NRR-DMPSPEm Resource

From: Kim, James
Sent: Thursday, September 20, 2018 3:28 PM
To: Duke, Paul R.; Thomas, Brian J.
Cc: Marabella, Lee A.
Subject: Salem 1 and 2 - Final RAI from I&C Branch RE: Inverter AOT Extension
Attachments: Final RAI from I & C Branch--Salem Vital Inverters AOT.docx

By letter dated May 16, 2018, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18136A866), as supplemented by letter dated June 14, 2018 (ML18169A218), PSEG Nuclear LLC (PSEG, the licensee), requested an amendment to Renewed Facility Operating License No. DPR-70 and DPR-75 for Salem Generating Station (Salem) Units 1 and 2. This license amendment request proposes to change Technical Specification (TS) 3.8.2.1, "A. C. Distribution - Operating." The proposed change would increase the Vital Instrument Bus (VI B) Inverters allowed outage time (AOT) from 24 hours for the A, B and C inverters to 7 days and from 72 hours for the D inverter to 7 days.

The NRC staff from Instrumentation and Controls Branch has determined that the additional information is required for the staff to complete its review. On September 4, 2018, the NRC staff sent PSEG the draft Request for Additional Information (RAI). This RAI relates to the licensee's request to increase the Vital Instrument Bus (VIB) Inverters allowed outage time (AOT).

On September 20, 2018, the NRC staff and the licensee held a conference call to clarify the request. A publicly available version of this final RAI (attached) will be placed in the NRC's ADAMS. Subsequently, the licensee agreed to respond to this request by October 31, 2018.

Jim Kim
Project Manager – Salem Generating Station
NRR/DORL/LPL1
301-415-4125

Hearing Identifier: NRR_DMPS
Email Number: 584

Mail Envelope Properties (James.Kim@nrc.gov20180920152700)

Subject: Salem 1 and 2 - Final RAI from I&C Branch RE: Inverter AOT Extension
Sent Date: 9/20/2018 3:27:57 PM
Received Date: 9/20/2018 3:27:00 PM
From: Kim, James

Created By: James.Kim@nrc.gov

Recipients:
"Marabella, Lee A." <Lee.Marabella@pseg.com>
Tracking Status: None
"Duke, Paul R." <Paul.Duke@pseg.com>
Tracking Status: None
"Thomas, Brian J." <Brian.Thomas@pseg.com>
Tracking Status: None

Post Office:

Files	**Size**	**Date & Time**
MESSAGE	1424	9/20/2018 3:27:00 PM
Final RAI from I & C Branch--Salem Vital Inverters AOT.docx	18738	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

REQUEST FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST, VITAL INSTRUMENT BUS
INVERTER ALLOWED OUTAGE TIME (AOT) EXTENSION
SALEM NUCLEAR GENERATING STATION UNITS 1 AND 2
DOCKET NUMBER 50-272, and 50-311

By letter dated May 16, 2018, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18136A866), as supplemented by letter dated June 14, 2018 (ML18169A218), PSEG Nuclear LLC submitted a license amendment request to extend the Vital Instrument Bus Inverter Allowed Outage Time (AOT) for Salem Nuclear Generating Station Units 1 and 2 (Salem). The licensee states that the planned AOT extension is to allow increased flexibility in scheduling and performance of corrective maintenance, allow better control and allocation of resources, and to reduce the potential for unplanned plant shutdown.

The NRC staff reviewed the information provided in the license amendment request and requests the licensee to respond to the following request for additional information (RAI):

EICB-1
In the plant configuration where a safety channel on the 1A vital instrument bus is in bypass for testing while the inverter for the 1B vital bus is in a planned or an unplanned AOT, a loss of offsite power could lead to failure of actuation of an ESF subsystem in a timely manner. This is possible because ESF actuation requires power for operation. Loss of offsite power should not disable a safety function during an AOT. Provide a description of the measures taken at Salem to avoid configurations that result in a system's loss of safety function. This information is requested to assess compliance to Salem UFSAR Criterion 19-Engineered Safety Features Protection Systems.

EICB-2
UFSAR Section 8.3.2.3 provides description of station battery monitoring for the batteries and the associated equipment. Please describe what type of monitoring and/or alarms are provided for the 115 V vital instrument buses. This information is requested to assess compliance to Salem UFSAR Criterion 12 – "Instrumentation and Control Systems": Instrumentation and controls shall be provided as required to monitor and maintain variables within prescribed operating ranges.

Non-RAI-related Question for the Salem PM:

In order for the staff to gain a thorough understanding of the impact of this LAR, please request the licensee to provide the information below. This information does not need to be docketed.

Provide current as-built simplified one-line schematics of the Vital Direct Current system and the Vital Alternating Current (AC) Instrumentation and Control power system including the backup regulated power supply. The simplified schematic should include 4.16 kV vital buses, the associated 230 V buses, the vital 125 V DC batteries, and the 115 V vital instrument buses. This information is requested to fully understand the proposed changes and it has not been provided in the license amendment request (LAR) and does not seem to be available in the Salem Updated Final Safety Analysis Report (UFSAR).