



An AEP Company

BOUNDLESS ENERGY™

Indiana Michigan Power  
Cook Nuclear Plant  
One Cook Place  
Bridgman, MI 49106  
indianamichiganpower.com

August 27, 2025

AEP-NRC-2025-39  
10 CFR 21.21(d)(3)(ii)

Docket Nos.: 50-315  
50-316

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant Unit 1 and Unit 2  
Part 21 30-day Notification

Indiana Michigan Power Company, the licensee for Donald C. Cook Nuclear Plant Units 1 and 2 is providing, as the enclosure to this letter, the required written notification of a defect of a basic component in accordance with 10 CFR 21.21(d)(3)(ii). The enclosed notification pertains to a failed Thermal Overload within an Emergency Diesel Generator Voltage Regulator supplied by Paragon Energy Solutions, LLC.

There are no commitments included in this submittal. Should you have any questions, please contact Mr. Michael K. Scarpello, Regulatory Affairs Director, at (269) 466-2649.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott A. Dailey".

Scott A. Dailey  
Site Vice President

RAW/sjh

Enclosure:

Part 21 Notification of Paragon Energy Solutions Emergency Diesel Generator Voltage Regulator

c: EGLE – RMD/RPS  
J. B. Giessner – NRC Region III  
NRC Resident Inspector  
N. Quilico – MPSC  
R. M. Sistevaris – AEP Ft. Wayne  
S. P. Wall, NRC Washington D.C.  
A. J. Williamson – AEP Ft. Wayne

**Enclosure to AEP-NRC-2025-39**  
**Part 21 Notification of Paragon Energy Solutions**  
**Emergency Diesel Generator Voltage Regulator**

1. Name and address of the individual or individuals informing the Commission.

Scott A. Dailey  
Site Vice President  
Cook Nuclear Plant  
Indiana Michigan Power Company  
1 Cook Place  
Bridgman, MI 49106

2. Identification of the facility, the activity, or the basic component supplied for such a facility or such activity within the United States which fails to comply or contains a defect.

Cook Nuclear Plant Unit 1  
Docket No. 50-315  
License No. DPR-58  
Cook Nuclear Plant Unit 2  
Docket No. 50-316  
License No. DPR-74  
Basic Component: Emergency Diesel Generator (EDG) Voltage Regulator (VR)

3. Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

Paragon Energy Solutions, LLC  
7410 Pebble Drive  
Fort Worth, TX 76118  
Tel: 817-284-0077

4. Nature of the defect or failure to comply and safety hazard which is created or could be created by such defect or failure to comply.

An Emergency Diesel Generator (EDG) Voltage Regulator (VR) was supplied containing two deficiencies associated with the Thermal Overload (TOL) that were determined to be Defects. The subject Thermal Overload (TOL) is a sub-component of the EDG VR. The EDG VR is a basic component within the EDG system. The TOL serves to protect the rotating equipment field (the EDG exciter) from excessive heating due to prolonged over current conditions. Should the TOL spuriously trip it will create a condition in which the EDG VR can no longer control the generator voltage, resulting in an inability of the EDG system to supply automatic onsite emergency AC power.

Deficiency 1: A heater dimensional tolerance deficiency was identified in that the heater coil is taller on the subject TOL such that it contacted the bimetallic strip when it was installed into the TOL. The heater contacting the bimetallic strip can exert a preload which lowers the activation threshold of the bimetallic strip resulting in spurious trips at a lower than intended operating current or when the device is subject to mechanical agitation. It can also result in localized overheating which could lead to uneven or excessive bending of the bimetal.

Deficiency 2: A braided control wire was confirmed to be incorrectly routed; it was found pinched between the phenolic boss of the cover and the pressure bar. This would restrict the movement of the pressure bar.

5. The date on which the information of such defect or failure to comply was obtained.

The defect was identified on July 22, 2025.

6. In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.

The subject Thermal Overload was manufactured by General Electric (GE) and is a model CR124K028 with a K624A heater. The DC Cook station has 4 EDG VRs with this model of GE TOL:

Lot 1355235, SN NLI-3S7950GR751A1-1002

Lot 1310478, SN NLI-3S7950GR751A1-1005

Lot 1290298, SN NLI-3S7950GR751A1-1006

Lot 1310479, SN NLI-3S7950GR751A1-1001

Basic components supplied to other licensees is unknown to Cook Nuclear Plant. Contact the vendor for additional information.

7. The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

The TOL containing the identified deficiencies was immediately replaced.

The extent of condition review included performing X-ray examinations of other potentially impacted TOLs that were installed. This identified one additional TOL containing "deficiency 2" and was immediately removed from the plant upon discovery.

Cook Nuclear Plant is performing daily continuity checks on impacted TOLs. This action is intended to continue until the TOLs are replaced with new style TOLs.

Cook Nuclear Plant is planning for replacement of the TOLs for the impacted EDG VRs with new style TOLs and will be completed by October 31, 2026.

8. Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

None.

9. In the case of an early site permit, the entities to whom an early site permit was transferred.

Not Applicable.