

## **NRR-DMPSPEm Resource**

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**From:** Green, Kimberly  
**Sent:** Wednesday, December 12, 2018 7:17 AM  
**To:** ERICKSON, JEFFREY S; MIKSA, JAMES P  
**Subject:** Draft Request for Additional Information for Palisades License Amendment Request to Revise Emergency Diesel Generator Degraded Voltage Surveillance Requirement 3.3.5.2a  
**Attachments:** Draft RAI 12-11-18.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 draft request for additional information (RAI).

The draft RAI is being sent to ensure that the request is understandable and the regulatory basis for the request is clear. This email and the attachment do not convey or represent an NRC staff position regarding ENO's request.

Please let me know if ENO needs a call to clarify the NRC staff's request.

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**From:** Green, Kimberly

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"MIKSA, JAMES P" <jmiksa@entergy.com>  
Tracking Status: None

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**DRAFT 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 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.