

## **NRR-DMPSPEm Resource**

---

**From:** Hon, Andrew  
**Sent:** Thursday, March 08, 2018 9:34 AM  
**To:** Turkal, Mark A; Yodersmith, Stephen B  
**Subject:** Brunswick Unit 1 and Unit 2 Request for Additional Information related Human Factors in the MELLLA+ LAR (CACs MF8864 and MF8865, EPID: L-2016-LLA-0009)

In a letter dated November 18, 2015, (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML16343A521), Duke Energy Progress (the licensee) requested the subject amendment to Operating Licenses OLs DPR-71 and DPR-62.

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing your submittal and has determined that additional information is required to complete the review. The specific information requested is addressed below. The proposed questions were discussed by telephone with your staff on March 6, 2018. Your staff confirmed that request for additional information (RAI) was understood and did not include proprietary or security-related information, and agreed to provide a response in 30 days of this request.

The NRC staff considers that timely responses to RAIs help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. Please note that if you do not respond to this request by the agreed-upon date or provide an acceptable alternate date, we may deny your application for amendment under the provisions of Title 10 of the *Code of Federal Regulations*, Section 2.108. If circumstances result in the need to revise the agreed upon response date, please contact me.

**Andy Hon, PE**

*Project Manager (Brunswick Nuclear Plant 1 & 2, Sequoyah Nuclear Plant 1 & 2)*  
*Plant Licensing Branch II-2*  
*Division of Operating Reactor Licensing*  
*Office of Nuclear Reactor Regulation*  
301-415-8480  
OWFN O8H19  
Mail Stop O8G-9a  
[andrew.hon@nrc.gov](mailto:andrew.hon@nrc.gov)

### **Regulatory Basis**

The NRC staff reviews the human performance aspects of LARs using the review guidance in NUREG-1764 Rev. 1, "Guidance for the Review of Changes to Human Actions" (ADAMS Accession No. ML072640413). In accordance with the generic risk categories established in Appendix A to NUREG-1764, the tasks under review are involved in the safety injection sequence and actions involving risk-important systems, and are, therefore, considered "risk important." Due to this risk importance, the NRC staff will perform a "Level One" review, the most stringent of the graded reviews possible under the guidance of NUREG-1764\*.

### **Request For Additional Information**

#### **APHB RAI-1**

The licensee states in Section 10.6 of the LAR:

Consistent with the requirements for the plant-specific analysis as described in the M+LTR, the operator training program and plant simulator will be evaluated to determine the specific changes required. Simulator changes and fidelity validation will be performed in accordance with applicable American National Standards Institute (ANSI) standards currently being used at the training simulator.

The NRC staff typically uses ANSI/ANS 3.5-2009, "Nuclear Power Plant Simulators for Use in Operator Training" as a review tool for training program development.

- (a) Please specify the ANSI standard(s) that the licensee proposes to use at the training simulator.
- (b) If ANSI/ANS 3.5-2009 is not the standard the licensee proposes for the license amendment, briefly explain whether this standard is appropriate.

#### APHB RAI-2

The licensee states in Enclosure 6, Section 10.5.3, "Operator Response" to the LAR (ADAMS Accession No. ML16257A411) that there are no new operator actions and there is no significant reduction in the time for operator actions. In the same section, the licensee states that a "new operator action to require initiation of lowering RPV [reactor pressure vessel] water level within 120 seconds to mitigate ATWS [Anticipated Transient Without Scram] instability events is judged not to impact the PRA."

- (a) Clarify if there are any time-critical operator actions that will be added, deleted, or changed to support the proposed license amendment, including the reduction in time available to complete the action(s).
- (b) If there is reduction in time available for operators to complete the action, justify and provide the process used to validate that all necessary operator actions can be reliably completed within the available time.

\* Note: This assessment of risk is only for purposes of scoping the human factors review and may differ from the licensee's assessment of risk importance or that of other portions of the NRC staff review. This assessment should not be considered as an accurate assessment of risk when compared to other methods, especially those using plant-specific data and NRC-accepted methods of probabilistic risk analysis and human reliability analysis (PRA/HRA).

**Hearing Identifier:** NRR\_DMPS  
**Email Number:** 227

**Mail Envelope Properties** (Andrew.Hon@nrc.gov20180308093300)

**Subject:** Brunswick Unit 1 and Unit 2 Request for Additional Information related Human Factors in the MELLLA+ LAR (CACs MF8864 and MF8865, EPID: L-2016-LLA-0009)  
**Sent Date:** 3/8/2018 9:33:35 AM  
**Received Date:** 3/8/2018 9:33:00 AM  
**From:** Hon, Andrew

**Created By:** Andrew.Hon@nrc.gov

**Recipients:**

"Turkal, Mark A" <Mark.Turkal@duke-energy.com>

Tracking Status: None

"Yodersmith, Stephen B" <Stephen.Yodersmith@duke-energy.com>

Tracking Status: None

**Post Office:**

Files	Size	Date & Time
MESSAGE	4672	3/8/2018 9:33:00 AM

**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**