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Waterford 3

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A4.05
PR

April 21, 1997

U.S. Nuclear Regulatory Commission
ATTN: Director, Office of Enforcement
Washington, D.C. 20555

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
NRC Inspection Report 97-01
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 Enclosure 1 of the subject Inspection Report.

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

Very truly yours,

E. C. Ewing
Director
Nuclear Safety & Regulatory Affairs

ECE/DMU/tjs
Attachments

cc: E. W. Merschoff (NRC Region IV), C.P. Patel (NRC-NRR),
R.B. McGehee, N.S. Reynolds, NRC Resident Inspectors Office



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# ATTACHMENT I

## ENTERGY OPERATIONS, INC. RESPONSE TO THE VIOLATIONS IDENTIFIED IN ENCLOSURE 1 OF INSPECTION REPORT 97-01

### VIOLATION NO. 9701-01

10 CFR 50.65(b)(1) states, in part, that the scope of the monitoring program shall include safety-related structures, systems, and components. Paragraph (c) states, "the requirements of this section shall be implemented by each licensee no later than July 10, 1996."

Contrary to the above, as of January 31, 1997, the safety-related containment atmospheric release system was not included in the licensee's 10 CFR Part 50.65 monitoring program scope.

This is a Severity Level IV violation (Supplement 1) (50-382/9701-01).

### RESPONSE

(1) Reason for the Violation

Entergy admits this violation and believes the cause to be the result of misinterpretation of 10CFR50.65 paragraph (b)(1), Regulatory Guide 1.160 and NUMARC 93-01 Section 8.2.1.1. The scoping decision to not include containment atmosphere release (CAR) system was originally made and approved by the Maintenance Rule Expert Panel based on assessing the system against criteria specified in 10CFR50.65 (b)(1), Regulatory Guide 1.160 and Section 8.2.1.1 of NUMARC 93-01. That Safety-Related scope inclusion criteria consists of the system's ability to maintain the (1) integrity of the reactor coolant pressure boundary, (2) capability to shutdown the reactor and maintain it in a safe shutdown condition and (3) capability to prevent or mitigate the consequences of accidents that could result in 10 CFR Part 100 limits. The basis for not including this system within scope was that, even though it was designated at Waterford 3 as safety-related, CAR (1) does not effect the integrity of the reactor coolant pressure boundary, (2) is not used to shutdown or maintain the reactor shutdown and (3) does not provide an accident safety function or prevent maintaining offsite exposure limits within 10 CFR Part 100 guidelines. The CAR system provides a long term post accident cleanup function. The system's containment isolation function was adequately scoped in the rule under Containment Building. However, based

on the system's safety related designation, its function to transfer combustible gases from the containment failed to be scoped into the rule.

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

Condition Report 97-0256 was generated to place this event in the corrective action program.

The containment atmosphere relief system has been included in the Maintenance Rule Program.

The justification for the scoping of all remaining SSCs was verified to be in accordance with this interruption of criteria of 10 CFR 50.65(b).

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

The containment atmosphere release system will be monitored against reliability criteria. The reliability performance criteria will be established, a historical review of the system will be performed and system categorization made. If determined that (a)(1) status is warranted, then (a)(1) goals will be established.

(4) Date When Full Compliance Will Be Achieved

The above actions will be completed by August 30, 1997, when system categorization will be made and, if needed, (a)(1) goals established. Upon completion of the above, Waterford 3 will be in full compliance.

# ATTACHMENT I

## ENTERGY OPERATIONS, INC. RESPONSE TO THE VIOLATIONS IDENTIFIED IN ENCLOSURE 1 OF INSPECTION REPORT 97-01

### VIOLATION NO. 9701-02

10 CFR 50.65(a)(1) states, in part, that each holder of an operating license shall monitor the performance or condition of structures, systems, or components, against licensee-established goals and that such goals shall be established commensurate with safety.

10 CFR 50.65(a)(2) states, in part, that monitoring under paragraph (a)(1) is not required where it has been demonstrated that the performance or condition of a structure, system, or component is being effectively controlled through the performance of appropriate preventive maintenance such that the structure, system, or component remains capable of performing its intended safety function. Paragraph (c) states, "the requirements of this section shall be implemented by each licensee no later than July 10, 1996."

Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 1, endorses NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 0, as an acceptable method for implementing the requirements of 10 CFR 50.65. Regulatory Guide 1.160 states that the methods described in the guide will be used in the evaluation of the effectiveness of maintenance activities of licensees who are required to comply with 10 CFR 50.65 unless a licensee has proposed an acceptable alternative method for compliance.

NUMARC 93-01, Section 9.3.2 states, in part, that performance criteria for evaluating structures, systems, or components are necessary to identify the standard against which performance is to be measured. Criteria are established to provide a basis for determining satisfactory performance (for structures, systems, or components monitored under paragraph (a)(2)). Additionally, Section 9.3.2 states that performance criteria for risk-significant structures, systems, and components be established to assure that reliability and availability assumptions used in the plant-specific probabilistic risk assessment, individual plant examination, or other risk determining analysis are maintained or adjusted when necessary. Appendix B of NUMARC 93-01 defines availability as the time that a structure, system, or component is capable of performing its intended function as a fraction of the total

time that the intended function may be demanded . . . the numerical complement of unavailability.

The licensee subscribed to the NUMARC 93-01 methodology in Procedure TI 4.22, "Maintenance Rule Program," Revision 0. As a measure to demonstrate the ability of certain risk-significant systems and components to perform the intended functions, the licensee chose to monitor unavailability of risk-significant systems.

Contrary to the above, as of January 31, 1997, for the reactor protection system, the engineered safety features actuation system, the core protection calculators, the broad range toxic gas monitors, and the containment polar crane function of lifting heavy loads over safety-related equipment, the licensee: (1) failed to establish goals commensurate with safety as described in 10 CFR 50.65(a)(1); or (2) as an alternative, failed to demonstrate that the performance of the above specified systems components, and functions were effectively controlled through the performance of appropriate preventive maintenance and that the systems and components remained capable of performing their intended function, in that, neither the unavailability of the functions performed by the systems and components were monitored, nor an acceptable alternative method for compliance proposed.

This is a Severity Level IV violation (Supplement 1) (50-382/9701-02).

RESPONSE

(1) Reason for the Violation

Entergy admits to this violation which addresses 5 systems. The reason for the violation pertaining to the containment polar crane was personnel error. Although cranes were scoped in the Maintenance Rule, the lift function of the cranes over safety related equipment was inadvertently overlooked and is further discussed in item 1 below.

The reason for the violation on the plant protection system (PPS), core protection calculators (CPCs), engineered safety features (ESF) actuation system and broad range gas monitors was an inadequate determination of the monitoring requirements of those components and systems. This is addressed further in items 2 and 3 below.

1. Waterford 3 initially scoped all cranes with the building in which they are located and only monitored the structural function of the cranes. The crane function associated with the safe lifting of heavy loads was not monitored at the plant, system, or component level. Failure to monitor the functions related to lifting loads does not provide assurance of the success of these functions.

2. The decision to exclude PPS availability performance monitoring was based on: (1) system design conservatism, (2) no change in risk from individual channel unavailability and (3) availability monitoring would be redundant to reliability monitoring already being performed. However, the decision failed to recognize the importance of individual channel availability monitoring as a precursor to overall PPS reliability. The PPS is designated as risk significant; but, Waterford 3 determined that monitoring unavailability of this system was not required based on: (1) the conservative 2 out of 4 logic inherent in the system's design, (2) on occasion with a channel out-of-service (by-pass or trip) the Probabilistic Safety Assessments (PSA) risk associated with the system did not change and (3) unavailability of the system would be reflected in maintenance preventable functional failures and therefore redundant. For these reasons, monitoring maintenance preventable functional failures was felt sufficient without availability monitoring to assess the overall performance of the systems. The above reason also applies to the CPCs and ESF actuation systems not being monitored for unavailability.

3. The focus for the broad range gas monitors' availability performance criteria was on maintaining the overall control room isolation function. It did not consider individual monitor unavailability as a precursor to overall broad range gas monitor reliability. The broad range gas monitors provided train isolation signals for the control room envelope on detection of toxic chemicals. The broad range gas monitors were not considered unavailable when the monitors were taken out-of-service because the control room was placed in an isolated condition and the isolation actuation function was not needed. Additionally, when a single train was taken out-of-service, the function of the system was considered to be available with the remaining monitor and did not count the out-of-service monitor as unavailable.

   Performance monitoring under (a)(2) for redundant or installed spares of multi-train risk significant systems provides an indication of the overall reliability of the system. This is reflective in that all of the risk significant system redundant or installed spares are and have been monitored against reliability performance criteria under (a)(2). In addition, except for those systems identified in this violation, availability performance monitoring under (a)(2) has and is being performed on risk significant system redundant or installed spare components and trains.

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

Condition Report 97-0257 was generated to place this event in the corrective action program.

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

Provisions will be made to monitor under 10 CFR50.65 paragraph (a)(2) the availability performance of the broad range gas monitors, PPS, CPCs and the ESF actuation system. The PSA will be reviewed and unavailability criteria established accordingly. These criteria will be reviewed and approved by the Expert Panel. The availability maintenance history of these systems will then be reviewed against their respective (a)(2) unavailability performance criteria and system categorization made if determined that (a)(1) status is warranted, then (a)(1) goals will be established.

Provisions will be made to monitor under 10 CFR50.65 paragraph (a)(2) the reliability performance of the lift function of the containment polar crane. In addition, the (a)(2) reliability performance criteria will be established and approved by the Expert Panel. A reliability historical review will be performed against criteria established and system categorization made. If determined that (a)(1) status is warranted, then (a)(1) goals will be established.

(4) Date When Full Compliance Will Be Achieved

The above actions will be completed by August 30, 1997. At that time, system categorization will be made and, if needed, (a)(1) goals established. Upon completion of the above, Waterford 3 will be in full compliance.