for lighting and resolution will be similar to, and developed from, the procedures used for VT-1 and VT-3 examinations of ASME Code Class 1, 2 and 3 components. As such containment visual examination procedures will be demonstrated to the ANII for capability to detect the flaws and degradation levels defined within the procedures. In applications where remote visual examination systems are to be used those systems will be demonstrated to have a resolution capability at least equivalent to that attainable by direct visual examination.</p> <p>The containment visual examinations will utilize an established acceptance criteria, that if exceeded, will require review by the responsible individual for disposition in accordance with applicable site programs.</p>
IWE-2320	<p>Added new paragraph IWE-2320 -"Responsible Individual"- which a) states the qualification requirements of the responsible individual and</p>	<p>(a) The details for the responsible individual qualification requirements were previously contained in the acceptance standards of IWE-3510.1.</p>	<p>See IWE-2310 and IWE-2330.</p>

**IWE CODE COMPARISON TABLE**

Code Paragraph	Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition	NMP Statement of Significance and/or Basis for Use as an Alternative Examination	NMP Disposition/Comments
	(b) Defines the responsibilities of the responsible individual for the development of plans and procedures; instruction, training and approval of visual examination personnel; performance or direction of visual examinations; evaluation of results and documenting results.	(b) The added detailed responsibilities for the responsible individual ensure proper performance of those related activities. Having an individual possessing the qualifications of (a) and performing the responsibilities of (b) increases plant quality and safety by assuring the reliable detection of conditions adverse to containment integrity.	
IWE-2330	<p>Added new paragraph IWE-2330 -"Personnel Qualification"- which a) states that the owner is responsible for defining the qualification requirements for personnel performing visual examinations and</p> <p>(b) Provides minimum qualification requirements that were previously contained in the acceptance criteria of IWE-3510.1.</p>	<p>(a) Adding requirements for the owner to define personnel qualification requirements provides for more efficient containment ISI program implementation by permitting personnel performing containment examinations to be qualified to written practices that are more consistent to those used for other NDE personnel.</p> <p>(b) Providing these details in the qualification requirements paragraph focuses the containment visual qualification on areas important to containment integrity.</p>	<p>Personnel performing containment visual examinations will be qualified to the existing qualification program. The visual examination program is based on the guidelines of ASNT SNT-TC-1A for VT-1 and VT-3 with additional requirements for IWL (concrete) experience and/or training. The SNT-TC-1A Recommended Practice for ASME Code Class 1, 2 and 3 ISI examinations does not specifically address visual examinations. The required involvement of the Responsible Individual assures testing and qualification reviews will be performed such that personnel receiving containment visual examination certification will have a "demonstrated skill, demonstrated knowledge, documented training, and documented experience required to properly perform the duties of a specific job as required by SNT-TC-1A. Procedures for inspection and qualification are reviewed by a NMP NDE Level III. Procedures must be demonstrated to the ANII for capability to detect flaws and degradation levels as defined in the inspection procedures.</p> <p>Personnel performing augmented ultrasonic examinations of containment surfaces will be qualified in accordance with written practices meeting the requirements of ASNT SNT-TC-1A and ASME Section XI (Edition and Addenda as applicable to the NMP ISI Program Plans).</p>
IWE-2400	No change	N/A	N/A
IWE-2410	No change	N/A	N/A
IWE-2411	No change	N/A	N/A
IWE-2412	Deleted a subparagraph discussing decreasing and extending inspection periods. Added a subparagraph detailing requirements for the scheduling of added welds or	The deleted subparagraph eliminates duplication with IWA-2400. The added requirements for the scheduling of added welds or components ensures that a representative sampling of	If items are added for any reason, the 1998 Edition of IWE-2412(b) provides requirements where none previously existed in the '92 Addenda of IWE. The administrative methodology for adding items to the IWE Program will be essentially the same as that for

**IWE CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
	components.	examinations is maintained.	adding items to the ASME Code Class 1, 2 or 3 ISI Program.
IWE-2420	Removed repaired areas as areas requiring reexaminations during the next successive inspection period.	Repaired areas that are likely to experience accelerated degradation and aging are already subject to augmented examinations per IWE-1241. Some repairs may be located in non augmented areas and may be necessary to correct physical damage caused by construction or craft activities. Not having to repeat examinations of these non augmented repaired areas provides for more efficient program implementation without adversely affecting component integrity.	Areas containing flaws or areas of degradation that have been accepted for continued service by engineering evaluation will be reexamined during the next inspection period. If the suspect area is unchanged during the next period examination, the area no longer requires augmented examination. This approach is consistent with the requirements for Class 2 components. In addition, even though an area is removed from augmented examination, it may be re-designated for augmented examination at any time during the interval if NMP determines that conditions that cause degradation still exist.
IWE-2430	Deleted the paragraph - "Additional Examinations" - which discussed adding examination items of the same category if flaws or areas of degradation are identified during an examination.	The changes to Table IWE-2500-1 eliminate several examination categories. The categories that remain all require 100% examination. Therefore no items are available for additional examinations.	N/A
IWE-2500	<p>Reworded the existing subparagraphs consistent with the previous paragraph changes and with Table IWE-2500-1 changes.</p> <p>Deleted the requirement to examine paint or coatings prior to removal.</p>	<p>The reworded subparagraphs add clarity and provide consistency within IWE.</p> <p>Not having to perform ASME examinations of non pressure retaining coatings prior to removal provides for more efficient containment ISI program implementation without adversely affecting the integrity of the pressure retaining base metal being exposed.</p>	<p>The current maintenance rule program identifies the peeling and cracking of paint as a degradation mechanism. An additional paragraph will be added to program procedures stating that when degradation exists on the containment liner the containment ISI program owner will be notified prior to repair activities and that repair/replacement of coatings falls under the jurisdiction of the ASME Section XI repair/replacement program. The repair/replacement responsible individual shall be notified prior to repair/replacement activities that include the removal and reapplication of coatings.</p>

**IWE CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
	<p>Replaced the requirement for one foot square grids in thickness measurements with a reference to Table IWE-2500-2.</p> <p>Added a reference to IWE-5000 for pressure tests.</p>	<p>The new Table IWE-2500-2 provides more detailed requirements for thickness measurement gridding and is discussed below.</p> <p>The added reference to IWE-5000 provides direction for the performance of pressure test.</p>	
IWE-2600	Deleted a sentence discussing compatibility of paint and coating systems and a requirement to examine the new paint.	The removal of this sentence addressing "new" non pressure retaining paint and coatings provides for more efficient containment ISI program implementation without adversely affecting component integrity.	The compatibility of paint and coating systems with the existing system, and the examination of newly applied coatings, is covered in the NMP nuclear coatings program.
IWE-3100	Removed the word nondestructive from the heading	Non significant.	N/A
IWE-3110	No change	N/A	N/A
IWE-3111	Replaced the reference to Table IWE-3410-1 with a reference to subarticle IWE-3500. Removed reference to paragraph IWE-3115.	Table IWE-3410-1 and paragraph IWE-3115 have been deleted and are discussed below. IWE-3500 adequately captures all of the information previously contained in the deleted table and paragraph.	N/A
IWE-3112	Replaced the reference to Table IWE-3410-1 with a reference to subarticle IWE-3500. ASME XI generic change from repair and or replacement to repair/replacement activities.	Non significant.	N/A
IWE-3114	Replaced the reference to Table IWE-3410-1 with a reference to subarticle IWE-3500. ASME XI generic change from repair and or replacement to repair/replacement activities.	Non significant.	N/A

**IWE CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
IWE-3115	Deleted subparagraph which addresses repair programs and evaluations being subject to review by authorities.	Non significant - there were no submittal or retention requirements changed by the deletion of the subparagraph.	N/A
IWE-3120	Removed the word nondestructive from the heading.	Non significant.	N/A
IWE-3121	Removed the word nondestructive and deleted references to IWE-3124 and IWE-3125 for the acceptance of flaws for continued service.	The removal of nondestructive is non significant. The referenced subparagraphs did not actually apply to the acceptance of flaws for continued service.	N/A
IWE-3122	Replaced the references to Table IWE-2500-1 and to IWE-3000 with a reference to subarticle IWE-3500. ASME XI generic change from repair and or replacement to repair/replacement activities. Reworded several sentences. Deleted sentence which addressed evaluations being subject to review by authorities.	Non significant - the changes are for clarity and to reconcile paragraph numbering. There were no submittal or retention requirements changed by the deletion of the sentence addressing evaluation reviews.	N/A
IWE-3124	Replaced the reference to Table IWE-3410-1 with a reference to subarticle IWE-3500. ASME XI generic change from repair and or replacement to repair/replacement activities.	Non significant.	N/A
IWE-3125	Deleted subparagraph which addressed repair programs and reexamination results being subject to review by authorities.	Non significant - there were no submittal or retention requirements changed by the deletion of the subparagraph.	For each flaw or area of degradation identified which exceeds acceptance standards, NMP will provide the following in the ISI Summary Report required by IWA-6000: (i) A description of each flaw or area, including the extent of degradation, and the condition that led to the degradation; (ii) The acceptability of each flaw or area and the need for additional examinations to verify that similar degradation does not exist in similar components, and; (iii) A description of necessary corrective actions.
IWE-3130	No change	N/A	N/A

**IWE CODE COMPARISON TABLE**

Code Paragraph	Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition	NMP Statement of Significance and/or Basis for Use as an Alternative Examination	NMP Disposition/Comments
IWE-3200	Added a statement to the end of the paragraph that states supplemental surface or volumetric examinations are required when specified by engineering evaluation.	The added statement clarifies requirements and eliminates potential duplication or contradiction of requirements in stating that the engineering evaluation requirements of IWE-3122 determine what and when supplemental examinations are required.	N/A
IWE-3410	Replaced the reference to Table IWE-3410-1 with a reference to subarticle IWE-3500.	Non significant	N/A
IWE-3430	No change	N/A	N/A
IWE-3500	No change	N/A	N/A
IWE-3510	<p>Reconciled acceptance standards with the IWE-2300 changes discussed above and the Table IWE-2500-1 changes discussed below by:</p> <p>Adding the requirement that the owner shall define acceptance criteria for visual examination of containment surfaces;</p> <p>Removed the wording for responsible individual and for personnel qualifications;</p> <p>Combined IWE-3510.2 and IWE-3510.3 and removed specific VT-1 and VT-3 examination attribute wording; and</p> <p>Incorporated IWE-3511; IWE-3513, IWE- 3514, and IWE-3515 with changes into IWE-3510.</p> <p>By the incorporation of IWE-3515 the acceptance standards for bolting were</p>	<p>Previously, examination requirements were contained in the acceptance standards of IWE-3500. This has been corrected by the addition of IWE-2300 as discussed above.</p> <p>(a) This change directly corresponds to the addition of IWE-2310(a) discussed above.</p> <p>This change directly corresponds to the addition of IWE-2330 discussed above.</p> <p>These changes directly correspond to the addition of IWE-2310(e)(1) and (2) discussed above.</p> <p>These changes correspond to the changes in the examination categories of Table IWE-2500-1 as discussed below and to the removal of examination requirements from the acceptance standards paragraphs per the addition of IWE-2310(e)(3) and (4) as discussed above.</p> <p>The resulting acceptance standards for bolting provide more practical containment ISI program</p>	See IWE-2310.

IWE CODE COMPARISON TABLE

Code Paragraph	Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition	NMP Statement of Significance and/or Basis for Use as an Alternative Examination	NMP Disposition/Comments
	changed from referencing material specs and torque or tension limits to conditions affecting leak tight or structural integrity.	implementation without adversely affecting containment leak tight or structural integrity.	
IWE-3511	Deleted subparagraph which addressed examination category E-B.	Examination Category E-B has been incorporated into Examination Category E-A per the changes to Table IWE-2500-1 discussed below.	See IWE-1231.
IWE-3512	<p>Renumbered subparagraph to IWE-3511. Reconciled acceptance standards with the IWE-2300 changes discussed above and the Table IWE-2500-1 changes discussed below.</p> <p>Added the requirement that the owner shall define acceptance criteria for visual examination of containment surfaces;</p> <p>Combined IWE-3512.2 and IWE-3512.3 with changes into IWE-3511.2 and removed specific VT-1 examination attribute wording; and</p> <p>Reworded ultrasonic examination paragraph.</p>	<p>The subparagraph was renumbered based on the deletion of previous IWE-3511 as discussed above. Previously examination requirements were contained in the acceptance standards of IWE-3500. This has been corrected by the addition of IWE-2300 as discussed above.</p> <p>This change directly corresponds to the addition of IWE-2310(a) discussed above.</p> <p>These changes directly correspond to the addition of IWE-2310(e)(1) and (2) discussed above and eliminate potential duplication or contradiction of requirements.</p> <p>This change is for clarity and is non-significant.</p>	<p>For Examination Category E-C, Containment Surfaces Requiring Augmented Examination, ultrasonic examinations of metallic liners of Class CC pressure retaining components that detect material loss in a local area exceeding 10% of the nominal wall thickness, or material loss in a local area projected to exceed 10% of the nominal wall thickness prior to the next examination, shall be accepted by engineering evaluation or corrected by repair/replacement activities. Supplemental examinations shall be performed when specified as a result of the engineering evaluation.</p>
IWE-3513 IWE-3514 IWE-3515	Deleted subparagraphs IWE-3513, IWE-3514, and IWE-3515 which addressed examination Categories E-D, E-F, and E-G respectively.	Examination Categories E-D, E-F and E-G have been incorporated into Examination Category E-A per the changes to Table IWE-2500-1 discussed below.	N/A

**IWE CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
IWE-4100	No change	N/A	N/A
IWE-5200	No change	N/A	N/A
IWE-5210	No change	N/A	N/A
IWE-5220	ASME XI generic change from repair and or replacement to repair/replacement activities.	Non significant.	N/A
IWE-5221	ASME XI generic change from repair and or replacement to repair/replacement activities. Removed the quotation of 10 CFR 50 Appendix J paragraph IV.A.	Non significant - the requirement to meet the requirements of Appendix J paragraph referenced is not affected by removing the quoted App J paragraph.	N/A
IWE-5222	ASME XI generic change from repair and or replacement to repair/replacement activities.	Non significant.	N/A
IWE-5240	Replaced a reference to IWA-5240 with requirements to perform detailed visual examination of repair/replacement areas during pressure tests.	The addition of specific IWE examination requirements during pressure testing in lieu of referencing IWA general requirements focuses requirements on issues specific to containment integrity and therefore provides added assurance of the integrity of repaired/replaced areas.	N/A
IWE-5250	Changed Corrective Measures to Corrective Action in the heading. ASME XI generic change from repair and or replacement to repair/replacement activities.	Non significant.	N/A
IWE-7100	No change	N/A	N/A
Table IWE-2411-1	No change	N/A	N/A
Table IWE-2412-1	Replaced the separate entries for 1 <sup>st</sup> and successive intervals with one entry for All intervals.	Non significant - The previous requirements for the 1 <sup>st</sup> and successive intervals were identical. Therefore, combining the entries does not affect any requirements.	N/A

IWE CODE COMPARISON TABLE

Code Paragraph	Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition	NMP Statement of Significance and/or Basis for Use as an Alternative Examination	NMP Disposition/Comments
<p>Table IWE-2500-1</p> <p>Examination Category E-A</p>	<p>Revised all examination categories.</p> <p>Item E1.11: Revised frequency of examination from "prior to each type A test" to "100% during each period".</p> <p>Item E1.12: Redesignated item from "accessible surface areas" to "wetted surfaces of submerged areas". Replaced examination method VT-3 with general visual.</p> <p>Item E1.20: Added BWR to item description. Replaced examination method VT-3 with general visual.</p> <p>Item E1.30: Added item for moisture barriers with a general VT required each period.</p> <p>All items no.'s - Replaced reference to IWE-3510 for examination requirements with IWE-2310.</p> <p>Notes - Revised to specifically include welds and bolting as part of the pressure retaining boundary requiring examination.</p>	<p>Removing the requirement to coordinate examinations with Type A tests allows for more efficient containment ISI program implementation without adversely affecting containment integrity.</p> <p>Replacing the accessible surface area designation (which is included in E1.11) with wetted surface areas (which were previously included in E1.12 footnote 4) does not eliminate or reduce any required examination areas. Requiring a general VT in lieu of a VT-3 eliminates the more detailed VT of areas with satisfactory general VT results. The performance of the general VT will identify any areas of deterioration or distress. Any areas identified will then be subject to a VT detailed examination to determine the magnitude and extent of those conditions. The general VT therefore, allows for more efficient containment ISI program implementation without adversely affecting containment integrity.</p> <p>BWR was added to clarify that this item only applies to BWR plants and change from VT-3 to general visual is as described above for Item E1.12.</p> <p>Moisture barriers were previously included in Examination Category E-D with a VT-3 required each interval. Examining moisture barriers more frequently will assure reliable detection of conditions adverse to containment quality.</p> <p>Non significant - Previously some examination requirements were contained in IWE-3500. They now exist in IWE-2300 as discussed above.</p> <p>Welds and bolting were previously included in Examination Categories E-B, E-F and E-G. Including these items in the examination category for the containment pressure retaining boundary provides for</p>	<p>See IWE-2300.</p>

IWE CODE COMPARISON TABLE

Code Paragraph	Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition	NMP Statement of Significance and/or Basis for Use as an Alternative Examination	NMP Disposition/Comments
		more efficient program implementation without adversely affecting component integrity.	
Table IWE-2500-1 Examination Category E-B	Deleted examination category which addressed pressure retaining welds.	Pressure retaining welds are now included in Examination Category E-A as addressed above.	See IWE-1231.
Table IWE-2500-1 Examination Category E-C	<p>Item E4.11: Replaced examination method VT-1 with detailed visual.</p> <p>Item E4.12: Added grid line intersections to description of parts examined. Changed examination method from volumetric to ultrasonic thickness.</p> <p>All item no.'s - Added examination requirement paragraph number references. Updated acceptance standard references.</p> <p>Notes - Changed note 2 from requiring augmented examination until an area remains unchanged for three consecutive inspection periods to the next inspection period. Deleted note 3 which discussed inspection deferrals.</p>	<p>Referring to the visual examination by the VT detailed term does not adversely affect the integrity of the containment components examined.</p> <p>The added wording clarifies inspection requirements and ensures repeatability in the location of subsequent thickness measurement points.</p> <p>Previously no references existed for examination requirements. These requirements have been added to IWE-2300 and -2500 as discussed above. Adding new references and updating paragraph numbers ensure proper requirements are applied to examinations.</p> <p>Three inspection periods cover a ten year interval. Performing augmented examinations for at least two periods while continuing general visual examinations each period provides for more efficient program implementation without adversely affecting component integrity. Deletion of note 3 is non significant.</p>	See IWE-2310.
Table IWE-2500-1 Examination Category E-D	Deleted examination category which addressed seals, gaskets and moisture barriers.	Moisture barriers have been included in Examination Category E-A as addressed above. Seals and gaskets previously required examination once per an interval with effectively an acceptance criteria of leak tightness. Leak tight integrity is verified during each 10CFR50 App. J leak test. Removing these inspection items provides for more efficient program	Moisture barriers will be examined by General Visual examination. Moisture barriers will be examined for tears, cracks or other damage that permits intrusion of moisture through the barrier.

IWE CODE COMPARISON TABLE

Code Paragraph	Changes between IWE 1992 Edition/ 1992 Addenda and the 1998 Edition	NMP Statement of Significance and/or Basis for Use as an Alternative Examination	NMP Disposition/Comments
		implementation without adversely affecting component integrity.	
Table IWE-2500-1 Examination Category E-F	Deleted examination category which addressed dissimilar metal welds.	Dissimilar metal welds are now included in Examination Category E-A as addressed above.	See IWE-1231.
Table IWE-2500-1 Examination Category E-G	Deleted examination category which addressed pressure retaining bolting.	Pressure retaining bolting is now included in Examination Category E-A as addressed above.	Pressure retaining bolting will be examined by General Visual examination. The recording criteria will be developed from the VT-1 procedure that is used for ASME Code Class 1 bolting. This includes examining for: nonaxial flaws greater than 1/4 inches in length; axial flaws greater than 1 inch in length; more than one deformed or sheared thread in the zone of thread engagement of bolts, studs or nuts; localized general corrosion that exceeds the thread root depth; bending, twisting or deformation of bolts or studs to the extent that assembly or disassembly is impaired; missing or loose bolts, studs, nuts or washers; fractured bolts, studs or nuts; degradation of protective coatings on bolting surfaces.
Table IWE-2500-1 Examination Category E-P	Deleted examination category which addressed 10CFR50 Appendix J testing for all pressure retaining components.	Appendix J testing is mandated by plant technical specifications. Removing this duplicate requirement from IWE does not adversely affect component integrity.	N/A
Table IWE-2500-2	Added new Table IWE-2500-2 - Ultrasonic Thickness Measurements For Augmented Examinations - which details gridding and thickness measurement requirements.	The new requirements provide for consistency and repeatability in obtaining thickness measurements and thus assure the reliable detection of conditions adverse to containment integrity.	N/A
Table IWE-3410-1	Deleted table.	Non significant - the contents of the previous table are adequately addressed in IWE-3500.	N/A

**Attachment B**  
**Nine Mile Point Unit 2**  
**ASME Section XI**  
**IWL Code Comparison Table**

**IWL CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWL 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
IWL-1100	ASME Section XI generic wording change from repair, replacement and or modification terms to repair/replacement activities.	Non significant.	N/A
IWL-1200	No change	N/A	N/A
IWL-1210	No change	N/A	N/A
IWL-1220	No change	N/A	N/A
IWL-2100	<p>Changed "Inspection" to "General" in heading.</p> <p>(a) Provided reference to IWA-2000 with exceptions from IWA-2210 and IWA-2300 for visual examinations and for qualification of visual examination personnel.</p>	<p>Non significant.</p> <p>(a) The additional general requirements invoked by reference to IWA-2000 where none were referenced previously further assure containment integrity. The exceptions from IWA-2210 and IWA-2300 are significant in that the related previous requirements have been changed and incorporated into IWL-2310. The IWL-2310 changes are addressed below.</p>	See IWL-2310.
IWL-2200	No change	N/A	N/A
IWL-2210	No change	N/A	N/A
IWL-2220	No change	N/A	IWL-2220.2 is not applicable to NMP containments.
IWL-2230	ASME Section XI generic change from repair and or replacement to repair/replacement activities.	Non significant.	N/A
IWL-2300	No change	N/A	N/A

**IWL CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWL 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
IWL-2310	<p>(a) Replaced VT-1C and VT-3C visual examination terminology with new VT general and VT detailed examination terms.</p> <p>(b) Replaced reference to IWA-2210 for illumination levels, examination distances and resolution requirements with specific examination attributes.</p> <p>(c) Replaced reference to IWA-2300 for concrete examination personnel qualification requirements with provisions for the owner to define the examination personnel qualification requirements.</p>	<p>These changes are related to the IWL-2100 changes addressed above and are considered significant.</p> <p>(a) Containment examinations are intended to identify indications of significant conditions over large areas. The VT general examination is performed to indicate the general structural condition for determining concrete deterioration and distress. The VT detailed examination is performed to determine the magnitude and extent of the deterioration.</p> <p>(b) Direct visual examination is not practical on all areas of containment surfaces. The previous VT requirements precluded the ability to demonstrate that remote visual examination was equivalent to direct visual examination. Providing specific examination attributes in IWL as opposed to referencing the generic requirements of IWA focuses the visual examination on areas important to the verification of containment integrity.</p> <p>(c) Invoking requirements comparable to CP-189 would complicate containment ISI program development without a compensating increase in plant quality or safety. Requiring an owner defined program provides for more efficient program implementation by permitting personnel performing containment examinations to be qualified to written practices that are more consistent to those used for other NDE personnel.</p>	<p>Containment visual examinations will be performed in accordance with procedures written specifically for the Containment ISI Program. Examiner qualification requirements for IWE will be VT-1 and VT-3 certification. Examiner qualification for IWL will be VT-1 and VT-3 with additional documented experience and/or training in concrete inspection. However, the containment visual examination procedure qualification requirements for lighting and resolution are similar to, and developed from, the procedures used for VT-1 and VT-3 examinations of ASME Code Class 1, 2 and 3 components. As such containment visual examination procedures will be demonstrated to the ANII for capability to detect the flaws and degradation levels defined within the procedures. In applications where remote visual examination systems are to be used, those systems will be demonstrated to have a resolution capability at least equivalent to that attainable by direct visual examination.</p>
IWL-2320	<p>Changed wording slightly.</p> <p>Made the ASME Section XI generic change from repair and or replacement to repair/replacement activities.</p>	<p>non significant - clarifies wording.</p> <p>non significant.</p>	N/A

**IWL CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWL 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
	Added a responsibility for the Responsible Engineer to review certain pressure test procedures.	The added pressure test responsibilities for the Responsible Engineer ensures proper performance of pressure testing activities.	
IWL-2400	No change	N/A	N/A
IWL-2410	No change	N/A	N/A
IWL-2420	No change	N/A	IWL-2420 is not applicable to NMP containments.
IWL-2421	Changed wording for sites with more than one plant. Changed frequencies by adding "and every 10 years thereafter".	Non significant - clarifies wording and accommodates plant life extensions.	IWL-2421 is not applicable to NMP containments.
IWL-2500	No change	N/A	N/A
IWL-2510	Changed heading.  Changed wording consistent with the changes to IWL-2310 addressed above.  Added two subparagraphs providing more detailed examination requirements for tendon anchorage areas.	Non significant.  Non significant.  The added details ensure proper tendon anchorage area examinations	IWL-2520 is not applicable to NMP containments.
IWL-2520	No change	N/A	IWL-2520 is not applicable to NMP containments.
IWL-2521	No change	N/A	IWL-2521 is not applicable to NMP containments.
IWL-2522	Changed the heading and added a subparagraph to address tendon elongation.	The added details ensure proper tendon examinations	IWL-2522 is not applicable to NMP containments.
IWL-2523	No change	N/A	IWL-2523 is not applicable to NMP containments.
IWL-2524	Changed wording consistent with the changes to IWL-2310 addressed above.	Non significant.	IWL-2524 is not applicable to NMP containments.
IWL-2525	Changed wording for sample analysis.	Non significant.	IWL-2525 is not applicable to NMP containments.
IWL-2526	Added a subparagraph addressing replacement of corrosion protection medium.	The added details ensure tendon integrity. However, these changes do not apply to NMP.	IWL-2526 is not applicable to NMP containments.

**IWL CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWL 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
IWL-3100	No change	N/A	N/A
IWL-3110	No change	N/A	N/A
IWL-3111	ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant.	N/A
IWL-3112	No change	N/A	N/A
IWL-3113	ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant.	N/A
IWL-3120	No change	Non significant.	IWL-3120 is not applicable to NMP containments.
IWL-3200	No change	N/A	N/A
IWL-3200	No change	N/A	N/A
IWL-3210	Removed the word concrete from the heading.	Non significant.	N/A
IWL-3211	Added tendon end and anchorage areas to the scope of the subsection and added corrosion protection medium leakage and end cap deformation as acceptance criteria attributes.  ASME Section XI generic change from repair and or replacement to repair/replacement activities.	Non significant.	IWL-3211 is not applicable to NMP containments.
IWL-3212	No change	N/A	N/A
IWL-3213	ASME Section XI generic change from repair and or replacement to repair/replacement activities.	Non significant.	N/A
IWL-3220	No change	N/A	IWL-3220 is not applicable to NMP containments.
IWL-3221	Added acceptance criteria attributes for tendon elongation, free water content	The added details ensure proper tendon examinations.	IWL-3221 is not applicable to NMP containments.

**IWL CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWL 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
	and corrosion protection medium reduction.		
IWL-3222	No change	N/A	IWL-3222 is not applicable to NMP containments.
IWL-3223	ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant.	IWL-3223 is not applicable to NMP containments.
IWL-3300	No change	N/A	N/A
IWL-3310	Added applicability for other plants at the same site.  ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant.  Non significant.	N/A
IWL-3320	Deleted paragraph which addressed engineering evaluations being subject to review by authorities.	Non significant - there were no submittal or retention requirements changed by the deletion of the subparagraph.	N/A
IWL-4000	ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant - all related repair and replacement requirements have been consolidated into IWL-4000.	N/A
IWL-4100	No change	N/A	N/A
IWL-4110	Exempted grease cups and installation screws from the scope.  ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant - the exempted items are non structural items.  Non significant.	IWL-4110 (b) is not applicable to NMP containments  N/A
IWL-4200	ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant.	N/A

**IWL CODE COMPARISON TABLE**

Code Paragraph	Changes between IWL 1992 Edition/ 1992 Addenda and the 1998 Edition	NMP Statement of Significance and/or Basis for Use as an Alternative Examination	NMP Disposition/Comments
	Added a new paragraph IWL-4210 to require Repair/Replacement Plans to be developed under the direction of a Responsible Engineer.	The added requirements ensure proper repair/replacement plan development.	N/A
IWL-4210	<p>Changed paragraph number to IWL-4220, removed the word repair from heading and changed referenced paragraph numbers consistent with the addition of a new paragraph IWL-4210 above.</p> <p>Changed wording consistent with the changes to IWL-2310 addressed above.</p> <p>ASME Section XI generic change from repair and or replacement to replace/replacement activities.</p> <p>Changed repair material to new material in several places.</p>	<p>Non significant.</p> <p>Non significant.</p> <p>Non significant.</p> <p>Non significant.</p>	N/A
IWL-4220	Changed paragraph number to IWL-4230.	Non significant.	N/A
IWL-4230	<p>Changed paragraph number to IWL-4240 and clarified by removing the word repair.</p> <p>ASME Section XI generic change from repair and or replacement to replace/replacement activities.</p> <p>Added detailed requirements for the contents of a repair/replacement plan.</p>	<p>Non significant.</p> <p>Non significant.</p> <p>The added detailed requirements ensure proper repair/replacement plan development for post-tensioning systems.</p>	IWL-4230 is not applicable to NMP containments
	ASME Section XI generic		

**IWL CODE COMPARISON TABLE**

<b>Code Paragraph</b>	<b>Changes between IWL 1992 Edition/ 1992 Addenda and the 1998 Edition</b>	<b>NMP Statement of Significance and/or Basis for Use as an Alternative Examination</b>	<b>NMP Disposition/Comments</b>
IWL-4300	ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant.	N/A
IWL-5100	ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant.	N/A
IWL-5200	No change	N/A	N/A
IWL-5210	ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant.	
IWL- 5220	No change	N/A	N/A
IWL-5230	Changed wording by removing some specific IWE related requirements while maintaining the reference to IWE-5000.	Non significant - the removed wording was IWE specific and is contained in IWE-5000.	N/A
IWL-5240	Deleted paragraph which addressed the scheduling of pressure tests.	Non significant - the schedule of pressure tests are contained in IWE-5000 as referenced in IWL-5230.	N/A
IWL-5250	<p>Changed wording regarding the role of the Responsible Engineer in pressure test activities.</p> <p>ASME Section XI generic change from repair and or replacement to replace/replacement activities.</p> <p>Changed VT terminology consistent with the changes to IWL-2310 addressed above.</p>	<p>The clarified role of the Responsible Engineer ensures proper pressure test procedures and examinations.</p> <p>Non significant.</p> <p>The VT terminology changes are discussed in IWL-2310 above.</p>	N/A
IWL-5260	Changed heading from Corrective Measures to Correction Action.	Non significant.	N/A

**IWL CODE COMPARISON TABLE**

Code Paragraph	Changes between IWL 1992 Edition/ 1992 Addenda and the 1998 Edition	NMP Statement of Significance and/or Basis for Use as an Alternative Examination	NMP Disposition/Comments
	ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant.	
IWL-5300	ASME Section XI generic change from repair and or replacement to replace/replacement activities.	Non significant.	N/A
IWL-7000	Deleted Article including IWL-7000, IWL-7110, IWL-7120 consistent with the IWL-4000 changes above.	Non significant - all related repair and replacement requirements have been incorporated into IWL-4000.	N/A
Table IWL-2500-1	<p>Changed Item L1.11 from all areas to all accessible areas.</p> <p>Changed VT exam method terminology consistent with the paragraph IWL-2310 changes above.</p>	<p>Changing Item L1.11 provides for more practical examination implementation than previous requirements.</p> <p>The VT terminology changes are discussed in IWL-2310 above.</p>	In the 1992 Edition and Addenda, Item L1.12, Suspect Areas, requires VT-1C visual examination. In the 1998 Edition, this item requires general visual examination. This is an inadvertent change. The 1999 Addenda of the Code will correct it to be "detailed visual" examination. NMP will perform detailed visual examination of suspect areas as intended by the 1998 Edition of the Code.
Table IWL-2521-1	Changed inspection periods to state every 5 <sup>th</sup> year in lieu of listing out each year and changed note 2 for having to meet acceptance criteria from "each of the earlier inspections" to "for the last 3 inspections".	Non significant - accommodates plant life extensions for tendon examinations.	Table IWL-2521-1 is not applicable to NMP containments.
Table IWL-2525-1	Added optional test methods for corrosion protection medium analysis.	Non significant - additional test method options provides for more practical test implementation.	Table IWL-2521-1 is not applicable to NMP containments.