

September 20, 2005

MEMORANDUM TO: Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

FROM: Eugene Imbro, Branch Chief */RA/*
Mechanical & Civil Engineering Branch
Division of Engineering
Office of Nuclear Reactor Regulation

SUBJECT: ALTERNATE ASME CODE EDITIONS AND ADDENDA TO THOSE
CITED IN THE GALL REPORT

In response to your memorandum dated April 15, 2005, the staff of the Division of Engineering (DE) has worked closely with the staff from the License Renewal and Environmental Impacts Program (RLEP), Section B. DE and RLEP have reviewed the changes to Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) which have been previously endorsed in NRC rulemakings to revise Title 10 of the Code of Federal Regulations (10 CFR) Section 50.55a with respect to their impact on issues related to 10 CFR Part 54 and the Generic Aging Lessons Learned (GALL) Report, Aging Management Programs (AMPs). Specifically, the impact on the following GALL AMPs:

- XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD,"
- XI.S1, "ASME Section XI, Subsection IWE,"
- XI.S2, "ASME Section XI, Subsection IWL," and,
- XI.S3, "ASME Section XI, Subsection IWF."

The DE staff developed a process to facilitate the review by cognizant RLEP staff of changes which had been incorporated into the 1997 Addenda through 2003 Addenda of ASME Code, Section XI. The DE staff provided the lists of changes to Section XI of the ASME Code given in Attachments 1 for RLEP staff review. RLEP staff recommended that additional documentation be developed to clarify the staff's basis for accepting a small subset of these changes for the purposes of meeting 10 CFR Part 54 and GALL AMP XI.M1 requirements. Attachment 2 to

Attachments: As Stated

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this memorandum provides the additional documentation that was developed by DE and RLEP staff to address the subset of changes that were identified as needing additional clarification. This information has been developed to further support the conclusions that were previously drawn during the two rulemakings which modified 10 CFR 50.55a to endorse the 1997 Addenda and 1998 Edition through 2000 Addenda and 2001 Edition through 2003 Addenda of ASME Code, Section XI.

Based on the information provided in the attachments to this memorandum, DE and RLEP staff have concluded that both the 1997 and 1998 Edition through 2000 Addenda and 2001 Edition through 2003 Addenda of ASME Code, Section XI can be referenced in the AMPs noted above in the GALL Report, Revision 1.

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Based on the information provided in the attachments to this memorandum, DE and RLEP staff have concluded that both the 1997 and 1998 Edition through 2000 Addenda and 2001 Edition through 2003 Addenda of ASME Code, Section XI can be referenced in the AMPs noted above in the GALL Report, Revision 1.

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ASME Code 1997 Addenda Changes

1997 Addenda	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-224	IWA-1200	Jurisdiction, Construction Code vs. Section XI, for administrative control of Repair/Replacement (R/R) activities	No	No R/R activities	No, Repair/Replacement activities have no impact to 10 CFR 54.
BC96-265	Table IWA-1600-1, IWA-2121(b), IWA-2120(c)	Qualification for ANI, Inspectors, Supervisors	No	No	No, personnel qualification requirements do not impact aging management.
BC97-094	IWA-1600-1, IWL-2100, IWL-2310, IWL-2320, IWL-2410(c), IWL-2421, IWL-2510, IWL-2521(a), Table IWL-2500-1, Table IWL-2521-1, IWL-2524.1, IWL-2525.2(a), Table IWL-2525-1, IWL-3310, IWL-3320, IWL-4220(c), IWL-5230, IWL-5240, IWL-5250, IWL-5260.	Change to personnel qualification and examination requirements for Class CC containments for sites with more than 2 units. CC N-603, CC N-630, CC N-605.	Modification in 10CFR50.55a to incorporate CC N-603 and CC N-630 by reference (RG1.147). The "owner-defined" personnel qualification provisions in IWL-2310(a) are not approved for use.	No	It is acceptable with 50.55a(b)(2)(viii)(F) modification/limitation. Table IWL-2500-1 incorporated CC N-630 with error in item L1.12 and the error was corrected in 2000 addenda.

1997 Addenda	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-216	IWA-2223, IWA-2233, IV-1100	Surface examinations corrects errors made in 1996 rev for scope of Appendix IV and added a performance demonstration requirement for eddy current as a surface examination technique	No	No	No, this change provided additional requirements for performance demonstration of eddy current systems.
BC97-206	IWA-2314	Personnel recertification 3 years to 5 years	Modification in 50.55a (b)(2)(xviii)(A)	Modification in 10CFR makes this acceptable since there is no change	No, 10 CFR 50.55a(b)(2)(xviii)(A) specified 3 years recertification requirement.
BC97-209	IWA-4110(a), (b), (d), IWA-4221(a), (b), (c)	Construction code Repair Replacement (R/R)	No	No R/R activities	No, Repair/Replacement activities do not impact the aging management.
BC96-268	IWA-4131.2(e)	Small items R/R	No	No R/R activities	No, this change specified that owner shall documentation requirement for its repair/replacement activities.
BC96-339	IWA-4133, Appendix IX	N-523-2 Mechanical clamping devices (leakage) (temporary repair)	No	No R/R activities	No, temporary repair component are not in the scope of aging management. Therefore, no impact to 10 CFR54.

1997 Addenda	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC96-338	IWA-4143	NPT stamped	No	No Qualification for replacement parts	No, qualification for replacement parts related to owner's responsibilities and QA program has no impact to 10 CFR 54.
BC97-218	IWA-4150(c)	R/R design requirements	No	No R/R activities	No, any change related to Repair/replacement plan has no impact to 10 CFR 54.
BC95-353	IWA-4311(d)	R/R documentation	No	No R/R activities	No, documentation requirement has no impact to 10 CFR 54.
BC96-180	IWA-4410, IWA-4420, IWA-4421, IWA-4422, IWA-4430, IWA- 4520(b), (c)	Defect Removal	No	No R/R activities	No, Repair/Replacement activities have no impact to 10 CFR 54.
BC96-332	IWA-4421(a), IWA- 4422.1, IWA-4460, IWA-4461.3, IWA- 4461.4, Table IWA- 4461.1-1, IWA-4462, IWA-4611.2, IWA- 4611.2.1, IWA- 4611.2.2, IWA-4611.3	The change adds provisions for metal removal using electrical discharge machining.	No	No	No, Repair/Replacement activities have no impact to 10 CFR 54.
BC96-178	IWA-4440	Transfer of welding procedure qualification records between owners. N-573	No	No R/R activities	No, Repair/Replacement activities have no impact to 10 CFR 54.

1997 Addenda	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-217	IWA-4623.1(a), IWA-4633.1(b), IWA-4633.1(c), IWA-4643.1(c), IWA-4643.1(d), IWA-4651(b), IWA-4651(c)(1)	Temper bead welding	No	No R/R activities	No, Repair/Replacement activities have no impact to 10 CFR 54.
BC96-259	IWA-4661(c), IWA-4662(a), (b), Table IWA-4662.1-1, IWA-4663.2, Fig. IWA-4663.1-1, IWA-4664, IWA-4664(c)(3), (4), IWA-4665	Underwater welding	Yes	No R/R activities	No, Repair/Replacement activities have no impact to 10 CFR 54.
BC97-097	IWA-4712.2(b)	Heat exchanger tube plugging	No	No R/R activities	No, Repair/Replacement activities have no impact to 10 CFR 54.
BC97-098	IWA-4723.2.1(a)(1), IWA-4723.2.2	Fusion Welding Procedure qualification	No	No R/R activities	No, Repair/Replacement activities have no impact to 10 CFR 54.

1997 Addenda	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-095	IWA-5110(c)	System Pressure test incorporates CC N-522 Containment Penetration Piping (acceptable in RG 1.147). Piping that penetrates a containment vessel is exempt from periodic system pressure test when the piping and isolation valves perform a containment function and the balance of the piping system is outside the scope of this Division.	No	No	No, this item related to Class 2 piping and isolation valves and the GALL report AMR components do not credit ASME Sect. XI as aging management program for Class 2 & 3 piping. The GALL Report credits other aging management program to manage CL 2 & 3 piping. Therefore, this change has no impact to 10 CFR 54.
BC96-336	Table IWB-2500-1, Category B-K, Figs. IWB-2500-13 and -14	Examination of integrally welded attachments. Incorporates CC N-323-1 (CC unacceptable)	Yes, 50.55a (b)(2)(xxi)(C)	Potential	No, 50.55a(b)(2)(xxi)(C) specified that 1995 addenda must be applied. Therefore, there is no change and no impact to 10 CFR 54.
BC96-264	Table IWC-2500-1, Category C-H All pressure retaining components Table IWD-2500-1, Category D-B Systems in support of ECC, Containment Heat removal, atmosphere cleanup and RHR	Clarification of the pressure testing requirements for Class 2 and 3 storage tanks	No	Yes	No impact to 10 CFR 54. Class 2 and 3 storage tanks do not credit ASME Sect. XI as aging management program as indicated in the GALL Report. Class 2 and 3 storage tanks credit other AMPs.

1997 Addenda	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-223	IWC-3125(b)	Editorial change IWC-3122.4 changed to IWC-3122.3	No	No submit analysis to regulatory authority	Editorial change has no impact to 10 CFR 54.
BC96-337	IWF-3112.3, IWF- 3122.3 Examination Evaluation	Clarification that supports that are analysed or tested for continued service do not require re-examination as if it were repaired	No	Acceptable, since the support is examined and then evaluated. To examine it after the evaluation is not necessary since no changes were made to the support.	The change has no impact to 10 CFR 54. Acceptable, since the support is examined and then evaluated for service. To examine it after the evaluation is not necessary since no changes were made to the support.
BC97-099	Appendix IV, Supplement 1 Eddy current examination paragraph 3.3.1.1(a)	Editorial change “measured from a single flaw” to “compared to a single notch”	No	No editorial	Editorial change has no impact to 10 CFR 54.
BC96-263	Appendix VIII-4110	Search unit Characterization	No	No	Procedure modification for UT instruments has no impact to 10 CFR 54.

1997 Addenda	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-215	A-4300(b)(1), A-4300(b)(2)	Fatigue Crack growth rates corrects a nonconservative procedure	No	No	Evaluation procedure change has no impact to 10 CFR 54.
BC96-269	Fig. J-1000-1, J-2000(b)(7)	Repair/Replacement activities	No	No	The change related to jurisdiction of the repair/repalcement and maintenance. This change has no impact to 10 CFR 54.
Errata	IWA-4622.2(d), IWL-3113, IWL-3213, Table L-3210-1 Note 3	Editorial change with no effect on the Code Provisions	No	No	None. Editorial Change

ASME Code Section XI 1998 Edition Changes

1998 Edition	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-292	Table IWA-1600-1, IWA-2310, IWA-2312(c), IWA-2312(d), IWA-2313, IWA-2316, IWA-2317, IWA-2350, Appendix VI, Appendix VI Supplement 1	Qualification and Certification of Visual examination personnel Incorporates code case N-546, qual for VT-2 exam personnel	Yes 10 CFR 50.55a (b)(2)(xviii)(B) and (C)	Potential	The changes have no impact to 10 CFR 54. 10 CFR 50.55a (b)(2)(xviii)(B) & (C) modifications provide adequate requirements for the personnel qualification.

1998 Edition	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-297	IWA-2210	Visual Examinations (lighting)	No	No	No. The change is for clarification for battery powered light. The requirements as indicated in Table IWA-2210-1 have not been changed.
BC97-294	IWA-2240	Alternative Examinations CC N-587 ... user considered equivalent exams	Yes 50.55a(b)(2)(xix)	No, the change relates to repair and replacement	The change has no impact to 10 CFR 54. 55.55a(b)(2)(xix) specified that The substitute of alternative examination methods, or newly developed techniques in 97 addenda of IWA-2240 must be applied. 50.55a also states that 98 edition through the latest edition and addenda are not approved for use. The change relates to repair and replacement
BC97-306	IWA-5221	System Leakage test boundary. Editorial revision changes IWD-5240(d) to IWD-5240	No	No	No impact to 10 CFR 54. Editorial revision change has no impact to 10 CFR 54.

1998 Edition	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-430	Table IWB-2412-1, Table IWC-2412-1, IWD-2412-1, IWE-2412-1, Table IWF-2410-2	Required Percentages of Examinations per period. Incorporates CC N-598	No	Yes, this change does not change the required number of examinations just allows flexibility on when examinations are performed during the interval.	The change has no impact to 10 CFR 54. The change does not reduce the required number of examinations just allows a little flexibility on when examinations are performed during the interval.
BC97-296	IWC-5230, IWD-5222	Incorporates CC N-534 allows nominal operating pressure in lieu of 1.1 or 1.25 times the design pressure.	No	Yes	No impact. Test pressure for a pneumatic test shall be the normal operating pressure as indicated in Code Case N-534. Staff has reviewed and accepted this position.
BC97-445	IWD-1220	Components exempt from examinations - the revision clarifies that the exemption in the paragraph applies to the VT-1 visual exam requirements of IWD-2500	No	No	No Impact to 10 CFR 54. This item relates to Class 3 component welds. The GALL report does not credit ASME Sect. XI program to manage Class 3 component welds. Therefore, the change has no impact to 10 CFR 54.

1998 Edition	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-210	IWE-1200(a), IWE-1231, IWE-1232(a), IWE-1241(c), IWE-1242, IWE-2100, IWE-2200(c), IWE-2200(d), IWE-2200(e), IWE-2200(f), IWE-2200(g), IWE-2300, IWE-2310, IWE-2320, IWE-2330, IWE-2420(b), IWE-2420(c), IWE-2430, IWE-2500, IWE-2600(b), Table IWE-2500-1, Table IWE-2500-2, Fig IWE-2500-1, Fig IWE-2500-2, IWE-3100, IWE-3111, IWE-3112(a), IWE-3112(b), IWE-3114, IWE-3115, IWE-3120, IWE-3121, IWE-3122.1, IWE-3122.2, IWE-3122.3(a), IWE-3122.3(c), IWE-3124, IWE-3125, IWE-3200, IWE-3410, Table IWE-3410-1, IWE-3510, IWE-3511.	Revision adds new requirements for general and detailed visual examination. CC -N590, CC N-601, CC N-604, CC N-605.	Yes. 10CFR50.55a to incorporate CC N-601, CC N-604, and CC N-605 by reference (RG1.147). The "owner-defined" visual examination and personnel qualification provisions in IWE-2310(a) and IWE-2330(a) for VT-1 and VT-3 examinations are not approved for use.	None	It is acceptable with the modification/limitation in 50.55a(b)(2)(ix)(F).

1998 Edition	Code subsections	Brief Description	Modification/ Limitation	Effect on GALL	Does change impact 10 CFR 54 ?
BC97-446	IWL-2100	ANI is not required to meet the qualification requirements of both ASME N626.1 and ASME N626.2 to perform inspections of Class CC concrete components.	No	No	No impact
BC97-303	IWL-2200	Revision clarifies that the preservice examination of unbonded post-tensioning systems is to be performed in accordance with the provisions of IWL-2220 rather than IWL-2500	No	No	No impact
BC97-427	Nonmandatory Appendix M	Mathematical modeling for UT examinations of pressure retaining components	No	No	No impact to 10 CFR 54. This item relates to criteria for validation of mathematical models used to predict equivalence in examination coverage and misorientation angle.
BC97-298	Appendix G	Flaw orientation	No	No	No impact to 10 CFR 54. This item relates to evaluation procedure. Evaluation procedure modification has no impact to 10 CFR 54.
Errata	Table IWB-2500-1	Editorial Change	No	No	No. Editorial change with no effect in Code provisions.

ASME Code Section XI 1999 Addenda Changes

1999 Addenda	Code Subsections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54 ?
Special Errata	IWA-4150(c)(3)(a), IWA-4340, IWA-4451.1, IWA-5400, G-2110(a), G-2215, Fig. J-1000-1, IWC-3510-1 corrected formula in Note 4	Editorial and paragraphs omitted that should have been included.	No	No	<p>IWA-4150(c)(3)(a), IWA-4340, IWA-4451.1 relates to repair/replacement activities. The change has no impact to 10 CFR 54.</p> <p>IWA-5400 was added to 1999 addenda and was deleted in 2000 addenda by errata. In reality, there is no change.</p> <p>G-2110(a), G-2215 provide procedure to calculate stress intensity factor. This change has no impact to 10 CFR 54.</p> <p>Fig. J-1000-1 is used to distinguish between repair/replacement activities and maintenance activities. The change has no impact to 10 CFR 54.</p> <p>IWC-3510-1 corrected formula in Note 4 has no effect in Code provisions.</p>

1999 Addenda	Code Subsections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54 ?
BC98-382	IWA-1100, IWA-4110(b), IWA-4150, IWA-4400, IWA-4410, IWA-4421(a), IWA-4422.1(a), IWA-4611, IWA-4611.2	Defect Removal (clarifies difference between flaw removal and defect removal)	No	No, R/R activities	The changes relate to repair/replacement activities. The changes have no impact to 10 CFR 54.
BC98-073	IWA-1320, IWA-6340	Component classification and ISI records. Incorporates references to IWE, IWF, and IWL for maintenance of ISI records and deletes references in App VII and VIII qualification	No	No	IWA-6340 relates to ISI records and report. This change has no impact to 10 CFR 54. IWA-1320 relates to component classification. This change has no impact to 10 CFR 54.
BC98-159	IWA-2110	Duties of Inspector with regard to the observation of pressure tests	No	No	The change relates to duties of inspector and has no impact to 10 CFR 54.
BC97-426	IWA-2310, IWA-2313, IWA-2314, IWA-2323(i)	Central Certification Program CC N-592	No	No	The change relates to qualification of NDE examination personnel. The change has no impact to 10 CFR 54.
BC98-533	IWA-2420, IWA-2425, Appendix F	Deletes appendix F and moves that info into IWA-2420 and adds IWA-2225	No	No	This change has no impact to 10 CFR 54.
BC97-291	IWA-4223	Reconciliation of Components CC N-567-1 Replacement components	No	No R/R activities	The change relates to repair/replacement activities and has no impact to 10 CFR 54.

1999 Addenda	Code Subsections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54 ?
BC98-535	IWA-4330, IWA-4331, IWA-4332, IWA-4334	Mitigation of Defects by Modification	Yes	No	The change relates to repair/replacement activities and has no impact to 10 CFR 54.
BC98-378	IWA-4331, IWA-4312.1	Rerating of components with new stress values allows a significantly higher pressure for most components	No	No R/R activities	The change relates to repair/replacement activities and has no impact to 10 CFR 54.
BC98-277	IWA-4451.1	Helical-Coil threaded inserts CC N-496-2	No	No R/R activities	see above.
BC98-541	IWA-4461.2, Table IWA-4461.11	Preheat temperatures	No	No R/R activities	See above
BC97-212	IWA-4540	Pressure testing of Class 1, 2, and 3 items. CC N-416-1 leak test in lieu of hydro for repair/replacement activities	No	No R/R activities	See above
BC98-149	IWA-5250(a)(2)	Examination of piping systems - clarifies IWA-5250(a)(2) applies only when system is borated for the purpose of controlling reactivity	No	Yes, evaluate	The change from “ a bolted connection on other than a gaseous system” to “ a bolted connection on a system borated for the purpose of controlling reactivity” relates to corrective action. This change has no impact to 10 CFR 54.

1999 Addenda	Code Subsections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54 ?
BC98-377	Table IWB-2500-1 Category B-A	CC N-623 permits deferral of inspections of the shell-to-flange and head-to-flange welds of the reactor vessel to the end of the interval under certain conditions	No	Potential	Staff has reviewed and endorsed Code Case N-623. The deferral of inspections to the end of interval under certain condition is acceptable. The wall thickness is greater than 6 inch. There is no mechanism will cause 6" cracking degradation during deferral time period. The change has no impact to 10 CFR 54.
BC98-275	Table IWB-2500-1, Category B-D	Full Penetration welded nozzles in vessels - eliminates the requirement to examine the inner radius of nozzles in Class 1 pressurizers and steam generators. (CC N-619)	<p>Yes, 50.55a (b)(2)(xxi)(A)</p> <p>ASME: No flaws have been found in this area of the nozzles. NRC: Not enough data</p> <p>A visual with enhanced magnification that has resolution to detect a 1-mil width wire or crack.</p>	Yes	<p>10 CFR 50.55a(b)(2)(xxi) specified 1998 edition must be applied when using the 1999 addenda through the latest edition and addenda. This is acceptable.</p> <p>50.55a also specified that enhance VT-1 with resolution to detect 1-mil width wire or crack can be used to substitute volumetric examination.</p> <p>This is acceptable with 50.55a modification/limitation.</p>

1999 Addenda	Code Subsections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54 ?
BC98-537	IWC-1222(a), IWC-1222(b), IWD-1220(a), IWD-1220(b), Table IWC-2500-1 Categories C-F-1 and C-F-2, Note 1	Clarifies exemptions for PWR piping. For Class 2, exemption for Aux feed piping has been reduced from NPS 4 smaller to NPS 1.5 and smaller. For Class 3 aux feed the exemptions has been increased from 1 NPS and smaller to 4 NPS and smaller.	No	Yes	For Class 2, the change increases the examination scope. Therefore, the change has no impact to 10 CFR 54. For Class 3 Auxiliary feedwater piping, the GALL Report does not credit ASME Sect. XI as aging management program. The Aux. Feedwater piping credits other AMPs. Therefore, the change is acceptable for 10 CFR 54.
BC98-534	Table IWC-2500-1	Nozzle-to-Nozzle weld examinations. Clarifies that this type of full penetration nozzle-to-nozzle weld is to be examined at the frequency specified in category C-B (steam generator replacement new issue)	No	Yes	The change added nozzle-to-nozzle weld examinations This change is a clarification. The change has no impact to 10 CFR 54.
BC98-547	Form NIS-2	modification to NIS-2 form to provide room to list code cases	No	No	The change to documentation form has no impact to 10 CFR 54.

1999 Addenda	Code Subsections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54 ?
BC98-539	Appendix III	UT examination of piping. Changed to "Requirements for UT of Pressure vessels not greater than 2" thick" Piping examinations are now contained in Appendix VIII	No	Yes	Appendix III describes UT examination methods, equipment, and requirements applicable to vessels not greater than 2 in. in thickness. The change has no impact to 10 CFR 54.
BC97-213	Appendix VII, VII-4240	Changes required 10 hour of annual training to 8 hours of practice. CC N-583	No 50.55a (b)(2)(xxii) proposed but not incorporated	No	Personnel qualification has no impact to 10 CFR 54.
BC98-379	G-1000, G-2110, Fig G-2110-1, G-2112.1, G-2215, G-2400	Changes fracture toughness rules for developing P-T limit curves. CC N-640	No	No	The identified evaluation requirement changes are technically acceptable and no impact to 10 CFR 54.
BC97-438	Fig. J-1000-1	Appendix J	No	No	Fig J-1000-1 is used to distinguish between repair/replacement activities and maintenance activities. The change has no impact to 10 CFR 54.
Errata	IWE and Appendix K	Editorial	No	No	Editorial change with no effect in Code provisions.

Section XI 2000 Addenda Changes

2000 Addenda	Code Sections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54?
BC99-487	Preface, Organization of Section XI, IWA-1100, Table IWA-1600-1, IWA-2110(a)(5),	Deletes Pump and valve testing which is addressed by the ASME OM Code	No	No	The change has no impact to 10 CFR 50.
BC00-014	IWA-2234, IWA-2420(b)(2), IWA-2420(b)(3), IWB-2420(b), IWC-2420(b)	Inspection plans and schedules. N-471, "Acoustic Emission for successive inspections, Section XI, Div.1"	No	No	Staff has reviewed and endorsed CC N-471. The change has no impact to 10 CFR 54.
BC99-287	IWA-4160	Verification of acceptability Clarifies owner is not required to use the latest construction Code or section III for repair/replacement activities.	No	No	The change relates to repair/replacement activities and has no impact to 10 CFR 54.
BC99-286	IWA-4180, IWA-4221(a), IWA-4221(c), IWA-4221(b), IWA-4221(c)	Requirements for document reconciliations. Repair replacement activities	No	No	The change relates to repair/replacement activities and has no impact to 10 CFR 54.
BC99-491	IWA-4222(a)(2)-footnote 7	Owners QA program Reconciliation program is not to be used to negate requirements of a QA Program	No	No	The change relates to administrative issue for repair/replacement activities and has no impact to 10 CFR 54.

2000 Addenda	Code Sections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54?
BC99-288	IWA-4224.2(c), IWA-4224.3(b)	changes word "component" to "item"	No	No	Editorial change has no impact to 10 CFR 54.
BC98-536	IWA-4510(b)(1)(b), IWA-4610(b)(1)(c), IWA-4622	Alternative welding methods related to temper bead welding .	No	No Repair/ Replacement activities	The change relates to repair/replacement activities and has no impact to 10 CFR 54.
BC99-490	IWA-4664, IWA-4666	Filler Metal Qualifications	No	No Repair/Replacement activities	The change relates to repair/replacement activities and has no impact to 10 CFR 54.
BC99-493	IWA-5120(d), IWA-5211(a), IWA-5211(b) &Footnote 1, IWA-5212(b), IWA-5221, IWB-5221(a), IWB-5230-1, IWC-5221, IWD-5221	Periodic pressure test clarification to clearly define conditions for performing the system leakage tests and hydro test	No	Yes Evaluate	The change provided clarification for the test. No impact.

2000 Addenda	Code Sections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54?
BC99-092	Table IWB-2500-1, Fig. IWB-2500-12, Appendix VIII-Supplement 8 - 1.1(c), Examination Category B-G-1	Examination of reactor vessel studs. Eliminates the surface examination of the center bore hole of reactor vessel studs. CC N-307-3	No	Yes	Appendix VIII-Supplement 8 1.1(c) is related to bolt/stud qualification specimen. The change has no impact to 10 CFR 54. Exam. Category B-G-1 has been modified from "Surface and Volumetric" to "Surface or Volumetric". The volumetric examination method is required for this item. See attached justification.
BC00-028	Table IWB-2500-1, Fig IWB-2500-16, Examination Category B-L-1	Examination of Pump Casing changes required volumetric examination for Item B12.10 to visual examination. CC N-481	No	Yes, volumetric examinations of cast materials are inconclusive due to material properties	The pump casing weld examination requirement has been changed from volumetric inspection for both inside and outside surfaces to VT-1 for outside surface only. See attached justification.

2000 Addenda	Code Sections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54?
BC99-091	Table IWC-2500-1 Category C-G, Note 1	Exam of pressure retaining welds in pumps and valves. Allows distribution of weld exams among different pumps and valves of similar design, function, and service in a system, rather than requiring examinations of all welds in a single pump or valve. CC N-617	No	Yes	The change provides same number of the weld examinations. Staff accepted this change and endorsed as shown in RG 1.147. The change has no impact to 10 CFR 54.
BC99-489	IWE-1220(c), IWE-1231(b), IWE-1232(c), IWE-2310(a), IWE-2330(b)	Revision clarifies that Subsection IWE allows for certain areas of containment metallic surfaces to be considered inaccessible due to various types of permanent obstructions which preclude visual examination, so long as these areas are not considered suspect areas.	No	No	No impact
BC00-016	IWE-4000, IWE-7000	IWE-4000 and IWE-7000 were combined into IWE-4000. ASME organizational change. Editorial	No	No	No impact

2000 Addenda	Code Sections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54?
BC99-088	IWF-2500 footnote 1	Examination Requirements footnote added to explain the types of mechanical connections required to be examined.	No	No	The footnote provides clarification and has no impact to 10 CFR 54.
BC99-285	IWL-4110	Clarification that the rules for repair and replacement activities in Subsection IWL do not always apply for the installation of concrete anchors in Class containments	In 2001 Edition this change was deleted. Therefore no impact on 50.55a	No	No impact
BC99-093	A-3310-Eq.(2), A3320	Qualification for Bolts and Studs. Corrects the equation of stress intensity factors for surface flaws	No	No	Modification of the stress intensity factor equation has no impact to 10 CFR 54.
BC00-025	A-5200	End-of-Period Flaw Size Flaw growth calculations	No	No	The change defines how to perform fatigue crack growth evaluation and has no Impact to 10 CFR 54
BC00-018	K-1300, K-5300(b)	Crack Growth	No	No	The change relates to evaluation procedure of flaw stability and has no Impact to 10 CFR 54.

2000 Addenda	Code Sections	Brief Description	Modification/ Limitation	Effect on GALL?	Does change impact 10 CFR 54?
ERRATA	IWA-2210, Table IWB-2500-1 – Category B-G-1 and Category B-N-1, IWB-3134(b), IWL02521(a)	Editorial changes.	No	No	Editorial change with no effect in Code provision.

ASME Code Section XI 2001 Edition Changes

2001 Edition	Code Sections	Brief Description	Modification/ Limitation	Effect on Gall	Does change impact 10 CFR 54?
BC98-269	IWA-2220, IWA-2224	Surface examination requirements for Category B-F and B-J piping welds CC N-615 Using UT from the inside surface	Yes 50.55a (b)(2)(xxii) use prohibited	No, since the use of these changes is prohibited.	10 CFR 50.55a(b)(2)(xxii) specified that the use of provision in IWA-2220, surface examination, of Section XI, 2001 edition through the latest edition and addenda is prohibited. Therefore, this item has no impact to 10 CFR 54.
BC00-576	IWA-2300	SNT-TC-1A to CP-189	No	No	This item relates to personnel qualification examinations. The change has no impact to 10 CFR 54.

2001 Edition	Code Sections	Brief Description	Modification/ Limitation	Effect on Gall	Does change impact 10 CFR 54?
BC00-169	IWA-2443	Code cases for other sections - deleted section due to impracticality (Was in course of preparation)	No	No	The added clarification has no impact to 10 CFR 54.
BC00-577	IWA-3300	Flaw Proximity Rules	No	No	This item relates to flaw characterization and has no impact to 10 CFR 54.
BC00-571	IWA-4110(b), IWA-4230, IWA-4400, IWA-4410, IWA-4411, IWA-4412, IWA-4413, IWA-4420, IWA-4421, IWA-4430, IWA-4450, IWA-4451, Table IWA-4461.1-1, IWA-4461.4, IWA-4462, IWA-4500, IWA-4520, IWA-4600, IWA-4610, IWA-4611, IWA-4620, IWA-4624, IWA-4630, IWA-4634, IWA-4644, IWA-4654, IWA-4666, IWA-4711.4, IWA-4712, IWA-4721.1	Defect removal requirements	No	No Repair/Replacement activities	This item relates to repair/replacement activities. The change has no impact to 10 CFR 54.
BC00-024	IWA-4131.1(a), IWA-4713	Qualification for Class 1 Mechanical tube Plugs	No	No Repair/Replacement activities	This item relates to repair/replacement activities. The change has no impact to 10 CFR 54.

2001 Edition	Code Sections	Brief Description	Modification/ Limitation	Effect on Gall	Does change impact 10 CFR 54?
BC00-742	IWA-4132 Pressure testing of Rotated Presssure relief valves	Deletes requirements for pressure testing and VT-2 of relief valves rotated from stock and installed by mechanical means. Still inspected post installation	No	No, R/R activities	This item relates to repair/replacement activities. The change has no impact to 10 CFR 54.
BC00-341	IWA-5240, IWA-5241, IWA-5242	VT-2 Visual examination for leakage. CC N-533 "Alternative requirements for VT-2 Visual examination of Class 1, 2, and 3 insulated pressure retaining bolted connections." Conditionally acceptable (hold times prior to VT-2)	No Hold times were re-introduced into the code in the 2003 Addenda	Yes	The change provided clarification. Staff has reviewed and endorsed CC N-533. The change is acceptable for 10 CFR 54.
BC00-730	IWA-6320	Reproduction and Microfilming, Digitization of records	No	No Storing and maintaining records	This item relates to ISI records and reports. The change has no impact to 10 CFR 54.
BC00-344	IWA-9000, Glossary	Definition of owner requirements to include both technical and administrative requirements	No	No	This item relates to definition. The change has no impact to 10 CFR 54.

2001 Edition	Code Sections	Brief Description	Modification/ Limitation	Effect on Gall	Does change impact 10 CFR 54?
BC00-168	Figs IWB-2500-1, -2, -3 and -6	Reactor pressure vessel examination scan area and volume. Clarifies that the RPV examinations may be performed from either inside or outside surface	No	Yes Acceptable	The change provides clarification for the examination scan area. Fig IWB-2500-1 showed more scan area than previous version and is acceptable. This extra scan area was correct in 2002A. This item has no impact to 10 CFR 54.
BC00-345	Table IWD-2500-1, Category D-B	substitutes system leakage test every inspection period in lieu of the hydrostatic test at the end of each interval CC N-498-4 conditionally accepted RG1.147 (hold times)	Yes. Hold times 50.55a (b)(2)(xx) for 1997-2002 Addenda	Yes Acceptable. Using the leakage test in lieu of a hydro test is acceptable. The high pressure only provides a small increase in the possible detection of leakage over the leakage test.	Staff has reviewed and endorsed CC N-498-4. The change has no impact to 10 CFR 54.
BC00-339	IWE-2500(b), Table IWE-2500-1--Category E-C, Table IWE-2500-2	Augmented Examination CC N-647	No	Potential	

2001 Edition	Code Sections	Brief Description	Modification/ Limitation	Effect on Gall	Does change impact 10 CFR 54?
BC	IWL-4110(b)(3)	Replacement of corrosion protection material (CPM) was exempt from R/R requirements	Yes. 50.55a(b)(2)(viii)(G) does not allow CPM replacement to be exempt from R/R requirements	No	No impact
BC00-574	Appendix III, III-2410	Examination coverage, Overlap,	No	No	This item relates to UT examination technique. The change has no impact to 10 CFR 54.
BC00-27	Appendix III, Supp 1, (a)(3) and (b)(4)	Cast Austenitic Materials clarifies that cast austenitic materials may be difficult to examine ultrasonically	No	Yes Acceptable. It is widely accepted that CASS material is difficult to UT.	No impact to 10 CFR 54.

ASME Code Section XI 2002 Addenda Changes

2002 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC01-942	Table IWA-1600-1	QAI-1 applicability date	No	No	No.

2002 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC01-749	IWA-2210	Visual Examination Procedure demonstration clarifies that the test chart is not required to contain only lower case characters without ascenders or descenders	No	No relates to characters on the vision chart	No
BC01-750	Table IWA-2210-1	Visual Examination Procedure illumination adequacy	No	No	No
BC01-925	IWA-2240, IWA4651, Fig. IWC-2500-12, Fig IWC-2500-13	Editorial corrections	No	No	No
BC01-920	IWA-2380, VII-4140	NDE Instructors - requirements applicable to all NDE instructors not just Ultrasonic examinations	No	No	No
BC01-166	IWA-4131.1(a) - Footnote 3, IWA-5440(b)(6)	Nominal Pipe size (NPS) designation	No	No	No
BC00-741	IWA-4540, IWA-5120, IWA-5214	Pressure testing requirements for repair replacement activities	No	No R/R activities	No

2002 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC00-749	IWA-5250, IWA-6220, IWA-9000, IWB-3517.1, IWB-2519.1, IWB-3520.1, IWB-3520.2, IWB-3522.1, IWD-2430, IWE-3122.2, IWE-3510.2, IWE-3510.3, IWE-3510.4, IWF-2220(a), IWF-2430(c), IWF-3112.2, IWF-3112.3, IWF-3122.2, IWF-3122.3	Clarifies the terms “corrective actions” and “corrective measures”	No	No clarification of terms	No
BC00-335	Table IWB-2500-1, Category B-G-1 and B-G-2, Table IWC-2500-1, Category C-D	Examination of Bolting N-652	No	Yes	<p>The change of B-G-1 eliminates examination of item B6.30 (closure stud when removed). See attached justification. Note 1 of the B-G-2 provided clarification for bolting examination.</p> <p>Note 5 of Category C-D, Table IWC-2500-1, allowed surface examination to substitute volumetric examination. Staff reviewed and accepted this position.</p>
BC00-743	IWB IWC IWD Appendix C	Acceptance criteria for Section XI pipe flaw evaluation	No	No	Analytical procedure and acceptance criteria change has no impact to 10 CFR 54.

2002 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC01-152	IWB-3643, IWC-3643, IWD-3643, Appendix H	Analytical procedures and acceptance criteria for ferritic and austenitic piping. CC N-494-3 (acceptable in RG1.147)	No	No	Analytical procedure and acceptance criteria change has no impact to 10 CFR 54.
BC01-747	IWC-2412, IWD-2412	Exempts examination category B-P From the requirements of Table IWB-2412-1	No	No	The change provided clarification for Exam.Category C-H & D-B. No impact. See attached explanation.
BC01-148	Table IWC2500-1-Category C-B IWC-2500-4 Sketch (d) IWC-3511.1, IWC-3511.2	Set on nozzles Clarifies the examination volumes for class 2 set-on nozzles	No	No	No Impact Table IWC-2500-1 & Fig. IWC-2500-4 sketch (d) were added for clarification. IWC-3511.1 & IWC-3511.2 was changed to provide allowable flaw sized clarification between ferritic and austenitic .
BC01-361	IWC-5230(g), IWD-5222(f)	Test Personnel Qualifications	No	No	This item has no impact to 10 CFR 54.
BC01-362	IWL-2410(d), IWL-2420(d), IWL-2521(a), IWL-2521(d), IWL-2521.2, IWL-2521-2 & Notes 1,2, and 6	Augmented Examination Requirements for Concrete Containments following R/R activities. Requirements when new access openings are made.			No, R/R activities

2002 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC01-151	Appendix I	Incorporates requirements of N-622, "Ultrasonic Exam. of RPV and Piping, Bolts, and Studs, Section XI, Division1" and resolves coverage issues in 10 CFR 50.55a	No	No	This item has no impact to 10 CFR 54.
BC01-770	Appendix I, Sup. 3, 4, and 7	Ultrasonic examination. Corrects reference errors caused by changes to section V, articles 4 and 5	No	No Just changes references	No.
BC01-410	Appendix VIII, VII-2100(d), VIII-4100	Characterization of equipment substitutions for UT	No	No	No.
BC00-755	Appendix VIII, Supplement 2, 1.1, 1.1(b), 1.1(c), 1.1(c)(3), 1.1(c)(4), 1.2(b), 1.2(b)(3), 1.3, 2.0, 2.2, 3.1	UT of wrought austenitic piping welds. Qualification for outside surface examination of piping welds. Adds provisions for piping exams from the ID. CC N-658	No	No	No. Staff has reviewed and accepted CC N-658. The change related to NDE qualification. This change has no impact to 10 CFR 54.
BC01-150	Appendix VIII, Supp 4, and 6	Incorporates N-622 and limitations in 10 CFR 50.55a	No	No UT procedure qualifications	The change has no impact to 10 CFR 54.
BC00-756	Appendix VIII, Sup 11	Qual requirements for Overlaid Austenitic piping welds	No	No UT procedure qualifications	No.

2002 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC00-744	A-4300(b), IWA-9000	Fatigue crack growth rates	No	No	No. A-4300(b) is related to FCG rates. IWA-9000 is related to glossary.
Errata	IWA, IWB, Appendices, A, G, and L	Editorial and Technical corrections	No	NO	Editorial change with no effect in Code provision.

ASME Code Section XI 2003 Addenda Changes

2003 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC01-360	IWA-4511	Personnel Qualification	No	No	No.
BC02-2119	IWA-4540(a)	Pressure testing following R/R activities	No	No R/R activities	No
BC02-2120	IWA-4623.2(b) – IWA-4644.1(b)	Postweld Heat treatment of temperbead welds	No	No Welding R/R activities	No.
BC02-2121	IWA-4623.1(e), IWA-4644.1(b)	Postweld heat treatment and hydrogen bakeout	No	No R/R activities	No.

2003 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC02-2126	Table IWB-2500-1, Category B-J Note 1 and Note 2	Thermal Fatigue examination of Class 1 piping welds Increases requirements in Table IWB-2500-1, Category B-J. A new 10% sample of focused volumetric on piping welds \$NPS 1.5 but less than NPS 4 potentially subject thermal fatigue	No	Yes, Acceptable since this was an increase in examinations subject to thermal fatigue.	No. Acceptable since this was an increase in examinations subject to thermal fatigue. Note: 50.55a(g)(4)(iii) specified that Category B-J , Item 9-20,21,22 examination is optional.
BC02-2130	Table IWB-2500-1 Category B-P, Item Numbers	Editorial, the revision consolidates items numbers for all pressure retaining components to one item number	No	Yes, Acceptable Editorial change	No. This item is editorial change.
BC02-2712	IWA-5213	Hold time requirements for system pressure tests for tables IWB-2500-1, IWC-2500-1, and IWD-2500-1.	No	Yes, Acceptable, this revision addresses an NRC limitation in 10 CFR 50.55a	No. Additional requirement for clarification has not impact to 10 CFR 54.

2003 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC02-2713	IWA-5242	VT-2 visual examination of insulated pressure-retaining bolted connections. Incorporates provisions of CC N-616.	Yes 10 CFR 50.55a(b)(2) (xxvii)	Yes The change is acceptable with the modification.	Staff has reviewed and conditionally accepted CC N-616. The condition still applied. The change has no impact to 10 CFR 54.
BC02-2719	IWA-6210(e), IWA-6210(f)	Processing of NIS-2 form	No	No Owner's requirements for documentation	No
BC02-2722	IWA-3330(d), Fig. IWA-3330-1, IWA-3380(f), Fig. IWA-3380-1	Combining flaws for evaluation (relaxation of when flaws need to be combined)	No	No Flaw evaluation	No
BC02-2724	Preface	Aging Management. Adds wording to the preface to cover "mandatory programs manage the effects of aging in accordance with 10 CFR50.55"	No	No, Does not change any requirements	No.
BC02-3479	IWA-4110(b), IWA-4331(d)	Form NIS-2 for Rerating supports. Deletes requirements for rerating of supports on NIS-2 forms	No	No R/R documentation activity	No.
BC02-3481	IWA-4221(a)	Reconciliation of Owner's requirements. Construction Code	No	No, R/R activities	No.

2003 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC02-2477	IWA-4221(b)(2), IWA-4226.1, IWA-4226.2, IWA-4226.3	Reconciliation of design requirements	No	No R/R activities	No.
BC02-3496	Appendix VIII, Supplements 4 and 5, 3.1	Calculation of allowable false calls. N-683	No	No qualification of UT	No.
BC02-3737	Appendix III, III-1100, III-4512(b), Table VIII-3110-1	Exam Requirements for piping welds with corrosion resistant cladding	No	No NDE qualification	No.
BC02-2123	Appendix VIII, Table VIII-6 S-1	Exam of Unclad reactor pressure vessel welds. N-664	No	No NDE Qualification	No.
BC02-122	III-4520(g)(1)(c), Supplement 1(b)(1)	Beam Angle Measurement of L-waves		No NDE Qualification	No.
BC00-737	IWA-4150(c)(7), IWA-4160, IWA-4180, IWA-4311(a), (b), (d), (e), IWA-4712.5, IWA-4713.5, IWA-4721.5, IWA-63100, IWA-6330, IWA-6350, IWL-4180, IX-1000(f)	Editorial Repair/Replacement documentation activity	No	No, R/R documentation activities	No.

2003 Addenda	Code Sections	Brief Description	Modification /Limitation	Effect on GALL	Does change impact 10 CFR 54?
BC02-3481	IWA-4221(a)	Reconciliation of owner's requirements	No	No R/R activities	No.
BC02-2122	This revision was removed. Items were added in error.	Visual examination requirements.	No	No changed back to original.	No.

NOTE: When specific Editions and/or Addenda requirements are adopted in GALL AMPs, the plant specific reliefs and exemptions granted by NRC should be noted in LRA-AMPs as items not consistent with GALL, and discussed in the respective AMP.

BC00-028

Prior to the 2000 Addenda, the ASME Section XI Code required volumetric examinations for inside and outside surfaces of Class 1 pump casing welds as specified in Table IWB-2500-1, Examination Category B-L-1, Item B12.10. Code Case N-481 identified an alternative, including visual inspections and flaw tolerance evaluation, in lieu of the volumetric examinations for cast austenitic stainless steel (CASS) pump casing welds. This alternative was endorsed by the staff in Reg. Guide 1.147.

Later, the ASME Code was revised in the 2000 Addenda to only require VT-1 examination only without the flaw tolerance evaluation to manage cracking for CASS pump casing welds. EMCB staff has stated that VT-1 examination alone is adequate to address this potential aging effect. A flaw tolerance evaluation is not required based on the results of past flaw tolerance evaluations performed for 60 years plant life which has demonstrated significant margins without safety concerns on loss of any intended function. However, no written documentation can be found for the code committee's position when the change was made.

EMCB staff explained that utilities performed the original flaw tolerance evaluations, for their respective plants using very conservative transients and cycles. The results showed significant margins for 40 year plant life. Based on EMCB's engineering judgement and technical expertise, if a flaw tolerance re-evaluation were performed for the 60 years renewed life using more realistic transients and cycles, the results will demonstrate that cracking will not occur and the pump casing will be able to serve the intended function.

Based on the discussion as summarized above, it was concluded that, for license renewal, VT-1 examination of the outside surface is adequate to manage cracking of Class 1 CASS pump casing welds without requiring the flaw tolerance evaluation for the period of extended operation. Concurrence from EMCB is requested to close this issue as a part of the comparison of the ASME Code Edition and Addenda changes that forms the basis for the positions contained in the GALL Report scheduled to be issued in September 2005.

BC99-092/BC00-335

On changes BC99-092 and BC00-335 (regarding Table IWB-2500-1 and Examination Category B-G-1), Division of Engineering staff has re-evaluated the inspection requirements of Table IWB-2500-1, Examination Category B-G-1, Inspection Items B6.20 and B6.30 as they apply to the inspection of RPV closure studs.

The staff notes that the ASME Code inspection requirements for RPV closure studs have evolved between the 1995 Edition and the 2004 Edition of Section XI of the ASME Code. This evolution has included making the inspection requirements less specific with regard to under what conditions the inspections have to be performed (studs in place or studs removed) and allowing flexibility with respect to whether effective surface or volumetric examinations are performed.

However, the staff has concluded that any Edition and Addenda of ASME Code, Section XI between the 1995 Edition and 2004 Edition (inclusive) which has been endorsed by the staff in 10 CFR 50.55a requires inspections which are adequate to identify potential degradation of the RPV closure studs. Hence, with regard to the inspection of the RPV closure studs, the requirements in any of these Editions

and Addenda are adequate to meet the purpose of Generic Aging Lessons Learned Aging Management Program XI.M1.

BC01-747

The change revises IWC-2412 and IWD-2412 to exclude the examination categories "C-H" and "D-B" from the percent completed requirements of Tables IWC-2412-1 and IWD-2412-1.

Category C-H, "All Pressure Retaining Components," requires system leakage tests be performed each inspection period for all Class 2 pressure retaining boundary components. Therefore, the percent completed requirements of Table IWC-2412-1 are not relevant since all pressure retaining boundary components must be tested each period.

Category D-B, "All Pressure Retaining Components," requires system leakage tests be performed each inspection period for all Class 3 pressure retaining boundary components. Therefore, the percent completed requirements of Table IWD-2412-1 are not relevant since all pressure retaining boundary components must be tested each period.

The DE staff finds this ASME code change acceptable since the percentage requirements in Tables IWC-2412-1 and IWD-2412-1 are not relevant to the system leakage tests that are to be performed each inspection period.

In other words, Categories C-H and D-B provide the items (examination boundaries) to be examined each inspection period. Therefore the time frame and examinations completed per period (calendar year of plant service within the interval 3, 7, 10) in tables IWC-2412-1 and IWD-2412-1 are not applicable.