



May 23, 2006

10 CFR 50.73(a)(2)(i)(B)

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 06-002, Main Steam Safety Valves Exceeded Lift Setpoint Acceptance Band

Licensee Event Report (LER) 06-002 is enclosed. The LER describes the discovery of two main steam safety valve as-found lift pressures that exceeded the lift setpoint acceptance band. This occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications.

Summary of Commitments

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

Paul A. Harden
Site Vice President, Palisades Nuclear Plant
Nuclear Management Company, LLC

Enclosure (1)

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

ENCLOSURE 1

LER 06-002, Main Steam Safety Valves Exceeded Lift Setpoint Acceptance Band

3 Pages Follow

LICENSEE EVENT REPORT (LER)

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

Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0066), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

| | | |
|---|---------------------------------------|---------------------------|
| FACILITY NAME (1) Palisades Nuclear Plant | DOCKET NUMBER (2) 05000-255 | PAGE (3) 1 of 3 |
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TITLE (4)
Main Steam Safety Valves Exceeded Lift Setpoint Acceptance Band

| EVENT DATE (5) | | | LER NUMBER (6) | | | REPORT DATE (7) | | | OTHER FACILITIES INVOLVED (8) | | |
|--------------------|-----|---|----------------|-------------------|---------------------|-----------------|-----|----------------------|-------------------------------|--|--|
| MO | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REV NO | MO | DAY | YEAR | FACILITY NAME | DOCKET NUMBER | |
| 03 | 26 | 2006 | 2006 | -- 002 -- | 00 | 05 | 23 | 2006 | FACILITY NAME | DOCKET NUMBER | |
| OPERATING MODE (9) | | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR : (Check all that apply) (11) | | | | | | | | | |
| 1 | | 20.2201(b) | | | 20.2203(a)(3)(ii) | | | 50.73(a)(2)(ii)(B) | | 50.73(a)(2)(ix)(A) | |
| POWER LEVEL (10) | | 099 | | | | | | | | | |
| | | 20.2201(d) | | | 20.2203(a)(4) | | | 50.73(a)(2)(iii) | | 50.73(a)(2)(x) | |
| | | 20.2203(a)(1) | | | 50.36(c)(1)(i)(A) | | | 50.73(a)(2)(iv)(A) | | 73.71(a)(4) | |
| | | 20.2203(a)(2)(i) | | | 50.36(c)(1)(ii)(A) | | | 50.73(a)(2)(v)(A) | | 73.71(a)(5) | |
| | | 20.2203(a)(2)(ii) | | | 50.36(c)(2) | | | 50.73(a)(2)(v)(B) | | OTHER Specify in Abstract below or in NRC Form 366A | |
| | | 20.2203(a)(2)(iii) | | | 50.46(a)(3)(ii) | | | 50.73(a)(2)(v)(C) | | | |
| | | 20.2203(a)(2)(iv) | | | 50.73(a)(2)(i)(A) | | | 50.73(a)(2)(v)(D) | | | |
| | | 20.2203(a)(2)(v) | | | X 50.73(a)(2)(i)(B) | | | 50.73(a)(2)(vii) | | | |
| | | 20.2203(a)(2)(vi) | | | 50.73(a)(2)(i)(C) | | | 50.73(a)(2)(viii)(A) | | | |
| | | 20.2203(a)(3)(i) | | | 50.73(a)(2)(ii)(A) | | | 50.73(a)(2)(viii)(B) | | | |

| LICENSEE CONTACT FOR THIS LER (12) | |
|------------------------------------|---|
| NAME Daniel G. Malone | TELEPHONE NUMBER (Include Area Code) (269) 764-2463 |

| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) | | | | | | | | | |
|--|--------|-----------|--------------|--------------------|-------|--------|-----------|--------------|--------------------|
| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO EPIX | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO EPIX |
| X | SB | RV | C710 | Y | | | | | |

| SUPPLEMENTAL REPORT EXPECTED (14) | | | | EXPECTED SUBMISSION DATE (15) | | |
|--|---|----|--|-------------------------------|-----|------|
| YES (If yes, complete EXPECTED SUBMISSION DATE). | X | NO | | MONTH | DAY | YEAR |

ABSTRACT

On March 26, 2006, with the plant in Mode 1, in-place testing of main steam safety valve RV-0710 determined that the as-found lift pressure did not meet the acceptance band of +/- 3% of setpoint, as specified by Technical Specification Table 3.7.1-1, "Main Steam Safety Valve Lift Settings." This was the second unsatisfactory as-found lift pressure for a main steam safety valve, as in-place testing on March 25, 2006, had previously determined that RV-0707 had failed to meet the as-found acceptance band.

Technical Specification LCO 3.7.1 requires a minimum of 23 out of 24 main steam safety valves to be operable in Modes 1, 2 and 3. Since the cause of the two unsatisfactory as-found lift pressures may have arisen over a period of time, it is assumed that the required number of main steam safety valves was not operable during past plant operation. Therefore, this occurrence is considered reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications.

The safety significance of this occurrence is considered minimal.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

EVENT DESCRIPTION

On March 26, 2006, with the plant in Mode 1, in-place testing of main steam safety valve RV-0710 [RV;SB] determined that the as-found lift pressure did not meet the acceptance band of +/- 3% of setpoint, as specified by Technical Specification Table 3.7.1-1, "Main Steam Safety Valve Lift Settings." The initial as-found lift pressure for RV-0710 was 6.73% above the specified lift setting. This was the second unsatisfactory as-found lift pressure for a main steam safety valve, as in-place testing on March 25, 2006, had previously determined that RV-0707 had failed to meet the as-found acceptance band, with an initial as-found lift pressure of 6.75% above the specified lift setting.

Technical Specification LCO 3.7.1 requires a minimum of 23 out of 24 main steam safety valves to be operable in Modes 1, 2 and 3. Testing of main steam safety valves is performed one valve at a time, with each valve adjusted if necessary and returned to operable status before proceeding with the testing of another valve. In this manner, a maximum of one valve is known to be inoperable at any time during testing. However, since the cause of the two unsatisfactory as-found lift pressures may have arisen over a period of time, it is assumed that the required number of main steam safety valves was not operable during past plant operation. Therefore, this occurrence is considered reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications.

CAUSE OF THE EVENT

The primary cause has been identified as Initial High Lift Phenomenon (IHLP) due to a combination of disc/seal and spindle guide bearing bonding. IHLP is characterized by the as-found lift pressure being 30 psig or higher than a second lift test with no adjustments or corrective measures taken. Industry experience indicates that in most cases the second lift pressure will meet the initial as-found acceptance band of +/- 3% of setpoint. This was the case with RV-0707 and RV-0710 as both of the valves exhibited a significant reduction in lift pressure on a second test lift which was performed prior to any adjustment, with each valve meeting the as-found acceptance band of +/- 3% of setpoint.

From industry evaluation, IHLP is believed to be associated with in-place testing using an assist device and is not believed to be prevalent in off-site bench testing results or actual in-plant pressurization events.

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TEXT CONTINUATION

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

CORRECTIVE ACTIONS

Final lift pressures were established for both valves within the acceptance band of +/- 1% of setpoint. RV-0707 required adjustment to achieve the final acceptance band, while RV-0710 met the acceptance band without further adjustment.

An additional 6 main steam safety valves were removed and tested at an off-site testing facility. All 6 valves met the as-found lift pressure acceptance band of +/- 3% of setpoint on their initial lift test.

The spindle guide bearing clearances have been increased in 8 of the valves to reduce the potential for spindle guide bearing bonding. The remaining valves are planned to be similarly modified in future outages on an on-going basis.

SAFETY SIGNIFICANCE

The safety significance of this occurrence is considered minimal. A bounding analysis has been performed which demonstrates that design limits would not have been challenged with the as-found lift pressures for RV-0707 and RV-0710.

PREVIOUS SIMILAR EVENTS

Palisades Licensee Event Report 04-003, "Main Steam Safety Valves Exceeded Lift Setpoint Acceptance Band"

Palisades Licensee Event Report 86-004, "Main Steam Relief Valves Fail To Meet 'As Found' Pressure Acceptance Criteria"

Palisades Licensee Event Report 83-074, "Valves Failed To Meet 'As Found' Acceptance Criteria"

Palisades Licensee Event Report 78-002, (not titled)