May 20, 2003

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

PALISADES NUCLEAR PLANT
DOCKET 50-255
LICENSE NO. DPR-20
LICENSEE EVENT REPORT 03-003, LOSS OF SHUTDOWN COOLING AND EMERGENCY DIESEL GENERATOR START

Licensee Event Report (LER) 03-003 is attached. The LER describes the loss of shutdown cooling and starting of emergency diesel generators that resulted from a loss of offsite power. This occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(v)(B) as an event that prevented the fulfillment of the safety function of a system needed to remove residual heat, and in accordance with 10 CFR 50.73(a)(2)(iv)(A), as an event that resulted in automatic actuation of the emergency ac electrical power system.

SUMMARY OF COMMITMENTS

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

Douglas E. Cooper
Site Vice-President, Palisades

CC
Regional Administrator, USNRC, Region III
Project Manager, USNRC, NRR
NRC Resident Inspector – Palisades

Attachment
**LOSS OF SHUTDOWN COOLING AND EMERGENCY DIESEL GENERATOR START**

<table>
<thead>
<tr>
<th>5. EVENT DATE</th>
<th>6. LER NUMBER</th>
<th>7. REPORT DATE</th>
<th>8. OTHER FACILITIES INVOLVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO DAY YEAR</td>
<td>YEAR SEQUENTIAL NUMBER REV NO</td>
<td>MO DAY YEAR</td>
<td>FACILITY NAME DOCKET NUMBER</td>
</tr>
<tr>
<td>03 25 2003</td>
<td>2003 - 003 - 00</td>
<td>05 20 2003</td>
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**9. OPERATING MODE**

<table>
<thead>
<tr>
<th>6. LER MODE</th>
<th>20.2203(a)(2)(iv)</th>
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<tbody>
<tr>
<td>6</td>
<td>50.73(a)(2)(ii)(A)</td>
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<tr>
<td>50.73(a)(2)(ix)(A)</td>
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**10. POWER LEVEL**

<table>
<thead>
<tr>
<th>7. REPORT DATE</th>
<th>8. OTHER FACILITIES INVOLVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACILITY NAME</td>
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</tbody>
</table>

**11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR:**

(93 characters)

(See reverse for required number of digits/characters for each block)

**12. LICENSEE CONTACT FOR THIS LER**

Barb Dotson, Regulatory Analyst
(269) 764-2265

**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

**14. SUPPLEMENTAL REPORT EXPECTED**

<table>
<thead>
<tr>
<th>YES (If yes, complete EXPECTED SUBMISSION DATE)</th>
<th>X</th>
<th>NO</th>
</tr>
</thead>
</table>

**15. EXPECTED SUBMISSION DATE**

MONTH DAY YEAR

**16. ABSTRACT**

On March 25, 2003, at 1116 hours, with the plant in Mode 6, a loss of offsite power occurred while installing a signpost. The signpost penetrated a buried conduit, damaging a control power cable associated with both offsite power feeds. As a result, the safety-related and non-safety related buses de-energized, which caused a loss of shutdown cooling flow. The emergency diesel generators started and loaded safety-related buses, as expected. An Alert was declared at 1126 hours. Shutdown cooling flow through the core was restored in approximately 20 minutes. The Alert was downgraded to an Unusual Event at 1231 hours. The Unusual Event was exited on March 27, 2003, at 1737 hours, when offsite power was fully restored.

This occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(B) as an event that prevented the fulfillment of the safety function of a system needed to remove residual heat, and in accordance with 10 CFR 50.73(a)(2)(iv)(A), as an event that resulted in automatic actuation of the emergency AC electrical power system.
On March 25, 2003, at 1116 hours, with the plant in Mode 6, a loss of offsite power occurred while installing a signpost. The signpost penetrated a buried conduit, damaging a control power cable associated with both offsite power feeds. As a result, the safety-related and non-safety related buses de-energized, which caused a loss of shutdown cooling [BP] flow. The emergency diesel generators [DG;EK] started and loaded safety-related buses, as expected. An Alert was declared at 1126 hours. Shutdown cooling flow through the core was restored in approximately 20 minutes. The Alert was downgraded to an Unusual Event at 1231 hours. The Unusual Event was exited on March 27, 2003, at 1737 hours, when offsite power was fully restored.

This occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(v)(B) as an event that prevented the fulfillment of the safety function of a system needed to remove residual heat, and in accordance with 10 CFR 50.73(a)(2)(iv)(A), as an event that resulted in automatic actuation of the emergency AC electrical power system.

ANALYSIS

Two offsite power feeds from the switchyard [FK] to the plant were being maintained operable. Some of the control circuits involving both of these offsite power feeds were routed in the same cable.

While installing a signpost in the main parking lot, a conduit was penetrated, damaging the cable containing the control circuits for both offsite power feeds. This caused a spurious actuation of several relays. Actuation of these relays resulted in the opening of breakers, interrupting power from the switchyard to the plant.

The de-energized safety-related buses resulted in loss of power to the operating low pressure safety injection (LPSI) pump [P;BP] that was providing shutdown cooling flow. The emergency diesel generators started and loaded as designed. The LPSI pumps are not automatically re-energized from the emergency diesel generator under these circumstances. Shutdown cooling flow was restored in approximately 20 minutes, when operators manually started a LPSI pump, with an emergency diesel generator supplying power to the pump’s bus.
CAUSE OF THE EVENT

There was no written process for controlling excavating/trenching/piercing the ground. Additionally, NMC missed an opportunity in May 2002 to identify the lack of procedural controls when an inadequate evaluation was performed for a previous event.

CORRECTIVE ACTIONS

A plant policy was issued prohibiting all digging and landscaping activities without appropriate approval and oversight.

The damaged cable was repaired, and the control circuits for one of the two offsite power feeds were relocated to a separate cable.

A procedure is being written to control excavating/trenching/piercing activities.

SAFETY SIGNIFICANCE

All safety systems functioned as designed. Primary coolant system temperature increased from approximately 92°F to 104°F. The average hourly heat-up rate limit specified in Technical Specification 3.4.3 was not exceeded. Fuel integrity was not challenged.

PREVIOUS SIMILAR EVENTS

Palisades has had several instances where equipment or cabling was damaged as a result of excavation/digging/trenching activities; however, none have caused a loss of offsite power.