



ENTERGY

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Waterford 3

W3F1-91-0050

A4.05

QA

April 15, 1991

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

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
NRC Inspection Report 90-26
NRC Enforcement Action 91-006
Reply to Notice of Violation and
Proposed Imposition of Civil Penalty

Gentlemen:

In accordance with 10CFR2.201, Entergy Operations, Inc. hereby submits in Attachment 1 the response to the Notice of Violation and Proposed Imposition of Civil Penalty of the subject Enforcement Action.

If you have any questions concerning this response, please contact
T.W. Gates at (504) 739-6697.

Very truly yours,

RFB/TWG/ssf

Attachment

Enclosure: Entergy Operations, Inc. Check #03-8355 for \$37,500

cc: Messrs. R.D. Martin, NRC Region IV

D.L. Wigginton, NRC-NRR

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for \$37,500.00

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ATTACHMENT 1

ENTERGY OPERATIONS, INC. RESPONSE TO THE VIOLATIONS IDENTIFIED IN
ENFORCEMENT ACTION 91-006

VIOLATION I.A.

Inadequate Surveillance Procedure

10 CFR Part 50, Appendix B, Criterion V, requires in part that activities affecting quality shall be prescribed by documenting instructions or procedures appropriate to the circumstances, which shall include appropriate acceptance criteria for determining that important activities have been satisfactorily accomplished.

FSAR Section 6.4.4.1 and Table 6.4-2 establish the design basis criteria for 200 cfm as the maximum emergency outside air makeup flow rate.

Contrary to the above, as of December 4, 1990, Surveillance Procedure PE-5-004, "Control Room Air Conditioning System Surveillance," did not include 200 cfm maximum emergency makeup air flow rate specifically as a test acceptance criterion.

VIOLATION I.B.

Lack of Timely Corrective Action

10CFR Part 50, Appendix B, Criterion V, requires in part that activities affecting quality shall be prescribed by documenting instructions or procedures appropriate to the circumstances, which shall include appropriate acceptance criteria for determining that important activities have been satisfactorily accomplished.

10 CFR Part 50, Appendix B, Criterion XVI, requires in part that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

Surveillance Procedure PE-5-004, "Control Room Air Conditioning System Surveillance," provides instructions for the performance of CRAC surveillance testing. Section 8.5.4 requires, in part, that corrective actions be taken and retesting be conducted as necessary "if the requirement Control Room pressure cannot be obtained and/or Emergency Outside air flow exceeds 200 cfm..."

Contrary to the above, from September 1988 until December 14, 1990, Waterford 3 was aware that the required positive control room pressure (1/8 inch water gauge) could be achieved and maintained only with an emergency outside air flow rate in excess of 200 cubic feet per minute (cfm), however, this condition adverse to quality was not corrected until December 14, 1990.

RESPONSE

(1) Event Summary

The Control Room envelope is designed to maintain a positive pressure differential of 0.125" water gauge (w.g.) or greater relative to the outside air, with a makeup rate of 200 cubic feet per minute (cfm) or less during a high radiation operating condition. The pressure and airflow limits are also used to verify the leak tightness of the Control Room envelope in a toxic gas operating condition, during which the system is in full recirculation with no outside air makeup. These parameters are mentioned in the Final Safety Analysis Report (FSAR) and Regulatory Guides 1.78 and 1.95, but the Technical Specifications (TS) require only that the Control Room be pressurized to 0.125" w.g. or greater, without requiring any specific makeup airflow.

Surveillance Procedure PE-5-004, "Control Room Air Conditioning Systems Surveillance," is performed every 18 months as required by the FSAR and TS to ensure system operability. Section 8.5 of PE-5-004 requires the certification of the Control Room differential pressure relative to the outside air under the initial test condition of the ventilation lineup in the high radiation mode with one of the emergency intakes open. Surveillance Procedure PE-5-004 Section 8.5.4 requires that in the event that 0.125" w.g. Control Room differential pressure cannot be obtained and/or the emergency outside air flow exceeds 200 cfm then:

- Inspect the Control room areas for leakage and correct accordingly. Retest as necessary.
- Verify actual emergency outside air flow by performing a duct traverse.
- Repeat the above steps as necessary.

On three separate occasions, Surveillance Procedure PE-5-004 was performed in which the Control Room differential pressure was greater than 0.125" w.g.; however, this pressure could only be achieved at an emergency outside air flow rate in excess of 250 cfm. If PE-5-004 was followed as stated above, the procedure could not be exited without meeting the requirements of the Control Room differential pressure being greater than 0.125" w.g. relative to the outside air and the emergency outside air flow for the intake being less than or equal to 200 cfm.

On June 17, 1988 and September 8, 1988, Surveillance Procedure PE-5-004 was conducted on the 'A' and 'B' trains of the Control Room Air Conditioning System, respectively. During the test, a differential pressure of 0.125" w.g. could only be achieved at an emergency outside air flow rate in excess of 250 cfm. The acceptance criteria for Surveillance Procedure PE-5-004 requires that the Control Room Air Conditioning System maintain the Control Room at a positive pressure of greater than or equal to 0.125" w.g. relative to the outside atmosphere when operating in the recirculation mode with an emergency outside air intake open. Section 8.5.4 of the procedure could not be completed as required and a Condition Identification (CI) was generated (CI 258158) on September 13, 1988, to investigate the problem. The procedure was signed as being completed.

On April 17, 1990, Surveillance Procedure PE-5-004 was conducted on the Control Room Air Conditioning System 'A' train with results of 0.125" w.g. differential pressure and 250 emergency outside air flow. Section 8.5.4 of the procedure was not completed, with justification that CI 258158, described above, had been initiated to find and correct the leakage paths in the Control Room envelope. The procedure was signed as being completed.

On April 19, 1990, Surveillance Procedure PE-5-004 was conducted on the Control Room Air Conditioning System 'B' train, with results of 0.2" w.g. differential pressure with 195 cfm emergency outside airflow. This test was performed with the normal Reactor Auxiliary Building (RAB) ventilation secured, which reduces the differential pressure between the Control Room envelope and the RAB, resulting in a lower leakage rate for the Control Room envelope.

(2) Background Information

The toxic chemical evaluation in Section 2.2.3.3 of the Waterford 3 FSAR was based on a control room infiltration rate of 0.012 volume changes per hour, following isolation. The same infiltration rate was assumed in the analysis of chemicals identified in a 1984 survey. When the Waterford 3 Control Room was leak-rate tested, an air exchange rate of about 0.054 volumes per hour (198 cfm) was established. Louisiana Power and Light (LP&L) committed to the Nuclear Regulatory Commission (NRC) (Commitment #A08360) on March 6, 1985, to provide the results of an analysis which will confirm habitability of the Control Room from toxic chemicals based on the actual air exchange rate and to change TS 4.7.6 to specify an allowable makeup air required to maintain the Control Room at a positive pressure of 0.125 inches w.g.

Regulatory Guide (RG) 1.95 requires that "The gross leakage characteristic of the Control Room should be determined by pressurizing the Control Room to 1/8-inch water gauge and determining the pressurization flow rate. (The use of a higher pressure differential is acceptable provided the flow rate is conservatively adjusted to correspond to 1/8-inch water gauge.)..."

RG 1.95 further states that Type II Control Rooms have an air exchange rate during normal operation of less than or equal to 1 exchange per hour and an isolated air exchange rate of less than or equal to 0.06 per hour. These figures as well as the isolation times for the valves are used to analyze the effects of a slow leak and also for a large instantaneous release of toxic gas. Waterford 3 measures the air exchange rate of the Control Room while isolated, but no testing is required to ensure that the normal operating air exchange rate is less than 1 exchange per hour (3667 cfm). The normal air intake rate for Waterford 3 Control Room envelope is 0.6 exchanges per hour (2200 + 10%, - 0%).

On November 5, 1985, the NRC was called to obtain clarification of the basis for RG 1.95 and RG 1.78 provisions that Control Rooms with an air exchange rate greater than 0.06 volumes per hour do not require verification of the leakage rate by periodic field testing. The NRC explained that verification testing is being required due to the gross Control Room leakages that are being observed in the field, regardless of the RG requirements. The NRC also explained that a limit on the maximum allowable air makeup flow rate provides an indirect measure of the leakage characteristic of the Control Room, even though the Control Room is in the isolation mode for the toxic chemical event. The NRC suggested that LP&L provide a maximum allowable air makeup flow rate for incorporation in Technical Specification 3/4.7-6 rather than a range of allowed makeup airflow.

On January 24, 1986, LP&L provided the NRC with a re-evaluation of a postulated toxic chemical release based on an air exchange rate of 0.06 volume changes per hour. LP&L stated in their response that the emergency outside air flow was adequately controlled administratively by Surveillance Procedure PE-5-004, to not exceed 200 cfm when verifying the pressure criterion of 0.125" w.g. The control of the allowable air makeup rate is a specificity relating to test control similar, for example, to the basis for calculating flow rate. Such specificity is appropriately addressed by procedure.

In phone conversations on January 4 and 6, 1988, the NRC indicated that there was no further regulatory action required to close the commitment related to procedurally controlling the emergency makeup flow rate for the Control Room Air Conditioning System when performing a Control Room pressure test pursuant to TS 3/4.7.6. The NRC further related that the commitment could be closed at the discretion of LP&L and recommended that LP&L consider an overall assessment of the Control Room envelope to assure that all actions and technical factors had been considered.

On February 17, 1988, LP&L closed the above commitment (A08360) after an overall assessment was completed.

(3) Reason For Violation

Entergy Operations, Inc. admits this violation and believes that the root cause of this event is failure of plant personnel to recognize the significance of the Control Room leakage rate while conducting Surveillance Procedure PE-5-004 and take timely corrective action to locate and correct leakage paths in the Control Room envelope.

Two contributing causes have been identified:

First, the basis of the 200 cfm pressurization flow is not clear in Design Basis Documentation. The RG allowed leak rate is less than or equal to 0.06 air exchanges per hour (220 cfm) for a Type II control room. There is no guidance on the operability requirements if the air exchange rate of 200 cfm or 220 cfm is exceeded.

Secondly, procedure PE-5-004 fails to address initial test conditions, specifically the lineup of RAB ventilation, and other system configurations since running the test with RAB normal ventilation secured will produce different test results.

(4) Corrective Steps That Have Been Taken And Results Achieved

The associated Condition Identification (CI) was changed to a Non-Conforming CI 272811.

Repairs to leakage paths in the Control Room envelope were made such that Surveillance Test PE-5-004 results were satisfactory with 0.125 w.g. differential pressure being achieved with less than 200 cfm make up airflow on December 21, 1990.

In addition, Surveillance Procedure PE-5-004, "Control Room Air Conditioning Surveillance," has been revised to include the 200 cfm makeup air flowrate limit as an explicit requirement for test acceptance.

Finally, Surveillance Procedure PE-5-004 has been revised to include detailed guidance on action required if the 0.125 w.g. differential pressure cannot be achieved with an emergency makeup flowrate of less than or equal to 200 cfm.

(5) Corrective Steps Which Will Be Taken To Avoid Further Violations

To address the root cause of this violation, a case study of this event will be reviewed with supervisory personnel and engineers on a recurring basis.

Long term corrective actions to address the contributing causes are as follows:

1. Technical Specification 3/4.7.6 will be revised to include the 200 cfm makeup air flowrate limit in the surveillance requirements.
2. The CI database will be audited by the Maintenance Review Committee (MRC) for CI's which have been open for an excessive period of time (greater than 3 months) without appropriate action taken. The MRC conducts these types of backlog CI reviews. However, in this case, the CI was overlooked. Consequently, this audit will further ensure that priority CI's are administratively controlled so that action is taken on a timely basis.
3. The initial conditions of PE-5-004, "Control Room Air Conditioning Surveillance," will be evaluated to determine whether other system configurations have the potential to impact test results. Also, all measured makeup flowrates will henceforth be normalized to 0.125 w.g. to allow for clear precursor trending.

(6) Date When Full Compliance Will Be Achieved

The Technical Specification Change Request associated with TS 3/4.7.6 will be submitted and all other corrective actions complete by July 1, 1991.

VIOLATION II

Failure to Enter Technical Specification 3.0.3

The Limiting Condition for Operation (LCO) for Technical Specification (TS) 3.7.6 requires that two independent Control Room Air Conditioning (CRAC) systems shall be operable for all modes of plant operation. The Action Statement requires that with one CRAC system inoperable, restore the inoperable system to operable status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. The Action Statement does not address two trains being inoperable.

TS Surveillance Requirement 4.7.6.e.3 states, in part, that each control room air conditioning system shall be demonstrated operable at least once per 18 months by verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8" water gauge (w.g.). TS 3.0.3 requires that when an LCO is not met, except as provided in the associated ACTION requirements, action shall be initiated within 1 hour to place the unit in hot standby within the next 6 hours, hot shutdown within the following 6 hours, and cold shutdown within the subsequent 24 hours.

Contrary to the above, from December 5, 1990, through December 12, 1990, the plant was operated with both CRAC systems incapable of pressurizing the control room to 1/8" w.g., as a result of inadequate control over fire/air seal work activities when a fire/air seal was removed, and action was not initiated as required.

RESPONSE

(1) Event Summary

On December 12, 1990, engineers discovered fire seal VIA0070 had been removed from around Fire Damper, FD-45, in accordance with Design Change, DC-3197, and as a result, a breach in the Control Room envelope existed. At 1045 hours on December 12, 1990, Technical Specification (TS) 3.0.3 was entered based on engineering judgement that the Control Room envelope could not obtain a 0.125" w.g. differential pressure with the outside air in accordance with Surveillance Test Procedure PE-5-004, "Control Room Air conditioning System Surveillance." In addition, the consequences of a high radiation or toxic gas scenario would have been considerably worse in the condition of seal VIA0070 being removed.

DC-3197 was approved for construction on September 24, 1990, and did not identify certain fire seals as also being an air pressure barrier for the Control Room envelope with the Reactor Auxiliary Building (RAB). The scope of this DC addressed a problem in which fire dampers were found to be inoperable due to the absence of an expansion space between the fire damper and the surrounding wall. This expansion space is required to allow for thermal expansion of the damper assembly under fire conditions. The fire seal around FD-45 (penetration number VIA0070) was removed on December 5, 1990.

(2) Background Information

The Control Room envelope is designed to maintain a positive pressure of 0.125" w.g. or greater with respect to the outside air, with a make up rate of 200 cubic feet per minute (cfm) or less, during the high radiation mode of operation. The pressure and airflow limits are also used to verify the leak tightness of the Control Room envelope for the toxic gas mode of operation during which the system is in full recirculation with no outside air makeup. The requirements are specified in the Final Safety Analysis Report (FSAR) and Regulatory Guide (RG) 1.78 and 1.95.

In LER 88-025, Waterford 3 committed to the corrective action of inspecting all fire barriers in accordance with Procedure ME-003-009, "Fire Walls, Floors, and Ceilings" and Procedure ME-003-006, "Fire Barrier Penetration Seals." An inspection of the fire dampers revealed that many of the dampers had not been installed per the manufacturer's requirements and fire test configurations. The concern was that the dampers were not provided with adequate annular space between the fire damper and wall to allow for thermal expansion of the damper and seal material. This problem has existed since initial construction and could have resulted in the dampers not functioning properly in a fire condition due to binding.

A Station Modification Request (SMR) FP-011 was initiated to correct penetration seal, fire barrier, and fire damper design deficiencies identified during the 100% penetration seal inspection initiated in November, 1988. The SMR was approved on February 12, 1990, and was later approved as DC-3197 on September 18, 1990. DC-3197 provides for the field installation or modification of approximately 228 seals, 25 dampers, and one fire barrier.

Fire seal VIA0070 around FD-45 was one of the damper seals identified for modification in DC-3197. The penetration around FD-45 was sealed with silicone foam during initial construction. Fire seal penetration VIA0070 was evaluated in Condition Identification (CI) 26011 on November 8, 1989, as having no requirement for fire protection. Subsequently, the damper was declared inoperable until the seal material around the damper could be removed.

Work commenced on seal VIA0070 on December 4, 1990, and in accordance with the DC, the following work was performed:

- the retaining closure angles from one side of the seal were removed to facilitate removal of the seal.
- the seal material was removed from around the damper.

At this point, the plant was operating with a breach in the Control Room envelope. There was approximately a 1/4" gap on the top and sides, and a 1/2" gap on the bottom between the ventilation duct and surrounding barrier wall.

An engineer noted at approximately 1600 hours on December 5, 1990, that work being done on two other DC-3197 seals (VIA0255 and VIA0256) could possibly breach the Control Room envelope. A discussion was held with several other engineers and determination was made that the Control Room had not been breached with the removal of these two seals because sheet metal had been installed on initial construction to facilitate installation of the seals, and had provided a pressure seal with the Control Room envelope.

On December 6, 1990, Nuclear Operations Construction (NOC) personnel were informed of the potential problem that existed with fire seals being removed under DC-3197 and that each fire seal being removed should be carefully evaluated to determine if removal of the fire seal could cause a breach in the Control Room envelope. NOC personnel conducted a review of all fire seals that were currently being worked and no immediate problems were identified. No work was being done on fire seal VIA0070 during the review and no problems were identified. A plan was initiated to involve the respective engineering personnel to evaluate the method and consequences, if any, of removing fire seals under DC-3197 that provide a pressure barrier for the Control Room envelope.

On December 10, 1990, Design Engineering (DE) personnel were informed of the potential problems with DC-3197. On December 11, 1990, DE personnel developed a list of 9 seals that were to be worked as part of DC-3197 which could possibly breach the Control Room envelope. On this list, 5 seals were identified as being currently worked. These seals were VIA0039, VIA0046, VIA0255, VIA0256, and VIA0070. A cursory inspection was made of the five seals and the Control Room envelope appeared not be breached. The retaining angle had been replaced on seal VIA0070 and it appeared that no work was being done on the seal.

On December 12, 1990, another inspection was performed on the five seals and a determination was made that seal VIA0070 breached the Control Room envelope because air flow past the retaining angle was observed. TS 3.0.3 was entered at 1045 hours on December 12, 1990, based on engineering judgement that two trains of HVAC system were inoperable as defined by the requirements in TS 3.7.6. A temporary seal was installed per Nonconformance Condition Identification (NCI) 272811 on seal VIA0070. The seal was determined to be operable and TS 3.0.3 was exited at 1141 hours on December 12, 1990. The seal was determined to be operable based on engineering judgement that the Control Room Air Conditioning System was observed per control room indications, to be capable of maintaining 0.125" w.g. positive pressure under normal operation without regard to the amount of makeup air being used. No visible signs of leakage were noted around the seal.

As a follow-up to the corrective action being taken under NCI 272811, Surveillance Procedure PE-5-004, "Control Room Air Conditioning Systems Surveillance," was scheduled as a conservative measure to check the overall integrity of the Control Room envelope.

The acceptance criteria for Surveillance Procedure PE-5-004 requires that the Control Room Air Conditioning System maintain the Control Room at a positive pressure of greater than or equal to 0.125" w.g. relative to the outside atmosphere when operating in recirculation mode with an emergency outside air intake open.

Surveillance Procedure PE-5-004 was performed on December 14, 1990, during which recirculation damper (D-41) indicated in the intermediate position per the plant monitoring computer. A positive pressure could not be achieved with the 'A' train emergency filtration unit running. The 'B' train was engaged while troubleshooting the suspected problem with the 'A' train recirculation damper. The required positive pressure differential could not be achieved with both emergency filtration units running because 200 cfm makeup airflow is the maximum that could be achieved, which is the designed and balance condition of the system with a failed open damper in one train and leakage out of the Control Room was greater than 200 cfm.

Recirculation damper D-41 was confirmed to be stuck in the intermediate position so the 'A' train was declared inoperable. The 'A' train recirculation damper D-41 was manually locked in the closed position, after which the 0.125" w.g. positive pressure could be maintained in accordance with the acceptance criteria of Surveillance Test Procedure PE-5-004 while operating the 'B' train emergency filtration unit. The differential pressure of 0.125" w.g. was maintained with an airflow of greater than 200 cfm.

Repair work was initiated on the recirculation damper D-41 on December 14, 1990, and on December 15, 1990, Seal VIA0070 was re-sealed with silicone foam in an air seal configuration. An engineering investigation was completed on December 19, 1990, which evaluated the Control Room envelope leakage problem.

The investigation revealed that CI 258158 was generated in 1988 to address the results of a Surveillance Test PE-5-004, in which 0.125" w.g. differential pressure could only be achieved by utilizing more than 200 cfm outside air makeup. CI 258158 was changed to a NCI on December 15, 1990, to allow for the location and repair of the Control Room envelope leakage paths as originally identified as a problem in 1988. The significance of the 200 cfm makeup airflow rate in Surveillance Test PE-5-004 was not understood in 1988, and as a result, CI 258158 was not aggressively pursued.

During the development of the engineering evaluation associated with NCI 258158, the basis of the 200 cfm makeup airflow and 0.125" w.g. differential pressure testing requirements of PE-5-004 was discovered to be important to high radiation and toxic gas accident analyses. Temporary measures of sealing the equipment room doors enabled the Surveillance Test PE-5-004 to be completed with 0.125" w.g. differential pressure and less than 200 cfm makeup airflow on December 15, 1990. The engineering evaluation recommended continued operation, with the temporary measures administratively controlled, and a concerted effort to find and repair all leakage paths into the Control Room envelope.

Several Control Room envelope leakage paths were identified on December 20, 1990 and repaired. The major leakage paths identified were:

- an unsealed penetration through the Computer Room floor. The seal was opened to re-pull a cable through a penetration under CI 269870. The seal was only addressed as being an impaired fire seal under fire impairment 90-494.
- a failure of the grouted joint between the walls and ceiling of the Control Room envelope, and air leakage past cold joints between walls that were not grouted or sealed.
- a poorly sealed joint between the fairing on doors 85 and 86, and the concrete wall. These doors provide an airlock with the Control Room envelope and RAB.
- several conduit covers were discovered to be missing or installed incorrectly.

Surveillance Test PE-5-004 was completed satisfactorily without temporary measures taken to seal the equipment room doors, on December 21, 1990.

(3) Reason For Violation

Entergy Operations, Inc. admits this violation and believes the root cause of this event is lack of sufficient documentation and details regarding the Control Room envelope boundary seals.

Several contributing causes have also been identified:

1. Contributing to this event was an inadequate Design Change. Existing documentation was not thoroughly researched in the development of DC-3197. The following documentation existed:
 - a. Ebasco Specification Project Identification number LOU 1564.249W, "Penetration Radiation Shields, Fire Stops and Air Seals for Electrical, Mechanical and HVAC Systems," is a document that identifies the boundaries of the Control Room envelope. However, this document does not specifically identify any seals as being a part of the Control Room envelope or mention that the Control Room envelope is associated with a TS.

- b. Project Evaluation/Information Request (PEIR) 70844 evaluated the maximum size opening into the Control Room envelope in square inches that could remain open while maintaining a positive pressure in the Control Room. The evaluation was completed on February 6, 1987, and concluded that a 2.34 square inch hole in the Control Room envelope would impact the ability to pressurize the Control Room envelope to 0.125" w.g. This calculation was based on the Control Room having an initial leakage of 177.44 cfm which is the same amount of leakage measured during start-up testing.
2. Timely corrective action was not taken by plant personnel upon initial discovery of the potential problem with the Control Room envelope.
3. Assignment of system specific review personnel by Design Engineering was inadequate. The HVAC system engineer was not included as part of the review process for DC-3197.
4. No procedures exist for maintaining track of work that may affect the integrity of the Control Room envelope.

(4) Corrective Steps That Have Been Taken And Results Achieved

The following immediate corrective actions were taken:

1. Seal VIA0070 was temporarily sealed under Non Conformance Identification (NCI) 272811 on December 12, 1990, and the system was observed to be capable of maintaining 0.125" w.g. positive pressure under normal operation without regard to the amount of makeup air being used.
2. All fire damper seal work affecting the Control Room envelope was stopped until air seal details are developed and installation methods determined.
3. On December 15, 1990, Seal VIA0070 was re-sealed with silicone foam in an air seal configuration.
4. Repairs to leakage paths in the Control Room envelope were made such that Surveillance Test PE-5-004 results were satisfactory with 0.125 w.g. differential pressure being achieved with less than 200 cfm makeup airflow on December 21, 1990.

In addition, the following corrective actions are now complete:

1. This event was reviewed with plant personnel during a recent safety meeting.

2. All existing Design Change Packages have been reviewed and revised as necessary to ensure that pressure boundaries are adequately addressed.

(5) Corrective Steps Which Will Be Taken To Avoid Further Violations

The following corrective actions are scheduled to address the root cause:

1. Revise the Nuclear Penetration List (NPL) such that all seals, which provide an air pressure seal with the Control Room envelope or CVAS, are properly identified.
2. Revise the NPL such that all seals, which are addressed by TS or are designed as an air pressure boundary, are properly identified.
3. Evaluate design, construction and maintenance procedures to ensure that any work done on seals, pressure boundaries, HVAC equipment, or any penetrations into the Control Room envelope addresses TS requirements.
4. Evaluate the feasibility of labeling seals with a number or sign to identify TS related seals.
5. A case study has been developed such that this event can be discussed on a recurring basis with supervisory and Design Engineering personnel.

The following corrective action to address the contributing causes is outstanding:

Revise DC-3197 to address the fire seals that affect the integrity of the Control Room envelope, Controlled Ventilation Area Section (CVAS) System, Fuel Handling Building (FHB) and Shielded Building boundaries.

(6) Date When Full Compliance Will Be Achieved

All corrective actions associated with this violation will be complete by March 1, 1992. (Note: This date is based on completing the revision of the NPL which is consistent with the information submitted to the NRC in LER-90-019 for Waterford 3 dated January 11, 1991.)