

FAQ TEMPLATE

Plant: D. C. Cook FAQ # 06-0011-III.G.3 Transition - Rev. 1b
Submittal Date: 02-15-07
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Distribution: Check all that apply (*NEI Internal Use*)

FPWG RIRWG NSSS OG NFPA 805 TF

Subject:

Interpretation of guidance? *Yes*

Proposed new guidance not in NEI 04-02? *Yes*

Details:

NEI 04-02 Guidance needing interpretation (include section, paragraph number, and line number):

NEI 04-02, Appendix B, Section B.2.2., (Page B-7, last paragraph)

Circumstances requiring guidance interpretation or new guidance:

The subject of transitioning Appendix R III.G.3/III.L areas is discussed in Section B.2.2 of NEI 04-02. However, the wording is not entirely clear. Confusion exists with regard to transitioning the areas as deterministic or performance-based. Clarification is requested regarding the transition of areas that currently comply with Section III.G.3 of Appendix R (with or without associated engineering evaluations and exemptions) to NFPA 805 as well as the need for a change evaluation.

Detail contentious points if licensee and NRC have not reached agreement:

N/A

Potentially relevant existing FAQ numbers:

FAQ 06-0012 addresses recovery actions which require change evaluations.

Future FAQ 07-xxxx addresses evaluation of risk impact of recovery actions

Response Section

Proposed Resolution of FAQ and the basis for the proposal:

Revise NEI 04-02, Section B.2.2 to address the transition of III.G.3 areas using both the deterministic and performance-based approaches. Deterministic methods can be utilized under the performance based approach as identified in Sections 2.2.e and 4.2.2 of NFPA 805. This combined type of approach is considered to be the most common method for transitioning these types of areas as many of them have existing engineering equivalency evaluations and exemptions/deviations which will remain part of the licensing basis going forward (allowed under the deterministic approach in accordance with Section 2.2.7 of NFPA 805). Previous analysis has demonstrated the ability to achieve the nuclear safety performance criteria for these areas. Therefore, if no changes to the compliance strategy are made, then a risk-informed, performance based change evaluation is not required until post-transition changes occur. Therefore, no further evaluation is necessary and the area shall be deemed to satisfy “Defense-in-Depth” and “Safety Margin” requirements of Sections 2.4.4.2 and 2.4.4.3 of NFPA 805. If no changes were made, an uncertainty analysis is also not required per 10 CFR 50.48(c)(2)(iv).

It should be noted that it is expected that licensees transitioning to an NFPA 805-based Fire Protection Program will be developing a plant specific fire PRA (ref. RG 1.205) and the risk presented by the use of recovery actions in these areas will be determined as part of this effort (See section B.2.2.4)

If appropriate, provide proposed rewording of guidance for inclusion in next revision.

Revise NEI 04-02, Section 4.3.2 (second paragraph) to state the following:

The deterministic branch of Figure 2.2 of NFPA 805 recognizes the new fire protection licensing basis may include components of the existing plant Fire Protection Program (including approved exemptions / deviations, and correctly implemented 10 CFR 50.59 and Fire Protection Regulatory reviews) that can be shown to comply with Chapters 1, 2 and 4. This would be considered compliance with deterministic compliance in NFPA 805 Chapter 4. Otherwise, additional Fire Protection Regulatory reviews may be used to demonstrate equivalence. (Note that exemptions/deviations, engineering equivalency evaluations, etc. can also be credited when transitioning an area under the performance-based branch of Figure 2.2 of NFPA 805 as deterministic methods can be utilized under the performance based approach (see Section 4.2.2 of NFPA 805.)

Revise NEI 04-02, Section B.2.2 (second paragraph) to state the following:

Transition of a fire area that is governed by Sections III.G.3/III.L of 10 CFR 50 Appendix R (or applicable sections of NUREG-0800) will be performed using both deterministic and performance-based approaches. Deterministic methods can be utilized under the performance-based approach as identified in Sections 2.2(e) and 4.2.2 of NFPA 805. This combined type of approach is considered to be the most common method for transitioning these types of areas as many of them have existing engineering equivalency evaluations and exemptions/deviations which will remain part of the licensing basis going forward (allowed under the deterministic approach in accordance with Section 2.2.7 of NFPA 805). Previous analysis has demonstrated the ability to achieve the nuclear safety performance criteria for these areas. Therefore, if no changes to the compliance strategy are made, then a risk-informed performance-based change evaluation will not be required until post-transition changes occur. Therefore, no further evaluation is necessary and the area shall be deemed to satisfy “Defense-in-Depth” and “Safety Margin” requirements of Sections 2.4.4.2 and 2.4.4.3 of NFPA 805. If no changes were made, an uncertainty analysis is also not required per 10 CFR 50.48(c)(2)(iv).

It should be noted that it is expected that licensees transitioning to an NFPA 805-based fire protection program will be developing a plant specific fire PRA (ref. RG 1.205) and the risk presented by the use of recovery actions in these areas will be determined as part of this effort (See Section B.2.2.4).

The current licensing basis for an alternative/dedicated shutdown fire area may be more explicit than other fire areas, since many licensees have detailed alternative/dedicated shutdown Safety Evaluation Reports. It may require more detailed documentation to ensure future change evaluations accurately capture the baseline configuration. For example, a dedicated shutdown methodology may credit a unique power source or pump that is not part of the plant’s safety systems or post-fire safe shutdown program. Post-transition changes to this equipment or methodology would need to be accurately captured for assessment of risk impact.