



**Consumers
Power
Company**

D. Lanham

General Offices: 212 West Michigan Avenue, Jackson, Michigan 49201 • Area Code 517 788-0550

February 1, 1978

Mr James G Keppler
Office of Inspection and Enforcement
Region III
US Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

DOCKET 50-255 - LICENSE DPR-20 -
PALISADES PLANT - ER-78-003

The attached LER is reportable under Technical Specification 6.9.2.a(2) (operation in a mode less conservative than the least conservative limiting condition for operation) for the Palisades Plant.

The late transmittal of this report was discussed with Mr R Warnick of the Region III office on January 19, 1978.

W. B. Hoffman

David P Hoffman
Assistant Nuclear Licensing Administrator

CC: ASchwencer, USNRC

FEB 3 1978

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LICENSEE EVENT REPORT

| CONTROL BLOCK: | | | | | | | | | | (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION) | | | | | | | | | |
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| <div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">1</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">M</div> <div style="border: 1px solid black; padding: 2px;">T</div> <div style="border: 1px solid black; padding: 2px;">P</div> <div style="border: 1px solid black; padding: 2px;">A</div> <div style="border: 1px solid black; padding: 2px;">L</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">2</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">3</div> <div style="border: 1px solid black; padding: 2px;">4</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">1</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">4</div> <div style="border: 1px solid black; padding: 2px;">5</div> </div> </div> | | | | | | | | | | <div style="display: flex; justify-content: space-between;"> <div>LICENSEE CODE</div> <div>LICENSE NUMBER</div> <div>LICENSE TYPE</div> <div>57-CAT 58</div> </div> | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">1</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">6</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">2</div> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">7</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">8</div> <div style="border: 1px solid black; padding: 2px;">7</div> <div style="border: 1px solid black; padding: 2px;">8</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">8</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">3</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">7</div> <div style="border: 1px solid black; padding: 2px;">8</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">9</div> </div> </div> | | | | | | | | | | <div style="display: flex; justify-content: space-between;"> <div>REPORT SOURCE</div> <div>DOCKET NUMBER</div> <div>EVENT DATE</div> <div>REPORT DATE</div> </div> | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)</div> <div>10</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>0 2</div> <div>With the reactor in cold shutdown, CV-3025 (shutdown cooling system HX</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>0 3</div> <div>outlet valve) failed closed, causing a loss of shutdown cooling flow and</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>0 4</div> <div>allowing PCS temperature to rise to approximately 215 degrees. Because</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>0 5</div> <div>the containment building equipment hatch was open, the LCO of TS</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>0 6</div> <div>3.6.1A was exceeded. The condition lasted for about 20 minutes.</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>0 7</div> <div>Redundant methods of restoring cooling flow were available. Event had</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>0 8</div> <div>no effect on public health or safety.</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>0 9</div> <div> <div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">C</div> <div style="border: 1px solid black; padding: 2px;">F</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">A</div> <div style="border: 1px solid black; padding: 2px;">B</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">V</div> <div style="border: 1px solid black; padding: 2px;">A</div> <div style="border: 1px solid black; padding: 2px;">L</div> <div style="border: 1px solid black; padding: 2px;">V</div> <div style="border: 1px solid black; padding: 2px;">O</div> <div style="border: 1px solid black; padding: 2px;">P</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">D</div> <div style="border: 1px solid black; padding: 2px;">Z</div> </div> </div> </div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">17</div> <div style="border: 1px solid black; padding: 2px;">7</div> <div style="border: 1px solid black; padding: 2px;">8</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">3</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">1</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">I</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">0</div> </div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">X</div> <div style="border: 1px solid black; padding: 2px;">H</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">Z</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">Z</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">I</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">I</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">A</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">H</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">3</div> <div style="border: 1px solid black; padding: 2px;">2</div> </div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)</div> <div>27</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>1 0</div> <div>Closure of CV-3025 was caused by water in the air line to the valve</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>1 1</div> <div>operator. Entry of water into the air system resulted from improper</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>1 2</div> <div>air dryer operation. Water was removed from the air line to restore valve</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>1 3</div> <div>operation and thereby reduce PCS temperature to within specs. To</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>1 4</div> <div>prevent recurrence, training in air system operation will be strengthened.</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div>1 5</div> <div> <div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">G</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">N/A</div> </div> </div> </div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">Z</div> <div style="border: 1px solid black; padding: 2px;">Z</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">N/A</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">N/A</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">Operator observation</div> </div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">N/A</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">N/A</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">N/A</div> </div> </div> | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div></div> | | | | | | | | | | | | | | | | | | | |

RECEIVED DOCUMENT
CONTROL DESK

1978 FEB 12 PM 2 25

On January 8, 1978, a loss of shutdown cooling system flow occurred. At the time of this occurrence, the reactor was in cold shutdown and primary coolant system (PCS) temperature was being maintained by the shutdown cooling system. As a result of the loss of shutdown cooling system flow, PCS temperatures rose to approximately 215 degrees, thereby taking the reactor out of the cold shutdown condition. Concurrent with this change in reactor plant condition, the containment building equipment hatch was open. This violates Technical Specification 3.6.1.a, which requires containment integrity to be maintained whenever the reactor is not in cold shutdown.

Redundant methods of restoring flow were available. It is possible to open CV-3025 by moving the valve stem with hand tools. An alternate means of providing core cooling can be provided by recycling Safety Injection and Refueling Water (SIRW) tank water through the PCS. This cooling method could have been used to provide additional time to restore normal operation of CV-3025. Based on the above, it is concluded that this event could not have adversely affected public health or safety.

CV-3025 failed closed because water had become entrained in the line supplying air to the valve operator. Water entered the system as a result of improper operation of the instrument air system air dryer. Specifically, the dryer air purge valves had been excessively throttled, which resulted in insufficient airflow during the dryer's regeneration cycle.

Immediate corrective action included:

- . Evacuation of personnel from the containment building.
- . Attempted closure of the equipment hatch.
- . Removal of water from the air line to restore operation of CV-3025.

Restoration of CV-3025 operability permitted restoration of cold shutdown temperature. The reactor was out of the cold shutdown condition for about 20 minutes.

To prevent recurrence, the following actions will be implemented:

- . Removal of water from other portions of the instrument air system (already in progress).
- . Revision of training program to provide additional emphasis on proper operation of the air dryers.
- . Addition of air dryer checks to the operator's rounds.
- . Tagging of the air dryer purge valves to indicate their function.

Preliminary investigation has revealed an apparent discrepancy in the piping arrangement to the air receiver tanks. The piping exits the tanks from the bottom, and therefore could potentially carry water away from the tanks into the air system. Appropriate modifications will be performed if deemed necessary after future investigation and evaluation.