

## **REGULATORY ANALYSIS**

### **DRAFT REGULATORY GUIDE DG-1271 DECOMMISSIONING OF NUCLEAR POWER REACTORS** *(Proposed Revision 1 of Regulatory Guide (RG) 1.184 dated July 2000)*

#### **Statement of the Problem**

Since issuance of RG 1.184 in July 2000 there have been 13 years of regulatory experience with decommissioning of nuclear facilities as well as the release of guidance relating to decommissioning of power reactors. Some of the insights and guidance are found in the references listed below. The Regulatory Guide in its current form does not contain all of the regulatory requirements and related guidance on decommissioning nuclear power reactors. Consequently, consideration needs to be given to revising RG 1.184.

#### **Objective**

The objective of this regulatory action is to assess updating RG 1.184 considering the experience and guidance for decommissioning nuclear power reactors garnered since Regulatory Guide 1.184 was issued in 2000.

#### **Alternative Approaches**

The NRC staff considered the following alternative approaches:

- Do not revise Regulatory Guide 1.184.
- Revise Regulatory Guide 1.184.

#### **Alternative 1: Do Not Revise Regulatory Guide 1.184**

Under this alternative, the NRC would not revise or issue additional guidance, and the current guidance would be retained. There would be no cost associated with its revision or in the public reviewing a proposed revision. However, since the issuance of RG 1.184 in 2000, the NRC staff has found common areas that require clarification in the RG including the need for early communication, insufficient information in environmental assessments associated with decommissioning, the need for early detection of spills, and estimates of decommissioning costs. In the absence of clarification of those areas, the NRC staff may need to issue requests for additional information. That will impact licensees who have to perform additional analyses to address those requests. The additional requests will result in increased costs to licensees because of the costs associated with responding to them, and NRC charges for additional staff time to complete the reviews.

#### **Alternative 2: Revise Regulatory Guide 1.184**

Under this alternative, the NRC would revise Regulatory Guide 1.184, taking into consideration the factors that have changed since the original issuance of the guide. The benefit of this action is that it would facilitate the decommissioning process by providing general procedures that the NRC considers acceptable for resolving issues related to decommissioning and eventual license termination for nuclear power reactors. The impact to the NRC would be the costs associated with preparing and issuing the regulatory guide 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 termination and other interactions between the NRC and its regulated entities.

## **Conclusion**

Based on this regulatory analysis, the NRC staff recommends the revision of Regulatory Guide 1.184. The staff concludes that the proposed action will facilitate the licensing process by enhancing a licensee's ability to address the decommissioning of nuclear power reactors. Revision of the guidance is expected to reduce the need for requests for additional information with the consequent burden on licensees to respond to them and for staff to review them. This is expected to facilitate the licensing process.

## **References**

1. U.S. Nuclear Regulatory Commission (NRC), "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," NUREG-0586, Supplement 1, November 2002, ADAMS Accession Number ML023500410.
2. NRC, "Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans," NUREG-1700, Revision 1, April 2003, ADAMS Accession Number ML03120391.
3. NRC, "Standard Format and Content of License Termination Plans for Nuclear Power Reactors," Regulatory Guide 1.179, June 2011, ADAMS Accession Number ML110490419.
4. NRC, "Fire Protection Program for Nuclear Power Plants During Decommissioning and Permanent Shutdown," Regulatory Guide 1.191, May 2001, ADAMS Accession Number ML011500010.
5. NRC, "Standard Review Plan for Decommissioning Cost Estimates for Nuclear Power Reactors," NUREG-1713, December 2004, ADAMS Accession Number ML043510113.
6. NRC, "Lessons Learned Related to Recently Submitted Decommissioning Plans and License Termination Plans," NRC Regulatory Issue Summary (RIS) 2002-02, January 2002, ADAMS Accession number ML013510432.