



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV

611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

OCT 21 1996

EA 96-139

Michael B. Sellman, Vice President
Operations - Waterford
Entergy Operations, Inc.
P.O. Box B
Killona, Louisiana 70066

SUBJECT: NRC INSPECTION REPORT 50-382/96-07

Thank you for your letter of June 27, 1996, in response to our letter and Notice of Violation dated May 28, 1996. We have reviewed your reply and find it responsive to the concerns raised in our Notice of Violation for Violations 328/9607-01, Examples 2 and 3, and 382/9607-02.

In response to Violation 382/9607-01, Example 1, you stated that you did not believe that a postmaintenance test was required given the nature of the work performed. We have reviewed your position and, after careful consideration, have determined that the failure to specify a postmaintenance test is a violation. The concern identified by this violation was not whether a new problem was introduced as a result of maintenance activities, but whether the maintenance performed to correct the deficiency (i.e., excessive control room envelope inleakage) was completed satisfactorily and demonstrated that the desired results (i.e., a decrease in the overall control room leakage) was obtained.

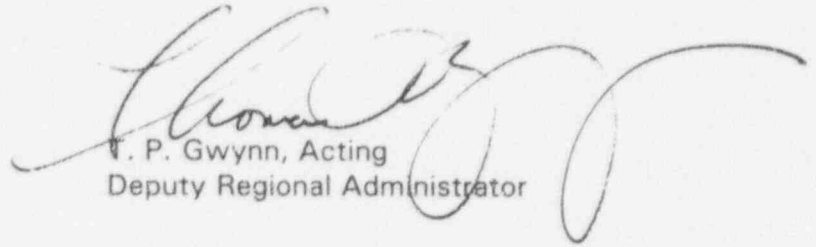
In response to Violation 382/9607-05, you stated that a violation did not exist in that there were not sufficient similarities between the root causes for the 1990 and 1996 events for the NRC to conclude that your staff had not implemented appropriate corrective actions following the 1990 event. For this reason, you stated that a violation of Criterion XVI did not exist.

After careful review of your response, we have concluded that a violation did exist, as documented in the subject inspection report. You noted in your response that the root causes for the events were so dissimilar that the corrective actions for the 1990 event could not have prevented the 1996 event. It should be noted that dissimilar causes for the two events does not preclude corrective actions from the first event from preventing a second event. In this specific case, one of the corrective actions you committed to implement was to provide training on a recurring basis to personnel in the Engineering and Operations organizations such that these personnel would maintain an awareness of the need to maintain the control room envelope in an acceptable condition. It is our position that the failure to provide the training on a recurring basis, following the 1990 event, was one of the causal factors in the 1996 event. Had training been provided as committed, Engineering and Operations personnel should have been prepared to challenge the proposal of making a control room door inoperable by removal of the door seal.

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Q PDR

We will review the implementation of your corrective actions during a future inspection to determine that full compliance has been achieved and will be maintained.

Sincerely,



T. P. Gwynn, Acting
Deputy Regional Administrator

Docket No.: 50-382
License No.: NPF-38

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-3-

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OCT 21 1996

bcc to DMB (IE01)

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EA 96-139

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*previously concurred

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OCT 21 1996

bcc to DMB (IE01)

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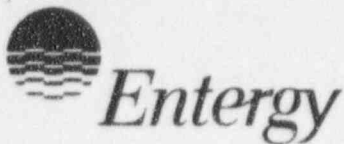
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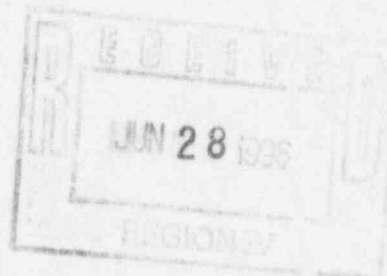
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*previously concurred



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James J. Fisicaro
Director
Nuclear Safety
Waterford 3



W3F1-96-0100
A4.05
PR

June 27, 1996

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 96-07
Reply to Notice of Violation

Gentlemen:

In accordance with 10CFR2.201, Entergy Operations, Inc. hereby submits in Attachment 1 the response to the violations identified in Enclosure 1 of the subject Inspection Report.

In addition to the attached response, Waterford 3 management acknowledges that improvements are necessary at Waterford 3 and is committed to making these changes. In a recent visit to the Region IV offices in Arlington, Waterford 3 management presented our FOCUS Plan to the Staff. This plan represents a four part management strategy to revitalize Waterford 3 performance.

In the Inspection Report cover letter, the Staff expressed concerns with the plant personnel's lack of a questioning attitude. Waterford 3's management shares this concern. By implementing the Timeless Principles, plans to achieve higher performance levels are anticipated. Establishing these principles as the culture by which we conduct our daily operation is critical to the implementation of the FOCUS Plan and achieving our desired goal of Best in Class performance.

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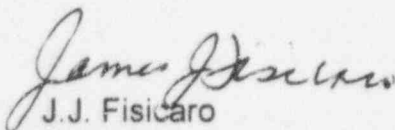
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Reply to Notice of Violation
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June 27, 1996

In addition to the above, it is important to note that other actions not tied directly to this violation are being pursued by Waterford 3 as part of our commitment to improve. These actions include:

- The control room envelope pressure test frequency has been increased to every 60 days on a staggered basis to provide additional assurances envelope integrity is maintained.
- A case study will be developed from the Root Cause Analysis Report for Condition Report CR-96-0374 to be reviewed with the appropriate plant personnel.
- A survey of plant personnel has been performed to obtain an "as found" condition regarding the safety culture at Waterford 3.
- Control room airlock door D85 has been reversed to seat against control room pressure, and thereby decrease leakage through the door.
- A plant modification to automatically trip the Reactor Auxiliary Building (RAB) Normal Ventilation, which operates at a negative pressure adjacent to the control room, during a toxic gas event is being evaluated.

If you have any questions concerning this response, please contact me at (504) 739-6242 or Tim Gaudet at (504) 739-6666.

Very truly yours,



J.J. Fisicaro
Director
Nuclear Safety

JJF/DMU/tjs
Attachment

cc:

L.J. Callan (NRC Region IV), C.P. Patel (NRC-NRR),
R.B. McGehee, N.S. Reynolds, NRC Resident Inspectors Office

ATTACHMENT 1

ENTERGY OPERATIONS, INC. RESPONSE TO THE VIOLATION IDENTIFIED IN
ENCLOSURE 1 OF INSPECTION REPORT 96-07

VIOLATION NO. 9607-01, Example 1

Technical Specification 6.8.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities referenced in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, "Quality Assurance Program Requirements," Sections 1 and 9, require that the licensee have administrative and maintenance procedures.

Procedure UNT-005-020, "Post Maintenance Testing," Section 5.1, stated that a satisfactory post maintenance test ensured the equipment or system is capable of performing its intended function and that the original deficiency is corrected.

Contrary to the above: A post maintenance test was not performed as required by Procedure UNT-005-020, to ensure that the control room air conditioning system was capable of performing its intended function after correction of a deficiency, in that, a post maintenance test was not performed subsequent to corrective maintenance completed on February 28, 1996, for Door Seal 73 to ensure that the original deficiency had been corrected. In addition, after corrective maintenance was completed, in January 1996, on the reactor building roof to reduce control room envelope leakage, no post maintenance test was performed.

This is the first example of a Severity Level IV violation (Supplement 1) (382/9607-01).

RESPONSE

(1) Reason for the Violation

Entergy believes that the cause for not performing a post maintenance test after reworking the airlock door seal can be attributed to a deficient maintenance procedure MM-006-106, Plant Door/Plant Door Equipment. This procedure required control room pressure checks be performed before and after maintenance of the door sealing mechanisms. The procedure stated that if the Control Room to Ambient differential pressure degraded (decreased) following maintenance, then the system engineer was to be notified for an evaluation. The required pressure checks were performed and

the results indicated the door seal replacement did not degrade the integrity of the control room envelope. This procedure, however, was deficient in that it did not require a post maintenance test to verify envelope operability.

Procedure, UNT-005-015, Work Authorization Preparation and Implementation, states in section 5.5.11 that post maintenance test instructions are to be included in the WA in accordance with UNT-005-020, as applicable. Procedure UNT-005-020, Post Maintenance Testing, states in section 5.1.1 that post maintenance testing should be determined based upon the extent of preventative and corrective maintenance performed. Section 5.1.2 of this procedure also states that post maintenance testing should be performed following all maintenance activities which may have impaired proper functioning of a component.

The sealing of the reactor auxiliary building roof in accordance with WA 01140128, involves a process that does not and can not adversely effect control room envelope integrity. A post maintenance test was not required because work performed never compromised the control room envelope integrity. The sealant applied to the roof is a liquid and is applied similar to paint. By nature of the process, sealing of the roof could not have increased the possibility of envelope leakage. A post maintenance test was therefore determined not to be required upon completion of the WA. Given the nature of the work performed and the guidance available in the afore mentioned procedures, Waterford 3 believes this was an acceptable determination.

(2) Corrective Steps That Have Been Taken and the Results Achieved

On 3/14/96 following the seal replacement on airlock door D73, a "B" train control room pressure verification test was performed in accordance with PE-005-004. The test results verified that the control room envelope was operable following airlock door seal maintenance. With a makeup flowrate of 190 scfm, the control room pressure was maintained at 0.130 in wg.

Additionally, System Engineering has provided the following recommendations to Operations and Maintenance for pressure boundary door maintenance until such time the appropriate procedures can be revised:

1. The Control Room envelope is tested with both airlock doors closed. If either air lock door is impaired for maintenance which affects the pressure retaining component of that door, enter the Technical Specification 3.7.6.5 and follow action statement d.2.a. The required retest is to perform PE-005-004 sections 8.4 and 8.5. Doors affected by this are D261, D262, D85, D86, D71, D73, D75. If there is a question on these recommendations, contact the System Engineer.

2. Prior to door maintenance on the CVAS airlock doors, perform a test to ensure that the pressure boundary can maintain the required pressure with only the single door closed. The alternative is to perform door maintenance in Mode 5 or 6. If there is a question on these recommendations, contact the System Engineer.
3. Prior to maintenance on the Fuel Handling Building Ventilation System doors, be aware that it will affect the pressure boundary and precautions should be taken to ensure that the pressure boundary remains intact or applicable LCOs are complied with. This includes cargo bay doors and stairway doors between +21 and +46 FHB. If there is a question on these recommendations, contact the System Engineer.

It should be noted that since these interim actions were initiated, one control room pressure boundary test following installation of a Temporary Alteration Request (TAR) and 3 pressure tests following door maintenance have been successfully performed. The results are as follows:

DATE	REASON FOR TEST	PRESSURE	MAKEUP AIRFLOW
4-2-96	Following installation of TAR on D85	0.125 in wg	164 scfm
5-11-96	Post Maintenance Test on D71 & D261	0.127 in wg	180 scfm
6-4-96	Post Maintenance Test on D71 & D262	0.125 in wg	164 scfm
6-24-96	Post Maintenance Test on D85	0.125 in wg	146 scfm

(3) Corrective Steps Which Will Be Taken to Avoid Further Violations

To prevent recurrence, Maintenance Procedure MM-006-106, Plant Door/Plant Door Equipment Maintenance, will be revised to ensure control room envelope integrity is verified following airlock door maintenance by performing a pressure test on the control room envelope.

Additionally, the Operations Department will develop a procedure(s) for pressure boundary testing of Technical Specification pressure boundaries; the Control Room Envelope, CVAS, and Fuel Handling Building (FHB) Ventilation system. This procedure(s) will eventually replace the pressure boundary testing currently performed in accordance with procedures, PE-005-004, PE-005-005 and PE-005-006, for the above areas. This procedure(s) will be utilized as a post-maintenance test following maintenance performed on the pressure boundary in these areas and for Operability determinations when required.

In conjunction with the above, as part of the Focus Plan, Waterford 3 plans to implement a procedure improvement initiative. The objectives of this initiative are in part to 1) upgrade the technical quality and usability of procedures to reduce human errors and enhance plant reliability by supporting the quality of work; and 2) enable improved procedure compliance.

(4) Date When Full Compliance Will Be Achieved

Waterford 3 is currently in full compliance based on the current interim measures. Procedure changes will be implemented to make the interim measures permanent. The procedure improvement initiative, which is part of the FOCUS Plan, is an ongoing process.

The revision to maintenance procedure MM-006-106 will be completed by July 15, 1996. The Operations procedure(s) will be completed by September 1, 1996. The existing Plant Engineering surveillance procedures for each area will continue to be used in the interim.

VIOLATION NO. 9607-01, Example 2

Technical Specification 6.8.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities referenced in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, "Quality Assurance Program Requirements," Sections 1 and 9, require that the licensee have administrative and maintenance procedures.

Procedure PE-005-004, "Control Room Air Conditioning System Surveillance," stated that control room envelope differential pressure be maintained between 0.125 to 0.13 inches water of gauge during the performance of the surveillance.

Contrary to the above: The pressure in the control room envelope was not maintained between 0.125 to 0.13 inches of water gauge during the performance of surveillance testing, as required by Procedure PE-005-004, in that, on October 25, 1992, March 10, 1993, and February 1, 1994, control room envelope pressure exceeded the maximum allowable pressure of 0.13 inches of water gauge during surveillance testing.

This is the second example of a Severity Level IV violation (Supplement 1) (382/9607-01).

RESPONSE

(1) Reason for the Violation

A procedure change implemented in July of 1991 to PE-005-004, Control Room Air Conditioning Surveillance, required that the control room envelope pressure be in the range of 0.125 to 0.130 in wg. A review of the test data after this procedure change was implemented indicates that the recorded pressures were not always within the specified range. It is believed that the cause for this was personnel error by the test supervisor. The control room pressure test was perceived as acceptable if the makeup airflow was less than 200 scfm and the pressure was greater than 0.125 in wg. No consideration was given to adjusting makeup airflow to obtain a pressure between 0.125 and 0.130 in wg as required by the test procedure.

(2) Corrective Steps That Have Been Taken and the Results Achieved

The values that were documented to be outside of the allowable band of 0.125 to 0.130 in wg were normalized to 0.125 in wg as allowed by Regulatory Guide 1.95 and found to be acceptable.

(3) Corrective Steps Which Will Be Taken to Avoid Further Violations

Personnel who would normally perform the control room envelope pressurization test have been counseled regarding procedural compliance.

Additionally, the Operations procedure that will be developed to address pressure boundary testing will include guidance on the collection of pressure data. If the recorded pressures do not fall within the required ranges, additional instructions will be provided for normalizing data as allowed by Reg Guide 1.95

(4) Date When Full Compliance Will Be Achieved

Waterford 3 is currently in full compliance for Example 2 of Violation No. 9607-01. The Operation's procedure will be issued by September 1, 1996.

VIOLATION NO. 9607-01, Example 3

Technical Specification 6.8.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities referenced in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, "Quality Assurance Program Requirements," Sections 1 and 9, require that the licensee have administrative and maintenance procedures.

Procedure MM-006-106, "Plant Door/Plant Door Equipment Maintenance," Section 7.5, stated the acceptance criteria for airtight doors as the transfer of a continuous and unbroken chalkline from the knife edge to the gasket.

Contrary to the above: The acceptance criteria for the airtight door was not met, as required by Procedure MM-006-106, in that, after replacement of Door Seal 73 on February 28, 1996, the transfer of a continuous and unbroken chalkline from the knife edge to the gasket had not been performed as part of the acceptance test for maintenance on control room envelope airtight doors.

This is the third example of a Severity Level IV violation (Supplement 1) (382/9607-01).

RESPONSE

(1) Reason for the Violation

The acceptance criteria listed for "airtight doors" in maintenance procedure MM-006-106, Plant Door/Plant Door Equipment, required that a "continuous and unbroken chalkline has transferred from knife edge to gasket." This criteria was erroneously listed for airtight doors when it did not apply. This activity is not required and can not be performed as an acceptance test for airtight doors. The reason this criteria was erroneously listed as an acceptance criteria for airtight doors is unknown, but it is believed to be the result of personnel error when separate construction and maintenance department door repairs procedures were being combined into one comprehensive procedure.

(2) Corrective Steps That Have Been Taken and the Results Achieved

The appropriate acceptance criteria for airtight doors has been established and will be added to maintenance procedure MM-006-106. In the interim, specific work instructions are being provided in the Work Authorization for all work performed on airtight doors.

(3) Corrective Steps Which Will Be Taken to Avoid Further Violations

Procedure MM-006-106, Plant Door/Plant Door Equipment Maintenance, will be revised to ensure that the correct acceptance criteria is listed for airtight doors.

In conjunction with the above, as part of the Focus Plan, Waterford 3 plans to implement a procedure improvement initiative. The objectives of this initiative are in part to 1) upgrade the technical quality and usability of procedures to reduce human errors and enhance plant reliability by supporting the quality of work; and 2) enable improved procedure compliance.

(4) Date When Full Compliance Will Be Achieved

Waterford 3 is currently in full compliance based on measures currently in place. The procedure improvement initiative, which is part of the FOCUS Plan, is an ongoing process. Additionally, the revision to maintenance procedure MM-006-106 will be completed by July 15, 1996.

VIOLATION NO. 9607-02

Criterion XI of Appendix B to 10 CFR Part 50 requires, in part, that a test program shall be established to assure that all testing required to demonstrate that systems and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.

Final Safety Analysis Report Section 2.2.3.3, "Design Basis Toxic Chemicals," specified that, for the purpose of toxic chemicals, the licensee satisfied the requirements for a Regulatory Guide 1.78, "Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release," Type B Control Room. For the purpose of chlorine sources, the licensee satisfied the requirements for a Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release," Type II Control Room.

Contrary to the above, as of March 14, 1996, a test program had not been established to assure that testing required to demonstrate that the control room envelope would perform satisfactorily in service, in that, the test program implemented by the licensee did not verify the rate of air infiltration through each control room envelope door during the 18 month surveillance test or prior to the initiation of maintenance was less than the acceptance limits contained in applicable design documents.

This is a Severity Level IV violation (Supplement I) (382/9607-02).

RESPONSE

(1) Reason for the Violation

Entergy believes the cause for this violation can be attributed to a deficient procedure. This procedure deficiency resulted from not periodically verifying the engineering information used to establish the procedure guidelines.

When an airlock door seal was replaced on one door, using procedure MM-006-106, Plant Door/Plant Door Equipment, adequate provisions were not in place to assure that the remaining door of the airlock could maintain the control room envelope Technical Specification requirements of 0.125 in. wg. pressure with a makeup air flowrate of less than or equal to 200 scfm.

On 2-28-96, Maintenance personnel replaced the door seal on control room airlock door D073 in accordance with instructions of Work Authorization (WA) 01142287 and MM-006-106, Plant Door/Plant Door Equipment.

This maintenance procedure was written incorporating guidance from an engineering evaluation performed subsequent to the 1990 Control Room Envelope event (NRC Inspection Report 90-26). The procedure was revised based on: (1) inter-office memo W3B2-91-0937 dated July 22, 1991 which stated, "...Provided no seal degradation exists, one of two doors of an airlock is capable of maintaining envelope integrity, as demonstrated in the leak tightness testing of May 9, 1991. Therefore, when maintenance work warrants the impairment of one airlock door, access through the 2nd airlock door should be allowed provided a visual inspection of the seal of the second airlock door shows the seal to be in satisfactory condition." and (2) inter-office memo W3B1-91-0272 dated November 19, 1991 which stated that work controls were in place for the system engineer to be included in the opening review cycle of all WA's which could alter control room normal air makeup flow. This includes work on doors D71, D73, D75, D85, D86, D260 and D261. "Engineering evaluation will then determine the degree of preventative measures required and ensure the integrity of adjoining door seals". This guidance permitted maintenance on one door in an airlock provided that the other door was visually inspected.

It was subsequently learned, however, that the engineering guidance provided as input to the maintenance procedure was deficient. Recent testing has shown that, in its present condition, the remaining intact door in the airlock is not capable of maintaining the appropriate control room pressure at the required makeup airflow. This was determined by a control room envelope pressure test performed with the seal removed from door D73.

It should be noted that the Work Authorization which replaced the door seal, was reviewed by the system engineer to determine if compensatory measures during maintenance were required. Because the seal on the remaining airlock door was determined to be in satisfactory condition, no additional measures were identified. The controls established by the maintenance procedure were strictly followed and adhered to. The requirements established by the procedure and Work Authorization for the activities in progress were well understood by the Shift Supervisor on duty.

It should also be noted that PE-005-004, Control Room Air Conditioning Surveillance, would not have revealed the inability of a single airlock door to maintain the control room envelope pressure since the airlock doors are tested as a unit. Each airlock is considered to include both doors and thus the control room envelope test is performed with both doors in the closed position. The control room envelope surveillance verifies envelope integrity by ensuring a positive pressure of greater than or equal to 0.125 in. wg. relative to outside atmosphere can be maintained with a makeup air flowrate less than or equal to 200 scfm during system operation.

Entergy believes that routine testing of single airlock doors is not currently necessary or desirable. The basis for past guidance on control of maintenance activities for control room envelope airlock doors relied on a test performed on a single airlock door. If periodically validated, Waterford believes that this guidance would have been satisfactory to ensure control room envelope integrity. It was, however, subsequently determined that this guidance was deficient in that no follow-up testing occurred to validate the assumption that a single airlock door could maintain envelope integrity. The assumption that one door in a control room envelope airlock is adequate to maintain envelope integrity is no longer considered valid. No periodic single door leak testing will be pursued to validate this assumption.

(2) Corrective Steps That Have Been Taken and the Results Achieved

Amendment 115 for the Technical Specifications has been implemented. This Amendment allows breaches in the control room envelope for the purposes of pressure boundary maintenance. Breaches in the pressurization boundary may be allowed for a period not to exceed 7 days under administrative control, provided that they are of known origin.

Additionally, interim guidance was provided by System Engineering to Operations and Maintenance for pressure boundary door maintenance. This interim guidance was previously addressed in the response to Violation 96-01, Example 1.

On 3/14/96, a 'B' train control room envelope pressure verification test was performed. The test was performed in the "as found" state. The test results verified that the control room envelope was operable. The control room pressure was maintained at 0.13 in wg with a makeup flowrate of 190 scfm.

During this test, airlock door D073 was opened to determine its effect on the test results. It was concluded that with this door open, control room pressure could not be maintained greater than or equal to 0.125 in wg. Based on this, it was determined that the control room envelope should have been declared inoperable during the door seal replacement. Condition Report CR 96-0374 was written to document this event and track subsequent corrective actions. A Root Cause Analysis was also performed for this event.

(3) Corrective Steps Which Will Be Taken to Avoid Further Violations

To prevent recurrence, Maintenance Procedure MM-006-106, Plant Door/Plant Door Equipment Maintenance, will be revised to ensure that the correct Technical Specification LCOs are entered prior to maintenance on airlock doors, and to ensure control room envelope integrity is maintained

following the completion of airlock door maintenance by performance of the appropriate retest.

Additionally, the Operations Department will develop a procedure(s) for pressure boundary testing of Technical Specification pressure boundaries; the Control Room Envelope, CVAS, and Fuel Handling Building (FHB) Ventilation system. This procedure(s) will eventually replace the pressure boundary testing currently performed in accordance with procedures, PE-005-004, PE-005-005 and PE-005-006, for the above areas. This procedure(s) will be utilized as a post-maintenance test following maintenance performed on the pressure boundary in these areas and for Operability determinations when required.

(4) Date When Full Compliance Will Be Achieved

Waterford 3 is currently in full compliance based on the interim measures. Procedure changes will be implemented to make the interim measures permanent.

The revision to maintenance procedure MM-006-106 will be completed by July 15, 1996. The Operations procedure(s) will be completed and issued by September 1, 1996. The existing Plant Engineering surveillance procedures for each area will continue to be used in the interim.

VIOLATION NO. 9607-05

Criterion XVI of Appendix B to 10 CFR Part 50 requires, in part, that measures be established to assure conditions adverse to quality, such as failures, malfunctions, and deficiencies, be promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure corrective actions preclude repetition.

Contrary to the above, corrective actions taken for a significant condition adverse to quality did not preclude repetition, in that, the corrective actions for the December 1990 control room envelope breach did not prevent the recurrence of the control room envelope breach on February 28, 1996.

This is a Severity Level IV violation (Supplier Sent I) (382/9607-05).

RESPONSE

(1) Reason for the Violation

Entergy believes the cause of the control room envelope being inoperable on February 28, 1996 differed from that of the December 1990 event. Entergy does not believe this event was the result of ineffective corrective actions resulting from the 1990 event.

As stated in the Root Cause Analysis Report for this event, the identified cause was the assumption that a single airlock door would meet the TS requirements for envelope integrity. This assumption was based on individual door test data and subsequent visual inspections as well as control room pressure readings before and after the maintenance. This assumption was not verified by subsequent testing and was found not to always be accurate. A contributing factor was the lack of a questioning attitude in the development of the criteria for performing maintenance on pressure boundary doors.

The event that occurred in 1990 was an inadvertent breach of the CR envelope by construction personnel at a penetration seal. This condition went undetected for some period of time. It was identified that this event was caused by a lack of sufficient documentation and guidance concerning the design change work activities being performed on control room envelope boundary penetration seals.

The most recent event, although similar in that it involved the control room envelope, involved a planned maintenance activity to repair a door seal that had been identified as being degraded. This activity had been identified as involving the control room envelope airlock doors which were known to be

part of the control room pressure boundary. The work activity was planned and controlled via approved procedures. Controls had been established and were strictly followed during the maintenance activity. The integrity of the envelope was assumed to have been maintained because of the proceduralized guidance provided in the door maintenance procedure, MM-006-106. The work activities were conducted as the procedures and programs dictated. The cause of the control room envelope being inoperable was deficient guidance incorporated into maintenance procedures which facilitated inappropriate actions.

Waterford 3 believes that the requirements associated with the control room envelope integrity were well understood by the individuals involved in the door maintenance activities of 2/28/96. The requirements established by the maintenance procedure and Work Authorization for the maintenance activities in progress were well understood by the Shift Supervisor on duty. The Shift Supervisor was also aware of the Technical Specification requirements for control room pressure and makeup flow.

When the maintenance activity was questioned, the Shift Supervisor believed that the control room envelope remained operable based on his knowledge of the system and the guidance that had been previously provided stating one airlock door was adequate to maintain control room envelope integrity. It was subsequently learned, however, that the engineering guidance provided as input to the maintenance procedure was deficient, in that, the remaining intact door in the airlock was, at that time, proven to be incapable of maintaining the appropriate control room pressure and makeup airflow requirements. This was determined by a test performed on door D73 performed in conjunction with the control room envelope pressure test following maintenance on this door. It should be pointed out that as soon as the envelope's condition was recognized our concerns were elevated and Waterford 3 responded urgently.

Following the 1990 event, additional guidance was developed and provided to the effected groups when performing maintenance on the control room envelope. As was determined during testing following the most recent event, the information used to develop the control room envelope corrective maintenance strategy may have been incorrect. (This is discussed further in the response to Violation 9607-02, Reason for the Violation.) A single door within an airlock may not always be adequate to maintain the control room envelope integrity. Waterford 3 believes that the use of this information and the lack of a self critical and questioning attitude were the cause of the recent event.

(2) Corrective Steps That Have Been Taken and the Results Achieved

Technical Specification Amendment 115 has been implemented. This amendment incorporates an LCO that allows for maintenance on the control room envelope with an allowed outage time of 7 days provided the specified compensatory measures are taken. Maintenance on the control room envelope pressure boundaries or the pressure retaining components of the airlock doors requires entry into the Action Statement for Technical Specification 3.7.6.5.

On 3/14/96 following the seal replacement on airlock door D73, a "B" train control room pressure verification test was performed in accordance with PE-005-004. The test results verified that the control room envelope following airlock door seal maintenance was operable. With a makeup flowrate of 190 scfm, the control room pressure was maintained at 0.130 in wg.

Additionally, System Engineering has provided the following recommendations to Operations and Maintenance for pressure boundary door maintenance until such time the appropriate procedures can be revised:

1. The Control Room envelope is tested with both airlock doors closed. If either air lock door is impaired for maintenance which affects the pressure retaining component of that door, enter the Technical Specification 3.7.6.5 and follow action statement d.2.a. The required retest is to perform PE-005-004 sections 8.4 and 8.5. Doors affected by this are D261, D262, D85, D86, D71, D73, D75. If there is a question on these recommendations, contact the System Engineer.
2. Prior to door maintenance on the CVAS airlock doors, perform a test to ensure that the pressure boundary can maintain the required pressure with only the single door closed. The alternative is to perform door maintenance in Mode 5 or 6. If there is a question on these recommendations, contact the System Engineer.
3. Prior to maintenance on the Fuel Handling Building Ventilation System doors, be aware that it will affect the pressure boundary and precautions should be taken to ensure that the pressure boundary remains intact or applicable LCOs are complied with. This includes cargo bay doors and stairway doors between +21 and +46 FHB. If there is a question on these recommendations, contact the System Engineer.

The revision to MM-006-106 is addressed in the response to Violation 9607-02.

A management/supervisor meeting was held on March 6, 1996 to discuss and emphasize the expectation of having a self-critical and questioning attitude along with developing a "defense-in-depth" barrier mentality. All hand meetings have followed and departmental meetings are ongoing to further emphasize this expectation.

(3) Corrective Steps Which Will Be Taken to Avoid Further Violations

Waterford is implementing significant changes to address organizational performance and culture problems. The issues surrounding a previous significant event involving the Auxiliary Component Cooling Water system (ACCW) are being used as a significant cultural event and opportunity to set new and higher standards. Waterford believes that the changes implemented as a result of the ACCW event will improve performance and correct the similar safety culture and questioning attitude issues identified surrounding the Control Room envelope event.

Waterford 3 is currently undergoing an evaluation of the Corrective Action Program. This evaluation will include a focus on addressing identified weak areas which would include Self-Critical/Questioning Attitudes, Safety Culture, and Self Assessment effectiveness.

An effort is now underway to promote management's expectations regarding Self-Critical/Questioning Attitudes and to foster an ever-improving safety culture through the use of the Waterford 3 FOCUS Plan. The components of this program were recently presented to representatives of Region IV in Arlington.

Waterford 3 will continue to place emphasis on the culture of a questioning attitude, looking for degrading trends and the use of the CR process to identify and correct problems and degrading trends.

(4) Date When Full Compliance Will Be Achieved

Waterford 3 is currently in full Compliance with the exception of the FOCUS Plan which is an ongoing process.