

St. Lucie SLRA: Breakout Questions

SLRA Section: 19.2.2.11 - Open Cycle Cooling Water System
TRP: 020

Note: Breakout Questions are provided to the applicant and will be incorporated into the publicly-available audit report.

Technical Reviewer	Andrew Johnson	01/12/2022
Technical Branch Chief	Steve Bloom	01/12/2022
Breakout Session	<i>Date/Time</i>	<i>To be filled in by PM</i>

Applicant Staff	NRC staff
<i>To be filled out by PM during breakout</i>	

Question Number	SLRA Section	SLRA Page	Background / Issue (As applicable/needed)	Discussion Question / Request	Outcome of Discussion
1	B.2.3.11	Page B-96	The SLRA program description in Appendix B states, "The components managed by this [the OCCW AMP] include the ICW system piping/fittings and valves with a diameter greater than 20-inches, ICW strainers, component cooling water (CCW) heat exchangers (tube side), ICW orifices and thermowells, the connections between small bore and large bore piping, the turbine cooling water (TCW) heat exchangers' ICW system isolation valves, and the casings of the ICW pumps."	Please discuss the scope of OCCW system AMP and any technical bases for not including the entire ICW system, as outlined in Procedure ER-SL-123-1000, Revision 1, " <i>NRC Generic Letter 89-13 Program</i> ," dated 06/10/2019.	

		<p>On page 9 of the OCCW SLR Program Basis Document (NEESL00008-REPT-049) it states, "This AMP only manages aging of the raw water exposed internal surfaces of piping, piping components, piping elements, and heat exchanger components within the scope of GL 89-13.</p> <p>Procedure ER-SL-123-1000, Revision 1, "<i>NRC Generic Letter 89-13 Program</i>," dated 06/10/2019, contains four attachments, which are the initial St. Lucie response to GL 89-13 in 1990 (Attachment 1), a commitment revision in 2000 (Attachment 2), a commitment clarification in 2013 (Attachment 3), and a summary of active programs for GL 89-13 as of 06/10/2019 (Attachment 4). None of these four attachments discuss restriction of inspection and maintenance of the ICW system piping and components to only those with a diameter greater than 20-inches. Recommended Action III from GL 89-13 was to establish a routine inspection and maintenance program to ensure that corrosion, erosion, protective coating failures, silting and biofouling cannot degrade the OCCW system performance. The St Lucie response was, "St. Lucie currently has a program that performs a 100% inspection of the ICW system piping and components."</p>		
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			The boundary drawings SLR-2998-G-082, Sheet 2 and SLR-8770-G-082, Sheet 2 include 20-inch diameter piping to bypass the strainer, as well as 1-inch, 2-inch, 4-inch, 6-inch and 8-inch piping for the automatic backflushing of the ICW strainers, all of which is color coded green to indicate it is within scope of license renewal and subsequent license renewal.		
2	NEESL00008-REPT-049	Page 9 of 43	The OCCW program evaluation document states: <i>The components with internal surfaces exposed to raw water not managed by the 89-13 program are managed by the PSL Insp. of Int. Surf. in Misc. Piping and Ducting Components AMP.</i> The current inspection frequency for the OCCW is 100 percent every other outage. The inspection frequency for the Insp. of Int. Surf. AMP is only on a sampling basis with 20 percent in each 10-year period.	Because the inspection frequency is significantly different between the two programs, it is not clear why the 20-inch, 8-inch, and 6-inch piping (whose failure could significantly degrade the OCCW system performance) is not included within the scope of the OCCW System AMP.	
3	Table 19-3	Page A1-71	The Commitment and Implementation Schedule contains Commitment 14 d) "Ensure that all above-ground, large-bore, safety-related ICW piping is replaced with AL6XN stainless steel," with an implementation date no later than 6 months prior to the SPEO, or no later than the last refueling outage prior to the SPEO. For PSL1: 09/01/2035	Provide clarification on the diameter of the piping that meets the definition of large-bore piping and will be replaced under Commitment 14 d).	

4	B.2.3.11	Page B-104	<p>The last paragraph on page B-104 states, "There has been no degradation identified in the underground discharge piping after a large portion of it was replaced in 2012."</p> <p>On the portal, the document "Circ Water RU17-049.pdf" is a report from ASI Marine that documents ROV inspections of in 84-inch diameter discharge pipeline (1B1) and a 36-inch diameter discharge pipeline (CW-28) in March 2018. Figure 3 on page 7 identifies a leak location in 1A ICW 30"-CW-30 but there is no discussion of this leak in the inspection report.</p>	Provide clarification on the apparent discrepancy between the statement on page B-104 of the SLRA and Figure 3 on page 7 of the ASI report.	
5	B.2.3.11	Page B-104	<p>The last paragraph on page B-104 states, "The underground piping between the intake structure and the CCW building has not experienced the type of degradation identified in the OE for the above ground piping. As a result, there are no plans to replace ICW piping that is underground or below sea-level."</p> <p>On the portal, the document "CW-F-2 – Underyard Pipes Drawing (CW-90).pdf" is a copy of drawing 8770-G-125, sheet CW-F-2. The drawing has 19 annotations (apparently dated from 2015).</p>	<p>It is unclear if the red colored annotations on the drawing indicate patches, leaks, repairs, or something else.</p> <p>Clarify the meaning of the annotations on the drawing and whether there is some type of degradation being experienced by the piping in the drawing. Also discuss any insights you have regarding why the above ground piping is experiencing extensive degradation and the underground and below sea-level piping is not experiencing the same type of degradation.</p>	