NRR-DMPSPEm Resource

From: Wengert, Thomas
Sent: Wednesday, July 18, 2018 11:18 AM
To: PYLE, STEPHENIE L
Cc: BICE, DAVID B (ANO); Pascarelli, Robert
Subject: ANO-1 - Final RAI #2 RE: License Amendment Request to Revise EFW System TS Bases (EPID L-2017-LLA-0349)
Attachments: ANO-1 Final RAI #2 RE EFW System TS Bases LAR.pdf

On July 16, 2018, the U.S. Nuclear Regulatory Commission (NRC) staff sent Entergy Operations, Inc. (the licensee) the draft Request for Additional Information (RAI) identified below. This RAI relates to the license amendment request to revise the Emergency Feedwater System (EFW) Technical Specification Bases at Arkansas Nuclear One, Unit 1, as described below.

The NRC staff held a conference call with the licensee staff on July 18, 2018, to clarify this request. At the conclusion of the call, the licensee agreed to provide a response to this RAI within 30 days (i.e., by August 17, 2018). A publicly available version of this final RAI (attached with "Draft" removed) will be placed in the NRC's Agencywide Documents Access and Management System (ADAMS).

From: Wengert, Thomas
Sent: Monday, July 16, 2018 1:54 PM
To: PYLE, STEPHENIE L
Cc: 'BICE, DAVID B (ANO)' ; Pascarelli, Robert
Subject: ANO-1 - Draft RAI #2 RE: License Amendment Request to Revise EFW System TS Bases (EPID L-2017-LLA-0349)

By letter dated October 2, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17275A910), as supplemented by letter dated April 26, 2018 (ADAMS Accession No. ML18117A492), Entergy Operations, Inc. (Entergy) requested changes to the Technical Specification (TS) Bases for the Arkansas Nuclear One, Unit 1 (ANO-1), TS 3.7.5, "Emergency Feedwater (EFW) System." The proposed change would stipulate the conditions for which the TS 3.7.5, Condition A, 7-day Completion Time should apply to the ANO-1 turbine driven EFW pump steam supply motor operated valves.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the submittals and determined that additional information is required in order to complete the review. The staff's draft request for additional information (RAI) is provided as an attachment to this email. Please review and let me know if Entergy would like to have a conference call with the NRC staff to clarify this request. Also, let's discuss the timing for your response to this RAI.

Tom Wengert
Project Manager – Arkansas Nuclear One
NRR/DORL/LPL4
(301) 415-4037

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Recipients:
"BICE, DAVID B (ANO)" <DBICE@entergy.com>
Tracking Status: None
"Pascarelli, Robert" <Robert.Pascarelli@nrc.gov>
Tracking Status: None
"PYLE, STEPHENIE L" <SPYLE@entergy.com>
Tracking Status: None

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REQUEST FOR ADDITIONAL INFORMATION

REGARDING LICENSE AMENDMENT REQUEST TO

REVISE TECHNICAL SPECIFICATION BASES 3.7.5,

EMERGENCY FEEDWATER SYSTEM

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT 1

DOCKET NO. 50-313

By letter dated October 2, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17275A910), as supplemented by letter dated April 26, 2018 (ADAMS Accession No. ML18117A492), Entergy Operations, Inc. (Entergy, the licensee) requested changes to the Technical Specification (TS) Bases for the Arkansas Nuclear One, Unit 1 (ANO-1), TS 3.7.5, "Emergency Feedwater (EFW) System." The proposed change would stipulate the conditions for which the TS 3.7.5, Condition A, 7-day Completion Time should apply to the ANO-1 turbine-driven (TD) EFW pump steam supply motor-operated valves (MOVs). The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the submittals and determined that additional information is required in order to complete the review, as indicated below.

Regulatory Requirement

Title 10 of the *Code of Federal Regulations* (10 CFR) paragraph 50.36(a)(1) states:

> Each applicant for a license authorizing operation of a production or utilization facility shall include in his application proposed technical specifications in accordance with the requirements of this section. A summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the technical specifications.

Request for Additional Information (RAI) SCPB-1

Issue-1

In Entergy letter dated April 26, 2018, the licensee provided the following response, in part, to NRC RAI SCPB-1, regarding existing direct current (DC) valve requirements for an operable turbine-driven pump train:

> In all cases, inoperability of the green train DC-powered steam supply MOVs requires TS entry since the P-7A EFW subsystem is the "green train" flow path to the Steam Generators (SGs). In the case where the red train DC-powered steam supply MOVs are de-energized closed such that these MOVs cannot inadvertently impact P-7A governor function (ramp circuitry), TS entry is not specifically required. With the valves de-energized closed, a red train related

failure cannot affect the green train P-7A EFW function. There are other inoperable red train DC-powered steam supply MOV configurations, however, that do require TS entry.

RAI-1

a. For the proposed OPERABLE steam paths (i.e., paths consisting of an OPERABLE alternating current (AC) powered steam supply valve (CV-2617 or CV-2667), an OPERABLE DC-powered steam supply valve (CV-2613 or CV-2663), and an OPERABLE DC-powered steam supply bypass valve (CV-2615 or CV-2665), clarify the necessary state (regarding valve position) of an inoperable valve in each pair that would be necessary to maintain an OPERABLE steam path and avoid impacting the turbine governor function.

b. If an inoperable steam supply MOV was not fully closed, describe what action would be taken in accordance with TSs.

c. For a proposed OPERABLE steam path with one OPERABLE red train DC MOV and one OPERABLE green train DC MOV, describe how existing surveillance testing would provide reasonable assurance that each proposed OPERABLE steam path supply would satisfactorily automatically start and operate the TD EFW pump.

d. In Entergy's response to RAI-1a, the licensee stated, in part, "In the case where the red train DC-powered steam supply MOVs are deenergized closed such that these MOVs cannot inadvertently impact P-7A governor function (ramp circuitry), TS entry is not specifically required." However, the last sentence of the response refers to other red train DC-powered steam supply MOV configurations that do require TS entry. Identify those configurations and explain why TS entry is required.

RAI SCPB-2

Issue-2

Section 2.2 of the Enclosure to the October 2, 2017, license amendment request included a statement that the proposed EFW TS Bases change will not create a conflict with the request to adopt Technical Specifications Task Force (TSTF)-412. The NRC staff approved the adoption of TSTF-412 at ANO-1 in Amendment No. 260 dated June 19, 2018 (ADAMS Accession No. ML18115A282). The revised TS 3.7.5 included in Amendment No. 260 specifies two conditions, Condition A and Condition C, that involve one inoperable steam supply to the TD EFW train. However, Section 2.4 of the Enclosure and Attachment 1 to the Enclosure to the license amendment request only included a proposed TS Bases change specific to Action A.

RAI-2

A definition of an operable steam path for Condition C has not been defined as the licensee proposed for Condition A. Please explain and define what constitutes an operable steam path when in Condition C.