

September 26, 2008

Chris L Burton, Vice President  
Shearon Harris Nuclear Power Plant  
Carolina Power & Light Company  
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SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 – ACCEPTANCE REVIEW REGARDING THE LICENSE AMENDMENT REQUEST TO ADOPT NATIONAL FIRE PROTECTION ASSOCIATION 805 PERFORMANCE-BASED STANDARD FOR FIRE PROTECTION FOR LIGHT WATER REACTOR GENERATING PLANTS (2001 EDITION) (TAC NO. MD8807)

Dear Mr. Burton:

By application dated May 29, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML081560639), Carolina Power and Light Company, now doing business as Progress Energy Carolinas, Inc., submitted a proposed amendment for the Shearon Harris Nuclear Power Plant, Unit 1 (HNP). The proposed amendment would enable HNP to adopt a new fire protection licensing basis which complies with the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.48(a) and (c). Specifically, HNP would transition the fire protection program to one based on the National Fire Protection Association 805 (NFPA 805) Performance-Based Standard for Fire Protection For Light Water Reactor Generating Plants (2001 Edition).

Consistent with 10 CFR 50.90, an amendment to the license (including the technical specifications) must fully describe the changes requested, and follow, as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

The purpose of this letter is to provide the final results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this request. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review and make an independent assessment regarding the acceptability of the proposed change. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

The NRC's Fire Protection Branch (AFPB) and Probabilistic Risk Assessment (PRA) Licensing Branch (APLA) performed an acceptance review of the license amendment request (LAR) in accordance with Revision 0 of the Office of Nuclear Reactor Regulation (NRR) Office Instruction LIC-109, "Acceptance Review Procedures" (ADAMS Accession No. ML081200811). The staff subsequently determined that the licensee has not provided all information necessary to start and complete a comprehensive review of the LAR to transition HNP to NFPA-805.

The NRC's staff review identified eight issues involving missing or incomplete information which present significant challenges to commencing and completing a comprehensive review of the LAR on an acceptable schedule. Three additional issues were identified that must be corrected.

Under the normal NRR acceptance review process, this licensing action would not be accepted. However, the staff concluded that since HNP is a NFPA 805 pilot plant, providing PEC with the option of providing an updated submittal within a reasonable time frame while the NRC staff continues its review of acceptable sections of the LAR is in the best interest of HNP, the NRC, the public, and non-pilot NFPA 805 licensees. Specifically, the NFPA 805 pilot process serves a dual purpose. In addition to assisting in the development of the LARs for the pilot plant licensees, the process also provides significant benefit to the NRC staff, the other NFPA 805 transitioning licensees, and the industry as a whole. As with any first time evolution, there are many lessons to be learned in both the development of NFPA 805 submittals and the associated NRC staff review of those submittals. These lessons learned are being factored into the regulatory infrastructure (Regulatory Guides, Standard Review Plan, Inspection Procedures, etc.). On this basis, the NRC has opted to invoke the rare exception provision of LIC-109 and accept for review a LAR which would not otherwise be acceptable for review.

By invoking the rare exception provision of LIC-109 for HNP and allowing PEC to provide a supplemental submittal, the overall duration of the LAR review is extended. This effectively results in an extension of enforcement discretion for all noncompliances until the review is complete. Furthermore, this may result in an extension of enforcement discretion for noncompliances that rely on modifications whose schedule is impacted by the staff's approval of the licensee's LAR.

On August 14, 2008, a telephone conference was held with PEC to discuss the LAR issues identified by the NRC staff. As a result, PEC committed to provide the additional information to address each of the identified issues by November 15, 2008.

#### Technical Acceptance Issues

1. The submittal does not reflect the current as-built plant configuration, and it does not provide a detailed, proposed configuration at the completion of transition, including all proposed modifications (sufficient for risk analysis purposes). In many places throughout the submittal, the licensee makes statements that "predict" compliance will be achieved. The final plant configuration has not been decided. The acceptability of the proposed modifications cannot be decided since the scope and configuration of the modifications has not been finalized.

The licensee should provide a listing of all proposed modifications and procedure changes being implemented during (and following) transition as part of the new NFPA 805 licensing basis.

2. The licensee's submittal is not clear in identifying the scope of the requested licensing action; specifically in identifying clearly the committed modifications and deviations from existing deterministic fire protection requirements. Although some of this information may be found in supporting calculations, it is not clearly identified in the calculations, and the calculations are not specifically referenced in the submittal, and therefore do not provide a basis to review the acceptability of the proposed LAR.

The formal submittal, made under oath or affirmation, does not contain details or a summary of the risk basis for transition, the specific modifications proposed for transition, the specific deviations proposed to remain in place after transition, nor references to the

calculations which may contain this detail. Since the calculations are not submitted under oath or affirmation (but rather simply to assist the NRC in its review), and are not referenced in the formal submittal, the staff is unable to ascertain what specific changes are requested, and cannot use the calculations as the basis for its safety evaluation.

The licensee should provide:

- A summary of the risk basis for transition, including the specific risk numbers needed to justify non-conformances and committed modifications.
  - A reference to the supporting calculations so that they may be considered in developing the safety evaluation report.
  - A list of the non-conformances being addressed during transition, including a description of the disposition of each.
3. The description of the current licensing basis contained in the Transition Report is limited to quoting the existing Fire Protection License Condition. An accurate, summary level description of the existing licensing basis is needed as a starting point for the evaluation of the transition process. Although much of this information is provided at a very high level of detail in the Transition Report tables, the endorsed industry guidance document (Nuclear Energy Institute (NEI) 04-02, "Guidance for Implementing A Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c)") provides a summary description of the licensing basis in Appendix H, Section H.3, Template: Transition Report Outline.

The licensee should provide a summary level description of the existing licensing basis, as described in NEI 04-02, Appendix H, Section H.3, Template: Transition Report Outline.

4. The HNP NFPA 805 LAR proposes to obtain NRC staff approval to accept non-conforming electrical raceway fire barrier systems (HEMYC and MT), Operator Manual Actions transitioning to Recovery Actions, and Multiple Spurious Operations. The licensee's submittal and supporting calculations do not provide a sufficient basis to conclude that the risk-informed decisions proposed are acceptable. Specifically, the submittal does not provide a justification that the Fire PRA being used, nor does it demonstrate that the manner in which it is being used is of sufficient quality for the specific changes being made. Further, the licensee's submittal only states that the change in risk will satisfy the guidance of Regulatory Guide (RG) 1.174 "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," but the supporting calculations do not demonstrate this. Therefore, the licensee has not provided a risk-informed basis for the acceptability of the proposed changes.

The licensee should provide:

- A risk-informed basis for the acceptability of the proposed changes, in sufficient detail to enable the NRC staff to decide whether the fire PRA or fire modeling is appropriately credited.
- A justification that the Fire PRA is of sufficient quality for the specific changes being made.

- A justification that the manner in which the Fire PRA is being used is appropriate for the risk-informed decisions being made.
  - Calculations sufficient to conclude that with the plant configuration in its final, post-transition state, that the change in risk is acceptable.
- 5 The submittal does not discuss the use of fire models acceptable to the NRC. There is no specific discussion of fire model verification and validation beyond a general statement that “Calculational models and numerical methods used in support of compliance with 10 CFR 50.48(c) have been and will be verified and validated as required by Section 2.7.3.2 of NFPA 805.”

The licensee should provide a list of the fire models being used to support the transition, and an explanation of how the verification and validation requirements in NFPA 805 Section 2.7.3.2 are being met for each.

6. NFPA 805 Section 4.2.4 states: “When the use of recovery actions has resulted in the use of this approach, the additional risk presented by their use shall be evaluated.” The submittal does not provide the results of the evaluation of risk associated with the use of recovery actions required by NFPA 805 Section 4.2.4. The treatment of recovery action feasibility does not address Multiple Spurious Actuations (MSAs) and their potential impact on available time to implement recovery actions.

The time available to implement recovery actions is directly dependent upon the effect of fire-induced damage to plant components and circuits. Some MSA combinations may cause plant conditions to change faster than previously analyzed in the plant’s thermal-hydraulic analyses. The treatment of Operator Manual Actions transitioning to Recovery Actions provided in the LAR amounts to a general discussion of method, rather than a detailed demonstration of acceptability.

The licensee should provide:

- A list of the pre-transition operator manual actions (both approved and un-approved).
  - A proposed disposition for each.
  - For any operator manual actions being carried forward as NFPA 805 recovery actions, the risk associated with their use.
  - For any operator manual actions being carried forward as NFPA 805 recovery actions, a detailed demonstration of acceptability, including feasibility.
  - A description of how the impact of MSAs has been addressed with respect to feasibility (specifically, discuss whether the existing thermal-hydraulic analyses remain bounding for MSA scenarios, and if not, provide a description of the new thermal-hydraulic analyses and their associated impact on feasibility).
7. Large Early Release Frequency (LERF) calculations have not been performed. No justification was provided for the use of a ratio between internal event Core Damage Frequency (CDF) and LERF.

The licensee should provide an analysis of LERF that is acceptable to the staff. There are currently two methods acceptable to the staff: 1) perform a simplified analysis of

LERF in accordance with NUREG/CR-6595, Revision 1, "An Approach for Estimating the Frequencies of Various Containment Failure Modes and Bypass Events," or 2) perform a complete Level II PRA.

8. The discussion in the Transition Report regarding Fire PRA quality is insufficient to determine that staff/peer review findings have been adequately addressed. Specifically, there is no discussion of the extent of condition, or of what changes were made to address the staff-identified deficiencies. Also, there is insufficient justification regarding the fire PRA-identified elements of the American Nuclear Society (ANS) standard which are met at capability category I. In many cases, these are dispositioned as "Category I is acceptable" with no further basis. Determination and justification of the capability category necessary for supporting requirements on a specific risk-informed application is included in the PRA standard.

The licensee should provide:

- A discussion regarding its review and evaluation of the extent of condition with respect to the staff/peer review findings.
- The disposition of each staff/peer review finding for both the Fire PRA and any of the Internal Events PRA findings that could affect the Fire PRA.
- Additional explanation or justification that capability category I is acceptable for all dispositions that originally were dispositioned as "Category I is acceptable."

#### Additional Important Clarifications

There were several statements in the LAR that mischaracterized the NRC staff's assessment of the HNP fire PRA quality.

9. Section 5.2.1 of the LAR states:

In support of this change, HNP has developed a fire Probabilistic Risk Assessment (PRA) which has been reviewed and been found acceptable by the NRC during the course of its observation of HNP's transition to NFPA 805 as a Pilot Plant.

Contrary to this assertion, the results of the NRC staff review of the HNP Fire PRA conducted in February 2008, as documented in the preliminary report (ADAMS Accession No. ML080650403), draw an opposite conclusion to the statement in the LAR:

The NRC review team noted that the Harris fire PRA is not yet complete, some tasks have yet to be started, and many areas are still in draft form. At the time of the onsite portion of the review, the Harris fire PRA was more similar to a scoping analysis, rather than a completed fire PRA. The results produced by the fire PRA reviewed by the NRC staff were based upon a number of modeling conservatisms. The staff understands that further work is being done by PE [Progress Energy] to finalize the fire PRA and to reduce the excess conservatisms.

Because the fire PRA model available was a work-in-progress, the NRC staff review of the Harris baseline fire PRA cannot be regarded as sufficient for determination of technical adequacy to support risk-informed applications. Additional review of the completed fire PRA will be necessary in the future. One approach would be a full-scope industry peer review of the completed HNP fire PRA model.

The licensee should revise Section 5.2.1 of the LAR to more accurately reflect the status of the NRC staff review of the HNP Fire PRA.

The NRC plans a follow-up review to determine the acceptability of the HNP Fire PRA prior to issuing the safety evaluation.

10. Section 4.5.1.2 of the LAR states:

In February 2008, as part of the NRC fire PRA staff review, the NRC staff reviewed the resolution of F & Os [facts and observations] from the 2002 NEI-00-02 peer review, the 2006 gap assessment review, and the subsequent 2007 Focused Peer Review. The NRC staff had no findings from that review.

The second sentence could be misconstrued to infer that the NRC staff's lack of findings equates to a favorable assessment of the internal events PRA model. The NRC staff did not perform a review of the HNP internal events PRA model; neither did the NRC staff judge the appropriateness of the resolution of the facts and observations (F&Os) from the internal events PRA model peer review.

The scope of the NRC staff review with respect to the internal events model was provided to PEC in the enclosure to the letter dated January 9, 2008, "Shearon Harris Nuclear Power Plant, Unit 1 – Review of the Fire Probabilistic Risk Assessment Model To Support Implementation of National Fire Protection Association (NFPA) Standard NFPA-805, 'Performance-Based Standard For Fire Protection For Light Water Reactor Electric Generating Plants,' as Allowed Under Title 10 of the Code Of Federal Regulations, Paragraph 50.48(c) (TAC No. MC5630)," (ADAMS Accession No. ML080070531). In Section II, "Review Scope," it states:

Prior to performing the initial Fire Probabilistic Risk Assessment (FPRA) staff review, the staff review team should verify the Internal Events PRA has been reviewed against Part 2 of ASME/ANS RA-S-2007<sup>1</sup>. The results of the Internal Events PRA peer review should be reviewed as a part of the FPRA staff review. This review SHALL be used in support of the determination for the Capability Category for Supporting Requirements (SRs) above referencing the requirements of Part 2 of ASME/ANS RA-S-2007.

The NRC staff did not review the internal events PRA model. The NRC reviewed

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<sup>1</sup> American Society of Mechanical Engineers (ASME)/American Nuclear Society (ANS) combined PRA Standard, ASME/ANS RA-S-2007, "Standard for Level 1/ Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Application," (draft) (PRA Standard)

unresolved findings (F&Os) that resulted from industry peer reviews and the HNP “gap analysis” related to the internal events PRA model.

The licensee should revise the discussion in the Transition Report with regard to the NRC staff review of the Internal Events PRA, Internal Event PRA peer reviews, and the staff’s findings.

11. Section 4.5.1.2 of the LAR states:.

At the same time, the NRC staff also reviewed the fire PRA in order to provide feedback on the progress to date of the HNP fire PRA development.

The purpose of the NRC staff’s review in February 2008, was not “... to provide feedback on the progress to date.” The intent was for the NRC staff to assess a completed fire PRA model against the fire PRA standard. However, the fire PRA was not complete at the time the review was scheduled. In light of the severe time constraints, the NRC staff agreed that it was best to review what was available on the scheduled date. Analyses that were not completed by the review date can be identified from the results of the staff review, but there was no attempt by the staff to assess or measure PEC’s progress on completing the HNP Fire PRA at the time of the review.

The licensee should revise Section 4.5.1.2 of the Transition Report to reflect the purpose of the NRC staff review.

### Conclusion

The eight identified Technical Acceptance issues listed above present significant challenges to completing a comprehensive review of the LAR in terms of regulatory requirements and the protection of public health and safety. The staff also identified three issues that mischaracterized the NRC staff review of the HNP Fire PRA. However, since HNP is an NFPA 805 pilot plant, the NRC staff is utilizing the rare exception provision of LIC-109, recommending that the submittal be accepted in the best interest of HNP, the NRC, non-pilot NFPA 805 licensees, and the public. Accepting the submittal is to the benefit of all concerned in order to capture the lessons learned from the pilot process and disseminate them on an expedited basis to the various stakeholders.

Enclosure 1 contains staff comments and observations (review checklist) on the HNP NFPA 805 LAR, which have been previously discussed with the licensee.

C. Burton

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PEC has agreed to provide the additional information to address each of the identified issues by November 15, 2008, which supports a timely review of the LAR. This will enable the NRC staff to begin its detailed technical review. If additional information is needed for the staff to complete its technical review, you will be advised by separate correspondence. Should you have any questions regarding this review, please contact Marlayna Vaaler at (301) 415-3178.

Sincerely,

**/RA/**

Thomas H. Boyce, Chief  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-400

cc: See next page



C. Burton

- 8 -

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Sincerely,

**/RA/**

Thomas H. Boyce, Chief  
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Office of Nuclear Reactor Regulation

Docket No. 50-400

cc: See next page

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\*by memo dated

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REVIEW CHECKLIST

Attribute	Source	Sufficient for Review?	Comments
Review the Licensee's submittal and verify that it includes an evaluation of the risk impact associated with major issues such as the operator manual actions, Hemyc, and circuit analysis of possible multiple spurious actuations (either quantitative or qualitative) as appropriate.	RG 1.205	No	This information is not readily retrievable from the Supporting Material (FSAs). A summary of this information should be provided in either the LAR or the Transition Report.
Review the Transition Report, if one is included in the Licensee's submittal, to verify that it meets the minimum content as defined in NEI 04-02 Sections 3.4, 4.6.2, and RG 1.205	NEI 04-02 RG 1.205	Yes	Transition Report is provided as Enclosure 3 to LAR Letter. Note: Transition Report does not include Administration Section
Feed and Bleed: 10 CFR 50.48(c)(2)(iii) specifically notes that use of feed-and-bleed as the sole fire-protected safe shutdown path for maintaining reactor coolant inventory, pressure control, and decay heat removal capability is not permitted for pressurized-water reactors (PWRs). This is noted in section 2.2 of NEI 04-02. Verify that a statement to this effect as well as a description of any dependence on feed-and-bleed in the fire protection program is included in the LAR.	10CFR50.48(c)(iii)	Yes	Includes a declaration that Feed and Bleed is not sole Safe Shutdown protected path. Included in Table 5-3 of Transition Report
Existing Cables: [10CFR50.48(c)(2)(v)] A LAR is acceptable if the licensee states that the cable installed in the plant meets a flame propagation test that is acceptable to the AHJ. FAQ 06-0022 documents flame propagation tests that are acceptable to the NRC.	10CFR50.48(c)(v)	Yes	Includes a declaration that cables used at Harris meet flame propagation tests acceptable to NRC. Included in Table 5-3 of Transition Report.
Water Supply and Distribution: [10CFR50.48(c)(2)(vi)]: This paragraph provides that a "provisional" manual fire-fighting standpipe/hose station system may not be used in place of seismically qualified standpipes and hose stations unless previously approved in the licensing basis. Licensees who wish to use the italicized exception in Section 3.6.4 of NFPA 805 must submit a request for a license amendment in accordance with paragraph (c)(2)(vii). However, because the NRC considers seismically qualified standpipes and hose stations of such importance, the NRC believes that licensees who wish to use the exception in Section 3.6.4 of NFPA 805 via a license amendment may have difficulty satisfying the three criteria in paragraph (c)(2)(vii).	10CFR50.48(c)(2)(vi)	Yes	Includes a declaration that water supply and distribution has been previously approved by NRC. Provided in Table 5-3 of Transition Report.

## REVIEW CHECKLIST

<p>If the licensee proposes to implement modifications as part of the transition to a risk-informed, performance-based fire protection program, verify that for each modification proposed, the LAR contains a description of the modification, a schedule for implementation of the modification and a risk-informed justification, including compensatory actions, for the acceptability of the schedule for the modification. Regulatory Issue Summary 2005-07, "Compensatory Measures to Satisfy the Fire Protection Program Requirements," provides guidance on compensatory measures acceptable to the NRC.</p>	<p>RG 1.205</p>	<p>No</p>	<p>Modifications have been assumed in calculations provided in supporting material, but only summary description and no justification has been provided with respect to risk. Section 4.8.3 is too general to provide a justification of risk related to non-compliances. In addition, Section 4.5.4 states that <u>upon completion of modifications</u>, the total change in risk associated with the transition to NFPA 805 will be consistent with the acceptance guidelines in Regulatory Guide 1.174.</p>
<p>Section 4.6.1 of NEI 04-02 states that the LAR should include an "updated transition schedule". The licensee should provide not only a transition schedule, but also a risk-informed justification for the timing of the schedule, demonstrating that the transition will be completed in a timely enough manner to avoid unacceptable risk due existing non-compliances with the current fire protection program that will not be resolved until transition is complete.</p>	<p>NEI 04-02</p>	<p>No</p>	<p>Insufficient justification has been provided beyond a statement that compensatory measures have been applied to each non-compliance.</p>
<p>Verify that the Licensee's submittal package documents the plant's risk-informed fire protection license condition. One acceptable approach would be to use the standard license condition from RG 1.205, if necessary supplemented by FAQ 06-0008.</p>	<p>RG 1.205</p>	<p>Yes</p>	<p>Included as Attachment M of Transition Report</p>
<p>Verify that all prior fire protection SERs and commitments are superseded by the issuance of the new license condition. Review the Licensee's submittal package and verify that it includes a listing of all SER sections that contain fire protection commitments.</p>	<p>10CFR50.48(c) RG 1.205 NEI 04-02</p>	<p>Yes</p>	<p>This attribute has been addressed in a variety of places; primarily in the Attachment A (NEI 04-02, Table B-1), Attachment B (NEI 04-02, Table B-2), Attachment C (NEI 04-02, Table B-3) and Attachment K of the Transition Report.</p>
<p>Verify that the Licensee's submittal package includes a list of all submittals made to support those SERS.</p>	<p>NEI 04-02</p>	<p>Yes</p>	<p>This attribute has been addressed in a variety of places; primarily in the Attachment A (NEI 04-02, Table B-1), Attachment B (NEI 04-02, Table B-2), Attachment C (NEI 04-02, Table B-3) and Attachment K of the Transition Report.</p>
<p>Verify that the Licensee's submittal package includes a discussion of the existing "approved fire protection program" so it can be superseded by the new license conditions. Verify that the Licensee's submittal package includes all prior approvals, documented in the transition tables (B-1, B-2, and B-3) with enough information to be stand-alone and therefore supersede the previous documentations.</p>	<p>NEI 04-02</p>	<p>No</p>	<p>Description of CLB in Transition Report Section 2.0, "Overview of Existing Fire Protection Program" is limited to quoting the existing Fire Protection License Condition (No details have been provided with respect to Appendix R, NUREG 0800, BTP Appendix A, etc.)</p>

## REVIEW CHECKLIST

Verify that the Licensee's submittal package documents how the plant meets the process used to identify any other license conditions for fire protection	NEI 04-02	Yes	Included as Attachment M of Transition Report
In accordance with 10 CFR 50.48(c)(3)(i), the LAR should contain a list of any other license conditions that need to be revised or suspended, the necessary revisions to these other license conditions, and an explanation of why these revisions are adequate to accomplish the plants' adoption of NFPA 805.	10CFR50.48(c)(3)(i)	Yes	Included as Attachment M of Transition Report
Verify that the Licensee's submittal package documents not only identify the other license conditions, but also describe the process used to identify the other license conditions.	10CFR50.48(c)	Yes	Included as Attachment M of Transition Report
Verify that the Licensee's submittal package discusses which Technical Specifications needing modification were identified, and the process used for their identification. Verify that the package includes:	10CFR50.48(c) NEI 04-02	Yes	Included as Attachment N of Transition Report
All administrative/audit technical specifications needing to be revoked	NEI 04-02	Yes	Included as Attachment N of Transition Report
Equipment technical specifications to be revised. Ensure they are consistent with 10 CFR 50.48(c)	10CFR50.48(c)	Yes	Included as Attachment N of Transition Report
Revised technical specification sections and their associated bases	10CFR50.48(c) NEI 04-02	Yes	Included as Attachment N of Transition Report
Verify that the Licensee's submittal package documents how the plant meets the process used to identify any other license conditions for fire protection	10CFR50.48(c) NEI 04-02	Yes	Included as Attachment M of Transition Report
Verify that the Licensee's submittal package documents not only identify the orders and exemptions, but also describe the process used to identify the orders and exemptions.		Yes	Included as Attachment O of Transition Report
Verify that the Licensee's submittal package documents include a statement on No Significant Hazards Consideration, in accordance with 10 CFR 50.91 and 10 CFR 50.92. Appendix H of NEI 04-02 provides one acceptable statement to the NRC staff that shows that the Licensee's submittal package, including the LAR meets the criteria for No Significant Hazards Consideration.	10CFR50.91 10CFR50.92 NEI 04-02, Appendix H	Yes	Included as Attachment U of Transition Report
Verify that the Licensee's submittal package documents includes a statement on Environmental Considerations in accordance with 10 CFR 51.22(b) and (c). Appendix H of NEI 04-02 provides one example of an acceptable statement.	10CFR50.22(b) and (c) NEI 04-02, Appendix H	Yes	Included as Attachment V of Transition Report

REVIEW CHECKLIST

<p>Verify that the Licensee’s submittal package documents how the plant meets the requirements of 10 CFR 50.48(c)(3)(i), which requires licensees include discussion of any changes Updated Final Safety Analysis Report (UFSAR).</p>	<p>10CFR50.48(c)(3)(i)</p>	<p>Yes</p>	<p>Included as Attachment R of Transition Report</p>
<p>Verify that the Licensee’s submittal package documents include discussion of any changes to UFSAR necessitated by the license amendment and a statement that the changes will be made in accordance with 10 CFR 50.71(e) As per NEI 04-02 Section 4.6.,1. Furthermore, verify the adequacy of the commitment made by the licensee to make changes to the UFSAR.</p>	<p>NEI 04-02, Section 4.6.1</p>	<p>Yes</p>	<p>Included as Attachment R of Transition Report</p>
<p>NRC established the FAQ process in accordance with RIS 2007 19 – “Process For Communicating Clarifications of Staff Positions Provided in Regulatory Guide 1.205 Concerning Issues Identified During the Pilot Application of National Fire Protection Association Standard 805” to clarify issues encountered during the pilots transition. Therefore, licensees may rely on FAQ resolutions to comply with 10 CFR 50.48(c). Relying on FAQs is acceptable to the NRC staff within the constraints defined in the FAQs.</p>	<p>RIS 2007-19</p>	<p>Yes</p>	<p>Included as Attachment H of Transition Report</p>
<p>Verify that the Licensee’s submittal package includes, a Fire Protection License Condition that provides risk acceptance criteria for risk-informed, performance-based changes to the fire protection program. To be considered acceptable, the license condition must require the licensee to implement and maintain in effect all provisions of the approved fire protection program, with specific references to the NFPA 805 transition license submittal and subsequent Safety Evaluation Report. The license condition must also provide acceptance criteria for self approved and NRC approved changes.</p>	<p>RG 1.205</p>	<p>Yes</p>	<p>Included as Attachment M of Transition Report</p>
<p>Use of Performance-Based Methods to make changes to Fundamental Fire Protection Program and Design Elements must be requested through the submittal of a LAR. Review of LARs submitted in accordance with 10 CFR 50.48(c)(2)(vii) will focus on review of the technical aspects of the approach or method proposed by the licensee compared to the requirement(s) in Chapter 3 and the performance goals, objectives and criteria of NFPA 805.</p>	<p>10CFR50.48(c)(2)(vii)</p>	<p>Yes</p>	<p>Included as Attachment P of Transition Report</p>

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<p>10 CFR 50.48(c) allows licensees to request approval to use risk-informed or performance-based alternatives to compliance with NFPA 805. A licensee may submit a LAR to use risk-informed or performance-based alternatives to compliance with NFPA 805. Verify the adequacy of methods and licensee's evaluation and conclusions with regard to meeting the margins of safety and defense-in-depth criteria of NFPA 805.</p>	<p>10CFR50.48(c)(4)</p>	<p>Yes</p>	<p>Included as Attachment Q of Transition Report</p>
<p>Licensees may use performance-based Fire Protection Engineering Evaluations to demonstrate compliance to Fundamental Fire Protection Program and Design Elements during transition.</p>	<p>RG 1.205 NEI 04-02</p>	<p>Yes</p>	<p>Included as Attachment J of Transition Report</p>
<p>Verify that the Licensee's submittal package documents a summary of the MSO methodology used. The methodology used should be consistent with and implement the lessons learned from pilot plant and preceding non-pilot plant activities as reflected in the changes from the FAQ process, as applicable to the applicant's particular situation. It should contain sufficient information concerning methods, tools, and acceptance criteria used to enable the staff to determine the acceptability of the licensee's methodology. The analysis should generally be performed and arranged by Fire Areas, although in some cases an alternative spatial approach may prove to be more practical. If an expert panel process was used, it should be documented with results clearly presented. The MSO analysis should generally conform with requirements found in NEI 04-02 B.2.1.3 and RG 1.205, C.3.3</p>	<p>RG 1.205, C.3.3 NEI 04-02, B.2.1.3</p>	<p>Yes</p>	<p>Included as Attachment F of Transition Report</p>

## REVIEW CHECKLIST

<p>Verify that the Licensee's methodology includes a feasibility determination, including an evaluation of egress and task lighting. An evaluation of the risk impact associated with the operator manual actions (either qualitative or quantitative), must be described and included as appropriate. Quantitative risk calculations should be in accordance with Section 4.2.4.2 of NFPA 805 (a bounding calculation approach is acceptable). The description of the transition of OMA to recovery action should include: 1) whether the operator manual actions are currently allowed or 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. Operator manual actions that are currently allowed and/or have been previously reviewed and approved by the NRC (as documented in an approved exemption/deviation) can be transitioned without a change evaluation (the risk associated with their use must still be evaluated).</p>	<p>NFPA 805, Section 4.2.4</p>	<p>No</p>	<p>Description of methodology does not meet this level of detail (discussing egress and task lighting). Does not include discussion of methodology to correlate Thermal-Hydraulic Analyses with Multiple Spurious Actuation scenarios to determine allowable recovery action timelines.</p> <p>Risk of credited recovery actions has not been adequately addressed.</p>
<p>Verify that the Licensee's submittal package clearly documents previously approved alternatives to the fundamental fire protection program requirements of NFPA 805 Chapter 3 that are being carried forward to the NFPA 805 Licensing Basis.</p>	<p>RG 1.205 NEI 04-02</p>	<p>Yes</p>	<p>Included in Attachment A (NEI 04-02, Table B-2) and Attachment K of Transition Report</p>
<p>Verify that the Licensee's submittal package documents all previously approved variations, and the documentation which demonstrates prior NRC approval of an alternative to Chapter 3 requirements, as well as approval of noncompliance with existing license regulatory requirements, is referenced. Any items for which previous NRC approval is unclear should be listed and evaluated via a plant change analysis.</p>	<p>RG 1.205 NEI 04-02</p>	<p>Yes</p>	<p>Included in Attachment A (NEI 04-02, Table B-2) and Attachment K of Transition Report</p>
<p>If Existing Engineering Equivalency Evaluations are used, the licensee must affirm in the LAR that they of appropriate quality, or, provide documentation as part of the LAR for staff review.</p>	<p>NEI 04-02</p>	<p>Yes</p>	<p>Section 4.2.2.2 and Attachment J of Transition Report</p>
<p>Verify that the LAR has described any current variances with deterministic fire protection requirements that will be carried over to the NFPA 805 performance-based licensing basis. The total risk increase associated with all fire protection program non-compliances (based on current deterministic fire protection program regulations) that the licensee does not intend to bring into compliance and the total risk change associated with plant changes planned for the transition to NFPA 805 should be estimated and reported.</p>	<p>RG 1.205</p>	<p>No</p>	<p>Contained in Supporting Material (FSAs); No risk numbers have been supplied in either the LAR or the Transition Report.</p>



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<p>Verify that the Licensee's submittal package documents a performance monitoring program, including a description and rationale for its implementation and the performance monitoring strategy for the proposed licensing basis change in accordance with RG 1.174.</p>	<p>NEI 04-02 RG 1.174</p>	<p>Yes</p>	<p>Described in Section 4.6 of the Transition Report</p>
<p>Verify that the Licensee's submittal package states that the Fire PRA peer review contains the following elements: a) a review of the methods used in the PRA and a determination of whether the application of those methods was done correctly in the Fire PRA baseline model, b) a comparison of the PRA models against the plant design and procedures to validate that they reflect the as-built and as operated plant, 3) a review of key assumptions to determine if they are appropriate and to assess their impact on the PRA results.</p>	<p>RG 1.174 RG 1.205</p>	<p>No</p>	<p>Submittal does not go to this level of detail with respect to the staff review or the subsequent peer review.</p>
<p>Verify that the Licensee's submittal package documents: 1) a description of high level findings, 2) details of questions arising during the peer review and any findings and their implemented or proposed (with commitment) resolution, 3) the findings related to the pedigree of the model and their relationship to current/planned plant configuration. As needed, during the Post-LAR Site Audit, verify that the licensee has properly dispositioned findings that affect the risk-informed changes.</p>	<p>RG 1.174 RG 1.205</p>	<p>No</p>	<p>The licensee's basis for the technical adequacy of the fire PRA model is discussed in Section 4.5.1. There are several omissions which are directly relevant to the staff's ability to conduct its licensing review:</p> <p style="padding-left: 40px;">a. The staff conducted a review of the draft fire PRA model and identified deficiencies - these are simply dispositioned in Table 4-3 as "Closed, per industry peer review." There is no discussion of the extent of condition, nor of what changes were made to address the staff-identified deficiencies.</p> <p style="padding-left: 40px;">b. The staff and industry peer review of the fire PRA identified elements of the ANS standard which are met at capability category I - in many cases, these are dispositioned in Table 4-5 as "Cat. I is acceptable" with no further basis</p>
<p>Verify that the Licensee's submittal package documents how the plant defines the term "Power Block" The definition should be compatible with the one given in the glossary of NFPA 805 defines Power Block as 1.6.46* Power Block. Structures that have equipment required for nuclear plant operations. The interpretation of this term has significant implications on the licensing basis of the licensee. Therefore, the licensees are required to describe the boundaries of the power block as a part of their submittal to the NRC (One acceptable approach of interpreting the definition acceptable to the staff is provided in FAQ resolution 06-19 ML 070510365</p>	<p>FAQ 06-0019</p>	<p>Yes</p>	<p>Included as Attachment I of Transition Report</p>

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<p>The Fundamental Fire Protection Program and Design Elements are established in Chapter 3 of NFPA 805. Section 4.3.1 of NEI 04-02 sets out a systematic process for determining the extent to which the current licensing basis meets these criteria and for identifying the fire protection program changes that would be necessary for complete compliance.</p>	<p>Yes</p>	<p>Yes</p>	<p>Described in Section 4.1 and included as Attachment A (NEI 04-02, Table B-1) of Transition Report</p>
<p>The Methodology to be used to implement a performance-based Fire Protection Program is provided in NFPA 805 Chapter 2. Section 4.3.2 sets out a systematic process for evaluating the existing post-fire safe shutdown analysis against the methodology requirements provided in NFPA 805 Chapter 2. Regulatory Guide 1.205 endorses the deterministic safe shutdown analysis methodology provided in Chapter 3 of NEI 00-01, Revision 1.</p>	<p>NFPA 805 Chapter 2 RG 1.205 NEI 00-01, Rev. 1</p>	<p>Yes</p>	<p>Described in Section 4.2.1 and included as Attachment B (NEI 04-02, Table B-2) of Transition Report</p>
<p>The Nuclear Safety Performance Criteria are established in NFPA 805, Section 1.5. NFPA 805, Chapter 4, provides the methodology to determine the fire protection systems and features required to achieve the performance criteria outlined in Section 1.5. Section 4.3.2 of NEI 04-02 sets out a systematic process for determining the extent to which the current licensing basis meets these criteria and for identifying the fire protection program changes that would be necessary for complete compliance. Verify that the Licensee's submittal package documents the methodology for performing the Fire Area-by-Fire Area Transition of its Fire Protection Program. NEI 04-02 Table B-3 is one acceptable approach (additional guidance is contained in FAQ 07-0039, Lessons Learned – NEI 04-02 B-2 and B-3 Tables).</p>	<p>NFPA 805, Chapter 4 NEI 04-02</p>	<p>Yes</p>	<p>Described in Section 4.2.2 and included in Attachment C (NEI 04-02, Table B-3) of Transition Report</p>

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<p>Review the Licensee’s treatment of non-power operations, considering the following:          Licensees are not required to prepare a complete PRA to model non-power operations; instead they can use a simplified approach of maximizing outage safety by focusing on the availability of systems that provide and support key safety functions as well as on measures that can reduce both the likelihood and consequences of adverse events.          RG 1.205 endorses the approach documented in NEI 04 02. Section 4.3.3 of NEI 04 02, Revision 1, states that the nuclear safety goal of NFPA 805 requires evaluation of the effects of a fire ‘during any operational mode and plant configuration. NEI 04 02 Section 4.3.3 further goes on to provide a strategy that “...demonstrate[s] that the nuclear safety performance criteria are met for High(er) Risk Evolutions (HRE) (HREs as defined by NUMARC 91-06) during non-power operational modes...”          Review the Licensee’s submittal package to verify that the licensee demonstrates that the nuclear safety performance criteria are met during Higher Risk Evolutions. To accomplish this objective, verify that the licensee has documented the following tasks using NEI 04-02, Table F-1 and the additional guidance provided in FAQ 07-0040:</p> <ul style="list-style-type: none"> <li>· Review of existing plant outage processes (outage management and outage risk assessments) to determine equipment relied upon to provide Key Safety Functions (KSF) including support functions during the required POSs.</li> <li>· Comparison of the equipment credited for achieving these KSFs against the equipment credited for nuclear safety.</li> <li>· For those components not already credited (or credited in a different way e.g., on versus off, open versus closed, etc.) analysis of the circuits in accordance with the nuclear safety methodology.</li> <li>· Identification of locations where 1) fires may cause damage to the equipment (and cabling) credited above, or 2) recovery actions credited for the KSF are performed</li> <li>· Identification of fire areas where a single fire may damage all the credited paths for a KSF.</li> </ul>	<p>NEI 04-02, Section 4.3.3</p>	<p>Yes</p>	<p>Described in Section 4.3 and included in Attachment D (NEI 04-02, Table F-1) of Transition Report</p>
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REVIEW CHECKLIST

<ul style="list-style-type: none"> <li>· For the above-mentioned areas the licensee may consider combinations of the following options to reduce fire risk depending upon the significance of the potential damage:             <ul style="list-style-type: none"> <li>o Prohibition or limitation of hot work in fire areas during periods of increased vulnerability</li> <li>o o Verification of operable detection and /or suppression in the vulnerable areas.</li> <li>o Prohibition or limitation of combustible materials in fire areas during periods of increased vulnerability</li> <li>o Provision of additional fire patrols at periodic intervals or other appropriate compensatory measures (such as surveillance cameras) during increased vulnerability</li> <li>o Use of recovery actions to mitigate potential losses of key safety functions.</li> <li>o Identification and monitoring in-situ ignition sources for “fire precursors” (e.g., equipment temperatures).</li> </ul> </li> </ul>			
<p>Verify that the Licensee’s submittal package documents that radiation release to any unrestricted area due to the direct effects of fire protection activities (but not involving fuel damage) remain as low as reasonable achievable, not to exceed 10 CFR Part 20 limits. 10 CFR 50.48(c)(3)(i) requires licensees transitioning to NFPA 805 satisfy performance goals, objectives, and criteria provided in NFPA 805. Sections 1.3.2, 1.4.2, and 1.5.2 of NFPA 805 provide goals, performance objectives, and performance criteria associated with this regulatory requirement, respectively. Section 4.3 of Appendix H to NEI 04 02 provides one acceptable approach to documenting information that must be provided to the NRC in the LAR for staff evaluation. Appendix G of NEI 04 02 provides evaluations which the reviewer can consult as part of this review.</p>	<p>10CFR50.48(c)(3)(i) NEI 04-02 Appendices H &amp; G</p>	<p>Yes</p>	<p>Described in Section 4.4 and included in Attachment E (NEI 04-02, Table G-1) of Transition Report</p>
<p>Verify that the licensee has created a document that includes fire hazards identification and nuclear safety capability assessment, on a fire area basis, for all fire areas that could affect the nuclear safety or radioactive release performance criteria defined in NFPA 805 Chapter 1.</p>	<p>NEI 04-02</p>	<p>Yes</p>	<p>Discussed in Section 4.7 of Transition Report</p>

## REVIEW CHECKLIST

Verify that the licensee has stated in the LAR that each analysis, calculation, or evaluation performed was independently reviewed.	NFPA 805, Section 2.7.3.1	Yes	Discussed in Section 4.7.3 of Transition Report
Verify that the LAR has identified acceptable draft or final standards as well as draft or final regulatory guides (or similar regulatory guidance) that served as a basis for addressing non-compliances through a fire PRA.	RG 1.200	Yes	Discussed in Section 4.5.2 of Transition Report
Verify that the LAR has identified acceptable draft or final PRA standards used to determine that the fire PRA is of sufficient technical quality to support addressing non-compliances during transition to NFPA 805.	RG 1.200	No	LAR does not adequately address Fire PRA quality
Verify that licensee has submitted documentation for staff review, in accordance with the guidance outlined in Section 4.2 of Regulatory Guide 1.200, for NRC review as they apply to NFPA 805 LARs. For example, the non-pilot plants must provide all "Significant" Facts & Observations ("Findings") from the peer review(s) conducted for the Fire PRA, their resolution (or plan for resolution, with schedule and commitments) and a list of all Significant Facts and Observations (F&Os) from the internal events PRA peer reviews, (including supplemental or "focused-scope" reviews) that have the potential to impact the Fire PRA, and their resolutions. The submittal shall also include significant findings from assessments against the endorsed PRA Quality Standards and their resolutions, if the peer reviews were not conducted in conformance with the endorsed standards and RG 1.200.	RG 1.200	No	Staff Review/Peer Review Findings/F&Os have not been fully addressed in the submittal. There is no discussion of the extent of condition, or of what changes were made to address the staff-identified deficiencies.  The staff and industry peer review of the fire PRA identified elements of the ANS standard which are met at capability category I - in many cases, these are dispositioned in Table 4-5 as "Cat. I is acceptable" with no further basis.
Verify that the LAR provides information about the processes that the licensee has established in order to ensure that PRA and fire modeling calculations in support of changes that it may choose to implement after transitioning to the NFPA 805 licensing basis remain valid.	NFPA 805, Section 2.7.1.1	Yes	Discussed in Section 4.7 of Transition Report
For each item of non-compliance that is carried forward to NFPA805 licensing basis as a risk-informed, performance-based change, verify that the licensee has provided the difference in CDF and LERF for the plant, with and without the item being in compliance.	NFPA 805, Section 2.4.4.1 RG 1.205	No	Modifications credited in the LAR are not sufficient to bring risk down to acceptable levels. Modifications yet to be postulated have not been integrated into the calculations so that they reflect accurate CDF and LERF values.

## REVIEW CHECKLIST

<p>For each item of non-compliance that is carried forward to NFPA805 licensing basis as a risk-informed, performance-based change, verify that the licensee has addressed defense-in-depth and safety margins as required by Sections 4.2.4.2 of NFPA 805 Code.</p>	<p>NFPA 805 Section 4.2.4.2 RG 1.205 NEI 04-02, Section 5.3</p>	<p>Yes</p>	<p>Discussed in Section 4.5.2.4 of Transition Report</p>
<p>If necessary, verify that licensee has provided the total CDF and LERF (internal events and external events) of the plant as it will be configured upon completion of the transition, including all modifications to which the licensee commits in the LAR (licensee may use guidance provided in RG. 1.174 to use qualitative and quantitative information), to enable NRC staff to make decisions with respect to acceptability of plant changes using criteria provided in RG 1.174.</p>	<p>RG 1.205 RG 1.174 NEI 04-02, Section 5.3</p>	<p>No</p>	<p>No risk details have been provided in the LAR. The LAR does not officially reference the supporting calculations.</p>
<p>Verify that the baseline PRA model for the post-transition plant has incorporated (a) completed or planned modifications, and procedural changes that address non-compliances with respect to current licensing basis, (b) completed or planned modifications including which the licensee has implemented to reduce risk, and (c) non-compliances (with respect to current licensing basis) that have been carried forward without plant changes, during the transition, with risk justifications.</p>	<p>RG 1.205 NEI 04-02, Section 5.3</p>	<p>No</p>	<p>Submittal does not provide a sufficient risk justification for non-compliances being carried forward.</p>
<p>Item (c) above should generally consist of III.G.2 Operator Manual Action, Hemyc or other fire barriers which do not meet the acceptance criteria, and deviation from the assumption of multiple-spurious actuations. Item (c) may consist of any other non-compliances with deterministic requirements that are carried forward to the post-transition plant</p>	<p>RG 1.205 NEI 04-02, Section 5.3</p>	<p>Yes</p>	<p>Discussed in Appendix G of Transition Report</p>
<p>Verify that the licensee has provided the cumulative change in CDF and LERF associated with all non-compliances (credit for non-fire-related decreases in CDF and LERF may be taken as per Regulatory Guide 1.205, but only during the transition), relative to the base line CDF and LERF for the fully compliant plant.</p>	<p>NFPA 805, Section 2.4.4.1 RG 1.205</p>	<p>No</p>	<p>No risk details have been provided in the LAR. The LAR does not officially reference the supporting calculations.</p>
<p>Verify that the licensee has properly utilized the Fire PRA standard in establishing the required quality for the application of the Fire PRA in the change evaluations. This should involve establishing those Supporting Requirements (SRs) that are needed and the Capability Category that must be met for each of those SRs.</p>	<p>ASME-RA-S-2007</p>	<p>No</p>	<p>Although discussed in Section 4.5.1.2 of the Transition Report, there is no detailed discussion of Capability Category for individual supporting requirements in order to demonstrate acceptable quality to support change evaluations.</p>

REVIEW CHECKLIST

<p>Section 5.3 of NEI 04-02 describes one acceptable approach to providing information to the NRC in the LAR for staff evaluation of the plant change process. NRC Staff has endorsed Section 5.3 of NEI 04-02.</p>	<p>NEI 04-02, Section 5.3</p>	<p>Yes</p>	<p>Described in Section 4.5.2 of the Transition Report</p>
<p>10 CFR 50.48(c) endorsed Section 2.7.2.2 “Supporting Documentation,” of NFPA 805 without exceptions. Section 2.7.2.2 states that detailed supporting documentation shall be retrievable records. Section 4.5 of Appendix H NEI-04-02 also states licensee’s responsibilities with respect to program documentation. The reviewer should verify that the licensee has stated that it complied with 10 CFR 50.48(c) with respect to archival documentation per guidance provided in Section 4.1 of Regulatory Guide 1.200 or other acceptable standard.</p>	<p>NFPA 805, Section 2.7.2.2 NEI 04-02, Section 4.5 of Appendix H RG 1.200, Section 4.1</p>	<p>Yes</p>	<p>Discussed in Section 4.7.2 of Transition Report</p>
<p>Only fire models that are acceptable to the authority having jurisdiction shall be used in fire modeling calculations. The models currently evaluated by the NRC for use in NFPA 805 transition are as follows:</p> <ul style="list-style-type: none"> <li>- Fire Dynamics Tools (FDT) as documented in NUREG-1805</li> <li>- Fire-Induced Vulnerability Evaluation (FIVE), Revision 1</li> <li>- Consolidated Fire Growth and Smoke Transport Model, CFAST</li> <li>- MAGIC</li> <li>- Fire Dynamics Simulator (FDS)</li> </ul> <p>Verify that the licensee has identified the fire modeling tools that they have used</p>	<p>NFPA 805, Section 2.4.1.2.1</p>	<p>No</p>	<p>Acceptable fire models are not discussed in the LAR or the Transition Report. Specific fire models used are discussed in the Supporting Material provided.</p>
<p>The reviewer should verify that the licensee has stated that the fire models used have been used within the scope, limitations and assumptions prescribed for that method. The reviewer should use NUREG-1824 in making this determination.</p>	<p>NFPA 805, Section 2.4.1.2.2</p>	<p>Yes</p>	<p>Discussed in Section 4.7.3 of the Transition Report</p>
<p>The five fire models that have been approved for use by the NRC have been verified and validated by a joint effort by NRC Research and the Electric Power Research Institute (EPRI). This verification and validation effort has been documented in NUREG-1824/EPRI 1011999.</p>	<p>NFPA 805, Section 2.4.1.2.3 NUREG-1824</p>	<p>Yes</p>	<p>Discussed in Section 4.7.3 of the Transition Report</p>

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Verify that the licensee has stated and/or provided documentation that personnel performing fire modeling are competent in that field and experienced in the application of these methods as they relate to nuclear power plants, nuclear power plant fire protection and power plant operations.	NFPA 805, Section 2.7.3.4	Yes	Discussed in Section 4.7.3 of the Transition Report
Verify that the licensee has used core damage frequency (CDF) and Large Early Release Frequency (LERF) as measures for risk.	NFPA 805, Section 2.4.4.1	No	LERF calculations were not performed. Section 4.5.2.4 states that LERF calculations were not performed; that delta-LERF was estimated using the ratio of delta-CDF to delta-LERF
Verify that the licensee has addressed the risk contribution associated with all potentially risk-significant fire scenarios by reviewing the methods and approaches, and/or sample of calculations provided by the licensee in its LAR.	NFPA 805, Section 2.4.3.2	Yes	Fire PRA was based on NUREG/CR-6850 methods, which should address all potentially risk-significant fire scenarios.
Section 2.7.3.5 of NFPA 805 Code requires licensee to perform an uncertainty analysis to provide reasonable assurance that the performance criteria have been met.	NFPA 805, Section 2.7.3.5 NEI 04-02, Section 5.3.4.5	Yes	Discussed in HNP-F/PSA-0081
Verify that the levels of availability, reliability and performance established by the licensee are acceptable by evaluating the approaches used by the licensee to establish them.	NFPA 805, Section 2.6.1.	Yes	Described in Section 4.6 of the Transition Report
Verify that the licensee has included a statement in the LAR verifying that methods to monitor availability, reliability and performance have been established. These methods shall consider the plant operating experience and industry operating experience.	NFPA 805, Section 2.6.2	Yes	Described in Section 4.6 of the Transition Report
Section 2.6.3 of NFPA 805 requires the licensee to establish appropriate corrective actions, if the established levels of availability, reliability and performance are not met, to return to the established levels. It also requires the licensee to establish monitoring to ensure that the corrective actions are effective. Verify that the licensee has provided a statement in the LAR confirming that it has established procedures at the site to meet requirements of Section 2.6.3.	NFPA 805, Section 2.6.3	Yes	Described in Section 4.6.2 of the Transition Report
NFPA 805 Section 4.2.4.1.6 requires the licensee to provide guidance to plant personnel that details the credited success path(s) for each fire area, including the performance of recovery actions and repairs.	NFPA 805, Section 4.2.4.1.6	No	There is only a general reference to feasibility.