

NFPA 805 Frequently Asked
Questions Program
Public Meeting
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Objective of this presentation

- To present the Fire Protection Branch's version of the FAQ process for NFPA 805 transition to stakeholders
- Receive feedback on draft FAQ process from NEI and other stakeholders
- Hold the first Monthly FAQ meeting

FAQ Program

- Provides a mechanism for resolving interpretation issues concerning NFPA 805 implementation
- Requested by Industry through the NEI
- Emulates the MSPI FAQ program's strengths, but in a regulatory setting

FAQ process results

- The answered FAQs represent NRC staff interpretations of the guidance for licensee transition
- FAQs and their answers may be treated as recommended changes to the endorsed revision of NEI 04-02, or inputs to future RISs
- May be formally adopted by the NRC through a Regulatory Issue Summary or an update of the RG endorsing a new revision of NEI 04-02

Reasons for submitting a FAQ

1. To clarify the guidance for circumstances not anticipated when the current revision of NEI 04-02 was endorsed
2. To clarify the guidance when the licensee and NRC staff do not agree on the meaning or how to apply the guidance to a particular situation
3. To provide guidance for a class of plants whose design or system functions differ from that described in the endorsed revision of NEI 04-02
4. To propose changes to the endorsed revision of NEI 04-02

What the FAQ Program is not

- The FAQ process does not involve:
 - Resolving interpretation issues with any other NRC regulatory document
 - Making licensing or engineering decisions
 - Requesting changes to NFPA 805
- The NFPA 805 FAQ program is not an exact copy of the ROP MSPI FAQ program

Issue identification

- The need for an interpretation of the guidance may be identified by a variety of stakeholders
 - Licensees
 - Vendors
 - Contractors
- It is expected that most requests will come from licensees
 - The rest of this process will refer to FAQ submitters as “licensees”
- FAQs should be submitted as soon as possible once the need is identified

FAQ submittal

- The licensee may submit the FAQ by email to NEI
- Email includes “FAQ” as part of the subject line and provides the name and phone number of a contact person
- FAQs proposed by the NRC will be brought directly to the the FAQ Monthly Meetings

Expeditionousness, completeness and factual agreement

- Licensees and the NRC must work expeditionously and cooperatively in order that issues can be resolved quickly
- Agreement by the Task Force on the factual elements of the FAQ should be achieved prior to submittal at the Monthly FAQ Meeting with the NRC
- The FAQ must:
 - Describe the situation clearly and concisely
 - Be complete and accurate in all respects
- The NRC will provide its alternate view to the licensee for inclusion in the FAQ if agreement cannot be reached on the wording of the FAQ

FAQ format

- See Figure 1 for the template for submitting a FAQ
- It is important that the contact information is provided on the FAQ submission

FAQ content

- The question section of the FAQ should include:
 - The specific wording of the guidance that needs to be interpreted
 - The circumstances involved
 - The specific question
 - The proposed new guidance
 - The applicable section of the NRC endorsed revision of NEI 04-02
- All relevant information should be included and should be as complete as possible
- Incompleteness or omissions will delay the resolution of the FAQ

Proposed FAQ response

- The licensee or NRC also provides a proposed response to the FAQ
- This proposed response should answer the question and provide the basis for the answer
- There must not be any new information presented in the response that was not already discussed in the question
- The proposed response should include wording to revise the applicable section in the next revision of NEI 04-02

Screening of FAQs

- FAQs submitted by licensees are reviewed by NEI and revision to the wording may be requested
- After receipt by NEI, the FAQ is reviewed by the industry's NFPA 805 Task Force
- The Task Force may conclude that the FAQ is without merit and may recommend that the FAQ be withdrawn
- An accepted FAQ is entered into the FAQ log, which includes all resolved and unresolved FAQs
- The log, including the questions and proposed responses, is forwarded to the NRC and industry Task Force members to review

Pilot plant FAQs

- During the pilot phase of the implementation of NFPA 805, FAQs identified at one of the pilot plants can be forwarded directly to the NRC
- After resolution, the NRC may recommend that the information be entered into the FAQ log

Contents of FAQ submissions

- All information in the FAQ log will be publicly available
 - A FAQ must not contain proprietary, classified, or safeguards information
 - If an interpretation is needed on an issue that contains this type of information, the licensee must submit their request to the NRC using the established process for handling such information
- FAQ submissions must conform to the NRC electronic submission guidelines
 - www.nrc.gov/site-help/eie/guid-elec-submission.pdf

Discussion of FAQs (Part 1)

- The FAQ log is reviewed at each NFPA 805 Task Force meeting
- The Task Force and NRC are responsible for achieving a consensus response at the Monthly FAQ Meeting
- The submitter is expected to present and explain the details of its FAQ at the Monthly FAQ Meeting
- Licensee and NRC staff are available to respond to questions posed by the Task Force at Monthly FAQ Meetings

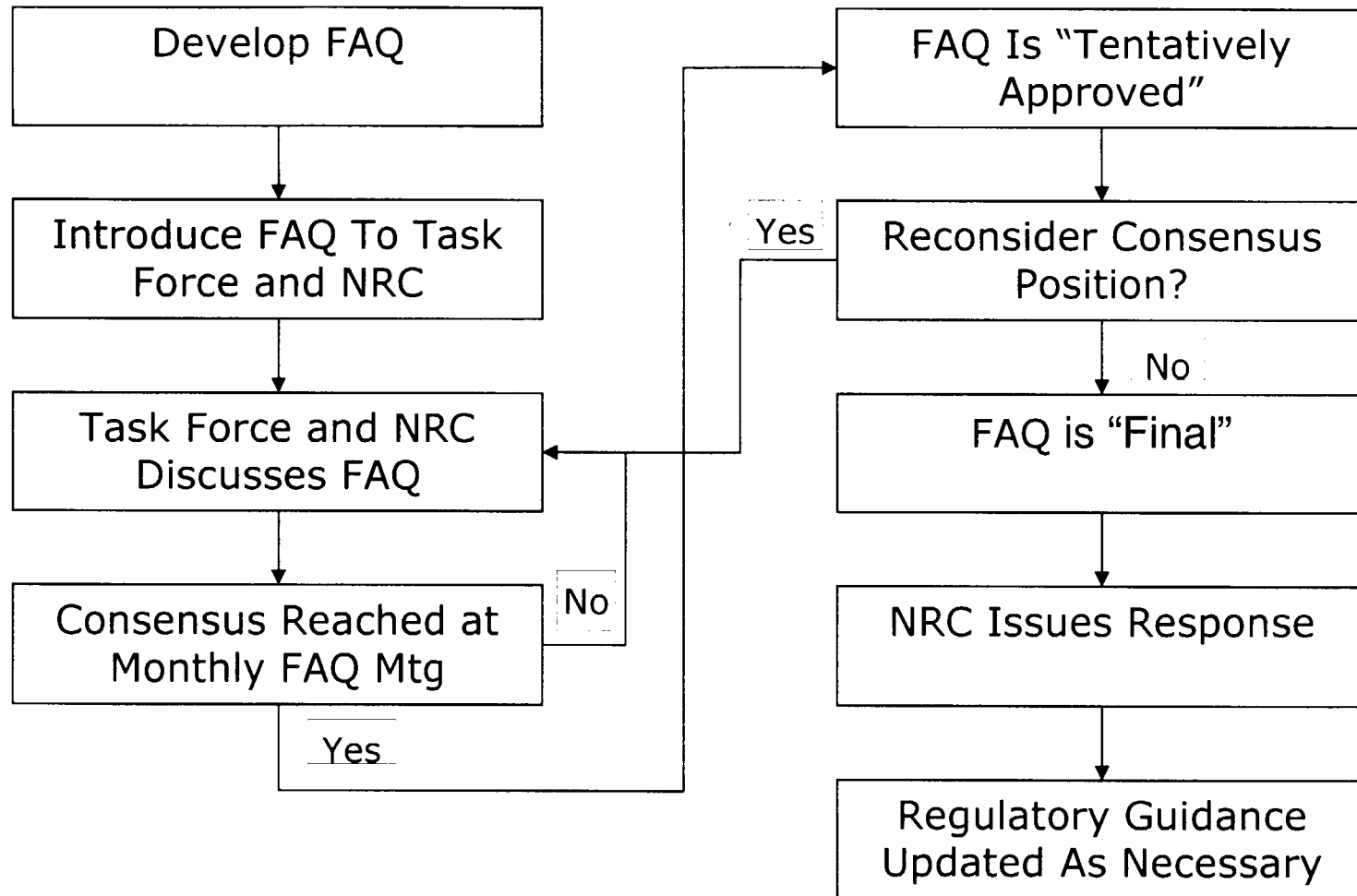
Discussion of FAQs (Part 2)

- Discussion of a new FAQ is deferred to the next monthly meeting, when participants will have had an opportunity to research the issues involved.
- At subsequent meetings, the FAQ will be discussed in detail, until all of the issues have been resolved and consensus has been reached on the response
- The FAQ will then be considered “Tentatively Approved,” and one additional month will be allowed for reconsideration
- At the following meeting, the FAQ becomes “Final,” unless the response is to be reconsidered

Typical FAQ timeline

- Typically, a FAQ is:
 1. Introduced at one Monthly FAQ Meeting
 2. The facts are discussed at the next Monthly FAQ Meeting and a tentative decision reached
 3. The FAQ goes final the following Monthly FAQ Meeting

FAQ process flowchart



Special circumstances

- In some limited cases it is possible for the NFPA 805 Task Force and the NRC to reach immediate consensus and take the FAQ to “Final”
 - No contention
 - Urgent resolution needed
 - The exception
- If consensus cannot be reached in a reasonable timeframe, the NRC will publish its position on the NRC website

Dissemination of FAQ answers

- Once “final”, the FAQs and accepted responses will be posted on the NRC website and treated as recommended revisions to NEI 04-02
- The NRC may also issue a Regulatory Issue Summary to give the response wider distribution

Incorporation of FAQs into 04-02

- At the time of a revision of NEI 04-02, all “final” FAQs will be reviewed for inclusion in the text
- FAQs, including those that were reviewed but not incorporated into the text of NEI 04-02, should be listed in the revision record of the guidance
- The NRC will endorse the revisions to NEI 04-02 in an update to RG 1.205, if acceptable.

NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 805 FREQUENTLY ASKED QUESTIONS PROGRAM

PURPOSE

The Frequently Asked Question (FAQ) process is a mechanism for resolving interpretation issues with Nuclear Energy Institute (NEI) 04-02, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48 (c)." Revision 1 of NEI 04-02 has been endorsed by Regulatory Guide (RG) 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants." The answered FAQs represent U.S. Nuclear Regulatory Commission (NRC) staff interpretations of the guidance for licensee transition to risk-informed, performance-based fire protection.

The FAQs and answers should be treated as an extension of the endorsed revision of NEI 04-02 and may be formally adopted by the NRC through a Regulatory Issue Summary (RIS) or an update of the RG endorsing a new revision of NEI 04-02.

There are several reasons for submitting a FAQ:

- 1. To clarify the guidance for circumstances not anticipated when the current revision of NEI 04-02 was endorsed.*
- 2. To clarify the guidance when the licensee and NRC staff do not agree on the meaning or how to apply the guidance to a particular situation.*
- 3. To provide guidance for a class of plants whose design or system functions differ from that described in the endorsed revision of NEI 04-02.*
- 4. To propose changes to the endorsed revision of NEI 04-02.*

The FAQ process is not the arena in which to resolve interpretation issues with any other NRC regulatory document. The FAQ process is also not used to make licensing or engineering decisions. In addition, this process is not the vehicle for requesting changes to National Fire Protection Association Standard 805 (NFPA 805).

PROCESS

1. Issue identification

The need for an interpretation of the guidance may be identified by a variety of stakeholders (for example licensees, vendors, contractors, etc.). However, it is expected that most requests will come from licensees, so the rest of this process will refer to "licensees" although it is understood that other stakeholders can request interpretations. FAQs should be submitted as soon as possible once the need is identified.

The licensee submits the FAQ by email to NEI. The email should include "FAQ" as part of the subject line and should provide the name and phone number of a contact person. FAQs proposed by the NRC will be brought directly to the NFPA 805 Task Force.

ENCLOSURE

2. Expeditionousness, Completeness and Factual Agreement

It is incumbent on licensees and the NRC to work expeditiously and cooperatively, sharing concerns, questions, and data in order that the issue can be resolved quickly. Where possible, agreement on the factual elements of the FAQ should be achieved prior to submittal. The FAQ must describe the situation clearly and concisely and must be complete and accurate in all respects. If agreement cannot be reached on the wording of the FAQ, the NRC will provide its alternate view to the licensee for inclusion in the FAQ.

3. FAQ Format

See Figure 1 for the template for submitting a FAQ. It is important that the contact information is provided on the FAQ submission.

The question section of the FAQ should include the specific wording of the guidance that needs to be interpreted, the circumstances involved, the specific question, the proposed new guidance, and the applicable section of the NRC endorsed revision of NEI 04-02. All relevant information should be included and should be as complete as possible. Incomplete or omitted information will delay the resolution of the FAQ.

The licensee or NRC also provides a proposed response to the FAQ. This proposed response should answer the question and provide the reasoning for the answer. There must not be any new information presented in the response that was not already discussed in the question. The FAQ should include proposed wording to revise the applicable section in the next revision of NEI 04-02.

4. Screening of FAQs

FAQs submitted by licensees are reviewed by NEI and revision to the wording may be requested. After acceptance by NEI, the FAQ is reviewed by the industry's NFPA 805 Task Force. Additional wording may be suggested to the licensee. In some cases, the task force may conclude that the FAQ is without merit and may recommend that the FAQ be withdrawn. An accepted FAQ is entered into the FAQ log, which includes all unresolved FAQs. The FAQ log is maintained by NEI. The log, including the questions and proposed responses, is forwarded to the NRC and industry task force members to review.

However, during the pilot phase of the implementation of NFPA 805, FAQs identified at one of the pilot plants do not need to be reviewed by the task force, and can be forwarded directly to the NRC. After resolution, the NRC may recommend that the information be entered into the FAQ log.

All information in the FAQ log will be publicly available. That is, a FAQ must not contain proprietary, classified, or safeguards information. If an interpretation is needed on an issue that contains proprietary, classified, or safeguards information, the licensee should

submit their request to the NRC using the established process for handling such information. FAQ submissions must also conform to the NRC electronic submission guidelines as seen online: www.nrc.gov/site-help/eie/guid-elec-submission.pdf.

5. Public Meeting Discussions of FAQs

The FAQ log is reviewed at each NFPA 805 task force meeting or teleconference, and the task force is responsible for achieving a consensus response, if possible. In most cases, the licensee or NRC is expected to present and explain the details of its FAQ. Licensee and NRC staff are usually available (at the meeting or by teleconferencing) to respond to questions posed by the task force.

The new FAQ is introduced by the licensee or NRC to ensure the task force understands the issues, but discussion of the FAQ is usually deferred to the next meeting, when participants will have had an opportunity to research the issues involved. At subsequent meetings, the FAQ will be discussed in detail, until all of the facts have been resolved and consensus has been reached on the response. The FAQ will then be considered "Tentatively Approved," and one additional month will be allowed for reconsideration. At the following meeting, the FAQ becomes "Final." Typically, a FAQ is introduced one month; the facts are discussed for another month and a tentative decision reached; and it goes final the following month.

In some limited cases (involving an issue with no contention and where exigent resolution is needed), it is possible for the NFPA 805 Task Force to reach immediate consensus and take the FAQ to "Final"; however, this will be the exception.

If consensus cannot be reached in a reasonable timeframe, the NRC will publish its position on the NRC website.

6. Incorporation of FAQs

Once approved by NRC, the FAQs and accepted response will be posted on the NRC website and is treated as an extension of NEI 04-02. The NRC may also issue a Regulatory Issue Summary to give the response wider distribution.

At the time of a revision of NEI 04-02, "final" FAQs will be reviewed for inclusion in the text. These FAQs will then be placed in an "archived" file. The archived FAQs are for historical purposes and are not considered to be part of NEI 04-02. The NRC will endorse the revisions to NEI 04-02 in an update to RG 1.205, if acceptable.

FAQs, including those that were reviewed but not incorporated into the text of NEI 04-02, will be listed in the revision record of the guidance.

Figure 1
FAQ TEMPLATE

FAQ Number: _____

Plant: _____

Submittal Date: _____

Submitter Contact: _____

Tel/email: _____

Subject:

Interpretation of guidance? Yes / No

Proposed new guidance not in NEI 04-02? Yes / No

Details:

NEI 04-02 guidance needing interpretation (include section, paragraph, and line numbers as applicable):

Circumstances requiring guidance interpretation or new guidance:

Detail contentious points if licensee and NRC have not reached consensus on the facts and circumstances:

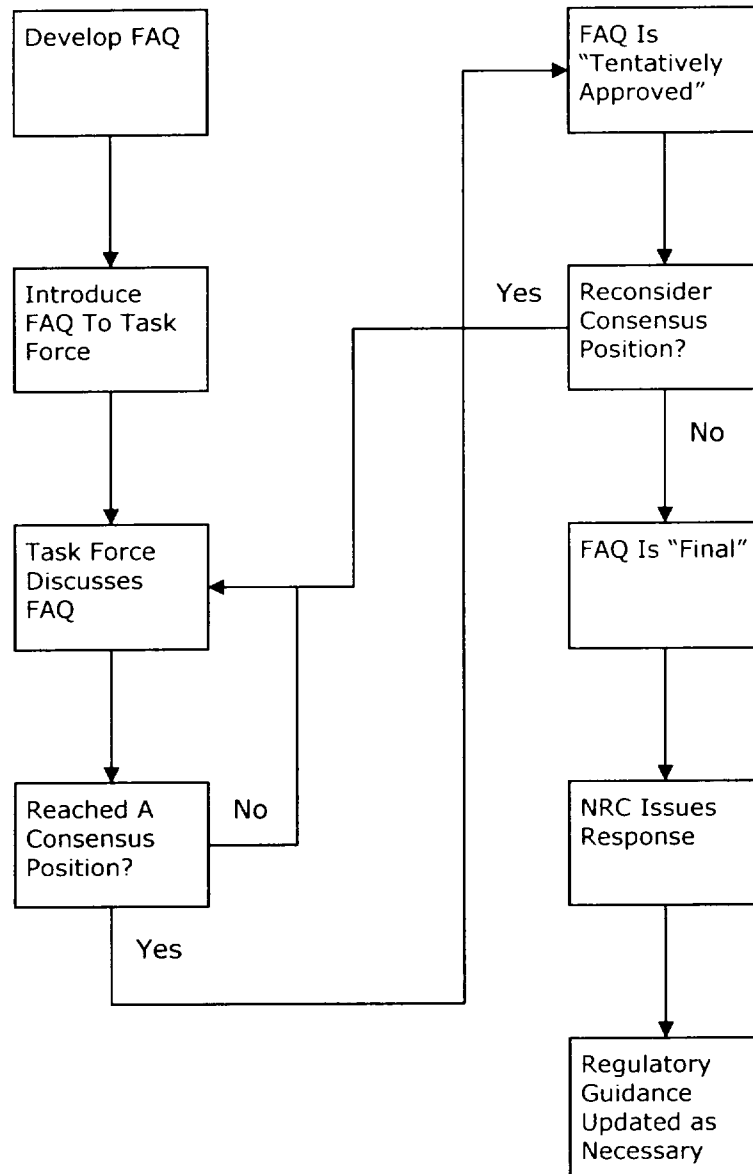
Potentially relevant existing FAQ numbers:

Response Section:

Proposed resolution of FAQ and the basis for the proposal:

If appropriate, provide proposed rewording of guidance for inclusion in the next Revision:

Figure 2
FAQ FLOWCHART



FAQ 06-0001

Question: Provide clarification of manual actions that may be credited without NRC review and approval for III.G.1 and III.G.2 protection and what constitutes prior NRC approval of OMAs.

Response: Reliable and feasible OMAs may be credited for the fire-affected redundant train without NRC approval (if III.G.1 or III.G.2 protection is provided). OMAs credited for the protected train must be approved by the NRC via the exemption process (10 CFR 50.12) for Appendix R plants or demonstrated to be acceptable by the plant change evaluation process under the NFPA 805 license using performance-based methodologies.

Implicit or explicit acceptance in the SER does not constitute compliance for an Appendix R plant. However, OMAs explicitly accepted in the SER may be submitted as exemptions citing the special circumstances of section 50.12(a)(2)(ii), citing the SER as the safety basis, and confirming that the safety basis established in the SER remains valid. It is expected that in these circumstances, the staff will grant the exemption without further review.

FAQ 06-0002

Question: Propose change to screening process such the NFPA 805 Chapter 4 evaluation is performed first to establish the need for Chapter 3 compliance

Response: The proposed approach is correct. However, NEI 04-02 must make clear the distinction between Chapter 3 requirements that are subject to Chapter 4 evaluation versus the Chapter 3 requirements that are independent of Chapter 4 (e.g., fire water supply requirements of Section 3.5 of NFPA 805).

FAQ 06-0003

Question: In the Preliminary Risk Screening process, change "greater than minimal" to "potentially greater than minimal" and include risk factor decreases.

Response: Staff agrees with proposed changes

FAQ 06-0004

Question: Similar to FAQ 06-0002, but proposes allowing a RI/PB change evaluation in lieu of a license amendment for a fire barrier that does not comply with Chapter 3 requirements. This FAQ also proposes a risk acceptance criteria of 1E-06/yr for CDF, etc.

Response: A license amendment would be required (unless the license condition specifically permits this approach) for the fire barrier deviation. Risk acceptance criteria and associated actions should be in accordance with RG 1.205.

See staff comments on NEI 04-02, Draft Rev 2 (February 2006) text (handout). Changes made by NEI were electronically accepted and staff insertions, deletions and comments were made to the "changes accepted" text. In general, where no comments or changes are made by the NRC, the changes made by NEI are acceptable to the staff.

FAQ 0001

The information for operator manual actions that should be included in the summary for the fire area is: 1) whether the operator manual actions were previously reviewed and approved by the NRC's Office of Nuclear Reactor Regulation (NRR), and 2) reference to documentation that demonstrates prior review and approval by the NRC. In some cases the previous approval may not be necessary or may not be obvious, yet should be allowed. Examples are:

- The operator manual action is currently credited in the Alternative Shutdown Procedure. Although this manual action was NOT specifically mentioned in the SER, the licensee submittal specifically discussed the methodology to be used to shut down. The action(s) is/are feasible and reliable and meet the 10 CFR 50 Appendix R, Section III.L criteria. This can be considered previously approved.
- Operation of equipment for which cables and equipment for the redundant safe shutdown train are located in separate fire areas thus meeting Section III.G.1 of 10 CFR 50, Appendix R (or applicable sections of NUREG-0800). See Figure B-4.
- Operation of fire affected equipment in fire areas that meet the protection requirements of Section III.G.2 of 10 CFR 50, appendix R (or applicable sections of NUREG-0800) for redundant trains. See Figure B-5.
- Manual operation of normally operated manual switches and valves where 10 CFR 50, Appendix R, Section III.G.1 separation is provided for redundant safe-shutdown trains

Repairs credited for cold shutdown equipment may also be transitioned on a fire area basis.

Information that should be summarized includes reference to documentation that demonstrates the equipment necessary for the repair is staged, the repair is proceduralized, and the repair is achievable in the necessary timeframe.

Operator manual actions that have been previously reviewed and approved by the NRC can be transitioned without the need to use the change evaluation process. However, licensees may consider the use of the change evaluation process for previously reviewed and approved operator manual actions so that the evaluation is consistent with operator manual actions not previously reviewed and approved by the NRC.

Comment: For pre-1979 licensees, operator manual actions that are used in lieu of the protection required by III.G.2 require prior approval through an exemption. For pre-1979 licensees, a staff decision in a safety evaluation report (SER) that approves the use of operator manual actions, in lieu of one of the protection specified in III.G.2, does not eliminate the need for an exemption and does not show prior approval.

For post-1979 licensees, those plants are not required to meet the requirements of III.G.2, and therefore a staff decision in an SER that approves the use of manual operator actions does not require an exemption.

Deleted: The operator manual action is currently credited in Non-Alternative Shutdown Procedure. The manual action was specifically discussed as acceptable in the SER however the NRC did not grant an exemption/deviation. This can be considered previously approved.

Comment: As above

Deleted: The operator manual action is currently credited in Non-Alternative Shutdown Procedure. The manual action was specifically discussed in the Licensee submittal however; it is not mentioned in the SER. This can be considered previously approved.

Comment: These areas must include detection and suppression, as well as separation, when required by III.G.2. Note that this change (replace "separation" with "protection") must also be made to the description under Figure B-5.

Deleted: separation

5.3.3 Preliminary Risk Screening

Once the definition of the change is established, a screening is then performed to identify and resolve minor changes to the fire protection program. This screening is consistent with fire protection regulatory review processes in place at nuclear plants under traditional licensing bases. This screening process is modeled after the NEI 02-03 process. This process will address most administrative changes (e.g., changes to the combustible control program, organizational changes, etc.).

The characteristics of an acceptable screening process that meets the "assessment of the acceptability of risk" requirement of Section 2.4.4 of NFPA 805 are:

- The quality of the screen is sufficient to ensure that greater than minimal risk increases receive detailed risk assessments appropriate to the level of risk.
- The screening process must be documented and be available for inspection by the NRC.
- The screening process does not pose undue evaluation or maintenance burden.

If any of the above is not met, proceed to Section 5.3.4 Risk Evaluation.

Appendix I contains an example of a screening process. The screening process is divided into assessing if the change is trivial (Sections 1.a, 2.a, 3.a) and performing a risk screen in Section 4.0. The risk screen identifies and documents the factors that contribute to the risk associated with the change. In general, these factors include changes in: a) frequency of all fire scenarios which are affected by the change, b) magnitude of expected fires, c) detection capability, d) suppression capability, and e) post-fire capability of plant systems to prevent damage to the core, including any required recovery actions.

The impact of the plant change on each of these factors can be evaluated (either qualitatively or quantitatively) and categorized as: "no" impact, "minimal" impact or "potentially greater than minimal" impact. The nature of the change would enable a licensee to choose among the three categories. A licensee may refer to their IPEEE, the fire protection SDP, or other documents to determine whether the change could have "minimal" or "potentially greater than minimal" impact. The licensee should document the basis for the conclusion. For those changes that do not meet the screening criteria a more detailed Risk Evaluation is required.

If a plant change could cause a "potentially greater than minimal" impact with respect to more than one of the above factors, or could result in a common cause impact on more than one of the above factors, i.e., (a) frequency of all fire scenarios which are affected by the change, b) magnitude of expected fires, c) detection capability, d) suppression capability, and e) post-fire capability of plant systems to prevent damage to the core), including any required recovery actions, licensees are encouraged to perform risk assessments of the more detailed, quantitative variety.

The preliminary risk screening and risk evaluations should also identify decreases in risk that are associated with the change. Depending upon the nature and magnitude of the decrease, consideration should be given to updating the risk model to account for the decrease.

NUCLEAR SAFETY COMPLIANCE STRATEGY CHANGE QUESTIONS

Considering the proposed change, answer the following questions, including a reference to the applicable regulatory, licensing basis, or NFPA document(s), and a brief description of why the proposed change does or does not satisfy the referenced document(s).

1. Does the proposed change involve a **Nuclear Safety Compliance Strategy** requirement as defined in [Insert appropriate document reference]?

- ☐ Yes – Proceed to Question 1.a.
- ☐ No – Document basis and proceed to Question 2.

a. Is the change editorial or trivial in nature? (See Attachment 1)

- o ☐ Yes Document basis and stop.
- o ☐ No Proceed to Question 1.b.

b. Does the change meet the deterministic requirements of Chapter 4 of NFPA 805?

- o ☐ Yes Document basis and complete remaining sections.
- o ☐ No Proceed to Question 1.c.

c. Is the change equivalent to the NFPA 805 Chapter 4 compliance strategy as defined in [Insert appropriate document reference]? Ensure documentation for determination of equivalency is included and meets NEI 04-02 requirements for documentation.

- o ☐ Yes Document basis and complete remaining sections.
- o ☐ No Perform a Risk Evaluation.

Changes to Fire Protection Program Fundamental element / minimum design requirements that are required for compliance or to meet the Nuclear Safety Performance Criteria must be evaluated in Section 3.

Comment: There are some specific requirements in Chapter 3 that may not be changed without a license amendment (or self approval process, if included in the approved license condition), even if the methodologies of Chapter 4 demonstrate that the change is acceptable based on risk, DID and SM (e.g., fire water supply volume requirements of 3.5.1). Changes to these requirements may not be screened at this stage. This comment also applies to Step 2.

- e. Does the proposed change impact the POST-FIRE CAPABILITY OF PLANT SYSTEMS, INCLUDING HUMAN ACTIONS, TO PREVENT CORE DAMAGE (including fire affected human actions) during any mode of operation for any fire scenarios affected by the change?
- ☐ No Impact
 - ☐ Minimal Impact
 - ☐ Potentially Greater than minimal

- f. Do any of the risk screening questions have "Potentially greater than minimal" impact, then a detailed quantitative risk evaluation may be required.
- ☐ No. The Fire Protection Program Plant change meets the risk-informed acceptance criteria of NFPA 805 Section 2.4.4.
 - ☐ Yes, a detailed quantitative risk evaluation is required.

Note: Changes that clearly decrease risk should be identified during the review for potential updates to the risk model.

5.3.3 Preliminary Risk Screening

Appendix I contains an example of a screening process. The screening process is divided into assessing if the change is trivial (Sections 1.a, 2.a, 3.a) and performing a risk screen in Section 4.0. The risk screen identifies and documents the factors that contribute to the risk associated with the change. In general, these factors include changes in: a) frequency of all fire scenarios which are affected by the change, b) magnitude of expected fires, c) detection capability, d) suppression capability, and e) post-fire capability of plant systems to prevent damage to the core, including any required recovery actions.

The impact of the plant change on each of these factors can be evaluated (either qualitatively or quantitatively) and categorized as: “no” impact, “minimal” impact or “potentially greater than minimal” impact. The nature of the change would enable a licensee to choose among the three categories. A licensee may refer to their IPEEE, the fire protection SDP, or other documents to determine whether the change could have “minimal” or “potentially greater than minimal” impact. The licensee should document the basis for the conclusion. For those changes that do not meet the screening criteria a more detailed Risk Evaluation is required.

If a plant change could cause a “potentially greater than minimal” impact with respect to more than one of the above factors, or could result in a common cause impact on more than one of the above factors (a) frequency of all fire scenarios which are affected by the change, b) magnitude of expected fires, c) detection capability, d) suppression capability, and e) post-fire capability of plant systems to prevent damage to the core, including any required recovery actions), licensees are encouraged to perform risk assessments of the more detailed, quantitative variety.

The preliminary risk screening and risk evaluations should also identify decreases in risk that are associated with the change. Depending upon the nature and magnitude of the decrease, consideration should be given to updating the risk model to account for the decrease.

[See response to FAQ HNP-06-002 for change to Step 4.0.e of Appendix I.]

5.3.2.4 Relationship of NFPA 805 Chapters 4 and 3 – Required Systems

It is important to note that there is overlap between the Fundamental Program Elements and Minimum Design Requirements in NFPA 805 Chapter 3 and the protection strategies defined in Chapter 4 of NFPA 805, particularly for fire protection features relied upon to satisfy the nuclear safety criteria of Section 4.2 of NFPA 805. In cases where NFPA 805 Chapter 4 specifies separation or protection methods and Chapter 3 discusses minimum design requirements for the methods, care must be taken to understand whether or not risk-informed, performance-based methods can be used. Examples and clarifications include the following:

- Section 3.11.5, Electrical Raceway Fire Barrier Systems, provides requirements for “ERFBS required by Chapter 4”. The requirements are deterministic in nature and are intended to apply to barriers meeting the Chapter 4 deterministic criteria. If a barrier relied upon for meeting nuclear safety criteria is found not to meet the requirements of Section 3.11.5, then a License Amendment Request is required.
- Note that several sections of NFPA 805, Chapter 3 specify requirements for systems/features that are required to meet the performance-based or deterministic requirements of Chapter 4 (Appendix B-1 provides guidance to determine which fire protection systems are ‘required’ by NFPA 805 Chapter 4.) These limitations are provided in the following sections of NFPA 805:
 - 3.8.2 – Detection
 - 3.9.1 – Automatic and Manual Water-Based Fire Suppression Systems
 - 3.10.1 – Gaseous Fire Suppression Systems
 - 3.11.2 – Fire Barriers
 - 3.11.3 – Fire Barrier Penetrations
 - 3.11.4 – Through Penetration Fire Stops
 - 3.11.5 – Electrical Raceway Fire Barrier Systems (ERFBS)

Since many of the fire protection systems/features in NFPA 805 Chapter 3 are the result of meeting the Chapter 4 performance criteria, the change review process should determine the Chapter 4 requirements first in the change identification process.

Comment: This section should note that there are two general classes of Chapter 3 requirements – those that are determined by Chapter 4 and those that are required whether or not the Chapter 4 evaluation shows that they are needed to meet the performance goals. An example of the latter is the requirement for the capacity of the fire water supply. A licensee whose fire water supply does not meet either of the two requirements of Section 3.5.1 of NFPA 805 must submit the change evaluation for NRC review and approval via a license amendment request. This section of NEI 04-02 should include other examples of both types of requirements.

Deleted: the

Deleted: acceptance criteria in

Comment: Section 3.11.5 requires that the ERFBS be tested in accordance with and meet the acceptance criteria of GL 86-10, Supplement 1. If the required ERFBS does not comply with this requirement, a license amendment is required in accordance with 10 CFR 50.48(c). However, in accordance with RG 1.205, the licensee's license condition may include an approved methodology and acceptance criteria for deviating from the requirements of 3.11.5.

It is important that this section of NEI 04-02 clarify the Chapter 3 to 4 relationship with respect to the required rating of fire barriers, including ERFBS. GL 86-10, Supplement 1 only recognizes 1-hour and 3-hour barriers. Consequently, it is not clear from 3.11.5 that a 2-hour barrier, for example, that meets the test and acceptance criteria of Supplement 1 is allowed without a license amendment (or license condition provision). However, since NFPA Sections 3.11.2 and 3.11.3 indicate that the fire resistance rating of barriers and penetrations should be as determined by the performance requirements established by Chapter 4, the intent of the standard appears to be that the required rating of the ERFBS ... [1]

Deleted: risk-informed, performance-based change evaluation in accordance with Section 2.4.4 of NFPA 805 is appropriate to assess impact on the nuclear safety capability, rather than a

Deleted: for approval

Comment: It is not clear what the purpose of this bullet is. It could be argued that all of the requirements of Chapter 3 are considered necessary to meet the performance-based or deterministic requirements of Chapter 4. Consequently this bullet appears to confuse the issue rather than clarify it.

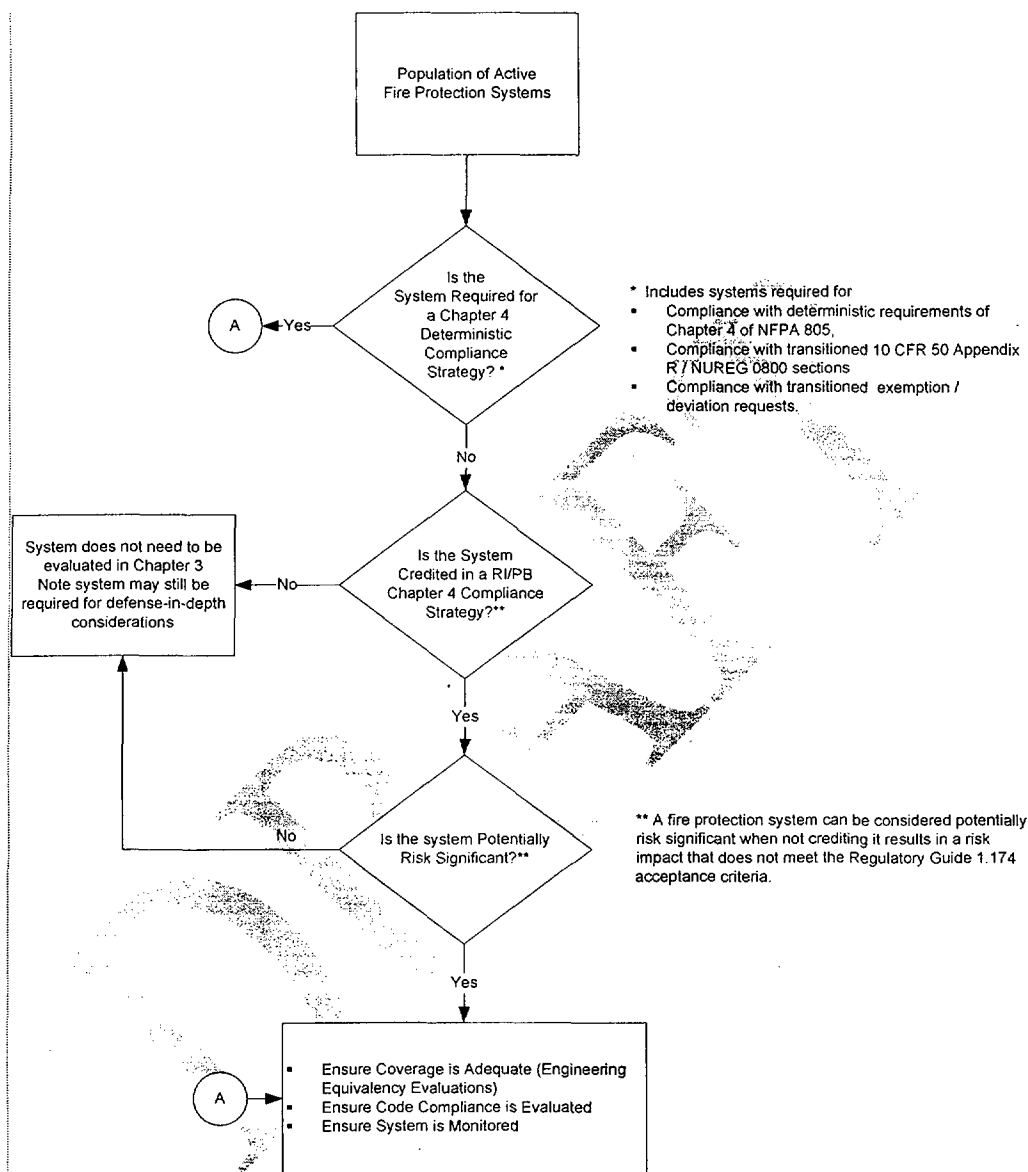
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NFPA 805, Chapter 3 because the NRC had previously approved an alternative compliance strategy. For example, if a licensee uses non-UL listed fire pumps, and this fact had been provided to the NRC during the licensing process and was discussed in the Station's Safety Evaluation Report(s), the previously approved alternative compliance will be carried over to NFPA 805, Chapter 3 as a previously approved alternative compliance. The rationale and documentation used to make the decision should be well documented in the worksheets. Exceptions and clarifications identified during the transition review should be documented in order to provide a well-established baseline for future changes.

Comment: If the alternative does not comply with regulatory requirements, it is a noncompliance, regardless of whether it was explicitly or tacitly approved in the SER. In this event, a license amendment request is required by 10 CFR 50.48(c) or the noncompliance may be approved via the licensee's approved change process if the licensee's license condition includes the provision for approval without NRC review and approval.

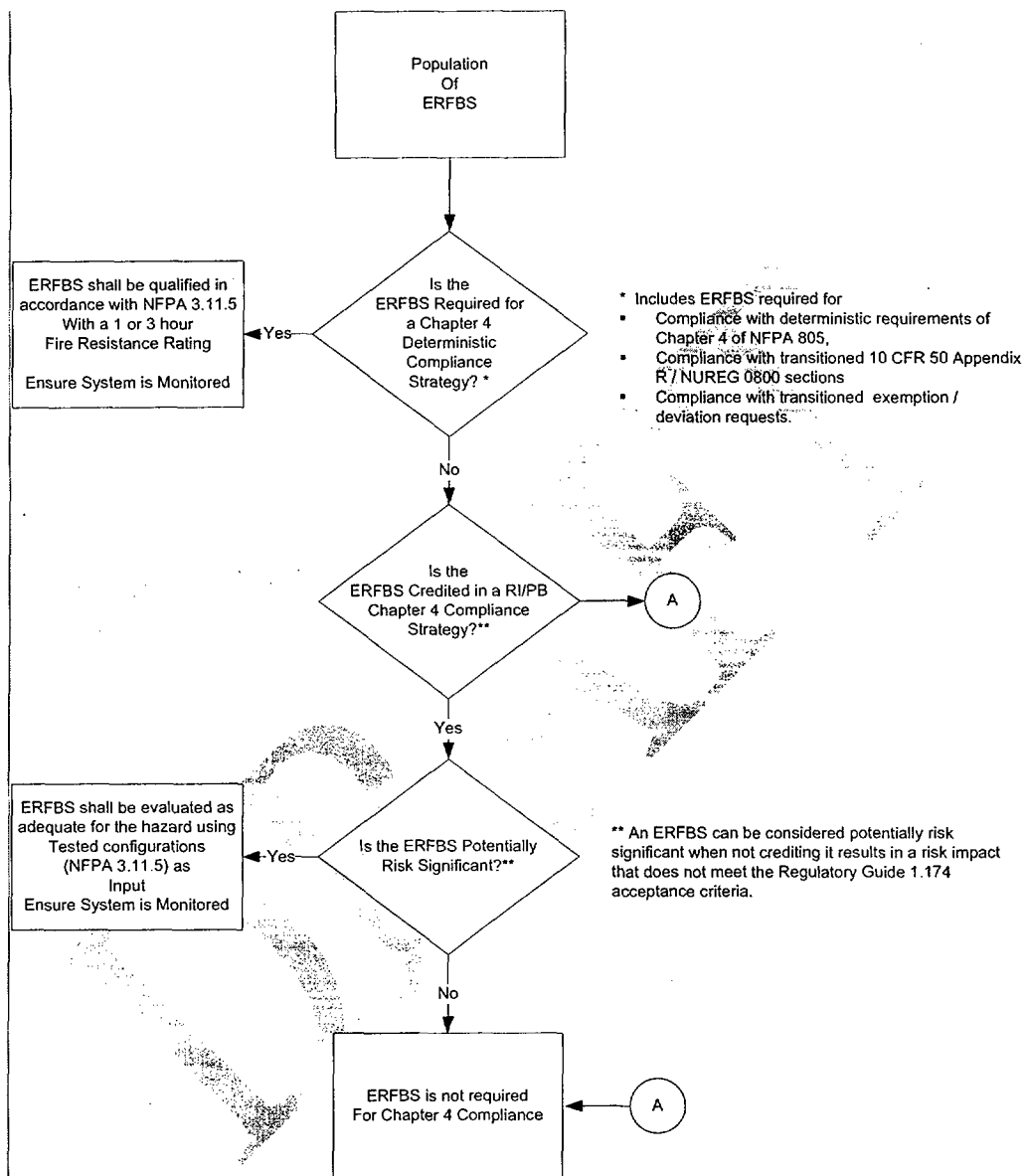
Existing Generic Letter 86-10 evaluations, which evaluate deviations from NFPA 805 Chapter 3 requirements, must be submitted to the NRC for approval as a license amendment if they do not meet the License Amendment Request threshold discussed in Section 5.3.2.

Certain Sections of Chapter 3 are only applicable if the fire protection feature is 'required' to meet the performance or deterministic requirements of Chapter 4. Determining if a fire protection feature is required is an iterative process. Figures B-1 through B-3 depict processes that may be used to determine if the requirements of Chapter 3 are applicable to a particular fire protection feature.



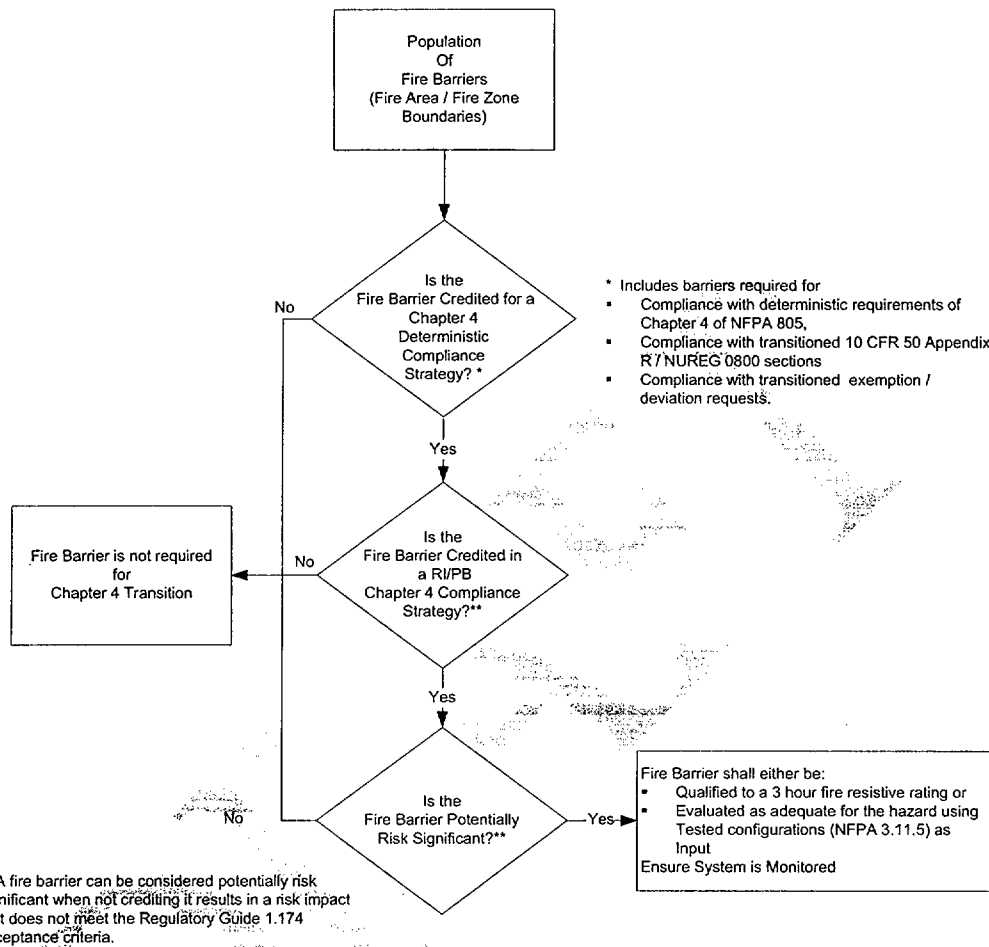
Comment: See comment above regarding Chapter 3 requirements that are not subject to Chapter 4 evaluations.

Figure B-1 – Process for Determining if an Active Fire Protection Feature is Required for NFPA 805 Chapter 4 Compliance



Comment: Acceptance criteria must be included in the licensee's fire protection license condition and must be in accordance with RG 1.205, not RG 1.174 (unless alternative criteria are submitted and approved by the NRC).

Figure B-2 – Process for Determining if an ERFBS is Required for NFPA 805 Chapter 4 Compliance



Comment: See comment above on risk acceptance criteria.

Figure B-3 – Process for Determining if a Fire Barrier is Required for NFPA 805 Chapter 4 Compliance

Included in Table B-1 is the mapping of the Fire Protection Fundamentals for “water supply” for a plant licensed to BTP 9.5-1 APCSB, May 1, 1976, Application Docketed but Construction Permit Not Received as of July 1, 1976. This mapping will be done for each section of Chapter 3 of NFPA 805. An example of how a licensee would map over the first 2 sections is provided. Once this mapping is completed all previous commitments will be superseded by compliance with the new rule.