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Docket Nos.: 50-348
50-364

10 CFR 2.201

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

Joseph M. Farley Nuclear Plant
Reply To a Notice Of Violation (VIO)
NRC Inspection Report Number 50-348,364/97-04

Ladies and Gentlemen:

As requested by your transmittal EA 97-130, dated May 6, 1997, this letter responds to the following violations:

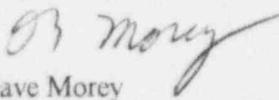
- EA 97-130 VIO 01014, "Procedural Inadequacies With Regard to Operation of the Penetration Room Filtration System."
- EA 97-130 VIO 02014, "Failure to Comply With Specific Sections of ANSI N510-1980 in Surveillance Testing of Technical Specification Ventilation Systems."
- EA 97-130 VIO 03014, "Failure to Identify the Degraded Penetration Room Boundary."
- EA 97-130 VIO 04014, "Fuel Movement Within the Spent Fuel Pool Without Meeting Penetration Room Filtration System Technical Specification Requirements."

The Southern Nuclear Operating Company (SNC) responses are provided in the enclosures.

Confirmation

I affirm that the responses are true and complete to the best of my knowledge, information, and belief.

Respectfully submitted,


Dave Morey

WAS/clt: nov97130.doc

Enclosures

cc: Mr. L. A. Reyes, Region II Administrator
Mr. J. I. Zimmerman, NRR Project Manager
Mr. T. M. Ross, Plant Sr. Resident Inspector



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ENCLOSURE 1

Response to EA 97-130 VIO 01014
“Procedural Inadequacies With Regard to
Operation of the Penetration Room Filtration System”

RESPONSE TO EA 97-130 VIO 01014

EA 97-130 VIO 01014, "Procedural Inadequacies With Regard to Operation of the Penetration Room Filtration System" states:

- A. 10 CFR Part 50, Appendix B, Criterion V, requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

Contrary to the above, prior to March 14, 1997, the licensee failed to prescribe documented instructions or procedures to implement the following activities affecting quality with regard to operation of the penetration room filtration (PRF) system:

1. Procedural steps to monitor penetration room-to-atmosphere negative pressure were not prescribed in emergency operating procedures. Monitoring penetration room-to-atmosphere negative pressure is an activity affecting quality in that a negative pressure is required to meet the intended safety function of the system during emergency conditions as described in Final Safety Analysis Report (FSAR) Section 6.2.3.1.2. FSAR Section 6.2.3.1.2 states, in part, that a function of the PRF system is to maintain a slightly negative pressure within the penetration room and that this negative pressure ensures inleakage to the penetration room, preventing exfiltration of radioactivity to the environment. For example, Step 3 of FNP-1/2-ESP-1.1, SI Termination, directs securing one train of the PRF system (if actuated), but does not direct monitoring the remaining PRF system train to ensure that it maintains adequate negative penetration room-to-atmosphere differential pressure.
2. Procedural steps to govern operation of the PRF system during recirculation operations were not provided in normal operating, testing, or emergency operating procedures. Recirculation operation is an activity affecting quality in that instructions for system alignment, testing and emergency operation are needed to implement multipass filtration of long term containment leakage. Multipass filtration is a function of the PRF system as described in FSAR Section 6.2.3.2.2. For example, FNP-1/2-STP-124.0, Penetration Room Filtration Performance Test, (STP-124.0), Step 6.3, states that the Penetration Room Filtration System Train to be tested is aligned per FNP-1/2-SOP-60.0, (SOP-60.0), Penetration Room Filtration System. However SOP-60.0 does not define system configurations or provide operator guidance for alignment for surveillance tests or post-loss of coolant accident (LOCA) system operation in the "recirc mode." STP-124.0 was also inadequate in that Step 7.5 directed operations to start the PRF system train to be tested and align it in the recirculation mode, but did not contain steps that define the recirculation mode or the configuration of the system for the recirculation mode.
3. Procedural steps were not prescribed to ensure that the test described in STP-124.0 was run in the sequence required by TS 4.7.8.b.1(a). The sequence of the visual inspection of the PRF system, the Dioctyl-phthalate (DOP) test, and the activated carbon adsorber section leak test is an activity affecting quality in that conducting the visual inspection after the DOP or carbon adsorber leak test can invalidate the integrity of the PRF system established in the DOP test and the carbon adsorber leak test. Technical Specification (TS) 4.7.8, Penetration Room Filtration System, part b.1(a), states that a

RESPONSE TO EA 97-130 VIO 01014

visual inspection of the penetration room filtration system shall be made before each DOP test or activated carbon adsorber section leak test in accordance with Section 5 of ANSI N510-1980. As a result, during performance of STP-124.0 on January 25, 1997, the visual inspection of the penetration room filtration system was not conducted prior to the HEPA filter and charcoal filter leak tests as required by TS 4.7.8.b.1(a).

4. STP-124.0 did not provide adequate steps to ensure that the test readings of the air flow through the PRF system, as described in Step 7.6 of STP-124.0, were consistently recorded. Obtaining accurate readings of the air flow through the PRF system is an activity affecting quality in that accurate air flow readings are required to determine whether the system meets TS surveillance requirement (SR) 4.7.8. TS SR 4.7.8, Penetration Room Filtration System, part b.3, requires, at least once per 18 months or during other specified conditions, verifying the PRF system flow rate of 5000 cfm + 10% during system operation when tested in accordance with Section 8 of ANSI N510-1980. As a result, several data packages which documented 1995 performances of the flow tests for STP-124.0 had discrepancies in the manner in which the air flow test data was recorded. The discrepancies included transposition errors which resulted in using the incorrect duct size for the calculations.

This is a Severity Level IV violation (Supplement I).

Admission or Denial

The violation occurred as described in the Notice of Violation.

Reason for Violation

EA 97-130 VIO 01014, Item 1:

The cause was procedural inadequacy in that FNP's procedures did not provide instructions to monitor penetration room to atmosphere differential pressure to ensure an adequate negative pressure was maintained.

EA 97-130 VIO 01014, Item 2:

The cause was procedural inadequacy in that FNP's surveillance and operating procedures did not address the steps to define the recirculation mode of PRF.

EA 97-130 VIO 01014, Item 3:

The cause was procedural inadequacy in that FNP's PRF surveillance test procedure, FNP-1/2-STP-124.0 (STP-124.0), did not clearly specify that the visual inspection of the PRF must be performed prior to the dioctyl-phthalate (DOP) test and the charcoal adsorber leak test as required by the FNP Technical Specification.

EA 97-130 VIO 01014, Item 4:

The cause was procedural inadequacy in that FNP's surveillance test procedure (STP-124.0) did not provide adequate guidance for recording the system flows. A contributing cause was the duct flow measuring points were not labeled in the field to identify the three system flow paths.

RESPONSE TO EA 97-130 VIO 01014

Corrective Steps Taken and Results Achieved

EA 97-130 VIO 01014, Item 1:

An actual condition requiring Phase B actuation has not occurred at FNP. Therefore, no adverse consequences were caused by the procedural inadequacies.

EA 97-130 VIO 01014, Item 2:

The design basis of the PRF system is to maintain the penetration room areas under a negative pressure while operating in the exhaust mode. No credit is taken in accident analyses for recirculation filtration. Therefore, no adverse condition existed.

EA 97-130 VIO 01014, Item 3:

The Unit 1 A Train PRF surveillance test (STP-124.0) was successfully re-performed on February 6, 1997.

EA 97-130 VIO 01014, Item 4:

FNP recalculated the transposed data and determined that three of the errors still met the TS acceptance criteria of PRF system flow. The recalculation of the fourth data transposition error, which occurred on December 1, 1992, showed a PRF system flow rate in excess of the TS acceptance criteria upper limit. This excess flow rate was evaluated and it was determined that the original design included sufficient flow rate margin to maintain the required filter residence time and efficiency with the excess flow rate. In addition, the previous and subsequent tests to the December 1, 1992 test were completed satisfactorily and no maintenance that would have affected the PRF system flow was performed during that time.

Corrective Steps That Will Be Taken to Avoid Further Violation

EA 97-130 VIO 01014, Item 1:

The procedure for Penetration Room Filtration, FNP-1/2-SOP-60.0, was revised to verify an adequate negative pressure when there is any change to the system configuration. Both Units 1 and 2 Emergency Response Procedures were revised to direct the operator to FNP-1/2-SOP-60.0 for PRF operation during an accident. To ensure continued monitoring of the differential pressure, the readings were added to the hourly ECCS logs. These logs are required by EEP-1, "Loss of Reactor or Secondary Coolant."

Emergency operating procedures which secure systems during an accident will be reviewed to determine if guidance is provided in the emergency operating procedures to monitor parameters which could be affected by securing the system.

EA 97-130 VIO 01014, Item 2:

The PRF performance test surveillance procedures were revised to instruct Operations to place the PRF train to be tested in operation per FNP-1/2-SOP-60.0. Also, the PRF performance test surveillance procedures were revised to require verification that the system has entered the LOCA recirculation mode by verifying that the recirculation damper has modulated open. FNP-1/2-SOP-60.0 was revised to align the PRF system in the recirculation mode during a LOCA. Both Units 1

RESPONSE TO EA 97-130 VIO 01014

and 2 Emergency Response Procedures were revised to direct the operator to FNP-1/2-SOP-60.0 for PRF operation during an accident. Additionally, surveillance test procedures FNP-1/2-STP-20.0, Penetration Room Filtration System Train A(B) Quarterly Operability and Valve Inservice Test, and FNP-1/2-STP-20.2, Penetration Room Filtration System Train A(B) Monthly Operability Test, were revised to test the system in the recirculation mode of operation.

EA 97-130 VIO 01014, Item 3:

The PRF surveillance test procedures (STP-124.0) were revised to clarify that the visual inspection shall be performed prior to the DOP and charcoal adsorber leak tests. Also, the Control Room Emergency Filtration System and Containment Purge Exhaust Filter System surveillance test procedures will be enhanced to clarify that the visual inspection shall be performed prior to the DOP and charcoal adsorber leak tests.

Also, the Control Room Emergency Filtration System and the Containment Purge Exhaust Filter System surveillance test procedures will be enhanced to clarify that the visual inspection must be performed prior to the DOP and charcoal adsorber leak tests.

EA 97-130 VIO 01014, Item 4:

FNP revised the PRF surveillance test procedure (STP-124.0) to clarify the data sheets to be used for recording the system flow data. FNP also applied labels to the PRF test ports to clearly identify the function of each test port. The Control Room Emergency Filtration System surveillance test procedure has also been revised to clarify the data sheets used for recording system flow data.

Date of Full Compliance

June 30, 1997

ENCLOSURE 2

Response to EA 97-130 VIO 02014
"Failure to Comply With Specific Sections of ANSI N510-1980 in
Surveillance Testing of Technical Specification Ventilation Systems"

RESPONSE TO EA 97-130 VIO 02014

EA 97-130 VIO 02014, "Failure to Comply With Specific Sections of ANSI N510-1980 in Surveillance Testing of Technical Specification Ventilation Systems" states:

- B. TS surveillance requirement (SR) 4.7.8, Penetration Room Filtration System, part b.3, requires, at least once per 18 months or during other specified conditions, verifying the PRF system flow rate of 5000 cfm + 10% during system operation when tested in accordance with Section 8 of ANSI N510-1980.

ANSI N510-1980, Testing of Nuclear Air-Cleaning Systems, Section 8.3.1, Airflow Capacity Test, steps 8.3.1.6 and 8.3.1.7, describe performing "dirty filter" flow tests as part of the Section 8 airflow capacity test.

TS SR 4.7.8.b.1.a requires a visual inspection of PRF system filters in accordance with Section 5 of ANSI N510-1980 every 18 months; and TS SR 4.7.8.d.3 requires PRF system heater testing in accordance with Section 14 of ANSI N510-1980 every 18 months.

TS SR 4.7.7.1, Control Room Emergency Filtration System (CREFS), requires visual filter inspections in accordance with Section 5 of ANSI N510-1980, system flow verifications in accordance with Section 8 of ANSI N510-1980, and pressurization system heater testing in accordance with Section 14 of ANSI N510-1980 every 18 months.

TS SR 4.9.14 requires a visual inspection of the Containment Purge exhaust filter in accordance with Section 5 of ANSI N510-1980 every 18 months.

Contrary to the above, between plant licensing and January 28, 1997, the licensee failed to test PRF system operation in accordance with Section 8 of ANSI N510-1980. Specifically, system flow rate testing did not include "dirty filter" flow tests as described by ANSI N510-1980, Section 8. In addition, on February 23, 1997, the licensee determined that surveillance testing to demonstrate compliance with TS Surveillance Requirements 4.7.7.1, 4.7.8, and 4.9.14 was inadequate in that Section 8 "dirty filter" testing for CREFS, and other parts of ANSI N510-1980 Sections 5 and 14 for CREFS, the PRF system, and Containment Purge exhaust, were not included in their surveillance test program.

This is a Severity Level IV violation (Supplement I).

Admission or Denial

The violation occurred as described in the Notice of Violation.

Reason for Violation

The cause of the inadequate surveillance testing of ESF ventilation systems was cognitive personnel error in that, during 1984, when the FNP TS were revised to incorporate the latest industry standard testing requirements, FNP personnel incorrectly concluded that the standards were provided for technical guidance as opposed to verbatim requirements.

RESPONSE TO EA 97-130 VIO 02014

Corrective Steps Taken and Results Achieved

FNP performed detailed evaluations of the incomplete performance of ANSI N510-1980, sections 5, 8 and 14, using the guidance provided in GL 91-18 as a guideline for nonconforming conditions. FNP determined that the systems were operable per GL 91-18 but were in a nonconforming condition due to the incomplete performance of some visual inspections and the dirty filter tests. The Control Room Emergency Filtration/Pressurization System, Penetration Room Filtration System, and Containment Purge Exhaust Filter System are capable of performing their specified functions without completion of all ANSI N510-1980 testing and inspection requirements.

Although these systems were able to perform their specified functions, both trains of the Control Room Emergency Filtration/Pressurization System and both trains of the Penetration Room Filtration System on Units 1 and 2 were declared inoperable due to surveillance not being completed. The Containment Purge Exhaust Filter System was not affected at this time due to both units being in a mode in which the Containment Purge Exhaust Filter System was not required to be operable. With both trains of the Control Room Emergency Filtration/Pressurization System and the Penetration Room Filtration System inoperable, FNP entered TS 3.0.3 for both units. NRC granted enforcement discretion and TS 3.0.3 was exited.

FNP took prompt action to resolve this issue by submitting a technical specification amendment request and performing additional testing and inspections, where possible, to satisfy the literal requirements of ANSI N510-1980 sections 5, 8 and 14.

Corrective Steps That Will Be Taken to Avoid Further Violation

FNP received the technical specification amendment, issued May 1, 1997, and revised appropriate procedures relating to the Control Room Emergency Filtration, Penetration Room Filtration, and Containment Purge Exhaust Filter systems to comply with the technical specification amendment. FNP is currently in compliance with the TS amendment.

Date of Full Compliance

May 23, 1997

ENCLOSURE 3

Response to EA 97-130 VIO 03014
"Failure to Identify the Degraded Penetration Room Boundary"

RESPONSE TO EA 97-130 VIO 03014

EA 97-130 VIO 03014, "Failure to Identify the Degraded Penetration Room Boundary" states:

- C. 10 CFR 50, Appendix B, Criterion XVI, and the J. M. Farley Plant Operations Quality Assurance Policy Manual, states, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

FSAR section 6.2.3.1.2 describes the criteria used to determine PRF system design flow rates. It states, "The exhaust flow rate is equivalent to the penetration room boundary inleakage; i.e., the sum of all possible inleakages when a pressure of -1.5 in. wg [inches water gauge] is maintained within the penetration room boundary." Furthermore, it states, "for estimating the exhaust fan capacity, it has been conservatively assumed that, with a -1.5 inches wg pressure, the inleakage is 100 percent of the penetration room volume per day. This inleakage is equivalent to 250 scfm."

FSAR section 6.2.3.3.2, states, "The penetration rooms are maintained at a pressure of -0.5 to -1.5 in. wg with only the exhaust fan operating. If the recirculation fan were to remain in operation in the exhaust mode, the pressure in the penetration rooms could be maintained at -3.0 in. wg."

FNP-1/2-STP-20.0, Penetration Room Filtration System Train A(B) Operability Test, Page 5, Note, described desired system performance of the PRF system upon switchover from the pure exhaust mode to recirculation operation including system operation with the recirculation fan in operation in the exhaust mode. The Note directs operators, that if the PRF system does not function in the manner described in the Note, to investigate and initiate corrective action if corrective action is required.

Contrary to the above, as of January 25, 1997, the licensee had failed to establish measures to assure that a significant condition adverse to quality was promptly identified and corrected. Specifically, the licensee failed to identify that the penetration room boundary had degraded such that inleakage was greater than 4000 scfm on Unit 1 and greater than 2000 scfm on Unit 2, which was in excess of the 250 scfm described in the FSAR. As a result, neither unit's PRF system was capable of maintaining -0.5 to -1.5 inches wg with only the exhaust fan running and Unit 1 could not maintain -3.0 inches wg in the penetration rooms with the recirculation fan also in the exhaust mode as described in FSAR Section 6.2.3.3.2. Furthermore, the licensee failed to obtain necessary data in the configurations described in STP-20.0 to determine if system performance warranted an investigation and initiation of corrective action.

This is a Severity Level IV violation (Supplement I).

Admission or Denial

The violation occurred as described in the Notice of Violation.

RESPONSE TO EA 97-130 VIO 03014

Reason for Violation

The cause of the failure to recognize and correct the degraded Penetration Room boundary was procedural inadequacy. The applicable surveillance test procedures did not specifically require the verification of adequate Penetration Room negative pressure as an acceptance criteria. A Note in these procedures was intended to accomplish the verification of adequate negative pressure but investigation determined that this Note was being consistently misapplied such that degradation of the Penetration Room boundary was not being identified.

Corrective Steps Taken and Results Achieved

Repairs have been performed on the boundaries of both Unit's Penetration Rooms which has significantly reduced the air inleakage.

Corrective Steps That Will Be Taken to Avoid Further Violation

The PRF surveillance procedures for both Units have been changed to require verification of adequate negative pressure in the Penetration Rooms in the modes of operation described in the FSAR. This verification is now a signoff requirement. Guidance is also provided to initiate corrective action if it is determined that the Penetration Room boundary has degraded.

Operations personnel will be trained on the procedural requirements to verify proper negative pressure in the Penetration Room and to initiate corrective action if the Penetration Room boundary has degraded.

Date of Full Compliance

June 30, 1997

ENCLOSURE 4

Response to EA 97-130 VIO 04014
"Fuel Movement Within the Spent Fuel Pool Without Meeting
Penetration Room Filtration System Technical Specification Requirements"

RESPONSE TO EA 97-130 VIO 04014

EA 97-130 VIO 04014, "Fuel Movement Within the Spent Fuel Pool Without Meeting Penetration Room Filtration System Technical Specification Requirements" states:

- D. TS 3.9.13 requires that two independent penetration room filtration systems (Specification 3.7.8) shall be OPERABLE and aligned to the spent fuel pool room during crane operation with loads, over the fuel in the spent fuel pit and during fuel movement within the spent fuel pit.

Contrary to the above, on October 31, 1996, the licensee performed fuel movement within the Unit 2 spent fuel pit with the A train Penetration Room Filtration (PRF) system inoperable and the B train PRF not aligned to the spent fuel pool room.

This is a Severity Level IV violation (Supplement I).

Admission or Denial

The violation occurred as described in the Notice of Violation.

Reason for Violation

The cause of this event was cognitive personnel error in that SNC personnel incorrectly interpreted TS requirements by the misapplication of TS 3/4.8.1.2 to TS 3/4.9.13.

Corrective Steps Taken and Results Achieved

SNC promptly revised their interpretation of the Technical Specifications to comply with the NRC position. The 1997 Unit 1 outage was planned to comply with the new interpretation.

Corrective Steps That Will Be Taken to Avoid Further Violation

Future refueling outages will be planned and implemented consistent with the current interpretation of the TS requirements for PRF operability in Modes 5 & 6.

Date of Full Compliance

March 6, 1997