

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report No. 50-382/92-18

Operating License No. NPF-38

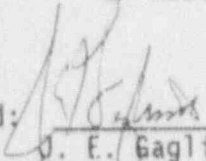
Licensee: Entergy Operations, Inc.
P. O. Box B
Killona, Louisiana 70066

Facility Name: Waterford Steam Electric Station, Unit 3 (W3)

Inspection At: W3, Taft, Louisiana

Inspection Conducted: June 29 through July 2, 1992

Inspector: M. E. Murphy, Reactor Inspector, Test Programs Section, Division
of Reactor Safety

Approved: 
J. E. Gagliardo, Chief, Test Programs Section
Division of Reactor Safety

7/21/92
Date

INSPECTION SUMMARY

Inspection Conducted June 29 through July 2, 1992 (Report 50-382/92-18)

Areas Inspected: Routine, announced inspection of the licensee's modification testing program and followup of actions taken on previous inspection findings.

Results: The licensee had a good program for identifying and implementing post-modification testing activities. The program was comprehensive and provided acceptable guidance for the testing of the licensee's different categories of modifications.

The following previously identified inspection findings were dispositioned as indicated:

- o Open Item 382/9114-03 (CLOSED)
- o Violation 382/9204-01 (CLOSED)

DETAILS

1. PERSONS CONTACTED

Entergy

- *R. Burski, Director, Nuclear Safety
- W. Day, Supervisor, STA
- J. Edwards, Jr., Scheduling Supervisor
- *T. Gaudet, Operational Licensing Supervisor
- *J. Houghtaling, Director, Plant Modification and Construction
- C. Koehler, Supervisor, Quality Assurance Support
- *I. Lednard, Manager, Technical Services
- M. Murray, Acting Supervisor, Modification Management
- *D. Packer, General Manager, Plant Operations
- P. Schlesinger, Supervisor, System Engineering - Electrical
- *R. Starkey, Manager, Operations and Maintenance
- *B. Thigpen, Acting Director, Plant Modification and Construction
- *J. Zabritski, Acting Manager, Quality Assurance

Virginia Power

- *G. Kane, Manager, Nuclear Quality Assurance
- *J. Smith, Manager, Quality Assurance (North Anna)
- *J. Stall, Assistant Station Manager, North Anna Power Station

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- *W. F. Smith, Senior Resident Inspector

The inspector also contacted other licensee personnel during the inspection.

*Denotes those attending the exit meeting on July 2, 1992.

2. FOLLOWUP OF PREVIOUS INSPECTION FINDINGS (92701, 92702)

2.1 (CLOSED) Open Item (382/9114-03):

This item was opened because the licensee emphasized in their procedures the closure of containment within 1.5 hours following loss of shutdown cooling. This figure was based on a calculated minimum time to uncover the core. However, the licensee's analysis contained in Memorandum W3890-1045, dated September 18, 1990, indicated that the containment could become uninhabitable in less than 30 minutes in the most adverse-containment cooling conditions. The licensee agreed to evaluate incorporating appropriate guidelines for dealing with hostile containment environmental conditions into procedures and training.

As a result of the licensee's evaluation, a decision was made to incorporate emerging environmental conditions into the "Containment Impairment Log,"

Attachment 11.13 of Procedure OP-001-003. This change took the form of a "CAUTION," which provided the limiting times for personnel habitability with the loss of shutdown cooling and all containment fan coolers operating versus no operable fan coolers. This "CAUTION" was incorporated in Procedure OP-001-003 by Revision 13, issued February 27, 1992.

The inspector reviewed the revision and found that there was an inconsistency in the combinations of temperature, times, and cooler availability. This was discussed with licensee representatives and the inspector was informed that this inconsistency had also been detected by their operators when the information was presented in training sessions that were given subsequent to the issuance of the revision. The error was identified as typographical for one of the temperatures. A procedure change request had been submitted to correct the error and to make some human factor changes to some of the other wording in the "CAUTION." The training information had already been corrected indicating the positive benefits of training feedback comments on procedure content.

This item is closed.

2.2 (CLOSED) Violation (382/9204-01):

This violation was cited for the licensee's failure to have the shift supervisor, control room supervisor, or shift technical advisor perform the required post-test review following the performance of surveillance and test activities on safety-related equipment as required by Administrative Procedure UNT-007-004.

In the response to the violation, the licensee committed to revise the definitions for controlled maintenance and uncontrolled maintenance in Procedure UNT-007-004 to include guidance for the required supervisory review of testing activities.

Change 1 to Revision 7 of Procedure UNT-007-004 was approved on May 10, 1992. The inspector reviewed this change and determined that the licensee's committed actions had been completed satisfactorily.

This violation is closed.

3. MODIFICATION TESTING (72701)

This portion of the inspection was conducted to determine that the licensee's modification testing program for new or modified structures, systems, and components was in conformance with the detailed design documentation, regulatory requirements, Technical Specifications, and industry approved codes and standards. The inspector reviewed the following licensee modification program administrative procedures:

- o UNT-007-028, "Design Change Initiation and Review," Revision 1, Change 1, dated April 1, 1992
- o NOECP-303, "Design Change Packages," Revision 4-2, dated June 12, 1992

The review determined that the licensee's program was comprehensive, addressed the different modification categories, and provided guidance for testing that was consistent with the category of modification. The program also provided acceptable definitions for testing during the various phases of the modification process.

Installation testing was defined as: "Testing to demonstrate that installation processes and materials are satisfactory. This includes, but is not limited to hydrostatic or pneumatic testing, point-to-point wiring, 'Megger' checks and flushes." Acceptance testing was defined as: "An activity that demonstrates a modification has been satisfactorily installed; ensures the design change will accomplish its intended function and verifies the system is functionally ready to be returned to service."

There was in general extensive discussion in the procedures for acceptance testing, with clear assignments of responsibilities for the determination, development, performance, and evaluation of the testing. This definitive discussion and assignment of responsibilities was not apparent for installation testing. The inspector discussed this lack of definitive discussion and assignment of responsibilities in the area of installation testing with licensee representatives. The licensee representatives stated that the procedures would be reviewed and evaluated for improvement in the area of installation testing.

The inspector reviewed the following design change packages:

- o 3162, "Reactor Coolant Shutdown Level Measurement System"
- o 3175, "Essential Chillers Dehydrator Addition"
- o 3204, "Replacement of Non-Safety Secondary Piping Components Due to Erosion/Corrosion"
- o 3257, "Quench Tank Level Indication Upgrade"
- o 3277, "Q-Deck Reinforcement for RCP Motor Changeout"
- o 03278, "Submergence of Safety Related Barton Transmitters & Splices Located in RCB"
- o 3288, "9200 Series MOV Torque Upgrade Modification"
- o 3328, "Hoist Addition Inside Reactor Containment Building"

This review determined that the modification work packages conformed to the administrative procedure requirements. Installation testing was satisfactorily addressed and the structures, systems, and/or components were properly prepared for the acceptance testing. These preparations included such items as preservation, wiring continuity, wiring separation, cleaning, flushing, calibration, breaker-trip tests, greasing, and lubrication. The licensee's review and evaluation of completed installation tests confirmed that test results met the stipulated acceptance criteria, or test deviations were resolved and retests were performed as appropriate. In either case, the procedures contained adequate statements of scope, objectives, limitations, precautions, prerequisites, and acceptance criteria. Provisions for work sign-off, system restoration and release to operations were incorporated. The licensee's review and evaluation of completed acceptance tests confirmed that test results met the established acceptance criteria or test deviations were resolved and required retests were performed prior to release to operations.

4. EXIT MEETING

An exit meeting was conducted with licensee personnel identified in paragraph 1 on July 2, 1992. During the meeting, the inspector reviewed the scope and findings of the inspection. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspectors.