

## **NRR-DMPSPEm Resource**

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**From:** Green, Kimberly  
**Sent:** Wednesday, January 9, 2019 1:13 PM  
**To:** ERICKSON, JEFFREY S; MIKSA, JAMES P  
**Subject:** Request for Additional Information for Palisades License Amendment Request to Revise Emergency Diesel Generator Degraded Voltage Surveillance Requirement 3.3.5.2a  
**Attachments:** Final RAI 01-09-19.docx

Dear Mr. Erickson and Mr. Miksa:

By letter dated May 31, 2018, Entergy Nuclear Operations, Inc. (ENO) requested a revision to Technical Specification Surveillance Requirement 3.3.5.2a to add a channel calibration requirement for the combined time delay setpoints for the degraded voltage sensing relay and the degraded voltage time delay relay for the Palisades Nuclear Plant (Agencywide Documents Access and Management System Package Accession No. ML18152A922).

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing your submittal and has identified an area where additional information is needed to complete its review. Attached, please find a request for additional information (RAI).

A draft RAI was previously transmitted to you by email dated December 12, 2018. At your request, a clarification call was held on January 9, 2019, to clarify the NRC staff's request. As a result of the call, the NRC staff revised the wording of the 4<sup>th</sup> bullet of RAI EICB-1 to include "documented" to clarify the type of assumptions for which a basis should be provided. A response to the attached RAI is requested within 30 days from the date of this email.

The NRC staff considers that timely responses to RAIs help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-1627.

Sincerely,  
Kimberly Green  
(301) 415-1627  
[kimberly.green@nrc.gov](mailto:kimberly.green@nrc.gov)

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**Created By:** Kimberly.Green@nrc.gov

**Recipients:**  
"ERICKSON, JEFFREY S" <JERICKS@entergy.com>  
Tracking Status: None  
"MIKSA, JAMES P" <jmiksa@entergy.com>  
Tracking Status: None

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**REQUEST FOR ADDITIONAL INFORMATION**  
**FOR PALISADES AMENDMENT REQUEST TO REVISE**  
**EDG DEGRADED VOLTAGE SURVEILLANCE REQUIREMENT**

By letter dated May 30, 2018 (Agencywide Document Access and Management System (ADAMS) Accession No. ML18152A922), Entergy Nuclear Operations, Inc., submitted a license amendment request (LAR) to revise Technical Specification (TS) 3.3.5, "Diesel Generator Undervoltage Start," Surveillance Requirement (SR) 3.3.5.2a to add a channel calibration requirement for the combined time delay setpoints for the degraded voltage sensing relay and the degraded voltage time delay relay. Currently, this SR requires calibration of the degraded voltage sensing relay time delay setpoint only. It does not include calibration of the combined setpoints for the degraded voltage sensing relay time delay and the nominal six-second delay for the time delay relay.

**RAI EICB-1:**

Attachments 5 and 6 to the LAR are "Second Level Undervoltage Relay Setpoint Calculation" and "Second Level Undervoltage Relays 162-153 and 162-154 Uncertainty Analysis." Both calculations use the methodology in Engineering Aid, EGAD-ELEC-08, "Instrument Loop Uncertainty and Setpoint Methodology," Revision 1, dated September 25, 2005. However, Engineering Aid EGAD-ELEC-08 was not provided as part of the LAR.

Regulatory Guide 1.105, "Setpoints for Safety-Related Instrumentation," Revision 3, and Regulatory Information Summary RIS 2006-17, "NRC Staff Position on the Requirements of 10 CFR 50.36, 'Technical Specifications,' Regarding Limit Safety System Settings During Periodic Testing and Calibration of Instrument Channels," contain guidance that is one acceptable means for performing setpoint calculations. These two guidance documents, among others, are referenced in Branch Technical Position (BTP) 7-12, "Guidance on Establishing and Maintaining Instrument Setpoints," Revision 5, which is documented in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition." The BTP provides acceptance criteria for setpoint calculations.

In order to determine if the combined setpoint for degraded voltage sensing relay time delay and the nominal six-second delay for the time delay relay is adequate, please provide a summary of the setpoint methodology, including:

- Description of the setpoint methodology and procedures used in determining setpoints, including information sources, scope, assumptions, and statistical methods for combining all the errors.
- Description of assumptions should include the environmental allowances (temperature, pressure, humidity, radiation, vibration, seismic, and electrical) for the instruments.
- Basis for acceptable as-found band and acceptable as-left band and determination of the instrument operability based on acceptable as-found band and acceptable as-left band.

- Basis for documented assumptions regarding instrument uncertainties and a discussion of the method used to determine uncertainty values.
- Description of the provisions for control of measuring and test equipment used for calibration of the instrument.
- Description of the program and methodology used to monitor and manage instrument uncertainties, including drift.

**RAI EICB-2:**

Section 6.3, paragraph B of Attachment 5 to the LAR states, in part, “As no drift data is specified for the time delay, it is assumed that drift is included in the tolerance value.” Please provide the basis for this assumption. Each assumption should be supported by a reference, a technical basis, vendor catalog information, vendor confirmation email, or some other technical justification.