JUL 12 1991

Docket No. 50-382/91-13
License No. NPF-38

Entergy Operations, Inc.
ATTN: Ross P. Barkhurst, Vice President
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P.O. Box B
Killona, Louisiana 70066

Gentlemen:

Thank you for your letter of July 8, 1991, in response to our letter and Notice of Violation dated June 6, 1991. We have reviewed your reply and find it responsive to the concerns raised in our Notice of Violation. 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,

Original Signed By:
Thomas P. Gwynn

Samuel J. Collins, Director
Division of Reactor Projects

cc:
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bcc to DMB (IE01)

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QA

July 8, 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 91-13
Reply to Notice of Violation

Gentlemen:

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

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

Very truly yours,

R.F. Burski

RFB/TWG/ssf
Attachment
cc: R.D. Martin, NRC Region IV
D.L. Wigginton, NRC-NRR
E.L. Blake
R.B. McGehee
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NRC Resident Inspectors Office

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ATTACHMENT 1

ENTERGY OPERATIONS, INC. RESPONSE TO THE VIOLATION IDENTIFIED IN APPENDIX A OF INSPECTION REPORT 91-13

VIOLATION NO. 9113-01

Failure to Comply with Written Procedures

Technical Specification 6.8.1 requires, in part, that written procedures shall be implemented and maintained covering refueling operations and the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978 and those required for implementing the requirements of NUREG-0737. The following are examples observed by the inspector of failure to properly implement those procedures.

1. Refueling Procedure RF-006-001, Revision 3, "Reactor Vessel Head and Internals Installation," Section 5.1.4 requires the refueling cavity to be drained to 33 feet for upper guide structure (UGS) installation.

   Contrary to the above, on April 22, 1991, the refueling cavity level; was established at 38 feet when the UGS was installed. The 38 foot level was an improvement, but the procedure was not changed to implement plans to raise the level even higher to reduce exposure to refueling personnel and to secure containment purge to preclude an automatic isolation due to high radiation shine.

2. Operations Procedure OP-100-001, Revision 6, "Duties and Responsibilities of Operators on Duty," Section 5.7.1 states, "Conditions that result in actuation of the annunciator system are investigated and corrective action taken to clear the alarm." A preceding note states, "Verify all alarms immediately. Do not allow any alarms to remain uninvestigated."

   Contrary to the above, at 8:41 a.m. on May 1, 1991, a safety parameter display system (SPDS) trouble alarm was received on the control room plant monitoring computer display and no action was taken by the operators until 1:22 a.m. on May 2, when the condition was recognized. As a result, emergency off-site dose assessment capability was unnecessarily impaired for over 16 hours.

3. Administrative Procedure UNT-005-010, Revision 2, "Independent Verification Program," Section 5.2 "CAUTION" requires, in part, that work may not proceed beyond an independent verification point until the independent verification is accomplished. Section 5.5.5 requires independent verification documentation to include the signature or initials of the person who performed the activity and of the independent verifier.

Contrary to the above, on April 4, 1991, a contract employee performing motor operated valve testing (MOVATS) proceeded past step 8.3.3.5 of Maintenance Procedure ME-007-027, Revision 4, "Using MOVATS 2150/2151 System for Testing of MOV," which had an independent verification point, without obtaining the independent verification. In addition, the person who had performed the activities had not signed the documentation. The contract employee (who was the test director) signed the document.

4. Operations Procedure OP-009-002, Revision 10, "Operating Procedure Emergency Diesel Generator," Section 5.0 requires the emergency diesel generators (EDGs) to be aligned in accordance with standby valve lineups, Attachments 11.1 and 11.2. Attachment 11.1 requires that the injector header isolation drain valves be open for a diesel start.

   Contrary to the above, on April 4, 1991, EDG A was started with the EDG Injector Drain Header Isolation Valves EGF-123A and EGF-124A closed. As a result, the drain header overflowed fuel oil onto the skid and the EDG start had to be terminated.

The above examples constitute a Severity Level IV violation.

RESPONSE

(1) Reason for the Violation

Entergy Operations, Inc. admits this violation. For clarity, each of the cited examples of failure to follow procedure will be treated separately.

(i) The root cause of the failure to establish the required refueling cavity water level prior to moving the reactor vessel upper guide structure was inappropriate action by the refueling controller in that, recognizing the need for a change to Refueling Procedure RF-006-001, "Reactor Vessel Head and Internals Installation," the change was not processed in accordance with the guidance contained in Administrative Procedure UNT-001-003, "Procedure Initiation, Review and Approval; Change and Revision; and Deletion." Compounding the problem was a lack of adequate procedure guidance in that RF-006-001 did not allow enough flexibility in the control of the refueling cavity water level when raising or lowering the upper guide structure.

A contributing cause of the problems experienced with the installation of the Upper Guide Structure was that RF-006-001 did not refer to water level again after it was initially established at 33 feet. This is misleading at best because after the required level is established, independent attachments are used to complete the evolution. The procedure was further inadequate in that it did not address securing the containment purge system as it had been during other high radiation exposure lifts inside containment. This resulted in an unnecessary challenge to safety systems.

(ii) The root cause of the failure to promptly investigate and take action for the safety parameter display system (SPDS) trouble alarm received on the plant monitoring computer (PMC) display was inadequate alarm functions for indicating SPDS trouble in the control room. A contributing cause was inadequate attention to detail by the operating shift personnel.

Investigation of this event revealed that the SPDS trouble alarm does not actuate any control room annunciator but rather is indicated by the display of a PMC critical alarm computer point. This can be misleading in certain circumstances, especially when the PMC is displaying a large number of alarms as it typically would be with the plant shutdown in a refueling outage. In this condition, the PMC is limited in that it is capable of displaying only a small percentage of the existent alarms at any one time. In short, once the initial PMC alarm has been acknowledged, only a careful review of all of the locked in PMC alarms will indicate whether a particular condition continues to exist. Separate from this review, there is no mechanism by which operators are reminded that the SPDS inputs have been lost.

(iii) The root cause of the failure to obtain the required independent verification before proceeding with the procedure is that a conflict exists between Administrative Procedure UNT-005-010, "Independent Verification Program," and Site Directive W2.101, "Procedure Compliance."

UNT-005-010, Section 5.2, "Verification Guidelines," indicates in a "Caution" statement that "Work may not proceed past an independent verification point until the independent verifier confirms, substantiates, or assures that an activity or condition has been implemented in conformance with the specified requirements or the work instructions or the procedure clearly allows independent verification after the activity is completed."

UNT-005-010, in Section 5.5.5, further requires that "Documentation of independent verification shall include the signature or initials of the person who performed the activity and the independent verifier."

These requirements are not entirely consistent with the upper-tier guidance of Site Directive W2.101. The guidance provided in step 5.2.7 of the site directive states, in part, that "When procedures indicate continuous use, but it is impractical for a single individual to do so, it is acceptable to have one individual read the procedure and indicate completion while another individual performs the task."

The evolution in question involved work on the Boric Acid Makeup Tank A gravity feed valve, BAM-113A. This valve is located in a contaminated room requiring the use of full protective clothing. Two contractors inside the room actually performed the work on the valve while a third technician remained outside the room to manipulate the MOVATS equipment and control the procedure. The removal of the temporary insulator was

performed by one technician and independently verified by the other. Completion of these steps- including the independent verification- was communicated to the technician outside the room who was controlling the procedure.

While completion of the independent verification was not in accordance with the requirements of UNT-005-010, it did satisfy the guidance of Site Directive W2.101. In this case, ALARA considerations justified invoking the special exception described in the site directive.

(iv) The root cause of the failure to maintain the A Emergency Diesel Generator (EDG) in accordance with the standby valve lineups of Operations Procedure OP-009-002, "Operating Procedure Emergency Diesel Generator," is inappropriate action by personnel because the valves were shut without any instructions to close them. The EDG A injector header drain isolation valves, EGF-123A and EGF-124A, were found closed after an EDG A run was secured because of fuel oil overflowing from the injector return header vents. The two valves are required to be open by OP-009-002, Attachment 11.1.

The valves were most likely shut to support EDG repairs performed on April 4th. However, a subsequent investigation could not positively identify the cause of the misalignment.

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

Immediate corrective action was necessary for the fourth example cited in the violation. Because the exact circumstances surrounding the misalignment of the return header drain valves could not be identified, it was determined that additional administrative controls are needed for the valves. To that end, Change 1 to Revision 11 to OP-009-002 was approved by the General Manager- Plant Operations on April 20, 1991. This change requires that the EDG Injector Drain Header Isolation Valves- EGF-123A(B) and EGF-124A(B)- be locked open on the associated standby system valve lineups.

Immediate corrective action was not necessary to address the violation of UNT-005-010 because the steps taken to independently verify the removal of the temporary insulator were in accordance with the higher tier guidance of Site Directive W2.101, "Procedure Compliance."

No immediate corrective action was necessary to address the other examples cited in the violation.

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

For the first example cited in the violation- failure to establish the required refueling cavity water level- several procedure changes are planned.

First, Refueling Procedure RF-006-001, "Reactor Vessel Head and Internals Installation," and RF-004-001, "Reactor Vessel Head and Internals Removal," will be changed to add a "CAUTION" statement to ensure that refueling cavity water level is as high as practical, but less than or equal to 44 feet, before lifting the upper guide structure. Both procedures will also be changed such that securing Containment Purge will be required before the UGS is raised.

Secondly, based on a review of other refueling evolutions which could result in a Containment Purge Isolation Signal, Refueling Procedure RF-004-002, "Incore Instrumentation Removal and Disposal," will be changed so that the procedure requires that Containment Purge be isolated prior to removing and disposing of incore instruments.

For the second example cited, a review of the function of the "PMC failure alarm" will be conducted. The annunciator associated with this alarm should alert operators to a problem with SPDS. Depending on the results of this review, the alarm will be either repaired or reconfigured such that, in the future, operators will be alerted to an SPDS failure.

To address this issue until such time as the annunciator function is properly implemented, a letter will be sent to all licensed operators emphasizing the need to periodically ensure that the SPDS display is updating. This letter will also inform operators of the PMC critical alarm computer point that will be displayed upon loss of SPDS inputs.

Thirdly, to address the independent verification concern, Administrative Procedure UNT-005-010, "Independent Verification Program," will be changed to reflect the guidance of the upper-tier Site Directive W2.101, "Procedure Compliance."

Finally, it is important to note that, while the corrective actions described above are intended to address the specific examples cited in this violation, programs have been initiated at Waterford 3 which should ensure long-term improvement in the human performance area in general and the procedure compliance area in particular. These programs were described in detail in the Entergy Operations, Inc. response to NRC Inspection Report 90-24 (Waterford 3 letter W3P90-1917 of December 31, 1990).

(4) Date When Full Compliance Will Be Achieved

Final action to address the PMC failure alarm in the control room is dependent on a functional review. In any event, required action will be complete by June 1, 1992. The letter to licensed operators will be complete by July 31, 1991. The procedure changes described above will be complete by September 30, 1991.