

**Detailed Comments on the  
Fire Protection Staff Guidance for License Renewal**

**Recommended Changes to the NRC Position**

Recommended changes to the NRC Staff Position are indicated below (text to be added is underlined; text to be deleted is stricken out). Changes to the supporting Rationale are not provided, but should be developed consistent with the position that the plant fire protection licensing basis provides the scope for fire protection SSCs for license renewal.

~~“Each nuclear station has a unique FP fire protection program, and the licensing basis for meeting FP fire protection requirements is plant-specific. In short, plant-specific licensing basis documents establish the basis for making FP fire protection scoping determinations. Consistent with the requirements specified in 10 CFR 54.4(a)(3) and 10 CFR 50.48, all systems, structures, and components (SSCs) relied upon to perform a function that demonstrates compliance with the Commission’s regulations for FP (10 CFR 50.48) are within the scope of license renewal. Consistent with General Design Criterion (GDC) 3, the scope of SSC’s included in 10 CFR 50.48 goes beyond the protection of safety-related equipment. According to NUREG-0800, Section 9.5.1, “Fire Protection Program,” the scope of equipment required for compliance with 10 CFR 50.48 also includes FP SSCs relied on to minimize the effects of a fire and to prevent the release of radiation to the environment. Components~~ The license renewal scope should include the fire protection SSCs within the plant licensing basis that assure a fire will not prevent the performance of the necessary safe shutdown functions and will not significantly increase the risk of radioactive releases to the environment. These are typically the fire protection SSCs required to comply with licensee commitments to 10 CFR 50, Appendix R, and with commitments to or equivalent requirement in Appendix A to Branch Technical Position (BTP) APCSB 9.5-1, “Fire Protection For Nuclear Power Plants,” or BTP CMEB 9.5-1, as documented in NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants.” Such fire protection SSCs were typically incorporated into the Technical Specifications (TS) to ensure operability and then, in accordance with Generic Letters 86-10 and 88-12, were removed from the TS and relocated into another administrative control document where the operability requirements currently reside. ~~are within the scope of license renewal. Each nuclear station has a unique FP program, and the licensing basis for meeting FP requirements is plant-specific. In short, plant-specific licensing basis documents establish the basis for making FP scoping determinations.”~~

This language addresses the industry concerns as follows:

- Expansion of the current fire protection licensing basis: The two sentences in the Staff Position impacting the current licensing basis, beginning with “Consistent with General Design Criterion (GDC 3)...,” are removed.
- Expansion of license renewal scope for fire protection beyond the current licensing basis: The revised language refocuses the scoping of fire protection equipment for license renewal to include equipment in the current fire protection licensing basis, consistent with the last sentence of the current Staff Position.

### **Expansion of Current Licensing Basis**

#### Reference to NUREG-0800

The principal concern rests with the statement in the Staff Position, “According to NUREG-0800, Section 9.5.1, ‘Fire Protection Program,’ the scope of equipment required for compliance with 10 CFR 50.48 also includes FP SSCs relied on to minimize the effects of fire and to prevent the release of radiation to the environment.” This statement appears to extend the current licensing basis (CLB) to demonstrate compliance with 10 CFR 50.48.

NUREG-0800 Section 9.5.1 actually states, “The purpose of the fire protection program is to provide assurance....that a fire will not prevent the performance of the necessary plant safe shutdown functions, and will not significantly increase the risk of radioactive releases.....” The statement in the Staff Position is therefore inconsistent with NUREG-0800 in two particulars, as noted in the following table.

| Topic area                        | Staff Guidance Attributed to NUREG-0800               | NUREG-0800  |
|-----------------------------------|---|---|
| Fire prevention/<br>Safe shutdown | “...minimize the effects of fire”                     | “...fire will not prevent the performance of the necessary plant safe shutdown functions” |
| Radiation release                 | “prevent the release of radiation to the environment” | “..and will not significantly increase the risk of radioactive releases.....”             |

Requiring the fire protection program to minimize the effects of fire (without further describing the boundary of the program for license renewal) effectively expands the CLB beyond maintaining safe shutdown to minimizing fire effects in areas where safe shutdown is not impacted, such as the Turbine Building. In addition, requiring the fire protection program to “prevent” radiation release rather than assuring a

fire will “not significantly increase the risk of ” radiation release has a similar impact on the CLB.

Application of “Important to Safety”

The Rationale for the Staff Position incorrectly applies the Regulatory Guide 1.189 definition of “important to safety,” to license renewal scoping. As shown in the table below, the definition of “important to safety” in Regulatory Guide 1.189 is actually closer to the definition of "safety-related" in other applicable regulatory documents (including GL 84-01), GDC 1, and 10 CFR 50 Appendix B).

|  | Important to Safety   | Safety-Related   |
|--|---|--|
| Reg Guide 1.189                              | “... those required to provide reasonable assurance that the facility can be operated without <b>undue risk to the health and safety of the public.</b> ”                   | “...required to mitigate the consequences of design basis accidents”   |
| GL 84-01 and NRC letter of December 19, 1983 | Meet more general requirements of GDC-1   | Meet 10 CFR 50 Appendix B criteria   |
| GDC-1  | “SSCs important to safety shall be designed, fabricated, erected and tested to quality standards commensurate with the importance of the safety functions to be performed.” |  |
| 10 CFR 50 Appendix B                         |   | Appendix B establishes QA requirements for the design, construction and operation of SSCs that prevent or mitigate the consequences of postulated accidents that could cause <b>undue risk to the health and safety of the public.</b> |

Tying the Regulatory Guide 1.189 definition of “important to safety” to the 10 CFR 50.48 requirement to protect SSCs important to safety is therefore an inappropriate extension of the current plant licensing basis. Furthermore, this regulatory guide was written two decades after 10 CFR 50.48, and is not applicable to any plant licensing basis unless the licensee specifically commits to it.

## **Expansion of Fire Protection Equipment Scoping for License Renewal**

The scope of fire protection equipment required for license renewal is defined by 10 CFR 54.4(a)(3) as “all SSCs relied on in safety analyses or plant evaluations to perform a function that demonstrates compliance with the Commission’s regulations for fire protection (10 CFR 50.48)...” All licensees applying for license renewal have long-established fire protection licensing bases meeting the requirements of 10 CFR 50.48 (as supported by SERs and inspection results). Therefore the scope of fire protection SSCs to be addressed in the license renewal application should be limited to those SSCs reflected in the current licensing basis.