AUDIT WORKSHEET
GALL REPORT AMP

PLANT: _____

LRA AMP: _____ **REVIEWER:** _____

GALL AMP: **XI.M5, BWR Feedwater Nozzle** **DATE:** _____

Program Element	Auditable GALL Criteria	Documentation of Audit Finding
Program Description	A. This program includes (a) enhanced inservice inspection (ISI) in accordance with the requirements of the American Society of Mechanical Engineers (ASME) Code, Section XI, Subsection IWB, Table IWB 2500-1 (2001 edition including the 2002 and 2003 Addenda) and the recommendation of General Electric (GE) NE-523-A71-0594, and	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
"	B. (b) system modifications to mitigate cracking. The program specifies periodic ultrasonic inspection of critical regions of the boiling water reactor (BWR) feedwater nozzle.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
1. Scope of Program	A. The program includes enhanced ISI to monitor the effects of cracking on the intended function of the component, and	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
"	B. systems modifications to mitigate cracking.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:

Program Element	Auditable GALL Criteria	Documentation of Audit Finding
2. Preventive Actions	A. Mitigation occurs by systems modifications, such as removal of stainless steel cladding and installation of improved spargers.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
“	B. Mitigation is also accomplished by changes to plant-operating procedures, such as improved feedwater control and rerouting of the reactor water cleanup system, to decrease the magnitude and frequency of temperature fluctuations.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
3. Parameters Monitored/ Inspected	A. The aging management program (AMP) monitors the effects of cracking on the intended function of the component by detection and sizing of cracks by ISI in accordance with ASME Section XI, Subsection IWB and the recommendation of GE NE-523-A71-0594.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
4. Detection of Aging Effects	A. The extent and schedule of the inspection prescribed by the program are designed to ensure that aging effects will be discovered and repaired before the loss of intended function of the component. Inspection can reveal cracking. GE NE-523-A71-0594 specifies ultrasonic testing (UT) of specific regions of the blend radius and bore. The UT examination techniques and personnel qualifications are in accordance with the guidelines of GE NE-523-A71-0594. Based on the inspection method and techniques and plant-specific fracture mechanics assessments, the inspection schedule is in accordance with Table 6-1 of GE NE-523-A71-0594. Leakage monitoring may be used to modify the inspection interval.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
5. Monitoring and Trending	A. Inspections scheduled in accordance with GE NE-523-A71-0594 provide timely detection of cracks.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria:

Program Element	Auditable GALL Criteria	Documentation of Audit Finding
		Comment:
6. Acceptance Criteria	A. Any cracking is evaluated in accordance with IWB-3100 by comparing inspection results with the acceptance standards of IWB-3400 and IWB-3500.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
7. Corrective Actions	A. Repair is performed in conformance with IWB-4000 and replacement in accordance with IWB-7000. As discussed in the appendix to this report, the staff finds the requirements of 10 CFR Part 50, Appendix B, acceptable to address the corrective actions.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
8. Confirmation Process	A. Site quality assurance (QA) procedures, review and approval processes, and administrative controls are implemented in accordance with the requirements of 10 CFR Part 50, Appendix B. As discussed in the appendix to this report, the staff finds the requirements of 10 CFR Part 50, Appendix B, acceptable to address the confirmation process and administrative controls.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
9. Administrative Controls	A. See Item 8, above.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:
10. Operating Experience	A. Cracking has occurred in several BWR plants (NUREG-0619, NRC Generic Letter 81-11). This AMP has been implemented for nearly 25 years and has been found to be effective in managing the effect of cracking on the intended function of feedwater nozzles.	Consistent with GALL AMP: ☐ Yes ☐No Document(s) used to confirm Criteria: Comment:

EXCEPTIONS

Item Number	Program Elements	LRA Exception Description	Basis for Accepting Exception	Documents Reviewed (Identifier, Para.# and/or Page #)
1.				
2.				
…				

ENHANCEMENTS

Item Number	Program Elements	LRA Enhancement Description	Basis for Accepting Enhancement	Documents Reviewed (Identifier, Para.# and/or Page #)
1.				
2.				
…				

DOCUMENT REVIEWED DURING AUDIT

Document Number	Identifier (number)	Title	Revision and/or Date
1.			
2.			
3.			
4.			
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