



Entergy Nuclear Operations, Inc.
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Anthony J. Vitale
Site Vice President

PNP 2013-093

January 06, 2014

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

SUBJECT: Discovery of Latent Design Deficiency Results in Non-Compliance with
10 CFR 50 Appendix R
Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

Dear Sir or Madam:

The enclosed Licensee Event Report (LER), 2013-004-00, is submitted in accordance with 10 CFR 50.73(a)(2)(ii)(B) due to discovery of an unanalyzed condition resulting in non-compliance with 10 CFR 50 Appendix R.

This letter contains no new commitments and no revisions to existing commitments.

Sincerely,

A handwritten signature in black ink, appearing to read "Anthony J. Vitale", written in a cursive style.

ajv/tad

Attachment: LER 2013-004, Discovery of Latent Design Deficiency Results in
Non-Compliance with 10 CFR 50 Appendix R

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

ATTACHMENT

LER 2013-004

**DISCOVERY OF LATENT DESIGN DEFICIENCY RESULTS IN NON-COMPLIANCE
WITH 10 CFR 50 APPENDIX R**

3 Pages Follow

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
PALISADES NUCLEAR PLANT	05000255	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
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EVENT DESCRIPTION

On November 7, 2013, with the plant operating in Mode 1 at 100% power, during a review of operating experience report, ICES-305419-20130810, "Un-fused remote DC ammeter circuits could result in secondary fires due to multiple fire induced faults," a similar latent design deficiency was identified at Palisades. The design deficiency represents an unanalyzed condition during a postulated fire event. Contrary to the requirements of 10 CFR 50 Appendix R, Section III.G, potential fire-induced cable faults could result in a fire in two different fire areas and subsequent loss of capability to safely shut down the plant.

Palisades' station batteries [EJ] contain shunts in the positive leg of output current flow. The shunts provide a voltage signal, proportional to the output current flow of the batteries, to ammeters located in the adjacent cable spreading room area. In the unlikely event of the postulated fire scenario, which is a primary fire in the cable spreading room or in a station battery room, the ammeter circuit wiring could experience fire-induced cable faults, allowing current flow greater than the rating of the wires. Current flow exceeding the rating of the wires would likely result in the wires overheating, potentially causing a secondary fire at some point along the path of the wires or causing damage to adjacent cables/wires. That is, a secondary fire could be created in an additional fire area as well as the originating fire area.

The design deficiency did not impact the performance of any other component functions, and no other safety functions were impacted as a result of this event. The condition would not have prevented the fulfillment of a safety function, as the condition did not result in a safety system functional failure as defined by 10 CFR 50.73(a)(2)(v).

CAUSE OF THE EVENT

The cause of the unanalyzed condition, for the postulated fire event, was a failure to recognize the described failure mode and identify the fault consequences for the cables of concern during previous design reviews required for 10 CFR 50 Appendix R.

CORRECTIVE ACTIONS TAKEN

Hourly fire watch tours were implemented as a compensatory measure for the affected areas.

CORRECTIVE ACTIONS TO BE TAKEN

The planned corrective actions to address this condition include the design and implementation of a permanent plant modification to install fuses in the ammeter indication circuits.

ASSESSMENT OF SAFETY CONSEQUENCES

There were no adverse safety consequences that resulted from the identified conditions, as there was no actual fire in the affected areas. Entergy Nuclear Operations, Inc. considers that fire protection administrative controls, the availability of fire detection and suppression systems, hourly fire watch tours and a trained on-site fire brigade, make it highly unlikely that a fire could occur and progress in a manner that results in the fire-induced failures of concern.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

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Additionally, for hypothetical fires that could progress in a manner that results in the fire-induced failures of concern, the coincident combinations of failures required to result in the specific circuit failures that cause secondary fires or secondary cable damage are even less likely to occur.

The hourly fire watch tours provide a compensatory measure that would promptly identify and extinguish a fire to minimize the fire impact, and provide assurance that the identified scenarios would not jeopardize post-fire safe shutdown capability during the interim time period prior to implementation of actions required for permanent issue resolution.

PREVIOUS SIMILAR EVENTS

LER 2010-003-00, Unanalyzed Condition Discovered Due to Non-Compliance with 10 CFR 50 Appendix R