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Waterford 3

W3F1-96-0143  
A4.05  
PR

September 5, 1996

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 96-10  
Reply to Notice of Violation

Gentlemen:

In accordance with 10CFR2.201, Entergy hereby submits in Attachment 1 the response to the violations identified in Enclosure 1 of the subject Inspection Report.

The staff expressed concerns with the two violations in the cover letter of the Inspection Report. Regarding the concern of the use of Plant Monitoring Computer (PMC) alarms, Waterford 3 (W3) agrees the PMC alarm function should not have been discontinued without ensuring that appropriate compensatory measures were in place. Although compensatory measures were not in place, efforts were being made to address the alarm screen discrepancies. It is our belief that Operations has accepted and maintained ownership of this process while continuing to operate Waterford 3 in a safe and conservative manner. Waterford 3 agrees with your concern regarding adherence to radiological requirements and W3 concurs that adherence to radiological requirements is important to assure personnel radiation protection and an effective ALARA program.

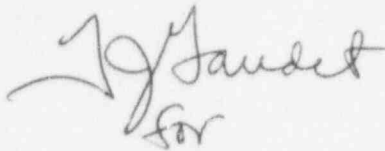
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If you have any questions concerning this response, please contact me at  
(504) 739-6242 or Tim Gaudet at (504) 739-6666.

Very truly yours,

A handwritten signature in cursive script, appearing to read "J.J. Fisicaro".

J.J. Fisicaro  
Director  
Nuclear Safety

JJF/WDM/PRS/tjs  
Attachment

cc: L.J. Callan (NRC Region IV)  
C.P. Patel (NRC-NRR)  
R.B. McGehee  
N.S. Reynolds  
NRC Resident Inspectors Office

ENTERGY RESPONSE TO THE VIOLATIONS IDENTIFIED IN ENCLOSURE 1 OF  
INSPECTION REPORT 96-10

VIOLATION NO. 9610-01

Technical Specification 6.8.1.a requires, in part, that written procedures shall be implemented covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A, Sections 1 and 7, require that the licensee have Administrative and Radioactivity Control Procedures.

1. Administrative Procedure OP-100-001, "Duties and Responsibilities of Operators on Duty," Revision 10, Step 4.4.9 required, in part, to evaluate and acknowledge all computer and annunciator alarms received.

Contrary to the above, from November 5, 1995 to May 23, 1996, Procedure OP-100-001 was not properly implemented in that computer alarms were consistently not acknowledged or evaluated by the on-shift operations crew.

This is a Severity Level IV violation (Supplement I) (50-382/9610-01).

RESPONSE

(1) Reason for Violation

Entergy believes the root cause of the violation is inadequate administrative controls in that compensatory measures were not established while awaiting permanent resolution to identified problems with the new Plant Monitoring Computer (PMC) alarm screen.

The Waterford 3 PMC was replaced during Refuel 7 (RF7) under Design Change 3374. In the months leading up to the installation, a team from Waterford 3 consisting of personnel from Operations, Reactor Engineering and Performance (RE&P), Design Engineering, and Modification Control monitored the progress of the project. In January of 1995, the team was able to see Waterford 3's specific alarm screen for the first time. Several problems were noted that were considered unacceptable by the team. However, because it was important to ship the PMC to Waterford 3 for a parallel run with the existing PMC, the decision was made to send the unit in its present condition and proceed with the implementation. Work to resolve the alarm screen problems was an ongoing process throughout the implementation, and accelerated towards total resolution during the second quarter of 1996.

Following the parallel run and installation, the decision was made to start up the plant coming out of RF7 with the PMC alarm screen still not accepted by Operations or RE&P. Continuous contact was made with the vendor in an attempt to correct the problems. It was determined that the new screen would not be useful as an operator aid to monitor alarmed parameters. Because of the vast number of computer points that were alarming, the PMC audible alarm became a hindrance to the Control Room operators, and was disabled. OP-100-001, Duties and Responsibilities of Operators on Duty, Step 4.4.9, was written under the assumption that PMC alarms would be valid and provide useful information to the operators. OP-100-001, Section 5.6, Plant Tour, instructs Operations personnel to make frequent tours of the unit to ensure that plant equipment is functioning in its expected manner. Control Room annunciators alert operators to abnormal conditions with vital plant equipment. Although Operations Management is confident that plant equipment was being sufficiently monitored, adequate compensatory measures were not established while awaiting permanent resolution to the PMC alarm screen problems.

In January of 1996, it was discovered that the vendor's alarm system package was undergoing a revision that would more closely meet Waterford 3's needs. Subsequent contact with the vendor resulted in an agreement to support the alarm screen upgrade and an upgrade path was mapped out. This upgrade will be delivered in three phased revisions and is scheduled for completion by October 31, 1996.

(2) Corrective Steps that Have Been Taken and Results Achieved

Standing Instruction 96-10 was issued to Operations personnel with the following information:

The enhancement for the PMC Alarm Screen will begin the week of July 15. This enhancement will be performed in four stages and completed in October. In the interim, the following will be done:

1. Keep two alarm screens active.
2. Frequently (several times per hour) observe the alarm screens to monitor for changing plant/equipment conditions.
3. Have the onshift PMC technicians clear the alarm backlog approximately every two hours.

The following changes were made to OP-100-001 so that the wording more closely resembled the intention of the procedure:

- Step 4.4.9: Evaluate and acknowledge all annunciators received. Respond in accordance with Step 5.7, Annunciators.
- Step 4.4.10: Frequently monitor the plant computer alarm screen for changing plant conditions and promptly acknowledge and evaluate audible computer alarms.

Revision 1 of the PMC alarm upgrade accomplished the following:

- Added a two character date code to each record.
- Added column headers to the red divider line on the alarm screen.
- Replaced MORE ALARMS message with a count of unacknowledged alarms.
- Reduced the font from double size to normal size.
- Changed the ACKNOWLEDGED area from 16 to 20 records.
- Changed the UNACKNOWLEDGED area from 4 to 14 records.

Revision 2 of the PMC alarm upgrade accomplished the following:

- Acknowledged alarms which return to normal will automatically be deleted from the screen
- If an acknowledged alarm point has an alarm cutout defined (i.e., Bearing temp alarm only if the pump is running) and the cutout point transitions to the alarm inhibit state, the alarm point will automatically be cleared from the screen.
- The audible alarm will be reinstated.
- Acknowledged alarms which undergo an alarm quality change will be automatically cleared from the alarm system and reposted with a new alarm message.
- All but valid alarms conditions will be deleted.

A visual cue will be added to indicate the presence of critical alarms not visible on the alarm screen (page full conditions).

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

Subsequent revisions will accomplish the following:

- Operators will be able to lock unacknowledged alarms to protect them from being acknowledged until they are released.
- A "hot key" will be provided to allow return to the first page of the alarm screen.
- Points in the alarm backlog will be able to be pulled up either by description or by point identification (ID).

- Alarms will be posted as they clear from the alarm screen to the message backlog in first-in, first-out order.
- A message/alarm backlog file will be added.
- Point ID's which go to a "bad" quality will give a single occurrence alarm to alert the operators.

(4) Date When Full Compliance Will Be Achieved

Based on the interim measures in place, Standing Instruction 96-10 and the changes made to OP-100-001, Waterford 3 is in full compliance. The final upgrade for the alarm package is scheduled for completion by October 31, 1996.

VIOLATION NO. 9610-03

Technical Specification 6.8.1.a requires, in part, that written procedures shall be implemented covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A, Sections 1 and 7, require that the licensee have Administrative and Radioactivity Control Procedures.

Health Physics Procedure HP-001-152, "Labeling, Handling, and Storage of Radioactive Material," Revision 10, Section 10.1, "Control of Radioactive Material within the RCA (Radiologically Controlled Area)," required, in part, that tools and equipment be smeared by health physics prior to storing and that contaminated tools and equipment not in a posted contaminated area be packaged in a yellow bag and labeled CAUTION RADIOACTIVE MATERIAL.

Health Physics Procedure HP-001-101, "ALARA Program Implementation," Revision 10, Section 4.10.5 required, in part, that individuals comply with warning signs.

Contrary to the above:

- a. As of June 11, 1996, Procedure HP-001-152 was not properly implemented in that contaminated operations department tools and equipment were not smeared prior to storage and were not packaged in a yellow bag and labeled CAUTION RADIOACTIVE MATERIAL.
- b. On July 18, 1996, Procedure HP-001-101 was not properly implemented in that licensee personnel did not comply with warning signs. Specifically, two individuals were observed drinking in a radiologically controlled area even though warning signs indicated that no drinking was allowed.

This is a Severity Level IV violation (Supplement I) (50-382/9610-03).

RESPONSE

(1) Reason for the Violation

- a. The root cause for Example "a" of the violation was personnel error in that contaminated Measuring and Test Equipment (M&TE) was not labeled and was stored in an unposted locker in breach of HP-001-152, "Labeling, Handling, and Storage of Radioactive Material."
- b. The root cause for Example "b" of the violation was personnel error in that a questioning attitude was not utilized with respect to thirst quenchers being located in an RCA considering the postings as well as



radiation worker training prescribing, "No Eating, Smoking Or Drinking" in the RCA. The contributing factor was the physical location of the cooler of consumable liquids in the RCA with accompanying cups, and without adequate labeling to indicate for Emergency First Aid Team (EFAT) use only. Thirst quenchers are only staged in the RCA during outages when heat stress is a concern.

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

The following corrective steps have been taken to prevent recurrence of this violation are:

- a. Condition Report CR-96-0906 was immediately prepared to address the occurrence. The specific individual(s) involved could not be identified; therefore, procedural expectations were reviewed and communicated to Operations personnel through the Daily Instructions. On August 15, 1996, CR-96-1264 was initiated to address a similar event (eight gages were placed in Operations M&TE locker without accompanying fitting caps or taping).
- b. The cooler of thirst quencher with associated cups was immediately removed from the RCA. On July 27, 1996, a lockable chest container was procured for storage of thirst quencher in the RCA, and it was labeled "EFAT USE ONLY." Individual containers of quencher will be stored in the chest. To assure personnel cognizance, the condition report along with its resolution was presented to personnel at the Safety meetings held August 28 and 29, 1996.

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

- a. Shift Supervisors presented the requirements of HP-001-152 (with Health Physics assistance) to Operations personnel to assure adequate knowledge and deference for the procedural requirements regarding contamination and tooling. New locks are to be placed on the Operations M&TE lockers with the SS/CRS being responsible for and controlling personnel access to the lockers. This measure is intended to assist in early identification of individuals who have not been completely indoctrinated by the training.
- b. A guidance directive will be developed to address use of thirst quenchers in an RCA.



It is believed that the above corrective steps, addressing operations control, worker performance and supervision, are adequate to avoid further violations of this type.

(4) Date When Full Compliance Will Be Achieved

Waterford 3 is in full compliance and the remaining actions described above in Section 3 will be completed by October 31, 1996.