

# DRAFT – UNCERTIFIED INFORMATION

## Question

RAI B.1.21-1 (Flow-Accelerated Corrosion)

### Background

In support of its integrated plant assessment, River Bend Station (RBS) prepared report RBS-EP-15-00007, Revision 0, "Aging Management Program Evaluation Results – Non-Class 1 Mechanical," to demonstrate that the programs credited in the license renewal aging management review reports are adequate to support license renewal. The RBS report states that it identifies the applicable program procedures and controlling documentation and describes the program elements required to support the RBS license renewal application. For the "scope of program" program element, RBS-EP-15-00007 Section 4.8, "Flow-Accelerated Corrosion," states that the program uses the guidance described in EPRI NSAC-202L, Revision 4, "Recommendations for an Effective Flow-Accelerated Corrosion Program," and cites program procedures SEP-FAC-RBS-001, "Flow-Accelerated Corrosion," and EN-DC-315, "Flow-Accelerated Corrosion Program." In addition, RBS-EP-15-00007 states that, for this aspect, the Flow-Accelerated Corrosion program is consistent with GALL Report AMP XI.M17, "Flow-Accelerated Corrosion."

### Issue

RBS-EP-15-00007 states that the program uses the guidance from NSAC 202L, Revision 4; however, implementing procedures SEP-FAC-RBS-001, and EN-DC-315 state that the program uses guidance from NSAC-202L, Revision 3. In addition, GALL Report AMP XI.M17 states that the program uses the guidance in NSAC-202L, Revision 2 or Revision 3. Consequently, it is unclear to the staff whether the program will use guidance in Revision 4 of NSAC-202L, as stated in RBS-EP-15-00007, or whether the program will use the guidance in Revision 3 of NSAC-202L, as stated in the associated implementing procedures SEP-FAC-RBS-001 and EN-DC-315, and in GALL Report AMP XI.M17.

### Request

Clarify which revision of NSAC 202L is used for guidance in the RBS Flow-Accelerated Corrosion program. If inconsistencies are identified between the applicable revision of NSAC 202L referenced in the integrated plant assessment and the program's implementing procedures or the GALL Report AMP XI.M17, address how these inconsistencies will be resolved.

## Response

*Note: A previous response to RAI B.1.21-1 was submitted in letter RBG-47834, dated March 8, 2018. The following response is the same as the response in letter RBG-47834 except a sentence has been added regarding reference to NSAC-202L, Revision 3, in site procedures. The following response supersedes the previous response submitted in letter RBG-47834.*

NSAC-202L, Revision 4, is used for guidance in the RBS Flow-Accelerated Corrosion Program.

Revisions have been initiated for procedures EN-DC-315 and SEP-FAC-RBS-001 to remove reference to Revision 3 of NSAC-202L.

EPRI periodically revises NSAC-202L to update flow-accelerated corrosion program recommendations with the experience of members of the CHECWORKS Users Group (CHUG), and recent developments in detection, modeling, and mitigation technology. These recommendations refine and enhance those of earlier versions and ensure the continuity of existing flow-accelerated corrosion programs. The technical changes in NSAC-202L-R4 represent improvements in the management of flow-accelerated corrosion and ensure that the main

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objective of flow-accelerated corrosion programs, which is to manage wall thinning, is maintained. Use of NSAC-202L-R4 for Flow-Accelerated Corrosion program guidance has been deemed acceptable in NUREG-2205, “*Safety Evaluation Report Related to the License Renewal of LaSalle County Station Units 1 and 2,*” and in NUREG-2191, “*Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report.*”

Because NUREG-1801, Section XI.M17 states that the program uses the guidance in NSAC-202L, Revision 2 or Revision 3, an exception is added to the RBS Flow-Accelerated Corrosion Program description.

The changes to LRA Table B-3 and Section B.1.21 follow with additions underlined and deletions lined through.

**Table B-3**  
**RBS Program Consistency with NUREG-1801**

Program Name	Plant-Specific	NUREG-1801 Comparison	
		Program has Enhancements	Program has Exceptions to NUREG-1801
Flow-Accelerated Corrosion [B.1.21]		X	<u>X</u>

### B.1.21 Flow-Accelerated Corrosion

#### Exceptions to NUREG-1801

None

The Flow-Accelerated Corrosion Program has the following exception.

<u>Element Affected</u>	<u>Exception</u>
<u>1. Scope of Program</u> <u>4. Detection of Aging Effects</u> <u>5. Monitoring and Trending</u> <u>6. Acceptance Criteria</u>	<u>The Flow-Accelerated Corrosion Program described in Section XI.M17 of NUREG-1801 relies on implementation of the Electric Power Research Institute (EPRI) guidelines in Nuclear Safety Analysis Center (NSAC)-202L-R2 or -R3 for an effective flow-accelerated corrosion program. The RBS Flow-Accelerated Corrosion Program is based on NSAC-202L-R4.<sup>1</sup></u>

#### Basis for Exception

1. EPRI periodically revises NSAC-202L to update flow-accelerated corrosion program recommendations with the experience of members of the CHECWORKS Users Group (CHUG), and recent developments in detection, modeling, and mitigation technology. These recommendations refine and enhance those of earlier versions and ensure the continuity of existing flow-accelerated corrosion programs. The technical changes in NSAC-202L-R4 represent improvements in the management of flow-accelerated corrosion and ensure that the main objective of flow-accelerated corrosion programs, which is to manage wall thinning, is maintained. Use of NSAC-202L-R4 for Flow-Accelerated Corrosion Program guidance has

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been deemed acceptable in NUREG-2205, “Safety Evaluation Report Related to the License Renewal of LaSalle County Station Units 1 and 2,” and in NUREG-2191, “Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report.”

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