



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

March 23, 2016

EA-14-094

Mr. Brian D. Boles  
Site Vice President  
FirstEnergy Nuclear Operating Company  
Mail Stop A-DB-3080  
5501 N. State Route 2  
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1 – ONLINE  
REFERENCE PORTAL FOR LICENSE AMENDMENT REQUEST TO ADOPT  
NATIONAL FIRE PROTECTION ASSOCIATED STANDARD 805 (CAC NO.  
MF7190)

Dear Mr. Boles:

By application dated December 16, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15350A314), as supplemented by letters dated February 2 and March 7, 2016 (ADAMS Accession No. ML16033A085 and ML16067A195, respectively), FirstEnergy Nuclear Operating Company (FENOC, the licensee) submitted a license amendment request for the Davis-Besse Nuclear Power Station, Unit No. 1. The proposed amendment requests to adopt National Fire Protection Associated Standard 805 (NFPA 805), "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition (ADAMS Accession No. ML010800360), as an alternative to compliance with existing fire protection program requirements.

To improve the efficiency of the U.S. Nuclear Regulatory Commission (NRC) reviews, the licensees' representatives and the NRC staff have discussed the use of an online reference portal that would allow the NRC staff and contractors limited read-only access to the basis documents and other reference materials cited in the applications. By letter dated December 20, 2011 (ADAMS Accession No. ML113340218), the NRC staff described the requested portal process. The online reference portal would allow the NRC staff to audit basis documents to determine whether the information included in the documents support the application. Documents identified as necessary for analysis of the application will be identified by the NRC staff. The licensee will be formally requested to submit those documents on the NRC docket. Use of the online reference portal is acceptable, as long as the following conditions are met:

- The online reference portal will be password-protected and passwords will be assigned to those directly involved in the review on a need-to-know basis;
- The online reference portal will be sufficiently secure to prevent staff from printing, saving, or downloading any documents; and
- Conditions of use of the online reference portal will be displayed on the login screen and will require concurrence by each user.

The NRC staff would like to request that the portal be populated with the documents listed in the enclosure to this letter. This will help with the preparation for the site audits and increase

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effectiveness of the review prior to the audit. Please provide NRC staff access to the portal and send me the information needed to access the portal, such as username and password, as soon as possible.

The conditions associated with the online reference portal must be maintained throughout the duration of the review process. Please provide written confirmation that FENOC agrees to the terms and conditions set forth in this letter.

If you have any questions, please contact me at (301) 415-1380.

Sincerely,

A handwritten signature in black ink, appearing to read 'Blake Purnell', written in a cursive style.

Blake Purnell, Project Manager  
Plant Licensing Branch III-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-346

Enclosure:

Generic List of SharePoint Portal  
Requested Documents for NFPA 805

cc: Distribution via Listserv

## GENERIC LIST OF SHAREPOINT PORTAL REQUESTED DOCUMENTS FOR NFPA 805

1. National Fire Protection Association (NFPA) Code Deviations and Justifications
2. All applicable Probabilistic Risk Assessment (PRA) Peer Review Reports
3. All site calculations referenced in the License Amendment Request
4. Credited Fire Protection (FP) System and Feature Drawings
  - a. Layout Drawings: fire barriers, installed fire detection and suppression systems, fire areas, fire zones, stairwells, fire doors, fire dampers, etc.
  - b. Piping and Instrumentation Diagrams (P&IDs): FP Water System
  - c. System Descriptions for Fire Suppression, Water Supply, and Detection (including incipient or very early warning fire detection)
  - d. Hydraulic Calculations for Fire Service and Fire Suppression System Water Demand (if used to support non-fire water use in Title 10 of the *Code of Federal Regulations*, paragraph 50.48(c)(2)(vii))
5. Drawings related to systems credited in the Nuclear Safety Capability Assessment (NSCA) as well as those required to fully understand plant response:
  - a. P&IDs: Reactor Coolant System, Main Steam, Main Feedwater, Circulating Water, Service Water, etc.
  - b. Safe Shutdown/NSCA Logic Diagrams (if used)
  - c. Electrical Distribution System One-Lines (alternating current and direct current)
6. Those documents that fulfill the NFPA 805 requirement for "Design Basis Document (DBD)"
  - a. Fire Area Calculations (e.g. Fire Safety Analyses, Fire Risk Analyses, Plant Change Evaluations, Fire Risk Evaluations)
  - b. NSCA Calculation (Safe Shutdown/Circuit Analysis)
  - c. Multiple Spurious Operation Expert Panel Report
  - d. Thermo-hydraulic Analysis serving as the basis for Variance from Deterministic Requirements (VFDR) and recovery action timing
  - e. Evaluation of Recovery Actions for feasibility
  - f. Fire Hazards Analysis (if separate from the fire area calculations)

Enclosure

- g. Non-Power Operation Calculation(s)
  - h. Radioactive Release Calculation(s)
  - i. Pre-fire Plans
7. Fire PRA Calculations
- a. Plant Boundary/Partitioning Methods and Results (TASK 1)
  - b. Component Selection Calculation (TASK 2)
  - c. Cable Selection and Circuit Analysis (TASKS 3, 9, and 10)
  - d. Ignition Frequency Calculation (TASK 6)
  - e. Fire PRA Quantification Calculations (TASK 5) including:
    - i. Seismic Fire Interactions (TASK 13) Methodologies and results (including assumptions)
    - ii. Screening Methodologies and Results (TASKS 4 and 7) (including assumptions)
    - iii. Fire Risk Quantifications (TASK 14) Methodologies and Results (including assumptions)
    - iv. Multi-compartment Screening and Analysis
    - v. Post-fire Human Reliability Analysis Methodologies and Results (including assumptions) (TASK 12)
    - vi. Detailed proposed modification descriptions (Engineering Change Requests/Records) sufficient to comprehend potential impact/improvement to Fire PRA
  - f. NFPA 805 Application Calculation (provides all the delta risk calculations for VFDRs)
  - g. Control Room Risk Calculation
  - h. Uncertainty and Sensitivity Calculations (TASK 15)
    - i. Fire Modeling Calculations used to support the Fire PRA (zone of influence (ZOI), hot gas layer, bounding, detailed fire modeling, etc.)
    - ii. Plant Specific Verification and Validation (V&V) Analysis

- iii. Non-public V&V References (e.g., Electric Power Research Institute (EPRI) Fire Modeling, Generic Treatment)
  - iv. Fire Modeling Assumptions and Calculations performed to support target selection (e.g.; ZOI, secondary fires, transient combustible/ignition sources) including those that deviate from NUREG/CR-6850 (TASKS 8 and 11)
8. Fire Modeling used in the Fire Modeling Performance-based Approach
- a. Plant Specific V&V Analysis performed
  - b. Non-public V&V References (e.g., EPRI Fire Modeling, Generic Treatments)
  - c. Fire Modeling Assumptions and Calculations performed to support Performance-Based Evaluations (e.g., ZOI, secondary fires, transient combustible/ignition sources) considered outside NUREG/CR 6850 Assumptions and Parameters (TASKS 8 and 11)
  - d. Hot Gas Layer Determination Calculations (including assumptions)
9. Fire Protection Program Manual
10. Fire Protection Quality Assurance Program (including FP Structure System Components and FP Features)
11. NFPA 805 Monitoring Program Calculations and Procedures
12. Technical Requirements Manual
13. Updated Final Safety Analysis Report (UFSAR) Changes (including current UFSAR Section 9.5.1, "Fire Protection Program," and Section 7.4, "Systems Required for Safe Shutdown")

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Blake Purnell, Project Manager  
Plant Licensing Branch III-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-346

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**DISTRIBUTION:**

PUBLIC	RidsNrrDraApla Resource
LPL3-2 r/f	RidsNrrDraAfpb Resource
RidsACRS_MailCTR Resource	RidsNrrDraArcb Resource
RidsNrrDorlLpl3-2 Resource	RidsNrrDssStsb Resource
RidsNrrLASRohrer Resource	JRobinson
RidsNrrPMDavisBesse Resource	THilsmeier
RidsRgn3MailCenter Resource	DGarmon

**ADAMS Accession No. ML16075A111**

OFFICE	DORL/LPL3-2/PM	DORL/LPL3-2/LA	DRA/AFP/BC	DORL/LPL3-2/BC (A)	DORL/LPL3-2/PM
NAME	BPurnell	SRohrer	AKlein	JPoole	BPurnell
DATE	3/23/16	3/15/16	3/22/16	3/22/16	3/23/16

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