

**AUDIT WORKSHEET**  
**GALL REPORT AMP**

PLANT: \_\_\_\_\_

LRA AMP: \_\_\_\_\_

REVIEWER: \_\_\_\_\_

GALL AMP: **XI.M36, External Surfaces Monitoring**

DATE: \_\_\_\_\_

Program Element	Auditable GALL Criteria	Documentation of Audit Finding
Program Description	A. The External Surfaces Monitoring program is based on system inspections and walkdowns. This program consists of periodic visual inspections of steel components such as piping, piping components, ducting, and other components within the scope of license renewal and subject to AMR in order to manage aging effects. The program manages aging effects through visual inspection of external surfaces for evidence of material loss. Loss of material due to boric acid corrosion is managed by the Boric Acid Corrosion Program.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria:  Comment:
1. Scope of Program	A. This program visually inspects the external surface of in-scope components and monitors external surfaces of steel components in systems within the scope of license renewal and subject to AMR for loss of material and leakage. Visual inspections are expected to identify loss of material due to general corrosion in accessible steel components. Loss of material due to pitting and crevice corrosion may not be detectable through these same visual inspections, however, general corrosion is expected to be present and detectable such that, should pitting and crevice corrosion exist, general corrosion will manifest itself as visible rust or rust byproducts (e.g., discoloration or coating degradation) and be detectable prior to any loss of intended function. Therefore, this program is acceptable for use in inspecting for loss of material for general, pitting and crevice corrosion.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria:  Comment
“	B. Surfaces that are inaccessible or not readily visible during	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No

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	<p>plant operations are inspected during refueling outages. Surfaces that are inaccessible or not readily visible during both plant operations and refueling outages are inspected at such intervals that would provide reasonable assurance that the effects of aging will be managed such that applicable components will perform their intended function during the period of extended operation.</p> <p>Surfaces that are insulated may be inspected when the external surface is exposed (i.e., maintenance) at such intervals that would provide reasonable assurance that the effects of aging will be managed such that applicable components will perform their intended function during the period of extended operation.</p>	<p>Document(s) used to confirm Criteria:</p> <p>Comment:</p>
“	<p>C. The program may also be credited with managing loss of material from internal surfaces, for situations in which material and environment combinations are the same for internal and external surfaces such that external surface condition is representative of internal surface condition. When credited, the program should describe the component internal environment and the credited similar external component environment inspected.</p>	<p>Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Document(s) used to confirm Criteria:</p> <p>Comment:</p>
2. Preventive Actions	<p>A. The External Surfaces Monitoring Program is a visual monitoring program that does not include preventive actions.</p>	<p>Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Document(s) used to confirm Criteria:</p> <p>Comment:</p>
3. Parameters Monitored/ Inspected	<p>A. The External Surfaces Monitoring Program utilizes periodic plant system inspections and walkdowns to monitor for material degradation and leakage. This program inspects components such as piping, piping components, ducting and other components. Coatings deterioration is an indicator of possible underlying degradation.</p> <p>Examples of inspection parameters include:</p> <ul style="list-style-type: none"> <li>• corrosion and material wastage (loss of material);</li> </ul>	<p>Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Document(s) used to confirm Criteria:</p> <p>Comment:</p>

Program Element	Auditable GALL Criteria	Documentation of Audit Finding
	<ul style="list-style-type: none"> <li>• leakage from or onto external surfaces;</li> <li>• worn, flaking, or oxide-coated surfaces;</li> <li>• corrosion stains on thermal insulation;</li> <li>• protective coating degradation (cracking and flaking)</li> </ul>	
4. Detection of Aging Effects	<p>A. Degradation of steel surfaces cannot occur without the degradation of the paint or coating. Confirmation of the integrity of the paint or coating is an effective method for managing the effects of corrosion on the steel surface. A visual inspection is conducted for component surfaces at least once per refueling cycle. This frequency accommodates inspections of components that may be in locations that are normally only accessible during outages. System walkdowns are normally performed on a frequency that exceeds once per fuel cycle. Surfaces that are inaccessible or not readily visible during plant operations and refueling outages are inspected at such intervals that would ensure the components intended function is maintained. The intervals of inspections may be adjusted as necessary based on plant-specific inspection results and industry experience.</p> <p>This program is credited with managing the loss of material for external surfaces and the loss of material for internal surfaces exposed to the same environment as the external surface.</p>	<p>Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No  Document(s) used to confirm Criteria:</p> <p>Comment:</p>
5. Monitoring and Trending	<p>A. Visual inspection activities are performed and associated personnel are qualified in accordance with site controlled procedures and processes. The External Surfaces Monitoring Program uses standardized monitoring and trending activities to track degradation. Deficiencies are documented using approved processes and procedures such that results can be trended. However, the program does not include formal trending. Inspections are performed at frequencies identified in Detection of Aging Effects.</p>	<p>Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No  Document(s) used to confirm Criteria:</p> <p>Comment:</p>

Program Element	Auditable GALL Criteria	Documentation of Audit Finding
6. Acceptance Criteria	A. For each component/aging effect combination, the acceptance criteria are defined to ensure that the need for corrective actions will be identified before loss of intended functions. Acceptance criteria include design standards, procedural requirements, current licensing basis, industry codes or standards, and engineering evaluation.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria:  Comment:
7. Corrective Actions	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 corrective actions, confirmation process, and administrative controls.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria:  Comment:
8. Confirmation Process	A. See Item 7, above.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria:  Comment:
9. Administrative Controls	A. See Item 7, above.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria:  Comment:
10. Operating Experience	A. External surfaces inspections via system inspections and walkdowns have been in effect at many utilities since the mid 1990's in support of the Maintenance Rule (10 CFR 50.65) and have proven effective in maintaining the material condition of plant systems. The elements that comprise these inspections (e.g., the scope of the inspections and inspection techniques) are consistent with industry practice.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> 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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