

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH
THIS INFORMATION COLLECTION REQUEST: 50.0 HRS.
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COMMISSION, WASHINGTON, DC 20555-0001, AND TO
THE PAPERWORK REDUCTION PROJECT

| | | | | | | | | | | | | | | |
|---|--------|-----------|---|--------------------|-----------------|--------------------|--------|-----------|-------------------------------|--|------------------|--------------------|---------------------------|------|
| FACILITY NAME (1) Point Beach Nuclear Plant, Unit 1 | | | | | | | | | | DOCKET NUMBER (2) 05000266 | | PAGE (3) 1 OF 4 | | |
| TITLE (4) Residual Heat Removal Not Aligned In Accordance With Technical Specifications Requirements | | | | | | | | | | | | | | |
| EVENT DATE (5) | | | LER NUMBER (6) | | | REPORT DATE (7) | | | OTHER FACILITIES INVOLVED (8) | | | | | |
| MONTH | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | MONTH | DAY | YEAR | FACILITY NAME | | DOCKET NUMBER | | | |
| 04 | 04 | 97 | 97 | -- 019 | -- 00 | 05 | 02 | 97 | Unit 2 | | 05000301 | | | |
| OPERATING MODE (9) N | | | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11) | | | | | | | | | | | |
| POWER LEVEL (10) 0 | | | 20.2201(b) | | | 20.2203(a)(2)(v) | | | X | | 50.73(a)(2)(ii) | | 50.73(a)(2)(viii) | |
| | | | 20.2203(a)(1) | | | 20.2203(a)(3)(ii) | | | | | 50.73(a)(2)(ii) | | 50.73(a)(2)(x) | |
| | | | 20.2203(a)(2)(i) | | | 20.2203(a)(3)(iii) | | | | | 50.73(a)(2)(iii) | | 73.71 | |
| | | | 20.2203(a)(2)(ii) | | | 20.2203(a)(4) | | | | | 50.73(a)(2)(iv) | | OTHER | |
| | | | 20.2203(a)(2)(iii) | | | 50.36(c)(1) | | | | | 50.73(a)(2)(v) | | Specify in Abstract below | |
| | | | 20.2203(a)(2)(iv) | | | 50.36(c)(2) | | | | | 50.73(a)(2)(vii) | | or in NRC Form 366A | |
| LICENSEE CONTACT FOR THIS LER (12) | | | | | | | | | | | | | | |
| NAME David Weaver | | | | | | | | | | TELEPHONE NUMBER (Include Area Code) (414) 221-3418 | | | | |
| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) | | | | | | | | | | | | | | |
| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPDs | | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPDs | | | | |
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| SUPPLEMENTAL REPORT EXPECTED (14) | | | | | | | | | | EXPECTED SUBMISSION DATE (15) | | MONTH | DAY | YEAR |
| YES (If yes, complete EXPECTED SUBMISSION DATE) | | | | | X | NO | | | | | | | | |
| ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16) | | | | | | | | | | | | | | |
| On April 4, 1997, Point Beach Nuclear Plant (PBNP) Unit 1 was in cold shutdown and Unit 2 was shut down during its annual refueling outage. During a review of NRC Inspection Report IR 96018, it was determined that PBNP had been operated during past refueling shutdown conditions with neither RHR normal decay heat removal loops in an operable status. Normal RHR decay heat removal takes suction from the "A" RCS loop hot leg and returns to the "B" RCS loop cold leg. However, during several occurrences, the RHR return was aligned to core deluge, potentially bypassing the reactor core. In the future, this method of utilizing the core deluge RHR line-up will be used only during conditions in which RHR is not required to be operable, or a Technical Specifications Change Request (TSCR) will be submitted to allow this line-up when RHR is required to be operable. A four-hour report was provided to the NRC in accordance with 10 CFR 50.72(b)(2)(i). The NRC resident inspectors were also notified of this event. | | | | | | | | | | | | | | |

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

Event Description:

On April 4, 1997, Point Beach Nuclear Plant (PBNP) Unit 1 was in cold shutdown and Unit 2 was shut down during its annual refueling outage. During a review of NRC Inspection Report IR 96018, it was determined that PBNP had been operated during past refueling shutdown conditions with both RHR normal decay heat removal loops inoperable. Normal RHR decay heat removal takes suction from the "A" RCS loop hot leg and returns to the "B" RCS loop cold leg. However, during past evolutions such as Technical Specifications Test TS-30, "High and Low Head SI Check Valve Leakage Test, Unit 1," and TS-31, "High and Low Head SI Check Valve Leakage Test, Unit 2," the RHR return was aligned to core deluge through valves SI-852A&B, potentially bypassing the reactor core. A Technical Specifications Interpretation DCS 3.1.22, "Use of Core Deluge as a Modified Residual Heat Removal (MRHR) Loop," provided guidance to allow this line-up. Safety Evaluation Report (SER) 91-118 and 91-118-01 incorrectly concluded that the modified RHR line-up utilizing the core deluge injection path did not involve a change to the plant Technical Specifications. Technical Specification 15.1.C states, in part, that a system, subsystem, train or component shall be operable "...when it is capable of performing its function(s) as analyzed in the safety analysis report." This modified lineup is not described in the PBNP Final Safety Analysis Report (FSAR). Therefore, the definition of operability was not met, rendering both trains of RHR inoperable during the time this line-up was utilized. Having both trains of RHR inoperable without immediate corrective action to restore a train to service is contrary to Technical Specification 15.3.1.A.3. In the future, this method of utilizing the core deluge RHR line-up will be used only during conditions in which RHR is not required to be operable, or a Technical Specifications Change Request (TSCR) will be submitted to allow this line-up when RHR is required to be operable. A four-hour report was provided to the NRC in accordance with 10 CFR 50.72(b)(2)(i). The NRC resident inspectors were also notified of this event.

Cause:

The root cause of this event was non-conservative decision making and not recognizing when the Technical Specifications (TS) were not controlling plant operations. The use of administrative controls (DCS 3.1.22) to administer the intent of the TS led to a failure to submit a Technical Specifications Change Request for prior NRC review and approval.

Corrective Actions:

1. DCS 3.1.22, "Use of Core Deluge as a Modified Residual Heat Removal (MRHR) Loop," has been canceled.
2. The PBNP management philosophy regarding TS interpretations has changed to minimize the use of TS interpretations.

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3. This method of utilizing the core deluge RHR line-up will be used only during conditions in which RHR is not required to be operable, or a Technical Specifications Change Request (TSCR) will be submitted to allow this line-up when RHR is required to be operable. Associated procedures implementing this line-up will be revised accordingly.

Reportability:

This Licensee Event Report is being submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B), "Any operation or condition prohibited by the plant's Technical Specifications." A four-hour report was provided to the NRC in accordance with 10 CFR 50.72(b)(2)(i). The NRC resident inspectors were also notified of this event.

Safety Assessment:

When using the core deluge lines for residual heat removal (RHR), there is no pumped flow through the reactor core. Cooling water enters the upper plenum and exits via the hot leg. Reactor coolant pumps are not required to be running. The heat removal method is natural circulation, similar to the heat removal means in the spent fuel pool.

Although the modified RHR line-up discussed above was not described in the PBNP FSAR and had not been previously reviewed by the NRC, the configuration has been thoroughly evaluated by Licensee personnel. One result of forced circulation is the prevention of boron stratification by allowing mixing during boron concentration changes. SERs 91-118 and 91-118-01 included provisions for preventing inadvertent dilution by securing all sources of dilute water to the reactor coolant system when the core deluge line-up is used. Nuclear Power Department Calculation N-91-112 also evaluated the decay heat removal capability of the RHR system using the core deluge line-up. The calculation included data obtained from testing and concluded that the core deluge lines can be used to remove decay heat. Therefore, the plant remained in a safe condition and this event created no additional risk to plant personnel and the general public.

Similar Occurrences:

The following LERs describe events involving inadequately implemented Technical Specifications requirements:

| <u>LER</u> | <u>Title</u> |
|---------------|--|
| 266/97-016-00 | Steam Generator Level Logic Not Tested In Accordance With Technical Specifications |
| 266/97-012-00 | Diesel-Driven Fire Pump Day Tank Not Sampled In Accordance With Technical Specifications |

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| | |
|---------------|---|
| 266/97-011-00 | Containment Fan Cooler Accident Fans Not Tested In Accordance With Technical Specifications |
| 266/97-005-00 | 1SI-852A Not Tested In Accordance With Technical Specifications |
| 266/97-003-00 | Spare Containment Penetrations Not Leak Tested In Accordance With Technical Specifications |
| 266/96-014-00 | Steam Generator Blowdown Sample Not Performed In Accordance With Technical Specifications |
| 266/96-012-00 | EDG Fuel Oil System Tests Not Performed In Accordance With Technical Specifications |
| 266/96-008-00 | Missed Full Pressure Test Of Containment Airlock |