

EXPIRES 5/31/95

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HOURS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON DC 20503.

FACILITY NAME (1)

CRYSTAL RIVER UNIT 3 (CR-3)

DOCKET NUMBER (2)

0 5 0 0 0 3 0 2 1 OF 0 8

PAGE (3)

TITLE (4)

Inadequate Containment Penetration Surveillance Procedures Result in Technical Specification Violation

| 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 NAMES | DOCKET NUMBER(S) | | | | | | | | | | | | | | |
| 0 | 6 | 0 | 5 | 9 | 6 | 9 | 6 | 0 | 1 | 8 | 0 | 1 | 1 | 1 | 2 | 5 | 9 | 6 | N/A | 0 | 5 | 0 | 0 | 0 |
| OPERATING MODE (9) | | | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (CHECK ONE OR MORE OF THE FOLLOWING) (11) | | | | | | | | | | | | | | | | | | | | | |
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| POWER LEVEL (10) | | | 0 1 0 | | | | | | | | | | | | | | | | | | | | | |
| | | | 20.402(b) | | | | | | | | | | | | | | | | | | | | | |
| | | | 20.405(a)(1)(i) | | | | | | | | | | | | | | | | | | | | | |
| | | | 20.405(a)(1)(ii) | | | | | | | | | | | | | | | | | | | | | |
| | | | 20.405(a)(1)(iii) | | | | | | | | | | | | | | | | | | | | | |
| | | | 20.405(a)(1)(iv) | | | | | | | | | | | | | | | | | | | | | |
| | | | 20.405(a)(1)(v) | | | | | | | | | | | | | | | | | | | | | |
| | | | 20.405(c) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.36(c)(1) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.36(c)(2) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.73(a)(2)(i) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.73(a)(2)(ii) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.73(a)(2)(iii) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.73(a)(2)(iv) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.73(a)(2)(v) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.73(a)(2)(vii) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.73(a)(2)(viii)(A) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.73(a)(2)(viii)(B) | | | | | | | | | | | | | | | | | | | | | |
| | | | 50.73(a)(2)(x) | | | | | | | | | | | | | | | | | | | | | |
| | | | 73.71(b) | | | | | | | | | | | | | | | | | | | | | |
| | | | 73.71(c) | | | | | | | | | | | | | | | | | | | | | |
| | | | OTHER (Specify in Abstract below and in Text, NRC Form 366A) | | | | | | | | | | | | | | | | | | | | | |

LICENSEE CONTACT FOR THIS LER (12)

NAME

T. W. Catchpole, Sr. Nuclear Licensing Engineer

TELEPHONE NUMBER

AREA CODE

3 5 2 5 6 3 - 4 6 0 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE IN THIS REPORT (13)

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPRDS | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPRDS |
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SUPPLEMENTAL REPORT EXPECTED (14)

| YES | NO | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On June 5, 1996, Florida Power Corporation's Crystal River Unit 3 (CR-3) was in MODE ONE (POWER OPERATION), operating at 10% reactor power. While performing a review of Surveillance Procedure SP-341 "Monthly Containment Isolation Valve Operability Check" for familiarity, the newly assigned System Engineer identified two Reactor Building (RB) containment penetrations having blind flanges outside containment that were not being verified closed once per 31 days as required by technical specifications. While these original plant penetrations are referenced within the appropriate surveillance procedure, the SP only verified the position of a test connection valve and did not verify that the penetrations had blind flanges installed. As part of the corrective actions for this LER, the system engineer identified an additional valve located outside containment that was not included in SP-341, and one flange located inside containment that was not being verified in SP-324 "Containment Inspection." These occurrences had various causes including personnel error and insufficient programmatic controls which contributed to inadequate surveillance procedures. In addition, this event can be attributed to inadequate corrective action from previous LER's. A complete verification of containment penetration documents has been conducted. Affected surveillance procedures will be revised and programmatic enhancements will be accomplished.

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EXPIRES 5/31/95

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)

CRYSTAL RIVER UNIT 3 (CR-3)

DOCKET NUMBER (2)

0 5 0 0 0 3 0 2

LER NUMBER (6)

YEAR SEQUENTIAL
NUMBER

9 6 --- 0 1 8 --- 0 1

PAGE (3)

0 2 OF 0 8

TEXT (If more space is required, Use additional NRC Form 366A's (17))

EVENT DESCRIPTION

On June 5, 1996, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE ONE (POWER OPERATION), operating at 10% reactor power. While performing a general review of Surveillance Procedure SP-341 "Monthly Containment Isolation Valve Operability Check" for familiarity, the newly assigned System Engineer identified two Reactor Building (RB) containment penetrations having blind flanges outside containment that were not being verified closed once per 31 days as required. Penetrations (PEN) 119 and 120 are normally isolated by blind flanges. During outages the blind flanges are replaced by flanges containing lines used for feeding cables and process lines into the RB to support Once-Through Steam Generator [AB,SG] (OTSG) work activities. A review of SP-341 revealed that while these penetrations are identified within the procedure, SP-341 does not verify PEN 119 and PEN 120 have blind flanges installed. SP-341 only required verification that local leak rate test connection valves associated with the penetrations were closed and capped.

A Problem Report was generated on June 5, 1996 to describe the above situation and was initially evaluated as not reportable based on an immediate verification that the blind flanges for PEN 119 and 120 were bolted in place, and based on the fact the inside flanges had been surveilled per SP-324 "Containment Inspection" which is required to be performed prior to entering MODE 4 (HOT SHUTDOWN) from MODE 5 if not performed within the previous 92 days. The Shift Supervisor on Duty (SSOD) supported this position by referencing ITS Surveillance Requirement SR 3.0.3 which allows up to 24 hours to perform a surveillance discovered not performed within its specified Frequency.

Based on follow-up actions associated with the above Problem Report, on June 14, 1996, the System Engineer identified an additional penetration (PEN 439) containing valves that were not verified by SP-341. Chemical Addition Valves [KD,ISV] CAV-619 and 622 are used during testing and maintenance of the Post Accident Sampling System (PASS) sample lines associated with PEN 439. Operations personnel immediately verified the valves were closed in compliance with technical specifications.

On June 14, 1996, a re-evaluation of the previous position regarding reportability resulted in a determination that the condition was reportable under 10CFR50.73(a)(2)(i)(B). This was based on the fact that the penetrations were not surveilled in accordance with SR 3.6.3.3 and were therefore an example of a condition prohibited by technical specifications. SR 3.6.3.3 requires verification of closure for each containment isolation manual valve and blind flange that is located outside containment and is required to be closed during accident conditions. Although the "missed surveillance" provisions of SR 3.0.3 established the immediate operability of the components, it did not cover the reportability aspect of failing to demonstrate the surveillance requirement established by SR 3.6.3.3.

EXPIRES 5/31/95

LICENSEE EVENT REPORT (LER)
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|-----------------------------|---------------------|-----------------|-------------------|
| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | PAGE (3) |
| CRYSTAL RIVER UNIT 3 (CR-3) | | YEAR | SEQUENTIAL NUMBER |
| | | REVISION NUMBER | |
| | 0 5 0 0 0 3 0 2 9 6 | 0 1 8 | 0 1 0 3 OF 0 8 |

TEXT (If more space is required, Use additional NRC Form 366A (17))

As part of the corrective action for this LER, the responsible engineer was tasked with comparing the boundary valves and blind flanges for each penetration with controlling documents including surveillance procedures, flow diagrams, the Final Safety Analysis Report (FSAR), structural drawings, and design basis documents. In accordance with the corrective action plan described in the original LER, as these deficiencies were identified the SSOD was notified for verification that the component was in its technical specification-required position. The flanges and valves associated with PEN 119, 120, and 439 described above were also included in the Required Action Log.

On July 10, 1996, based on a review of the topical design basis document (TDBD) for containment penetrations, it was discovered that Leak Rate Valve [IJ,ISV] LRV-44 which is located outside containment, was part of the containment barrier for PEN 202 - Reactor Building Leak Rate Test Penetration, but was not included in SP-341. Operators verified the valve was locked closed and listed the valve in the Required Action Log.

On August 9, 1996, a blind flange located inside containment was identified which was not procedurally verified by SP-324, "Containment Inspection." SP-324 requires verification per ITS Surveillance Requirement SR 3.6.3.4 to ensure each containment manual valve and flange located inside containment and required to be closed during accident conditions is closed. The flange is downstream of Makeup & Purification System Valve [CB,ISV] MUV-505 and upstream of PEN 333. ITS Surveillance Requirement SR 3.0.3 was entered upon notification to the SSOD and a Reactor Building entry was performed on August 9, 1996 during which the flange was found to be properly installed.

This report is being provided in accordance with 10CFR50.73(a)(2)(i)(B) to describe a condition prohibited by the plant's technical specifications.

EVENT EVALUATION

PEN 119 and 120 are original plant penetrations with blind flanges. The classification of these penetrations was changed in 1991 from Type IV to Type II. A Type IV penetration configuration has one isolation device while a Type II penetration has two isolation devices at least one external and the other internal or external to the reactor building. SP-324 contains a valve checklist that includes PEN 119 and 120 and is required to be used for installation verification during each cold shutdown (MODE 5) if not performed within the previous 92 days. In addition, procedure SP-346 "Containment Penetrations Weekly Check During Refueling Operations" verifies these penetrations have the capabilities to be isolated, either with the blind flange or a modified flange. Also, there is no history of failures of these penetrations during "as found" testing conducted as part of 10CFR50 Appendix J "Primary Reactor Containment Leakage Testing for Water Cooled Power Reactors". In addition, the only work performed on PEN 119 and 120 would have been in conjunction with swapping flanges out to facilitate work in the

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LER NUMBER (6)

PAGE (3)

CRYSTAL RIVER UNIT 3 (CR-3)

YEAR

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NUMBER

0 5 0 0 0 3 0 2 9 6 0 1 8 0 1 0 4 OF 0 8

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RB. No other work history was evident based on a review of the computerized work request database. Therefore, there is reasonable assurance containment integrity was maintained with respect to these penetrations.

CAV-619 and CAV-622 (PEN 439 - Pressurizer and RCS Sample Line Penetration) were installed by a plant modification to facilitate maintenance of the PASS system and completed in November, 1991. A review of the testing history of these valves indicates they were verified closed during performance of Operating Procedure OP-419 "Liquid Sampling System Initial Valve Line Up" performed in conjunction with the noted outages in July 1992 (Refuel 8), April 1993 (Midcycle Outage 9), May 1994 (Refuel 9), and April 1996 (Refuel 10). A review of the work history for CAV-619 and CAV-620 revealed only one work request for CAV-619 performed November, 1993 to install a test gauge in support of Performance Test Procedure PT-448 "CAV-1, CAV-3, and CAV-126 Downstream Pressure Test." The clearance order associated with this test shows that CAV-619 was restored to the closed position. Therefore, there is reasonable assurance containment integrity was maintained with respect to the penetrations associated with these valves.

Leak Rate Valve [IJ,ISV] LRV-44 is located outside containment and is associated with PEN 202 - Reactor Building Leak Rate Test Penetration. This line is a normally closed line which provides sample information for the reactor building atmosphere during the performance of Integrated Leak Rate Testing (ILRT). PEN 202 is a Type IV Penetration which only requires one of the two closure devices to be surveilled. The other device is a blind flange which is included in SP-324 and receives verification of its position as required. Although PEN 202 is a Type IV penetration, the topical design basis document (TDBD) for containment penetrations describes both the flange and LRV-44 as part of the barrier for PEN 202. Therefore, for consistency with the TDBD, LRV-44 should be included in SP-341 for verification in accordance with ITS SR 3.6.3.3 since it is a manual valve located outside containment and is required to be closed during accident conditions. This is a conservative position to achieve consistency with the TDBD pending future revisions which may clarify that only one of the devices constitutes the containment barrier. LRV-44 is a locked closed valve and is included in Surveillance Procedure SP-381, "Locked/Sealed Valve Check List (Position Verification of Locked/Sealed Valves)," which is performed quarterly.

The flange downstream of Makeup & Purification System Valve [CB,ISV] MUV-505 and upstream of PEN 333 - Letdown Line Penetration was installed during Refueling Outage 6 which was completed in January, 1988. The flange was part of a modification which installed a third Makeup System Letdown Cooler [CB,HX]. The modification called for flanged connections to be installed for future installation of a fourth Letdown Cooler. The flange is part of the test boundary when PEN 333 is tested during local leak rate testing per Surveillance Procedure SP-179C, "Containment Leakage Test - Type 'C'." SP-179C was performed for local leak testing of PEN 333 on March 27, 1996 and September 13, 1996.