

14.2.12.1.34 Auxiliary Feedwater System Test

198-8208

DCD Tier 2, Section 14.2.12.1.34 provides the initial test descriptions for the Auxiliary Feedwater System (AFWS). In **NRC RAI ~~198-8028~~, Question 14.02-28 (ML15254A546)**, the NRC staff requested that the DC applicant identify the test method item that verifies the AFWS response to manual controls, or alternatively that the applicant modify APR1400 DCD Section 14.2.12.1.34, "Auxiliary Feedwater System," to include this information.

In the June 30, 2016, response to **RAI ~~198-8208~~, Question 14.02-28 (ML16182A548)**, the DC applicant upgraded DCD Section 14.2.12.1.34 with a revised test plan that included several changes to verify the AFWS response to several different manual, simulated and automatic controls.

Based on the proposed changes to APR1400 DCD Section 14.2.12.1.34 to include manual controls for the AFWS, the NRC staff determined that the issues identified in RAI 8208, Question 14.02-28 are resolved. As such, the NRC staff finds the AFWS test described in DCD Section 14.2.12.1.34 verifies the as-installed AFWS component and meets RG 1.68 Appendix A-1.d and is acceptable; Therefore, **NRC RAI ~~198-8028~~, Question 14.02-28 is resolved** and the proposed change to the DCD is being tracked as **Confirmatory Item 14.2.12.1-17**.

14.2.12.1.37 Reactor Coolant Gas Vent System Test

DCD Tier 2, Subsection 14.2.12.1.37 provides the initial test descriptions for the Safety Depressurization and Reactor Coolant Gas Vent System (RCGVS). The NRC staff determined that the acceptance criteria was incomplete and also referenced incorrect DCD design sections. In **NRC RAI 175-8034, Question 05.04.12-9 (ML15295A499)**, the staff requested that the DC applicant correct the erroneous references to the acceptance criteria for the RCGVS.

In the May 4, 2016, response to **RAI 175-8034, Question 05.04.12-9 (ML16125A479)**, the DC applicant clarified that DCD Tier 2, Subsection 14.2.12.1.37 describes RCGVS testing, whereas DCD Tier 2, Section 14.2.12.1.3 describes testing of the safety depressurization of the POSRVs. Therefore, the applicant committed to revise the title of Subsection 14.2.12.1.37 to "Reactor Coolant Gas Vent System Test," and remove references to the POSRVs. The applicant provided a revised Subsection 14.2.12.1.37 that removed incorrect references to other parts of the DCD and now included acceptance criteria that clearly relate to the test objectives and methods. The NRC staff determined the revised preoperational test procedures and their acceptance criteria are adequate to verify RCGVS operation; therefore, the NRC staff determined that the response to **RAI 175-8034, Question 05.04.12-9** is acceptable. The proposed DCD changes are being tracked as **Confirmatory Item 14.2.12.1-18**.

14.2.12.1.38 Containment Spray System Test

DCD Tier 2, Subsection 14.2.12.1.38 provides the initial test descriptions for the Containment Spray System (CSS). The Section 5.0, Acceptance Criteria states:

GTG

the ability to synchronize the ~~GTF~~ with offsite power while loaded upon a simulated restoration of offsite power; 7) demonstration of the adequacy and operation of the fuel systems; 8) demonstration of the operation of the lube oil and cooling systems; and 9) demonstration of the operation of the exhaust/intake system.

The NRC staff determined that the DC applicant's response to **RAI 191-8210, Question 14.02-11** and the proposed revisions to DCD Subsections 14.2.12.1.89 and 14.2.12.1.90 related to testing the AAC GTG is acceptable because it addresses the specific concerns raised in the RAI and provides sufficient detail to demonstrate that the AAC GTG can obtain rated voltage and frequency within 2 minutes after the receipt of a starting signal. Based on the above, the NRC staff determined that the proposed revisions to DCD Subsections meet 10 CFR Part 50, Appendix A, GDC 17 and 18, and RG 1.68, Appendix A, Section A-1.g, Item 3. **RAI 191-8210, Question 14.02-11 is resolved** and these proposed changes to the DCD are being tracked as **Confirmatory Item 14.2.12.1-39**.

In **NRC RAI 8711, Question 14.02-71 (ML16319A337)**, the NRC staff requested the DC applicant discuss how the initial test program in DCD Tier 2 Section 14.2.12.1.89, demonstrates that the AAC GTG and its supporting systems can be started, controlled, and monitored from the RSR to cope with an SBO. **RAI 8711, Question 14.02-71 is being tracked as Open Item 14.2.12-1.40**.

14.2.12.1.99 Compound Building HVAC System Test; 14.2.12.1.132 Auxiliary Building Controlled Area HVAC System Test

In **NRC RAI 281-8232, Question 14.02-47 (ML15306A018)**, the NRC staff requested the DC applicant to update DCD Sections 14.2.12.1.99, "Compound Building HVAC [Heating, Ventilation and Air Conditioning] System Test," and 14.2.12.1.132, "Auxiliary Building Controlled Area HVAC System Test," to provide for testing to verify the airflow rate acceptance criteria provided in DCD Table 12.2-26. The HVAC system airflow rates provided in this table are airflow rates relied upon to provide reasonable assurance that airborne concentrations remain below derived airborne concentration (DAC) limits.

In the June 15, 2015, response to **RAI 281-8232, Question 14.02-47 (ML16167A537)**, the DC applicant added acceptance criteria to DCD Sections 14.2.12.1.99 and 14.2.12.1.132, to ensure that the ITP provides for testing of the Compound Building HVAC system and the Auxiliary Building controlled area HVAC system to maintain exhaust airflow rates from the radiologically controlled rooms at a minimum to the HVAC flows in DCD Table 12.2-26.

The staff determined that the DC applicant's response to **RAI 281-8232, Question 14.02-47** and the proposed revision to Subsections 14.2.12.1.99 and 14.2.12.1.132 meets the testing guidance in RG 1.68, Appendix A, Section A-1.m, for minimum exhaust airflow rates from these radiologically controlled rooms in accordance with DCD Table 12.2-26 and therefore, is acceptable. **RAI 281-8232, Question 14.02-47 is resolved** and the proposed change to the DCD is being tracked as **Confirmatory Item 14.2.12.1-48**.