

Note 10 CFR 50.9
(b) is not applicable

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---- SSSSSSSSSS ----- AA ----- P P P P P P P P P P -----  
-- SSSSSSSSSSSSSS ----- AAAA ----- P P P P P P P P P P -----  
-- SSSSSS -- SS ----- AAAAAA ----- P P P P -- P P P P -----  
--- SSSSSSS ----- AAA AAA ----- P P P P -- P P P P -----  
----- SSSSSSS ----- AAAAAAAAAA ----- P P P P P P P P P P -----  
----- SSSSSSS ----- AAAAAAAAAA ----- P P P P P P P P P P -----  
-- SS --- SSSSSS -- AAAA ----- AAAA -- P P P P -----  
- SSSSSSSSSSSSSS - AAAA ----- AAAA - P P P P -----  
--- SSSSSSSSSSS ----- AAAA ----- AAAA - P P P P -----
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Reporting was required by
10 CFR 50.55a

Client 100
Receiver NUITG
Department

Spool request SCRIPT S082 NUITG
Request number 685996
Database P00(sappp00)
Owner NUITG
Device type SH1DN000
Format Type INCH12
Priority 5
Count 1
Output request 1
Created 07/05/2284 91:45:49
From NUITG
Printed 07/05/2284 91:45:49
host sappa04
Device S082

G-16

Incorrecto OAR Not reportable see lt ext

*****Long Text Object Identification*****
Order 000070109827 Operation 0180 Confirmation 0008325170
Confirmation counter 00000001 Long text

Action

Review and determine if a report is required since past Owner Activity Reports had incorrectly stated that AFW was tested IAW ASME XI requirements.

Response:

The above action states to determine is reporting is required due to the Owner Activity Reports (OAR) incorrectly stating that AFW was tested IAW ASME XI requirements.

A review of 10CFR50.9, Completeness and Accuracy of Information, was conducted. 10CFR50.9 states:

a) Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

(b) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

As documented in root cause report, the previous OAR reports for Unit 1 and Unit 2 have incorrectly stated that all ASME Section XI testing has been completed. As identified in the root cause, the required ASME Section XI buried pipe testing for the AFW system has not been performed since the 1st 10-year interval for Unit 1 and only the #22 AFW buried piping was tested in the 1st 10-year interval for Salem Unit 2. Therefore by the guidance of 10CFR50.9 the OAR reports for since the first interval for Unit

1 and since Unit 2 start up were not complete and accurate in all material respects.

The next question to answer in 10CFR50.9(b) is whether or not the information has a #significant implication for public health and safety#. As documented in Salem Unit 1 OpEval 70108698-0110, despite being found in a degraded condition, the AFW piping was capable of performing its design function. As documented in Salem Unit 2 OpEval 70109482-0010, although the missed pressure testing is a nonconformance there is sufficient initial testing, performance testing, and pipe condition evidence to support operability. Since the Unit 1 and 2 AFW underground piping was determined to be operable without the performance of the required ASME Section XI testing being performed, the inaccuracies in the OAR reports do not constitute a significant implication to public health and safety and therefore do not require reporting in accordance with 10CFR50.9.

Since Salem will be receiving a potential Non-cited violation for failure to perform the required pressure drop tests, updating the previous OARs will provide no additional benefits to the NRC or public since the non-cited violation will be a matter of public record.

Corrective actions include requiring a formal pressure test plan including hand over hand walk downs, boundary validation, and formal acceptance criteria for buried piping tests during each 10 year interval update and completing the current 10 year update to these requirements.

An extent of condition review was performed. Both Unit 1 and Unit 2 AFW buried piping had not been tested in accordance with ASME Section XI requirements. During 1R20, Unit 1 AFW buried piping was replaced and pressure tested in accordance with ASME Section XI requirements. A risk assessment for Salem Unit 2 missed pressure test was conducted. The results of that assessment concluded that deferral of the pressure test for a period of up to the end of the current operating cycle is acceptable and results in a negligible increase in risk. During 2R18, Unit 2 AFW buried piping will be pressure tested. Additionally, pressure test boundary drawings were reviewed to identify other potential buried piping that would fall under the same pressure test. Other piping identified includes Service Water (SW) headers on both units. Review and evaluation of the buried portion of the Service Water system determined that due to the excessive leakage of the SW21 valves validated by In-Service Test (IST) data the system is determined to be non-isolable. Therefore, the requirements of IWA-5244(b)(2) are applicable "The system pressure test for non-isolable buried components shall consist of a test to confirm that flow during operation is not impaired." IST data has shown that the structural integrity of the SW system is satisfactory. The extent of condition review determined that no other piping systems were identified as buried at Salem units 1 and 2 where the condition identified would apply.

A review of the applicable Operating Experience did not identify plants that had similar experiences such that the corrective actions would have prevented this event. Through a review of NRC integrated inspection reports the team identified that other plants received non-cited violations for issues similar to those identified in this report. The NRC has identified a preliminary green non cited violation for this event. Though past Owner Acceptance Reports (OAR) had incorrectly stated that the AFW system had been tested in accordance with ASME Section XI testing requirements, this event has been determined to be non reportable.

2.0 EVENT DESCRIPTION:

On 5 April 2010, during the Salem Unit 1 Refueling Outage (1R20), a portion of the Auxiliary Feedwater System (AFW) buried piping was excavated and inspected in accordance with the Buried Pipe Program. The inspection revealed general corrosion on several sections of the piping supplying AFW to 12 and 14 Steam Generators. Salem Unit 1 AFW buried piping was replaced and pressure tested during the outage.

A review of AFW piping inspection history to support past operability was initiated. Through this investigation it was determined that periodic pressure testing required under ASME Section XI IWA-5244, Buried Components, had not been performed during the first, second, or third ten-year inspection intervals. Additionally, no approved alternative testing method had been requested in accordance with 10CFR50.55a.

Detailed Time Line (see Attachment #1)

3.0 ANALYSIS:

LS-AA-125-1001, Revision 7, Root Cause Analysis Manual, was reviewed to determine which methods were most appropriate for the analysis of this event and details to conduct were outlined in LS-AA-125-1001. Events and Causal Factors Charting, TapRoot®, Barrier Analysis and Task Analysis were chosen as the best tools for this event.

Basis for Using the Event and Causal Factors Chart (E&CF) Technique (See Attachment #2 for the completed E&CF)
This technique was used to provide a timeline from the beginning of the first interval long term plan until discovery of the missed inspection of the AFW buried piping. Results of utilizing this method provided for a detailed review of the event and the identification of causal factors.

Basis for Using the TapRoot® Technique

This technique was used to provide an interviewing and investigation strategy used in the development of the root and contributing causes. Results of utilizing this method provided the cause codes for trending purposes.