



~~SECURITY-RELATED INFORMATION~~
~~WITHHOLD FROM PUBLIC DISCLOSURE UNDER 10 CFR 2.390~~

September 21, 2011

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-001

Serial No. 11-308
LIC/CDS/R0
Docket No.: 50-305
License No.: DPR-43

DOMINION ENERGY KEWAUNEE, INC.
KEWAUNEE POWER STATION
LICENSE AMENDMENT REQUEST 250: ADOPTION OF NFPA 805
PERFORMANCE-BASED STANDARD FOR FIRE PROTECTION FOR
LIGHT WATER REACTOR ELECTRIC GENERATING PLANTS (2001 EDITION)

Pursuant to 10 CFR 50.90, Dominion Energy Kewaunee, Inc. (DEK) requests an amendment to Facility Operating License Number DPR-43 for Kewaunee Power Station (KPS). This proposed amendment requests Nuclear Regulatory Commission (NRC) review and approval for adoption of a new fire protection licensing basis which complies with the requirements in 10 CFR 50.48(a), 10 CFR 50.48(c), and the guidance in Regulatory Guide (RG) 1.205, Revision 1 (Reference 1). This amendment request also follows the guidance in Nuclear Energy Institute (NEI) 04-02, Revision 2 (Reference 2).

The transition to the proposed new fire protection licensing basis includes the following high level activities: a new fire safe shutdown analysis; a new Fire Probabilistic Risk Assessment (PRA); and completion of activities required for transitioning the licensing basis to 10 CFR 50.48(c).

As documented in this request, DEK believes that it has met the NRC regulatory requirements for the transition of its fire protection licensing basis, that the license amendment does not present a significant hazards consideration, and that the criteria for a categorical exclusion from the need for an environmental assessment have been met.

Enclosure 1 contains the KPS Transition Report (TR) and its supporting attachments. The TR provides the required technical and regulatory assessments to enable NRC review and approval of the new licensing basis. DEK considers Attachments C, D, G, S, and W of the TR to be sensitive information and requests that these attachments be withheld from public disclosure pursuant to 10 CFR 2.390.

~~ENCLOSURE CONTAINS SECURITY-RELATED INFORMATION~~

Enclosure 1 Attachments C, D, G, S, and W contain security-related information to be withheld from public disclosure in accordance with 10 CFR 2.390. Upon removal of Attachments C, D, G, S, and W, this letter, as provided in Enclosure 2, is decontrolled.

The following provides a summary of the major topics presented in the attachments to the enclosed KPS Transition Report:

- Attachment A – NEI 04-02 Table B-1 - Transition of Fundamental FP Program & Design Elements
- Attachment B – NEI 04-02 Table B-2 – Nuclear Safety Capability Assessment - Methodology Review
- Attachment C – NEI 04-02 Table B-3 – Fire Area Transition
- Attachment D – NEI 04-02 Non-Power Operational Modes Transition
- Attachment E – NEI 04-02 Radioactive Release Transition
- Attachment F – Fire-Induced Multiple Spurious Operations Resolution
- Attachment G – Recovery Actions Transition
- Attachment H – NFPA 805 Frequently Asked Question Summary Table
- Attachment I – Definition of Power Block
- Attachment J – Fire Modeling V&V
- Attachment K – Existing Licensing Action Transition
- Attachment L – NFPA 805 Chapter 3 Requirements for Approval
(10 CFR 50.48(c)(2)(vii))
- Attachment M – License Condition Changes
- Attachment N – Technical Specification Changes
- Attachment O – Orders and Exemptions
- Attachment P – Risk-Informed, Performance-Based Alternatives to NFPA 805
10 CFR 50.48(c)(4)
- Attachment Q – No Significant Hazards Evaluations
- Attachment R – Environmental Considerations Evaluation
- Attachment S – Plant Modifications and Items to be Completed During Implementation
- Attachment T – Clarification of Prior NRC Approvals
- Attachment U – Internal Events PRA Quality
- Attachment V – Fire PRA Quality
- Attachment W – Fire PRA Insights

Pilot plant license amendment requests have been submitted and a series of reviews and observation meetings have occurred as part of the process to transition the industry to NFPA 805. These activities have served to develop a standardized transition process; increase communications between the NRC and transitioning licensees; develop transition lesson learned reports from observation visits; improve Regulatory Guide 1.205 and inspection procedures, provide insights on enforcement discretion, and improve the NEI license amendment request template. In addition, NEI established the NFPA 805 Task Force to ensure successful implementation of RG 1.205. The NEI NFPA 805 Task Force continues to provide the interface between the transitioning plants, the nuclear industry, and the NRC.

The NEI NFPA 805 Task Force, working with the NRC, developed and maintains the Frequently Asked Questions (FAQ) process for obtaining clarifications related to RG 1.205, NEI 04-02, and NFPA 805. Additional information on the FAQ process is provided in Enclosure 1, Section 3.4. Attachment H of Enclosure 1 provides the FAQs that have been reviewed and/or used in this submittal. The FAQ process is an ongoing effort that will continue as more licensees transition. It is expected that additional FAQs will be developed and existing FAQs will be revised as the transition process progresses.

A Fire PRA to support the risk-informed/performance-based change evaluations per Regulatory Positions C.2.2 and C.4.3 of RG 1.205 has been completed. The PRA was developed in accordance with NUREG/CR-6850/EPRI TR-1011989 and is discussed in Enclosure 1, Section 4.5.

In accordance with the guidance in Regulatory Position C.2.2 of Regulatory Guide 1.205, Revision 1, the total risk change associated with pre-transition fire protection program variances meeting the NFPA 805 performance-based approach (via the change evaluation process) was evaluated. Upon completion of the proposed plant modifications, as referenced in the Transition Report Section 4.8.2, the total change in risk associated with the KPS transition to NFPA 805 will be consistent with the acceptance guidelines in Regulatory Guide 1.174.

Variances were identified from the pre-transition fire protection licensing basis. These variances were dispositioned using the NFPA 805 fire modeling and fire risk evaluation processes. Variances were assessed against the quantitative risk acceptance criteria and maintenance of defense-in-depth and safety margin criteria was ensured as described in NEI 04-02 and RG 1.205. The results are summarized in Enclosure 1, Attachment C.

Section 5.4 of the Transition Report discusses the KPS proposed implementation schedule for transitioning KPS to the proposed new fire protection licensing basis. Specifically, implementation of procedure changes, process updates, and training of affected plant personnel listed in Table S-2 of the attached Transition Report will be completed within 180 days after NRC approval of this license amendment request. The plant modifications identified in Table S-1 of the Transition Report will be completed

Enclosure:

1. CD-ROM – Kewaunee Power Station, Transition to 10 CFR 50.48(c) - NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition. [contains 10 CFR 2.390 security-related information to be withheld from public disclosure]
2. CD-ROM – Kewaunee Power Station, Transition to 10 CFR 50.48(c) - NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition. [decontrolled redacted version]

Enclosed with this letter are two CD-ROMs, the first of which contains this submittal's Enclosures, labeled:

Dominion Energy Kewaunee, Inc.
Kewaunee Power Station
License Amendment Request 250
Transition to 10 CFR 50.48(c) - NFPA 805
Performance-Based Standard for Fire Protection for
Light Water Reactor Electric Generating Plants, 2001 Edition

Serial No. 11-308
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The first enclosed CD-ROM contains the following file:

	File Name	Description	File Size	Sensitivity
001	KPS_NFPA_805_LAR_np.pdf	LAR 250	12.83 MB	Security-Related

The second enclosed CD-ROM contains the following file:

	File Name	Description	File Size	Sensitivity
001	KPS_NFPA_805_LAR_p.pdf	LAR 250	4.82 MB	Publicly Available

References:

1. NRC Regulatory Guide 1.205, "Risk Informed, Performance Based Fire Protection for Existing Light-Water Nuclear Power Plants," Revision 1, dated December 2009.
2. Nuclear Energy Institute (NEI) 04-02, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c)," Revision 2, dated April 2008.

Commitments made by this letter:

1. Implementation of the procedure changes, process updates, and training of affected plant personnel identified in Table S-2 of the Transition Report will be completed within 180 days after NRC approval of this license amendment request.
2. The plant modifications identified in Table S-1 of the Transition Report will be completed prior to the end of the first refueling outage following two full operating cycles after NRC approval of this license amendment request. Alternatives to the proposed modifications may be implemented, such as revisions to the modification scope or application of NFPA 805 PB-RI methods, consistent with the NRC approved licensing basis. Appropriate compensatory measures will be implemented and maintained in place until these modifications are complete.

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