ENTERGY

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A4.05
QA

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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 92-01
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 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
R.B. McGehee
N.S. Reynolds
NRC Resident Inspectors Office

IE01

ATTACHMENT 1

ENTERGY OPERATIONS, INC. RESPONSE TO THE VIOLATIONS IDENTIFIED IN APPENDIX A OF INSPECTION REPORT 92-01

VIOLATION NO. 9201-01

Criterion VI of Appendix B of 10 CFR Part 50 and the licensee's approved Quality Assurance Program require that measures be established to control the issuance of documents, such as instructions, procedures, and drawings, and changes thereto, which prescribe all activities affecting quality.

Contrary to the above, the licensee failed to control the changes to Drawing LOU-1564-G167, Sheet 1, "Flow Diagram - Safety Injection," in that the revised drawing was posted in the control room without transferring the tags indicating that a safety-related temporary alteration (modification) affected the drawing.

RESPONSE

(1) Reason for the Violation

Entergy Operations, Inc. admits this violation and believes that the root cause of the event is that Administrative Procedure UNT-005-004, "Temporary Alteration Control," is inadequate in that it does not include measures for designating affected drawings so that other interested parties are aware of the temporary alteration. In practice, this means that personnel posting revised drawings in the control room do not know whether a particular drawing is affected by a temporary alteration unless they observe a temporary alteration sticker on the drawing they are replacing.

The control room contains three sets of drawings- one hard copy set and two sets on aperture cards. Discussions with the individual typically assigned to update the control room drawings indicated that the usual practice was to cross-check the three sets of drawings to ensure that each of the sets reflected the same temporary alteration status. In this instance, a discrepancy was noted. The individual attempted to resolve the discrepancy by checking the status of temporary alteration 91-050 in the temporary alteration log. Unfortunately, he inadvertently checked the caution tag-out log and, based on (caution tag-out) log number 91-050 being closed, incorrectly concluded that the temporary alteration had been removed. As a result, the revised drawings were posted in the control room without the stickers indicating that a temporary alteration was installed.

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

The affected control room drawing- LOU-1564-G167, Sheet 1, "Flow Diagram - Safety Injection," was updated to properly indicate the installation of a temporary alteration.

Secondly, control room drawings were audited to verify the proper placement of temporary alteration tags. No discrepancies were noted.

Thirdly, Plant Engineering generated a list of all controlled drawings affected by the installation of temporary alterations. The list will be updated each time a temporary alteration is installed or removed. In the short term, this will ensure that personnel charged with posting revised drawings to the control room know which drawings should indicate the installation of a temporary alteration.

Finally, this event was discussed at the Plant Engineering daily status meeting to highlight the importance of proper implementation of the Corrective Action Program. If the root cause of a similar problem noted during the third quarter, 1991 temporary alteration audit had been fully evaluated, this event may have been prevented.

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

Administrative Procedure UNT-005-004, "Temporary Alteration Control," will be revised to include guidance on the administrative aspects of temporary alteration control.

(4) Date When Full Compliance Will Be Achieved

Administrative Procedure UNT-005-004 will be revised by June 4, 1992.

VIOLATION NO. 9201-02

Criterion III of Appendix B of 10 CFR Part 50 and the licensee's approved Quality Assurance Program require that design changes, including field changes, shall be [subject to design control measures] commensurate with those applied to the original design and be approved by the organization that performed the original design unless the applicant designates another responsible organization.

Contrary to the above, the licensee, during the performance of Work Authorization WA-99000406 on April 16, 1991, made an apparent field design change without the required review and approval. One conductor of safety-related electrical Cable 30588C-SMB was terminated at a different point than specified in the work authorization. The individual lined out, initialed, and dated the prescribed termination point and then substituted a different termination point. This termination was independently verified and the entire design change package reviewed and closed. However, the field change process was not implemented and the affected drawing (LOU-1564-B421, Sheet 588S) was not changed to reflect the as-built configuration.

RESPONSE

(1) Reason for the Violation

Entergy Operations, Inc. admits this violation. While the root cause of this event can not be determined conclusively, it is likely that the event resulted from a combination of an incomplete work package and an undetectable error by the electrician in the field.

First, review of Work Authorization (WA) 99000406 indicates that an approved change to Design Change Package (DCP) 3260, "Removal of Shutdown Cooling Auto-Closure Interlock," was not fully incorporated into the work package. The reasons for this are not clear but it appears that the change to the DCP- Document Revision Notice (DRN) 19101213- was incorporated into the termination/determination sheets in the package while the drawing associated with the DRN was not. This was not necessarily incorrect but it did contribute to the violation because, without the drawing, an error made in the termination/determination sheets was not easily detectable.

The error in the package involved a wire termination at Auxiliary Isolation Panel 2 Terminal Board TBC point C5. In accordance with the DRN, two wires were to be terminated at this point in order to connect pressurizer pressure isolation relay 63X4 to point A-23 in Plant Protection System PAC Cabinet CP-26. In the termination/determination sheets however, only one wire was terminated at point C5. The other wire was terminated at the adjacent point on the same terminal board, point C4.

This error was recognized by the technician during the installation in the field. The technician was familiar with the intent of the DRN and recognized that both wires needed to be terminated at the same point on the terminal board. Although the technical basis for his decision is unclear, the electrician believed that technical documentation existed to support

changing the termination point and proceeded to terminate the cables at point C4. No documentation has been found to support that decision. In any case, the wiring was satisfactory from an electrical standpoint but was not in accordance with the latest DRN.

Again, the fact that the drawing associated with DRN 9101213 was apparently not in the package played a role. Electricians are normally authorized to correct typographical errors on termination/determination sheets as long as the wiring is ultimately installed in accordance with the latest DRN. In this case, one of the wire terminations was obviously incorrect; either point C4 or C5 would have been acceptable (electrically) as long as both wires were terminated at the same point. The electrician may have selected terminal board point C4 because it had been used in the original design; in any event, the proper termination point could not be determined without reference to the design authority which, at the time, was DRN 9101213. Although he was fully aware of the overall wiring plan and performed the wiring in a satisfactory manner from an electrical standpoint, the electrician may have unknowingly referenced an improper or superseded design source to justify the selection of termination point C4.

A number of so-called "barriers" failed to prevent this event. The most significant of these is that the field wiring was subjected to and passed a point-to-point wiring check. It appears that this check was performed using a combination of the original DRN and the termination/determination sheets. A review of Maintenance Procedure ME-007-001, "Cable Insulation Resistance and Continuity Testing," indicates that the procedure provides very little guidance on the documentation that should be used to conduct point-to-point checks.

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

Because the wiring of pressurizer pressure isolation relay 63X4 between Auxiliary Isolation Panel 2 and CP-26 was satisfactory from an electrical standpoint, DRNs I9200324 and I9200325 were issued to update the effected controlled drawings.

In addition, the Electrical Maintenance Department has implemented new guidance with respect to the preparation of termination/determination sheets. To avoid confusion, the practice of using line-outs and initials to update the sheets when a DRN is issued has been discontinued. Rather, standard practice in the future will be for the work planner to start from a "clean sheet" and, to the extent possible, rewrite the entire sequence of operations necessary to implement a change. This change should encourage a more logical thought process, simplify the review process and, by extension, reduce the likelihood of errors when incorporating changes to the termination/determination sheets.

Third, it is now standard practice that Maintenance Department Planning Supervisors recieve a controlled copy of a DRN if the DRN impacts an assigned DCP. This should "close the loop" to a certain extent by ensuring that the Maintenance Department gets every DRN as soon as it is distributed. This practice is less dependent on personal interaction between the Maintenance Department and Design Engineering and should ensure that issued DRNs reach the planners and are included in the work packages.

Finally, the Maintenance Superintendent reviewed this event with the technician who performed the field work and his supervisor. The discussion stressed the preeminence of controlled drawings over other documentation in the performance of field work.

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

Waterford 3 will perform a comprehensive review of the process of coordinating and communicating changes to approved Design Change Packages between Design Engineering and the implementing organizations. Although the exact nature of the review has not been decided, it is expected to include representatives from Maintenance, Modification Control, Document Control, and Design Engineering, among others.

Secondly, this event will be discussed with Maintenance Department personnel in the regular shop meetings. The importance of controlled drawings as the principle design authority will be stressed. For the electrical and I&C disciplines, the importance of point-to-point wiring checks and independent verification in accordance with the latest DRN will be emphasized.

Finally, Maintenance Procedure ME-007-001, "Cable Insulation Resistance and Continuity Testing," will be revised such that it requires the use of the latest DRN when conducting point-to-point wiring checks.

(4) Date When Full Compliance Will Be Achieved

Waterford 3 will complete the procedure revision, hold the shop meetings, and conduct the process review described above before the start of the fifth refueling outage which is expected to begin September 19, 1992.