

## Regulatory Guide Periodic Review

Regulatory Guide Number: **1.191, Revision 0**

Title: **Fire Protection Program for Nuclear Power Plants During Decommissioning and Permanent Shutdown**

Office/Division/Branches: **NMSS/DUWP/RDB, NRR/DRA/APLB**

Technical Leads: **John Hickman, Naeem Iqbal**

Recommended Staff Action: **Revise**

### 1. What are the known technical or regulatory issues with the current version of the Regulatory Guide (RG)?

RG 1.191, Revision 0, was published in 2001 (Agencywide Documents Access and Management System (ADAMS) Accession No. [ML011500010](#)) to describe methods acceptable to the NRC staff for complying with the NRC's regulations regarding fire protection programs for licensees who have certified that their plants have permanently ceased operations and that fuel has been permanently removed from the reactor vessels.

Since 2001 plants that were licensed under Title 10 of the *Code of Federal Regulations* (10 CFR) 50.48(b), "Fire protection," or Appendix R to 10 CFR Part 50, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," have used this RG. This RG endorses several National Fire Protection Association (NFPA) standards. However, the date of affirmation for each standard is not listed in the RG.

In July 2004, the NRC amended its fire protection rule in 10 CFR 50.48 to allow nuclear power plant licensees to voluntarily adopt the risk-informed and performance-based rule 10 CFR 50.48(c). As an alternative to 10 CFR 50.48(b), many licensees adopted and maintain a fire protection program that meets 10 CFR 50.48(c), "National Fire Protection Association Standard NFPA 805," that incorporates by reference National Fire Protection Association (NFPA) 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition." In addition, 10 CFR 50.48(c) amends 10 CFR 50.48(f) to allow decommissioning plants the option to use a risk-informed, performance-based fire protection program.

In 2011 a periodic review was conducted (ADAMS Accession No. [ML13087A491](#)) of this RG and concluded that guidance on the new fire protection rule 10 CFR 50.48(c), NFPA 805, and its implementation is premature at that time for incorporation into this RG.

While the guidance in the current version of RG 1.191 remains adequate for plants that were licensed under 10 CFR 50.48(b) or Appendix R, the current version of RG does not include guidance for plants that were licensed under 10 CFR 50.48(c). The next revision to RG 1.191 should add guidance from NFPA 805, 2001 Edition, for plants licensed under 10 CFR 50.48(c).

While the staff has identified new information related to RG 1.191, Revision 0, this new information is not related to any currently identified safety concerns.

**2. What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of anticipated numbers of licensing and inspection activities over the next several years?**

There are no identified safety concerns if the RG is not updated. However, there are consistency issues that merit resolving as discussed above. The benefit of updating would be inclusion of regulatory information for plants that have transitioned to NFPA 805.

To date, 38 of the 99 operating reactor units are transitioned to NFPA 805. Safety evaluations are being finalized for two license amendment requests to transition to NFPA 805 (3 operating reactor units). The NRC staff expects one more license amendment request (2 operating reactor units) submittal in April 2018. One reactor unit (Fort Calhoun Station, Unit 1) licensed under 10 CFR 50.48(c) was permanently shut down in 2016. Thus, there is a need for revising the guide to address fire protection licensing bases. There are a number of power reactor decommissioning license applications anticipated in the next 5 years. The fire protection program under 10 CFR 50.48(c) via NFPA 805 for an operating reactor provides the basis for developing the fire protection program for the decommissioning phase. Therefore, the next revision of the RG 1.191 should add guidance for plants licensed under 10 CFR 50.48(c).

**3. What is an estimate of the level of effort needed to address identified issues in terms of full-time equivalent (FTE) and contractor resources?**

Revision of the RG should take approximately between 0.2 FTE and 0.4 FTE of NRC staff time. The effort will involve incorporating Chapter 5 from NFPA 805, updating references, and developing additional changes as needed. This activity will require coordination with other NRC Offices (Office of Nuclear Reactor Regulation, Office of Nuclear Material Safety and Safeguard, and Office of Nuclear Regulatory Research), and the NRC Regional Offices. The organizations that will be involved are cognizant of the need for updating this RG. Contractor support may be utilized in lieu of staff resources if dictated by resource constraints.

**4. Based on the answers to the questions above, what is the staff action for this guide (Reviewed with no issues identified, Reviewed with issues identified for future consideration, Revise, or Withdraw)?**

Revise.

**5. Provide a conceptual plan and timeframe to address the issues identified during the review.**

The NRC staff plans to develop a draft RG that will be published for public comment by the 4<sup>th</sup> quarter CY 2018, and is dependent on availability of funds and resources.

**NOTE: This review was conducted in September 2017 and reflects the NRC staff plans as of that date. These plans are tentative and are subject to change.**