Regulatory Guide Withdrawal

Regulatory Guide Number:	**1.86, Revision 0**
Title:	**Termination of Operating Licenses for Nuclear Reactors**
Office/division/branch:	**NMSS/DUWP/RDB**
Technical Lead:	**James Shepherd**
SUBJECT:	**Basis For Withdrawal**

(1) What did the Regulatory Guide support?

This Regulatory Guide (RG) 1.86 provided guidance for applications for termination of operating licenses for nuclear reactors, including the decommissioning of the reactors, under the decommissioning and license termination regulatory process in place in 1974.

RG 1.86 was issued in June 1974 and stated that licensees having a possession-only license must retain, with the 10 CFR Part 50 license, authorization for special nuclear material (10 CFR Part 70, "Domestic Licensing of Special Nuclear Material"), byproduct material (10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material"), and source material (10 CFR Part 40, "Domestic Licensing of Source Material"), until the fuel, radioactive components, and sources were removed from the facility. Also, it noted that appropriate administrative controls and facility requirements were imposed by the 10 CFR Part 50 license and the technical specifications to assure that proper surveillances were performed and that the reactor facility was maintained in a safe condition and not operated.

In addition, the RG indicated that a possession-only license permitted various options and procedures for decommissioning, such as DECON (dismantling), SAFSTOR (long term storage) or ENTOMB (Entombment). The requirements imposed depended on the option selected.

(2) What was the purpose of the Regulatory Guide?

This guide described the methods and procedures considered acceptable by the NRC staff in 1974 for the termination of operating licenses for nuclear reactors, including the decommissioning of the reactors. In addition, it provided acceptable average and maximum surface contamination levels (see Table 1, “Acceptable Surface Contamination Levels”).

(3) How was the Regulatory Guide used?

The NRC staff issued RG 1.86 in June 1974 to provide guidance for decommissioning and termination of licenses for nuclear reactors. In addition, RG 1.86 includes information in Table 1, “Acceptable Surface Contamination Levels”, regarding surface contamination criteria that have been used for many years by all types of licensees for release for unrestricted use of materials and equipment.

(4) Why is the Regulatory Guide no longer needed?

The regulatory guidance in RG 1.86 is no longer needed because it has been updated and replaced by NRC regulations and other regulatory guidance.

The NRC staff originally issued RG 1.86 in June 1974 to provide guidance on meeting the decommissioning and license termination requirements in 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities,” as stated in the response to Question 1.

In 1996, the NRC amended its regulations in 10 CFR Part 2, "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders"; 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities"; and 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions" (61 FR 39278; July 29, 1996). These amendments prescribe specific criteria for decommissioning nuclear power reactors. In 1997, the NRC amended its regulations in 10 CFR Part 20, “Standards for Protection against Radiation”; 10 CFR Part 30, “Rules of General Applicability to Domestic Licensing of Byproduct Material”; 10 CFR Part 40, “Domestic Licensing of Source Material”; 10 CFR Part 50; 10 CFR Part 51; 10 CFR Part 70, “Domestic Licensing of Special Nuclear Material”; and 10 CFR Part 71, “Packaging and Transportation of Radioactive Material” (62 FR 39058; July 21, 1997). This 1997 rule is known as the License Termination Rule or LTR. These changes prescribe specific radiological criteria for license termination for all NRC licenses.

As a result, the information in RG 1.86 became obsolete due to its reliance on outdated regulatory processes, guidance, and technical information. In November 18, 1998, the NRC staff issued a *Federal Register* notice (63 FR 64132) of supplemental information on the implementation of the LTR stating that RG 1.86 was superseded for purposes of license termination.

In 1999, the staff developed RG 1.179, “Standard Formant and Content of License Termination Plans for Nuclear Power Reactors,” and in 2000, RG 1.184, “Decommissioning of Nuclear Power Reactors,” and RG 1.185, “Standard Format and Content for Post-Shutdown Decommissioning Activities Report,” to reflect the changes in the revised decommissioning regulations and license termination rule, and to provide guidance on implementing the revised regulations.

In addition, various NUREGs contain updated information that are aligned with RG 1.179, RG 1.184 and RG 1.185 and are consistent with the changes in the regulations. These NUREGs are: NUREG-1700, “Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans,” and NUREG-1757, “Consolidated Decommissioning Guidance,” Volume 2, “Characterization, Survey, and Determination of Radiological Criteria.” Specifically, NUREG-1757, Volume 2, Revision 1, includes: (1) tables of screening criteria (concentrations) applicable to surface contamination of buildings and to surface soils (Tables H.1 and H.2); and (2) guidance on determining site-specific criteria for buildings and soils remaining onsite at license termination (Chapter 5 and Appendix I).

For the release for unrestricted use of materials and equipment, NUREG-1757, Volume 1, Revision 2, section 15.11.1.1, “Release of Solid Materials with Surface Residual Radioactivity,” describes current NRC staff practice for the case-by-case reviews of

applications. In addition, RG 8.21, “Health Physics Surveys for Byproduct Material at NRC-Licensed Processing and Manufacturing Plants,” RG 8.23, “Radiation Safety Surveys at Medical Institutions,” and RG 8.30, “Health Physics Surveys in Uranium Recovery Facilities,” provide information similar to that included in Table 1 of RG 1.86. Specifically, Table 1 in RG 1.86 is now included in RG 8.23 and is titled, “Table 3 Acceptable Surface Contamination Levels for Uncontrolled Release of Equipment.”

(5) What guidance is available once the Regulatory Guide is removed?

RG 1.179, “Standard Formant and Content of License Termination Plans for Nuclear Power Reactors,” provides the current staff regulatory guidance for implementing the NRC’s regulations concerning power reactor license termination. RG 1.184, Revision 1, “Decommissioning of Nuclear Power Reactors,” and RG 1.185, Revision 1, “Standard Format and Content for Post-Shutdown Decommissioning Activities Report,” provide the current staff guidance for implementing the NRC’s power reactor decommissioning regulations.

In addition, NUREG-1700, “Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans,” and NUREG-1757, “Consolidated Decommissioning Guidance,” Volume 2, “Characterization, Survey, and Determination of Radiological Criteria,” provide related up-to-date technical information.

For the release for unrestricted use of materials and equipment, guidance is included in NUREG-1757, Vol. 1, describing the current NRC staff practice for release of materials and equipment. In addition, RG 8.21, “Health Physics Surveys for Byproduct Material at NRC-Licensed Processing and Manufacturing Plants,” RG 8.23, “Radiation Safety Surveys at Medical Institutions,” and RG 8.30, “Health Physics Surveys in Uranium Recovery Facilities,” provide information similar to that included in Table 1 of RG 1.86. Specifically, Table 1 in RG 1.86 is now included in RG 8.23 and is titled, “Table 3 Acceptable Surface Contamination Levels for Uncontrolled Release of Equipment.”

(6) Is the Regulatory Guide referenced in other documents and what are the “ripple effects” on these documents if it is withdrawn?

RG 1.86 is referenced in NRC guidance documents such as RG 8.21, “Health Physics Surveys for Byproduct Material at NRC-Licensed Processing and Manufacturing Plants,” RG 8.23, “Radiation Safety Surveys at Medical Institutions,” and RG 8.30, “Health Physics Surveys in Uranium Recovery Facilities.” However, these are only informational references. The staff anticipates that future revisions of these documents would reference RG 1.179, RG 1.184, and RG 1.185.

RG 1.86 does not include any references; however, NUREG-1757 references RG 1.86 (specifically, the section of Vol. 1 that describes the current NRC staff practice for release of materials and equipment). The staff anticipates that the next revision of NUREG-1757 will make the appropriate change regarding the withdrawal of RG 1.86.

(7) What is the basis for believing that no guidance similar to that in the Regulatory Guide will ever be needed?

There is more up-to-date guidance in other NRC regulatory documents, making RG 1.86 obsolete. Specifically, this guidance can be found in RG 1.179, “Standard Formant and

Content of License Termination Plans for Nuclear Power Reactors," RG 1.184, "Decommissioning of Nuclear Power Reactors," and RG 1.185, "Standard Format and Content for Post-Shutdown Decommissioning Activities Report," stating the staff positions on implementing NRC's license termination and decommissioning regulations.

In addition, various NUREGs, including NUREG-1700, "Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans," and NUREG-1757, "Consolidated Decommissioning Guidance," Vol. 2, "Characterization, Survey, and Determination of Radiological Criteria," provide up-to-date information that aligns with RG 1.184 and RG 1.185.

Also, guidance is available in RG 8.21 "Health Physics Surveys for Byproduct Material at NRC-Licensed Processing and Manufacturing Plants," RG 8.23 "Radiation Safety Surveys at Medical Institutions," and RG 8.30 "Health Physics Surveys in Uranium Recovery Facilities."

(8) Will generic guidance still be needed?

Yes, and the existing guidance in RG 1.179, RG 1.184, RG 1.185, RG 8.21, RG 8.23, and RG 8.30 is sufficient.

(9) What is the rationale for withdrawing this Regulatory Guide instead of revising it?

RG 1.86 is based on the NRC's requirements in 1974 and includes outdated regulatory processes, guidance and technical information. Current guidance with the approach and methodologies for reactor decommissioning, license termination, and surface contamination criteria for unrestricted release of materials and equipment is described in more recent NRC regulatory guidance documents.

(10) Do other agencies rely upon the Regulatory Guide, e.g., Agreement State programs, National Aeronautical and Space Administration, Department of Energy?

No other agencies are known to be using this RG. Although it is possible that some Agreement States could still be referencing RG 1.86, the states would use the latest information in the related documents once RG 1.86 is withdrawn. The Agreement States have access to the other NRC regulatory documents discussed in the answer to Question 8. Also, Agreement States will be informed of the relocation of the technical information in RG 1.86 to the regulatory documents listed in the answer to question 8 as part of periodic communication letters sent to the states providing NRC updated information.