



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

April 28, 2017

LICENSEE: Entergy Operations, Inc.

FACILITY: Waterford Steam Electric Station, Unit 3

SUBJECT: SUMMARY OF FEBRUARY 16, 2017, PUBLIC MEETING WITH ENTERGY OPERATIONS, INC., REGARDING LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATION TABLE 4.3-2 TO RELOCATE ENGINEERED SAFETY FEATURES ACTUATION SYSTEM SUBGROUP RELAYS TO THE SURVEILLANCE FREQUENCY CONTROL PROGRAM (CAC NO. MF8325)

On February 16, 2017, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Entergy Operation, Inc. (Entergy, the licensee) by teleconference. The meeting notice and agenda, dated February 3, 2017, is available in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML17041A176. A list of attendees is enclosed. A list of discussion topics, dated February 10, 2017, is available under ADAMS Accession No. ML17041A173.

During the teleconference, the NRC staff and the licensee discussed a license amendment request (LAR) for Waterford Steam Electric Station, Unit 3 (Waterford 3) to revise the table notation for Technical Specification (TS) Table 4.3-2, "Engineered Safety Features Actuation System [ESFAS] Instrumentation Surveillance Requirements." The LAR was submitted to the NRC by letter dated September 1, 2016 (ADAMS Accession No. ML16245A359). As described in the LAR, the licensee proposed to revise TS Table 4.3-2 to relocate the surveillance frequency of both the new and existing ESFAS relays to the Waterford 3 Surveillance Frequency Control Program (SFCP), following a modification to the relay circuitry, which is planned to be installed pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.59, "Changes, tests and experiments."

The purpose of this teleconference was to hold a followup discussion to a previous public teleconference held on December 8, 2016. The meeting summary for the December 8, 2016, teleconference is available under ADAMS Accession No. ML16364A290. From the previous discussion of the LAR, the NRC staff developed a request for additional information (RAI) pertaining to the proposed amendment. This RAI was issued on December 27, 2016 (ADAMS Accession No. ML16354A105) and the licensee subsequently issued a response by letter dated January 26, 2017 (ADAMS Accession No. ML17039A909).

The teleconference on February 16, 2017, discussed additional questions related to the licensee's response to Questions No. 1 and No. 5b of the issued RAI dated December 27, 2016. In the RAI, the licensee was asked to demonstrate that the surveillance frequency of the relays in the proposed design will meet the surveillance and testability requirements of 10 CFR Part 50, Appendix A, General Design Criterion 21, "Protection system reliability and testability," and Institute of Electrical Electronics Engineers (IEEE) 279-1971, "Criteria for Protection Systems for Nuclear Power Generating Stations," or to justify an exception for these requirements via the criteria outlined in Regulatory Guide 1.22, "Periodic Testing of Protection

System Actuation Functions,” Section D.4. In addition to the information provided in the response to this RAI dated January 26, 2017, the licensee and NRC staff discussed the following questions:

1. Which is the “other relay” and why will it be mispositioned? Has it happened earlier?
2. Explain the operation of the main steam isolation signal and containment spray actuation signal isolation valves. Are both solenoids (SV-1A and SV-2A) required to actuate the isolation valves?
3. Is it possible to test the relays by using the manual trip switch in each of the subgroup relays? Explain why the existing manual trip switch cannot be used for testing.
4. What are the results of previous tests that were conducted during cold shutdown when the reactor was not operating?
5. How many tests were conducted to confirm actuation of the actuating relays for the isolation valves and how many were successful on the first try? How do you verify the actuation of the relays?
6. If there were any failures of the actuation relays, then was their root cause determined and fixed? If so, provide a brief reason for failure and the fix.
7. Were there any trips that were caused by inadvertent relay operation? If so, provide a brief reason and describe the fix.
8. If sufficient data is not available for Waterford 3, then supplemental data from other plants with similar logic is acceptable.

In response to Question 1, the licensee stated that the proposed relay configuration included two relays, and that “other relay” referred to the relay, which was not undergoing testing at the time. For question 2, the licensee responded that both solenoid valves are required to operate the valve. In response to Question 5, the licensee responded that actuation of the relays was confirmed by operation of the corresponding valve. If the valve does not operate, it is not directly apparent which component failed. If the valve does not operate, the plant enters into a troubleshooting procedure to determine which component has failed.

For the remainder of the questions, the licensee agreed to obtain the information and submit it to NRC as a supplement to the original LAR dated September 1, 2016. This supplement was submitted to NRC on February 27, 2017 (ADAMS Accession No. ML17058A460).

No regulatory decisions were reached at this meeting. No member of the public called in to listen or provide comments to the staff after the business portion of the meeting and, thus, no Public Meeting Feedback forms were received.

Please direct any inquiries to me at 301-415-1390 or [April.Pulvirenti@nrc.gov](mailto:April.Pulvirenti@nrc.gov).

*April L. Pulvirenti*

April Pulvirenti, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosures:  
List of Attendees

cc w/enclosure: Distribution via Listserv

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**ADAMS Accession No.: ML17107A132**

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	NRR/DORL/LPL4/BC	NRR/DORL/LPL4/PM
NAME	APuvirenti	PBlechman	RPascarelli	APuvirenti
DATE	04/26/17	04/25/17	04/27/17	04/28/17

**OFFICIAL RECORD COPY**

LIST OF ATTENDEES

FEBRUARY 16, 2017, PUBLIC MEETING

WITH ENTERGY OPERATIONS, INC.

REGARDING REVISION OF TECHNICAL SPECIFICATION TABLE 4.3-2

FOR WATERFORD STEAM ELECTRIC STATION, UNIT 3

U.S. Nuclear Regulatory Commission

Robert Pascarelli, Branch Chief  
April Pulvirenti, Project Manager  
Gursharon Singh, Electronics Engineer  
Peter Snyder, Reactor Systems Engineer

Entergy Operations, Inc.

Miguel Barreto, Engineering  
Chris Bergeron, Systems Engineering  
Victor Collins, Project Support  
Jessica Dedrick, Regulatory Assurance  
Tom Drews, System Engineering  
John Jarrell, Regulatory Assurance  
William McKinney, Systems Engineering  
Michael Peno, Project Support  
Maria Zamber, Regulatory Assurance

Public

None