



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

August 31, 2015

LICENSEE: Entergy Operations, Inc.  
FACILITY: Waterford Steam Electric Station, Unit 3  
SUBJECT: SUMMARY OF AUGUST 11, 2015, MEETING WITH ENTERGY OPERATIONS, INC. TO DISCUSS MAIN CONTROL ROOM ABANDONMENT REGARDING THE NATIONAL FIRE PROTECTION ASSOCIATION 805 LICENSE AMENDMENT REQUEST (TAC NO. ME7602)

On August 11, 2015, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of Entergy Operations, Inc. (Entergy, the licensee), at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of the meeting was to discuss with Entergy staff its proposed method for estimating the change in risk associated with fires that might result in main control room (MCR) abandonment on loss of habitability and loss of control for the Waterford Steam Electric Station, Unit 3 (WF3). This public meeting was in response to an NRC request for additional information (RAI) that was sent to Entergy on July 21, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15197A229). A list of attendees is enclosed.

The meeting notice and agenda, dated July 27, 2015, are available in ADAMS at Accession No. ML15222A541. The licensee presented information is available in ADAMS at Accession No. ML15222A347.

The licensee's presentation consisted of addressing each of the bullet points on the slides and discussing the layout and proximity of the MCR and the remote shutdown panel (RSP).

The first notable discussion between the NRC and licensee staff was held concerning slide 5, which is the layout of the MCR and RSP locations. The NRC staff requested the licensee to address if the MCR/cable spreading room (CSR) fire area is the only III.G.3 fire area at WF3. The licensee confirmed that the MCR/CSR is the only III.G.3 fire area in the plant.

A discussion centered on the conditions for which the licensee would abandon the MCR, in the event of a CSR fire. The licensee clarified that a fire in the CSR could lead to the abandonment of the MCR per WF3 procedures. Any time the WF3 shift manager determines that reactor control is lost due to a fire, the WF3 MCR is abandoned and command and control is transferred to the RSP.

The NRC staff then requested the licensee to address how it identified the Variances from Deterministic Requirements (VFDRs) for the MCR. The licensee explained that it identified VFDRs within the MCR/CSR based on the deterministic separation criteria in National Fire Protection Association 805 (e.g., separated by a 3-hour barrier, 1-hour barrier with automatic detection and suppression, etc.). This is the same approach used when identifying VFDRs in

the rest of the plant. The licensee discussed its extensive RSP that can control the plant to bring it to cold shutdown, transfer control back to MCR for cold shutdown, or stay at hot shutdown. In the situation where control is transferred away from the MCR, most of the VFDRs are no longer applicable. The NRC staff commented that this approach is appropriate for WF3.

The NRC staff inquired about the fire suppression systems in the cable spreading room. The licensee stated that the fire suppression was water-based, and carbon dioxide (CO<sub>2</sub>) type systems are not used that could harm relay room habitability.

The licensee discussed the time determinations on slide 10 of the presentation, specifically detailing the 15 minutes used to decide to abandon the MCR, followed by the 30 minutes needed to take control of the shutdown equipment. The licensee stated that the times are based on starting emergency feedwater before the reactor core is uncovered. The NRC staff requested that the licensee include some of this discussion on timing in the RAI response.

The final discussions related to previous RAIs that were issued to the licensee – Probabilistic Risk Assessment (PRA) RAI.S04 and PRA RAI.S05. The licensee clarified that once emergency feedwater is established and the RCPs are tripped, the shutdown panel acts like the MCR. For RAI.S04, the NRC requested additional clarification about how human actions related to abandoning the MCR and achieving safe and stable conditions from the RSP are evaluated. The licensee stated that it would clarify whether recovery actions associated with fires in the CSR that do not lead to abandonment are needed, or if the changes in risk can accommodate not including such actions.

The NRC contractor from Pacific Northwest National Laboratories noted two statements provided in the response to PRA RAI.S05, dated March 12, 2015, which appeared to be inconsistent with the description of the licensee's revised approach provided during the meeting. The licensee confirmed that these statements (i.e., "a single failure to implement a procedural step was assumed to lead to core damage" and "[d]ue to the relatively high contribution derived from the operator action assessment the supporting equipment was not explicitly modelled") are no longer correct and stated that the RAI response will be updated to address the contractor's concern.

Members of the public were not in attendance; however, one member of the public was on the telephone bridgeline. No Public Meeting Feedback Forms were received for this meeting.

Please direct any inquiries to me at 301-415-3229 or [Michael.Orenak@nrc.gov](mailto:Michael.Orenak@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Michael D. Orenak". The signature is fluid and cursive, with the first name "Michael" being the most prominent.

Michael D Orenak, Project Manager  
Plant Licensing Branch IV-2 and Decommissioning  
Transition Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure:  
List of Attendees

cc w/enclosure: Distribution via Listserv

LIST OF ATTENDEES

AUGUST 11, 2015, PUBLIC MEETING WITH ENTERGY OPERATIONS, INC.

REGARDING MAIN CONTROL ROOM ABANDONMENT

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

<b>NAME</b>	<b>ORGANIZATION</b>
Michael Orenak	U.S. Nuclear Regulatory Commission (NRC)
Stephen Dinsmore	NRC
David Gennardo	NRC
Alex Klein	NRC
Harold Barrett	NRC
Stacy Rosenberg	NRC
Stephen Koenick	NRC
Garill Coles	Pacific Northwest National Labs (PNNL) (telephone)
William Ivans	PNNL (telephone)
Alan Harris	Entergy Operations, Inc.
John Jarrell	Entergy Operations, Inc.
Mark Thigpen	Entergy Operations, Inc.
Kevin Fitzsimmons	Entergy Operations, Inc.
Douglas Ortego	Entergy Operations, Inc. (telephone)
Jason Hall	Entergy Operations, Inc. (telephone)
Andrew Spotts	Jensen Hughes
John Spargaaren	Jensen Hughes (telephone)
Richard Harris	Arkansas Nuclear One
Andy Ratchford	RDS (telephone)
Ricky Summit	RSC Engineers

Enclosure

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Sincerely,

*/RA/*

Michael D Orenak, Project Manager  
Plant Licensing Branch IV-2 and Decommissioning  
Transition Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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NAME	MOrenak	PBlechman (LRonewicz for)	MKhanna	MOrenak
DATE	8/31/15	8/27/15	8/31/15	8/31/15

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