

NRR-DRMAPEm Resource

From: Lamb, John
Sent: Monday, August 12, 2019 1:45 PM
To: Enfinger, Timothy Lee
Subject: RAI - Edwin I. Hatch Nuclear Plant, LAR Regarding Degraded Voltage (L-2019-LLA-0108)

Importance: High

Mr. Enfinger:

In its letter dated April 30, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19123A101), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) for Edwin I. Hatch Nuclear Plant (HNP), Units 1 and 2 to revise Technical Specifications (TS) 3.3.8.1, "Loss of Power (LOP) Instrumentation." Specifically, the proposed changes would delete the annunciation requirements for the HNP, Unit 1, 4.16 kilovolt (kV) emergency bus undervoltage instrumentation, revise the instrument Allowable Values (AVs) for the HNP, Unit 1, 4.16 kV emergency bus degraded voltage instrumentation, and revise the HNP, Unit 1 license condition to more accurately reflect its intent.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's RAI responses and determined that additional information is required in order to complete the review. The request for additional information (RAI) is below. The RAIs correlates to "holes" in the draft Safety Evaluation or to information that is needed on the docket. It is expected that the licensee's responses to the RAIs will enable the NRC staff to fill in the holes and complete its evaluation.

On August 12, 2019, a clarifying call was held between NRC and SNC to make sure the questions were understandable and did not contain any proprietary information. The NRC staff did not make any regulatory decisions during the clarifying call. SNC stated they would respond to the below RAIs within 30 days from the date of this email. Enclosed is the request for additional information.

Sincerely,

John G. Lamb, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

Enclosure: Request for Additional Information

RAI

In its letter dated April 30, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19123A101), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) for Edwin I. Hatch Nuclear Plant (HNP), Units 1 and 2 to revise Technical Specifications (TS) 3.3.8.1, "Loss of Power (LOP) Instrumentation." Specifically, the proposed changes would delete the annunciation requirements for the HNP, Unit 1, 4.16 kilovolt (kV) emergency bus undervoltage instrumentation, revise the instrument Allowable Values (AVs) for the HNP, Unit 1, 4.16 kV emergency bus

degraded voltage instrumentation, and revise the HNP, Unit 1 license condition to more accurately reflect its intent.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's RAI responses and determined that additional information is required in order to complete the review. The request for additional information (RAI) is below. The RAIs correlates to "holes" in the draft Safety Evaluation or to information that is needed on the docket. It is expected that the licensee's responses to the RAIs will enable the NRC staff to fill in the holes and complete its evaluation.

Regulatory Requirements

The regulations at Title 10 of the *Code of Federal Regulations* (10 CFR), 50.36, "Technical specifications," establish the requirements related to the content of the TS. Pursuant to 10 CFR 50.36(c), TS are required to include items in five specific categories related to station operation: (1) Safety limits, limiting safety system settings, and limiting control settings, (2) Limited conditions of operation (LCOs), (3) Surveillance requirements (SR), (4) Design features; and (5) Administrative controls. The proposed changes in this LAR relate to the SR category.

The regulation 10 CFR 50.36(c)(1)(ii)(A) states in part, "Limiting safety system settings for nuclear reactors are settings for automatic protective devices related to those variables having significant safety functions. Where a limiting safety system setting is specified for a variable on which a safety limit has been placed, the setting must be so chosen that automatic protective action will correct the abnormal situation before a safety limit is exceeded. If, during operation, it is determined that the automatic safety system does not function as required, the licensee shall take appropriate action, which may include shutting down the reactor."

The regulation 10 CFR Part 50.36(c)(3), "Surveillance requirements," requires surveillance relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

RAI-1:

In the LAR, the licensee requested to revise the AVs for Function 2, "4.16 kV Emergency Bus Undervoltage (Degraded Voltage)," to include Functions 2.a (Bus Undervoltage) and 2.b (Time Delay). There are new AVs specified for the new Degraded Voltage Relays (DVRs). To evaluate this request, the NRC staff needs to confirm whether the proposed undervoltage setting AVs provide reasonable margin for satisfying applicable regulatory criteria within 10 CFR 50.36(c). Please provide the manufacturer name, and specific model number, which will be used to accomplish the safety functions associated with these proposed DVRs.

This information is needed to enable the NRC staff to verify that the requirements of 10 CFR 50.36(c) are reasonably being met regarding the selection of the AVs for "Degraded Voltage," against a loss of power condition.

RAI-2:

In the LAR, the licensee requested to revise the AV of the Time Delay for Function 2.b, "4.16 kV Emergency Bus Undervoltage (Degraded Voltage)," from ≤ 21.5 seconds to ≤ 11.3 seconds. To evaluate this request, the NRC staff needs to confirm whether the proposed time delay setting AVs provide reasonable margin needed to satisfy applicable regulatory criteria within 10 CFR 50.36(c).

- Please provide the proposed time delay setting range and manufacturer's specified time delay performance tolerance that will be used for the proposed relays (e.g., 1-10 seconds; 2-20 seconds; or 10-100 seconds, at \pm X% of range or \pm X% of setting).
- In your response, please indicate whether the manufacturer's specification for the time delay performance tolerance is provided in terms of percent of time delay setting or percent of range.

This information is needed to enable the NRC staff to verify that the requirements of 10 CFR 50.36(c) are being met regarding the selection of the allowable values for "Degraded Voltage," against a loss of power condition.

RAI-3:

The LAR states, in part, that Emergency Diesel Generators (DGs) 1A and 1 C have a 1000-hour rating of 2850 kilowatt (kW) and a 168-hour rating of 3250 kW. However, as described in the LAR dated February 19, 2019 (ADAMS Accession No. ML19050A010), DGs 2A and 2C have a continuous rating of 2850 kW and up to a 30-minute rating of 3500 kW. The swing DG has a 1000-hour rating of 2850 kW up to a 168-hour rating of 3250 kW.

It appears that the LAR uses the swing DG's rating in describing the rating for DGs 1A and 1C. It is also not clear what the continuous rating and 30-minute rating of DGs 1A and 1C are. Please provide the clarification of the rating of DGs 1A and 1C including the continuous rating and 30-minute rating.

Hearing Identifier: NRR_DRMA
Email Number: 167

Mail Envelope Properties (DM6PR09MB3978678FAF1984A2B8875402FAD30)

Subject: RAI - Edwin I. Hatch Nuclear Plant, LAR Regarding Degraded Voltage
(L-2019-LLA-0108)
Sent Date: 8/12/2019 1:45:24 PM
Received Date: 8/12/2019 1:45:00 PM
From: Lamb, John

Created By: John.Lamb@nrc.gov

Recipients:
"Enfinger, Timothy Lee" <TLENFING@SOUTHERNCO.COM>
Tracking Status: None

Post Office: DM6PR09MB3978.namprd09.prod.outlook.com

Files	Size	Date & Time
MESSAGE	7361	8/12/2019 1:45:00 PM

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