

REGULATORY ANALYSIS

DRAFT REGULATORY GUIDE DG-1370 FIRE PROTECTION PROGRAM FOR NUCLEAR POWER PLANTS DURING DECOMMISSIONING

(Proposed Revision 1 of Regulatory Guide 1.191, Dated May 2001)

1. Statement of the Problem

The U.S. Nuclear Regulatory Commission (NRC) is considering revising Regulatory Guide (RG) 1.191, Revision 0, "Fire Protection Program for Nuclear Power Plants During Decommissioning." The purpose of RG 1.191 is to describe methods acceptable to the NRC staff for complying with the NRC's regulations for fire protection programs for licensees that have certified that their plants have permanently ceased operations and that the fuel has been permanently removed from the reactor vessels.

This proposed revision of the guide (Revision 1) would address new information identified since Revision 0 of this guide was issued. The guidance in Revision 0 of the RG remains adequate for plants licensed under 10 CFR 50.48(b) or 10 CFR Part 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979." Revision 0 does not include guidance for plants that have transitioned to the National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," licensing basis (i.e., 10 CFR 50.48(c)). This guide is being revised to include guidance for plants that have transitioned to NFPA 805, 2001 Edition, via 10 CFR 50.48(c).

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), that incorporates by reference NFPA 805. In addition, 10 CFR 50.48(c) amended 10 CFR 50.48(f) to allow decommissioning plants the option to use a risk-informed, performance-based fire protection program. In addition, 10 CFR 50.48(f) states that a fire protection program that complies with NFPA 805 shall be deemed acceptable for complying with the requirements of 10 CFR 50.48(f). Further, 10 CFR 50.48(f)(2) requires licensees to assess the fire protection program on a regular basis and revise it, as needed, throughout the various stages of facility decommissioning. The requirements of 10 CFR 50.48(f)(3) permit licensees to make changes to the fire protection program without NRC approval if these changes do not reduce the effectiveness of fire protection for facilities, systems, and equipment that could result in a radiological hazard, taking into account the conditions and activities of decommissioning at the facility. It should be noted that a significant number of licensees have transitioned to NFPA 805, 2001 Edition.

2. Objective

The objective of this proposed revision of the guide (Revision 1) would be to address new information identified since Revision 0 of this guide was issued. The guidance in Revision 0 of the RG is for plants licensed under 10 CFR 50.48(b) or 10 CFR Part 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979." However, Revision 0 does not include guidance for plants that have transitioned to the NFPA 805

licensing basis (i.e., 10 CFR 50.48(c)). This guide would be revised to include guidance for plants that have transitioned to NFPA 805, 2001 Edition, via 10 CFR 50.48(c).

3. Alternative Approaches

The NRC staff considered the following alternative approaches:

1. Do not revise Regulatory Guide 1.191
2. Withdraw Regulatory Guide 1.191
3. Revise Regulatory Guide 1.191 to address the current methods and procedures.

Alternative 1: Do Not Revise Regulatory Guide 1.191

Under this alternative, the NRC would not revise the guidance, and the current guidance would be retained. This alternative is considered the “no-action” alternative and provides a baseline condition from which any other alternatives will be assessed. If the NRC does not take action, there would not be any changes in costs or benefit to the public, licensees, or NRC. There are no identified safety concerns if the RG is not updated. However, there would not be guidance for decommissioning of plants that have transitioned to NFPA 805 via 10 CFR 50.48(c). The NRC would continue to review each permanently defueled technical specifications application on a case-by-case basis.

Alternative 2: Withdraw Regulatory Guide 1.191

Under this alternative, the NRC would withdraw this RG. This would eliminate the problems identified above regarding the RG. However, it would also eliminate the only readily available description of guidance that the NRC staff considers acceptable for demonstrating compliance with 10 CFR 50.48(f) for risk-informed, performance-based fire protection programs for decommissioning reactors. Although this alternative would be less costly to the NRC in the short term than the proposed Alternative 3, it would impede accessibility to the most current regulatory guidance and would be expected to be more costly in the long term to the NRC, the public, and licensees since the NRC would continue to review each application on a case-by-case basis.

Alternative 3: Revise Regulatory Guide 1.191

Under this alternative, the NRC would revise RG 1.191. Currently there is no risk-informed fire protection guidance for decommissioned plants. This revision would incorporate the latest information concerning risk-informed, performance-based fire protection programs. This revision would help ensure that NRC staff, the industry, and the public have access to the most current guidance available that accurately reflects the agency’s positions.

The impact to the NRC would be the costs associated with preparing and issuing the RG revision. The impact to the public would be the voluntary costs associated with reviewing and providing comments to NRC during the public comment period. The value to NRC staff and its applicants would be the benefits associated with enhanced efficiency and effectiveness in using a common guidance document as the technical basis for license applications and other interactions between the NRC and its regulated entities.

Conclusion

Based on this regulatory analysis, the NRC staff concludes that a revision of RG 1.191 is warranted. This revision would include guidance for plants that have transitioned to NFPA 805, 2001 Edition, via 10 CFR 50.48(c). By doing so, the NRC would ensure that the RG guidance available in this area is current and accurately reflects the staff's position by providing a risk-informed, performance-based fire protection program for decommissioning reactors.