

May 25, 2005

Mr. Daniel J. Malone
Site Vice President
Palisades Nuclear Plant
Nuclear Management Company, LLC
27780 Blue Star Memorial Highway
Covert, MI 49043-9530

SUBJECT: PALISADES PLANT - RE: FINAL ACCIDENT SEQUENCE PRECURSOR
ANALYSIS OF 2003 OPERATIONAL EVENT

Dear Mr. Malone:

Enclosed for your information is the final Accident Sequence Precursor (ASP) analysis of an operational event which occurred at the Palisades Plant in March 2003. The condition was reported by Licensee Event Report No. 255/03003, dated May 20, 2003, and documented in U.S. Nuclear Regulatory Commission (NRC) Inspection Report No. 05000255/2004005, dated April 8, 2004. This is being issued as a final analysis since it is a non-controversial, lower risk precursor for which the ASP results are consistent with the results from the Significance Determination Process's final evaluation of the same condition. Elimination of the review and comment resolution for this event will reduce the burden for the NRC staff and the licensee.

Sincerely,

/RA/

David H. Jaffe, Acting Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-255

Enclosure: ASP Analysis

cc: See next page

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DATE	5/25/05	5/24/05	5/25/05

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SUMMARIES OF FINAL ACCIDENT SEQUENCE PRECURSOR (ASP) ANALYSIS

Loss of Shutdown Cooling and Emergency Diesel Generator Start at Palisades

(March 2003.) This is the ASP analysis of operational conditions documented in License Event Report 255/03-003, dated May 20, 2003, and Inspection Report 05000255/2004005, dated April 8, 2004.

Condition summary: On March 25, 2003, plant maintenance workers were installing signposts in the parking lot to designate parking spaces. One of the signposts was driven into a conduit and damaged a cable which contained protective relay circuitry for all sources of offsite power. An alert was declared due to the loss of offsite power combined with the loss of shutdown cooling. The alert was downgraded to an Unusual Event after about 1 hour when shutdown cooling was restored.

The reported event, loss of offsite power, occurred during a refueling outage, when the reactor vessel head was open, and the cavity was flooded. The decay heat was being removed by decay heat removal (DHR) system. The event caused temporary disconnection of the alternating current (ac) power from the grid (switchyard power disconnect event) which stopped the running DHR train and auto-started emergency diesel generators.

Results: The mean conditional core damage probability (CCDP) of this event is calculated as 3×10^{-6} with 5 percent and 95 percent uncertainty bounds of 3×10^{-7} and 8×10^{-6} , respectively. This relatively low CCDP is due to factors such as ease of proceduralized recovery of ac power to the buses if the diesel generators did not start; long time window for core damage to occur, and various credible (but not proceduralized) recovery processes available if the DHR system did not restart. One insight that can be derived from this analysis is to proceduralize backup processes in case the normal DHR system fails during shutdown operations.

SDP/ASP comparison. The risk significance of this event has also been analyzed under the Significance Determination Process (SDP). The result was a white finding with a delta core damage frequency of 1×10^{-6} . Thus, the ASP and SDP results are consistent.

A sensitivity analysis made as part of the ASP analysis to determine the CCDP if this event had occurred during power operation, shows that the event importance could have been as high as 4×10^{-5} , even when credit is given for easy ac power recovery operator action in this particular case.

The ASP analysis can be found at ML051190504. If you have any questions about the analysis, please contact Selim Sancaktar (415-8184).

Palisades Plant

cc:

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