

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report No. 50-382/92-16

Operating License No. NPF-38

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

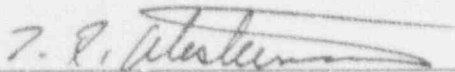
Facility Name: Waterford Steam Electric Station, Unit 3 (W3)

Inspection At: W3, Taft, Louisiana

Inspection Conducted: July 20-22, 1992

Inspector: M. F. Runyan, Reactor Inspector, Plant Systems Section
Division of Reactor Safety

Approved:


T. F. Westerman, Chief, Plant Systems Section
Division of Reactor Safety

8-6-92
Date

Inspection Summary

Inspection Conducted July 20-22, 1992 (Report 50-382/92-16)

Areas Inspected: Routine, announced inspection of licensee's measuring and test equipment program and followup on corrective actions for previous violations and deviations.

Results: The licensee's measuring and test equipment program was established, proceduralized, and implemented in an effective manner. The program addressed relevant issues and appeared to be in compliance with regulatory requirements. M&TE storage, accountability, tagging, issue, and calibration were well managed by knowledgeable and conscientious personnel. M&TE was being calibrated in controlled environments using test equipment traceable to the National Institute of Standards. Instances of out-of-tolerance M&TE were being aggressively evaluated, though one exception was identified where an apparent nonconservative judgement was used.

The licensee's corrective actions for Violations 382/9201-01 and 382/9201-02 were incomplete. Several relevant considerations were not addressed. For Violation 382/9201-01, the licensee stated that they plan to transmit a supplemental letter to update the status of corrective actions. Both violations were left open.

DETAILS

1. PERSONS CONTACTED

ENTERGY

- M. Brooks, Instrumentation and Control (I&C) Specialist
- *R. Dussoy, I&C Superintendent
- W. Floyd, Quality Assurance (QA) Operations
- *T. Gaudet, Operational Licensing Engineer
- T. Gates, Licensing Engineer
- *D. Guidry, Lead Supervisor, I&C
- J. Hoffpauir, Maintenance Superintendent
- *B. Morrison, Licensing Engineer
- *D. Packer, General Manager, Plant Operations
- *C. Thomas, Operational Licensing Engineer

NRC

- *K. Kennedy, Project Engineer
- W. Smith, Senior Resident Inspector

2. FOLLOWUP ON CORRECTIVE ACTIONS FOR VIOLATIONS AND DEVIATIONS (92702)

2.1 (OPEN) Violation (382/9201-01): Failure to Control Changes to Drawings

The Notice of Violation (NOV) identified that the licensee had failed to properly control a change to Drawing LOU-1564-G167, Sheet 1, "Flow Diagram-Safety Injection," in that the revised drawing was posted in the control room without transferring stickers indicating that Temporary Alteration 91-050 affected the drawing. The licensee admitted the violation and concluded that the root cause was that Administrative Procedure UNT-005-004, "Temporary Alteration Control," did not adequately ensure that interested parties were aware of the temporary alteration status of affected drawings.

While posting the change to Drawing LOU-1564-G167, the document control individual noticed that a discrepancy existed among the three sets of controlled drawings in the control room. At least one of the three drawings did not contain a sticker identifying the presence of the subject temporary alteration. The individual checked the caution tag log, thinking it was the temporary alteration log, noticed that tags for temporary alteration 91-050 were cleared, and incorrectly concluded that the temporary alteration was removed. The individual then removed the remaining stickers. A short time later, the inspector noticed the discrepancy.

The licensee corrected the three sets of control room drawings to show the proper temporary alteration status of Drawing LOU-1564-G167. An audit of other control room drawings did not reveal any other similar discrepancies.

Plant Engineering generated a list of controlled drawings affected by the installation of temporary alterations and were to maintain this list properly updated. This step was intended to be an interim corrective action pending the planned revision to Procedure UNT-005-004.

The licensee committed to revise Procedure UNT-005-004 by June 4, 1992, to include guidance on the administrative aspects of temporary alteration control.

The inspector noted that the only change made to Procedure UNT-005-004 was to include a requirement for Plant Engineering to add each new temporary alteration to the newly created list. The list itself was not a controlled document. The procedure did not address the removal of a temporary alteration from the list. The licensee stated that the long-term changes to Procedure UNT-005-004 would be completed in August, though no draft procedure was available for review. The inspector informed the licensee that they had not fully met their commitment to revise Procedure UNT-005-004 by June 4, 1992, to include guidance on the administrative aspects of temporary alteration control. The licensee agreed to provide a supplemental letter to the initial NOV response (W3F1-92-0125) to clarify and update the intended revision to the subject procedure.

The inspector also noted that the licensee had not taken issue with the fact that the document control individual who had found the error with the safety-related drawing had not reported this problem on any problem identification document. By simply "correcting" the discrepancy, this individual did not enable the implementation of actions to determine why the stickers were not properly in place, whether it was a repetitive problem, and whether a control room operator may have used and taken action based on a drawing showing improper temporary alteration status. When questioned, the licensee stated that the individual probably should have written a Quality Notice (QN) to document this discrepancy. The licensee stated that it would factor this issue into its corrective action plan for the violation.

The violation will remain open pending receipt of a supplemental letter from the licensee updating its plan to revise Procedure UNT-005-004. Also, additional inspection will be necessary to verify that the document control individual's failure to issue a QN is taken into proper consideration.

2.2 (OPEN) Violation (382/9201-02): Failure to Control Field Design Changes

This violation involved a wiring change made in the field that was inconsistent with the drawing issued in the original design change package. The package contained termination/determination sheets that were in error. The technician installing the modification noticed the error and terminated the wires in an electrically correct manner, but not in accordance with the new controlled drawing. The technician claimed that the drawing was mistakenly not in the change package and that the wires were terminated at the same point used in the original design. The post-modification tests were successful.

The licensee issued a design change notice to correct the subject drawing to reflect the as-installed configuration. The Electrical Maintenance Department decided to discontinue the use of "line-outs and initials" on termination/determination sheets, a practice which had contributed to the previous error. The new standard practice was to issue a completely new sheet whenever changes were made. Another policy change implemented in the wake of the violation was to send a controlled copy of each document revision notice (DRN) to the Maintenance Department Planning Supervisors. This was done to prevent, as in this case, the failure to include the revised drawing in the work package.

For long-term corrective action, the licensee committed to perform a comprehensive review of the process of coordinating and communicating changes to approved design change packages between Design Engineering and the implementing organizations. Additionally, shop meetings were to be held with Maintenance Department personnel to stress the importance of controlled drawings as the principle design authority. Finally, Maintenance Procedure ME-007-001, "Cable Insulation Resistance and Continuity Testing," was to be revised to require the use of the latest DRN drawing to conduct point-to-point wiring checks. These corrective actions were to be completed by September 19, 1992.

The inspector noted that the two newly implemented standard practices (discontinuing lineouts and sending DRNs to supervisors) were not proceduralized and that the licensee had no plan to proceduralize them. The licensee agreed to place these policy changes into a controlled procedure. The inspector reviewed attendance sheets documenting the shop meeting seminars and meeting notices for the design change package process review. The licensee was uncertain as to what product would result from this process review. The licensee informed the inspector that an additional procedure, ME-007-003, "Control Circuit Testing and Maintenance," would be revised prior to the September 19, 1992, commitment date.

This item will remain open pending completion of the corrective actions discussed above.

2.3 (Closed) Deviation 382/9016-01: Failure to Meet Commitment to Regulatory Guide (RG) 1.97

During an inspection of the licensee's actions taken to meet the commitment to RG 1.97, a deviation with six examples was identified. The licensee acknowledged the deviation occurred and provided descriptions of corrective actions to be taken in letters dated October 18 and December 14, 1990.

An inspector reviewed the licensee's corrective actions and found that the actions had been taken as described. The licensee's actions were considered acceptable for the closure of this item. The inspector found, however, that the licensee's resubmittal of its commitment to RG 1.97, dated February 28, 1991, had not been evaluated by the NRC. A safety evaluation will be issued

upon completion of the NRC's review. The closure of this item does not constitute concurrence with the licensee's February 28, 1991, submittal.

3. MEASURING AND TEST EQUIPMENT (35750)

The licensee's program to control the safety-related uses of measuring and test equipment was delineated in the following procedures:

UNT-005-009 Disposition of Measuring and Test Equipment (M&TE)
Nonconformances, Revision 3

UNT-005-011 Calibration and Control of Measuring and Test Equipment
(M&TE), Revision 3

MD-001-021 M&TE Accountability Procedure, Revision 3

The inspector reviewed these procedures and concluded that the licensee's M&TE program was well proceduralized and appeared to address all elements typically contained in an M&TE program including those listed in IEEE Standard 498-1980, "IEEE Standard Requirements for the Calibration and Control of Measuring and Test Equipment Used in Nuclear Facilities."

The inspector toured the M&TE tool shop, which included provisions for M&TE storage and issue. The area was clean and well organized. M&TE calibration stickers were evident on each piece of M&TE observed. M&TE that was defective or which had exceeded its recalibration date was segregated from in-service M&TE to reduce the probability of inadvertent use.

The inspector selected the following pieces of M&TE at random to determine whether the licensee's control and accountability of M&TE was effective:

HPCD033	Digital Multimeter
MEET008002	Megger
MEET270010	50K Load Cell
MEMT055004	Torque Wrench
MEMT068011	Torque Wrench
MIET020069	Digital Thermometer
MIET020126	AC/DC Current Probe
MIET023002	Decade Resistor
MLES285001	Computing Voltmeter
MMGT313003	Oxygen Analyzer
ODPT027009	Heise Test Gauge
MIET041018	Digital Multimeter
MIET020096	Digital Multimeter

The licensee was able to quickly determine the location and status of each of the selected M&TE. For those M&TE currently located in the tool room, the inspector reviewed the corresponding "M&TE Record of Accountability" cards. The cards, which provided a record of each use of an M&TE device, were being maintained in accordance with Procedure MD-001-021.

The licensee's program appeared to be effective in ensuring that M&TE was recalled prior to its recalibration date. An innovative policy had been implemented to require recalibration of M&TE after 16 quantitative or qualitative uses. This superseded the regular calibration frequency for M&TE devices that were used frequently. This policy was instituted to reduce the administrative burden encountered when M&TE devices are found out-of-tolerance upon recalibration, but it should also improve plant safety by limiting the number of times a defective piece of M&TE can be used.

The inspector toured the metrology laboratory where the majority of the site's M&TE is sent for periodic calibration. The facility was clean and orderly. The temperature and humidity in the shop were being monitored continuously to ensure that shop conditions met the calibration device manufacturers' tolerance for performing a calibration. The inspector selected several calibration devices and verified that the licensee maintained documentation establishing traceability to the National Institute of Standards.

The inspector reviewed a database listing each occurrence of M&TE being found out-of-tolerance upon recalibration. Of specific interest was whether the licensee was alert to any trends which would suggest that the frequency of calibration of an M&TE device should be changed. Through discussions with the licensee and review of two M&TE trending summaries, the inspector determined that the licensee was properly monitoring long-term M&TE performance trends. Also from this database, the inspector selected several M&TE as-found out-of-tolerance events to determine whether the licensee was performing effective evaluations of the potential impact of using out-of-tolerance M&TE on safety-related equipment. Generally, these evaluations appeared comprehensive and conservative in nature, though one exception was noted. A digital multimeter (MIET041058) was found out of tolerance on January 6, 1992. In searching the records, the individual performing the evaluation found that MIET041058 had last been used on a plant instrument that had 3 months later been checked successfully using a different multimeter. The individual had reasoned that since the plant instrument was shown to be in tolerance after it had been checked by MIET041058, that the inaccuracies of MIET041058 were not significant and that previous uses of this multimeter were acceptable. The inspector pointed out that this reasoning oversimplified the situation since in any one case errors may overlap or cancel. The licensee stated that it would reconsider its policy of using this method to disposition out-of-tolerance M&TE.

The inspector reviewed the last Quality Assurance audit report performed in the area of measuring and test equipment (Audit No. SA-91-013.1, "Control of M&TE," February 22, 1991, through April 23, 1991). The report detailed a

generally favorable assessment of the M&TE program with no major findings identified.

As an overall assessment, the inspector concluded that the licensee's measuring and test equipment program was proceduralized and implemented in an effective manner. Individuals responsible for the program were knowledgeable and were conscientiously attempting to enhance performance in this area.

4. EXIT INTERVIEW

The inspector met with Mr. D. F. Packer and other members of the Waterford 3 staff identified in paragraph 1 at the conclusion of the inspection. At this meeting, the inspector summarized the scope and findings of the inspection. The licensee did not identify as proprietary any of the material provided to, or reviewed by, the inspector during this inspection.