



**Entergy
Operations**

Entergy Operations, Inc.
317 Barclay St
New Orleans, LA 70112
Tel 504-586-2805
Tel 504-739-6774

Raymond F. Burski
Manager
Policy & Regulatory Affairs

W3P90-1917
A4.05
QA

December 31, 1990

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 90-24
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,

Raymond F. Burski
RFB/TWG/ssf

Attachment

cc: Messrs. R.D. Martin, NRC Region IV
D.L. Wigginton, NRC-NRR
E.L. Blake
R.B. McGehee

NRC Resident Inspectors Office

9101070112 901231
PDR ADOCK 05000382
G PDR

IE01
111

ATTACHMENT 1

ENTERGY OPERATIONS, INC. RESPONSE TO THE VIOLATION IDENTIFIED IN
APPENDIX A OF INSPECTION REPORT 90-24

VIOLATION NO. 9024-01

Failure to Comply with Written Procedures

Technical Specification 6.8.1 requires, in part, that written procedures shall be implemented covering applicable activities specified in Regulatory Guide 1.33, Revision 2, February 1978, including administrative controls, maintenance, and surveillance testing of safety related equipment. The following are examples observed by the inspector of failure to properly implement those procedures:

1. Maintenance Electrical Testing Procedure ME-007-002, Revision 7, "Molded Case Circuit Breakers," Step 8.4.4.5 NOTE requires, in part, "after the current source has been adjusted, allow 5 minutes cooldown time for other than hydraulic mechanical breakers."

Contrary to the above, on October 29, 1990, while testing the 480 volt molded case circuit breaker for the B EDG jacket water heater, the technician commenced timing of the thermal element delay just a few seconds after adjusting the current through the phase C thermal element.

2. Procedure ME-007-002, Revision 7, step 8.10.5, requires a motor control center cubicle door interlock mechanism test on the above molded case circuit breaker after cleaning, inspecting, testing, and remounting and prior to rack-in.

Contrary to the above, on October 29, 1990, after remounting the above molded case circuit breaker, and before rack-in, the door interlock mechanism test was not done.

3. Surveillance Procedure OP-903-111, Revision 1, "Containment Air Lock Door Seal Leakage Test," Step 2 of Section 7.1, states "Attach instrument air or regulated nitrogen source to the leak rate monitor at the 'Input' test connection."

Contrary to the above, on October 13, 1990, while performing surveillance procedure OP-903-111 on the containment air lock inner door, the individual performing the test connected the leak rate monitor to the station air system instead of the instrument air system.

4. Administrative Procedure UNT-005-004, Revision 7, "Temporary Alteration Control," paragraph 5.1.4, states that "When a procedure, special test, or work instruction which controlled a Temporary Alteration is complete and a Temporary Alteration must remain installed, the Temporary Alteration shall be approved through normal means."

Contrary to the above, on October 26, 1990, a temporary level hose was connected to the spent resin storage tank which was not installed in accordance with the requirements of UNT-005-004 or an approved work instruction.

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 wait the required period of time before checking the thermal element delay characteristic was personnel error with a contributing cause being inadequate procedural guidance. The procedure in question, ME-07-002, "Molded Case Circuit Breakers," Revision 7, Step 8.4, discusses the thermal element time delay test; while the intent of the procedure step may be satisfied by other methods, the procedure allows for only one acceptable means of performing the test.

Personnel error is the root cause because the technician performing the maintenance simply did not follow the procedure. He used a technique that, while technically adequate, is not allowed by the procedure. Inadequate procedural guidance is a contributing cause because the procedure writer used NOTE statements that contained procedure requirements rather than just guidance.

The technique used by the maintenance technician represents an application of "toolbox knowledge." They set up the equipment differently than described in the procedure which made the NOTE irrelevant. This degree of latitude is not allowed in the procedure; they should have performed the test as described or changed the procedure.

MD-001-028, "Writer's Guide for Maintenance Procedures," Revision 2, Section 5.3.6, discusses the proper use of "Warnings," "Cautions," and "Notes." In part, it states that "Warning, Caution, and Note statements should not be written as procedure steps to be performed by the technician, rather as additional important information for the technician to be aware of." The use of the NOTE statement in this procedure is improper because it does not provide guidance but rather states a requirement that must be satisfied if the thermal element delay characteristic is to be accurately measured.

(ii) The failure to test the Motor Control Center (MCC) Cubicle door interlock mechanism before engaging the MCC cubicle to the energized bus was solely the result personnel error in that the technicians performing the test did not comply with the maintenance procedure as required.

The door interlock mechanism prevents opening the cubicle door while the associated breaker is closed; it is intended to minimize the chances of accidental contact with the energized internals of the cubicle. The technicians performing the maintenance incorrectly assumed that their various manipulations of the breaker during the conduct of the testing were sufficient to verify the proper operation of the interlock mechanism. That is only partially correct. The final check of the mechanism is a discreet step at the end of the procedure; in addition to checking the mechanism, it provides a final measure of confidence that the breaker has been properly returned to normal. The end result is that neither the administrative nor the technical objectives of the procedural step were satisfied.

(iii) The root cause of the failure to initially select the proper air supply for the performance of the air lock door seal test as required by Surveillance Procedure OP-903-111, "Containment Air Lock Door Seal Leakage Test" was personnel error in that the individual performing the test employed inadequate work practices for the evolution in question. This is evidenced by the fact that he did not adequately identify the required component before connecting the leak rate monitor and did not check the progress of the evolution in enough detail to recognize the error.

(iv) The root cause for the improperly installed temporary level indication on the spent resin storage tank was personnel error in that Administrative Procedure OP-100-010, "Equipment Out of Service," was not followed. When it was determined that the level transmitter (RWMILT0644) was not functioning properly, it should have been declared inoperable and an "equipment out of service checklist" should have been initiated. Then, with an approved work authorization to address the problem, section 5.1.3.2 of UNT-005-004 allows the use of a temporary alteration without processing a temporary alteration request. So, given that a work authorization (WA 01030073) exists to correct the problems with the spent resin storage tank level indication, proper use of the equipment out of service procedure would have prevented this problem from occurring.

At this point, it is not possible to determine why the equipment was not properly declared inoperable and an equipment out of service checklist initiated. However, indications are that the personnel involved properly evaluated the spent resin storage tank as non-safety related but did not recognize that, being quality related, the requirements of OP-100-010 applied.

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

For clarity, each of the cited examples of failure to follow procedure will be discussed individually.

(i) Since the technical objectives of the procedure were satisfied in all respects, no immediate corrective action was necessary. A revision to MD-007-002 is currently being prepared to eliminate the ambiguity in this procedure step such that the desired technique is clearly spelled out. In the future, the test current will be set independent of the breaker by shorting the leads of the current source. This will eliminate the need for a cooldown period before the trip characteristic of the thermal element can be accurately measured and allow the removal of the improperly used NOTE from the procedure. The technicians will also be counseled as to proper use of procedures.

(ii) When the technicians performing the maintenance on the MCC cubicle recognized the fact that they had failed to test the door interlock mechanism as required by ME-007-002, "Molded Case Circuit Breakers," they stopped work and brought the matter to the attention of their immediate supervisor. Since the work authorization package was still open and the breaker had not been released to Operations for unrestricted use, the cubicle was disengaged from the bus and the door interlock mechanism was satisfactorily tested in accordance with step 8.10.5 of ME-007-002. The technical aspects of the maintenance procedure having been satisfied, no further immediate corrective action was necessary. The technicians involved will be counseled as to the proper use of procedures.

(iii) When the Shift Test Engineer recognized that he had inadvertently connected the leak rate monitor to the Station Air system instead of the Instrument Air system as required by OP-903-111, he immediately relocated the air supply to the Instrument Air system. Since the error was identified before any subsequent steps were attempted and the test was satisfactorily completed using the specified air source, no further immediate corrective action was required. The individual was subsequently counseled on the importance of compliance with procedures.

(iv) When the on-shift Shift Supervisor was made aware of this problem on October 26, 1990, an equipment out of service checklist was initiated. He also directed that a Quality Notice (QA-90-236) be written to formally document and track corrective action. Finally, a Condition Identification was generated to have the temporary level indication removed from the spent resin storage tank.

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

Entergy Operations Inc. has previously undertaken a vigorous and aggressive effort to confront the problem of improving human performance in general and procedural compliance in particular. The Operation Zero Deviation Program and the Human Performance Trending Program are but two examples of the company's efforts to address this difficult issue.

These programs clearly reflect heightened management concern and increased emphasis on the issue of procedural compliance. Furthermore, several of the most recent NRC monthly resident inspection reports have commented favorably on the results of this effort. They attest to the presence of an overall continued improvement with regard to the quality of operations and maintenance procedures and efforts on the part of personnel to comply with them (Re: Inspection Reports 50-382/90-24, 90-19, and 90-15).

This trend of overall improvement is supported by Waterford 3's Human Performance Trending program. A graphical representation of procedural compliance issues versus time from January 1989 until the present reveals a noticeable downtrend in the number of internal and externally identified compliance issues.

Overall then, Waterford 3 continues to make strides towards improvement in the human factors performance and procedure compliance areas. This tends to validate the effectiveness of the management programs already in place. However, management is concerned about these most recent examples of procedure compliance issues.

In addition to the programs already in place, Entergy Operations, Inc. has been working towards the implementation of several new management initiatives; these can generally be grouped under the term "Improving Human Performance (IHP) Reinforcement," a subset of which is a plan to refocus efforts in the procedure compliance area.

Although the IHP Reinforcement initiative is still in the developmental phase, its purpose is clear: to enhance the existing improving human performance program and to comply with the INPO reporting methodology for the Human Performance Enhancement System (HPES) by building on the foundation of Waterford 3's existing IHP program. Briefly, the program consists of the following aspects:

- Further employee training
- HPES evaluations and reports to INPO
- Implementation of a "self-checking" philosophy to enhance performance and professionalism of all aspects of plant operations
- Increased interaction with INPO to include followup HPES assist visits
- Completion of the Operations and Maintenance procedure upgrade program
- Implementation of the enhanced procedure compliance initiative

- An effectiveness review to evaluate the program's progress

The Enhanced Procedure Compliance Initiative has several overall goals: it is intended to restate the Entergy Operations philosophy with regard to procedural compliance, improve management visibility in this area, and re-emphasize management's commitment to the overall philosophy of procedure compliance as the foundation for the safe and efficient operation of the plant.

One key aspect of the initiative is the forthcoming Entergy Operations Management Manual Station Directive entitled "Procedure Compliance," the cornerstone of which is the Waterford 3 Procedure Compliance Policy Statement. This important directive will serve as the master document that will consolidate and formalize a Waterford 3 management philosophy such that it can be consistently and universally applied.

Several different aspects of procedure compliance are addressed in the new site directive. First, definitions are provided to centralize guidance that has occasionally been treated in individual procedures. Secondly, a philosophy of procedural development, dissemination, and use is presented. Deviations from- and changes to- procedures are discussed including circumstances when each is appropriate.

Finally, the Waterford 3 Procedure Compliance Policy Statement is presented. The statement describes (among other things) the reasons why procedure usage and compliance is desirable and stresses the importance of seeking a procedure change when the performance of a procedure step is inappropriate.

The Procedure Compliance directive will be presented to employees at department and shop level meetings.

A second facet of the Enhanced Procedural Compliance Initiative is a series of Supervisory/Management and peer observations. As currently envisioned, selected maintenance and surveillance evolutions will be monitored with an eye towards identification of procedural weaknesses, weaknesses in the understanding and implementation of procedural compliance, and reinforcement of the previously mentioned concept of self-checking.

The final aspect of the program may, in hindsight, be the most critical. Waterford 3 has previously communicated the management philosophy regarding procedural compliance in a number of ways, including one-on-one level discussions between employees and supervisors. Nevertheless, the most recent examples of failure to follow procedure illustrate the important role of periodic reinforcement in the effort to achieve and maintain a high degree of procedural integrity. To that end, the department and shop level discussions of the new procedure compliance site directive will be formally included in phase one of the General Employee Training (GET) program. This will ensure that all new employees are immediately exposed to management's philosophy with regard to this critical concept and that all existing employees are exposed to the concept on a yearly basis through GET requalification.

These new programs are a measure of management resolve in the procedure compliance and human performance areas. They should allow Waterford 3 to build on the solid foundation established by earlier efforts and result in continued improvement in this important area.

(4) Date When Full Compliance Will Be Achieved

The personnel counseling of the electrical maintenance technicians will be complete by January 11, 1991.

The Entergy Operations Management Manual Station Directive entitled "Procedure Compliance" will be issued and reviewed with appropriate employees by the end of the first quarter of 1991.

The Supervisory/Management and peer observations of selected procedures will be underway by the end of the first quarter of 1991.

Finally, the GET program will be updated to include the new Procedure Compliance directive by the end of the first quarter of 1991.