

AUDIT WORKSHEET
GALL REPORT AMP

PLANT: _____

LRA AMP: _____

REVIEWER: _____

GALL AMP: **XI.M34, Buried Piping And Tanks Inspection**

DATE: _____

Program Element	Auditable GALL Criteria	Documentation of Audit Finding
Program Description	<p>A. The program includes (a) preventive measures to mitigate corrosion, and (b) periodic inspection to manage the effects of corrosion on the pressure-retaining capacity of buried steel piping and tanks. Gray cast iron, which is included under the definition of steel, is also subject to a loss of material due to selective leaching, which is an aging effect managed under Chapter XI.M33, "Selective Leaching of Materials."</p> <p>Preventive measures are in accordance with standard industry practice for maintaining external coatings and wrappings. Buried piping and tanks are inspected when they are excavated during maintenance and when a pipe is dug up and inspected for any reason.</p> <p>This program is an acceptable option to manage buried piping and tanks, except further evaluation is required for the program element/attributes of detection of aging effects (regarding inspection frequency) and operating experience.</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>
1. Scope of Program	<p>A. The program relies on preventive measures such as coating, wrapping and periodic inspection for loss of material caused by corrosion of the external surface of buried steel piping and tanks. Loss of material in these components, which may be exposed to aggressive soil environment, is caused by general, pitting, and crevice corrosion, and microbiologically-influenced corrosion (MIC). Periodic inspections are performed when the components are excavated for maintenance or for any other</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>

Program Element	Auditable GALL Criteria	Documentation of Audit Finding
	reason. The scope of the program covers buried components that are within the scope of license renewal for the plant.	
2. Preventive Actions	A. In accordance with industry practice, underground piping and tanks are coated during installation with a protective coating system, such as coal tar enamel with a fiberglass wrap and a kraft paper outer wrap, a polyolifin tape coating, or a fusion bonded epoxy coating to protect the piping from contacting the aggressive soil environment.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria: Comment:
3. Parameters Monitored/ Inspected	A. The program monitors parameters such as coating and wrapping integrity that are directly related to corrosion damage of the external surface of buried steel piping and tanks. Coatings and wrappings are inspected by visual techniques. Any evidence of damaged wrapping or coating defects, such as coating perforation, holidays, or other damage, is an indicator of possible corrosion damage to the external surface of piping and tanks.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria: Comment:
4. Detection of Aging Effects	A. Inspections performed to confirm that coating and wrapping are intact are an effective method to ensure that corrosion of external surfaces has not occurred and the intended function is maintained. Buried piping and tanks are opportunistically inspected whenever they are excavated during maintenance. When opportunistic, the inspections are performed in areas with the highest likelihood of corrosion problems, and in areas with a history of corrosion problems, within the areas made accessible to support the maintenance activity. The applicant's program is to be evaluated for the extended period of operation. It is anticipated that one or more opportunistic inspections may occur within a ten-year period. Prior to entering the period of extended operation, the applicant is to verify that there is at least one opportunistic or focused inspection is performed within the past ten years. Upon entering the period of extended operation, the applicant is to perform a focused inspection within ten years, unless an opportunistic inspection occurred within this ten-year period. Any credited	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria: Comment:

Program Element	Auditable GALL Criteria	Documentation of Audit Finding
	inspection should be performed in areas with the highest likelihood of corrosion problems, and in areas with a history of corrosion problems.	
5. Monitoring and Trending	A. Results of previous inspections are used to identify susceptible locations.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria: Comment:
6. Acceptance Criteria	A. Any coating and wrapping degradations are reported and evaluated according to site corrective actions procedures.	Consistent with GALL AMP: <input type="checkbox"/> Yes <input type="checkbox"/> No Document(s) used to confirm Criteria: Comment:
7. Corrective Actions	A. The site corrective actions program, quality assurance (QA) procedures, site review and approval process, and administrative controls are implemented in accordance with the requirements of 10 CFR Part 50, Appendix B. 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:

Program Element	Auditable GALL Criteria	Documentation of Audit Finding
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. Operating experience shows that the program described here is effective in managing corrosion of external surfaces of buried steel piping and tanks. However, because the inspection frequency is plant-specific and depends on the plant operating experience, the applicant's plant-specific operating experience is further evaluated for the extended period of operation.	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.			
....			