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U.S. NUCLEAR REGULATORY COMMISSION STANDARD REVIEW PLAN OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

10.0 DECOMMISSIONING

10.1 PURPOSE OF REVIEW

The purpose of the review of the applicant's plans for decommissioning is to determine with reasonable assurance that the applicant will be able to decommission the facility safely and in accordance with NRC requirements.

At the time of the initial license application, and on license renewal, the applicant/licensee may be required to submit a decommissioning funding plan (DFP). The purpose of NRC evaluation of the DFP is to determine that the applicant/licensee has considered decommissioning actions that may be needed in the future; has performed a credible site-specific cost estimate for those actions; and has presented the NRC with financial assurance to cover the cost of these actions in the future. The DFP, therefore, should contain an overview of the proposed decommissioning actions; the methods used to determine the cost estimate; and the financial assurance mechanism. These must be in sufficient detail to allow the reviewer to determine that the decommissioning cost used in the DFP is reasonably accurate.

Before the initiation of decommissioning actions, the licensee must submit, to the NRC, for approval a Decommissioning Plan (DP) if required by §70.38(g). The DP details the specific decommissioning activities to be performed; describes radiation protection procedures to protect workers, the public and the environment during decommissioning. It must provide sufficient information to allow the reviewer to assess the appropriateness of the decommissioning activities, and the adequacy of the actions to protect health and safety and the environment. It must also update the cost estimate originally presented in the DFP to undertake the facility decommissioning. Approval of a DP is often obtained through application for a license amendment. The reviewer must ascertain that the applicant understands decommissioning requirements and procedures, and commits to the protection of the health and safety of workers, the public and the environment during decommissioning.

10.2 RESPONSIBILITY FOR REVIEW

Primary: Licensing Project Manager

Secondary: Environmental Reviewer
Technical and financial specialists in the Division of Waste Management

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Supporting: Fuel facility inspection staff

10.3 AREAS OF REVIEW

The reviewer will evaluate the applicant's DFP or DP in accordance with the "NMSS Decommissioning Program Standard Review Plan" currently under development in the Division of Waste Management.

Before starting the DFP or DP review, the reviewer should first review the applicant's proposed "Environmental Protection Measures" (SRP Chapter 9), and specifically the commitments to waste minimization applicable to decommissioning, and the "Radiation Protection Program" (SRP Chapter 4) as it applies to radiological decontamination and management of radiological effluents.

10.4 ACCEPTANCE CRITERIA

10.4.1 Regulatory Requirements

Decommissioning planning, financial assurance for decommissioning, recordkeeping for decommissioning, and waste and contamination minimization are required by the following NRC regulations:

1. 10 CFR 70.22(a)(9) "Decommissioning Funding Plan";
2. 10 CFR 70.25 "Financial Assurance and Recordkeeping for Decommissioning";
3. 10 CFR 70.38 "Expiration and Termination of Licenses and Decommissioning of Sites and Separate Buildings or Outdoor Areas"; and
4. 10 CFR 20.1401-1406 "Radiological Criteria for License Termination" (Subpart E).

10.4.2 Regulatory Guidance

Relevant regulatory guidance and the appropriate acceptance criteria for DPs and DFPs contained in license applications and/or amendment requests are included in the "NMSS Decommissioning Program Standard Review Plan" currently under development.

10.5 REVIEW PROCEDURES

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The primary reviewer will evaluate the application against NRC requirements and acceptance criteria identified in "NMSS Decommissioning Program SRP." This review will be supplemented as appropriate by detailed review of any contamination and waste-minimization plans submitted by the applicant in response to 10 CFR 20.1406. The reviewer will also coordinate with the principal reviewers for environmental protection listed in Chapter 9.0, to confirm review of a new applicant's descriptions of plans for waste minimization, as well as plans for existing licensees to minimize contamination and reduce exposures and effluents as part of the radiation protection established under Part 20. The purpose of this coordination is to ensure that any issues that are relevant to the environmental review are properly conveyed to the lead reviewers, for these sections, for consideration and resolution. Similarly, any decommissioning issues that arise in the environmental review that are most suited for review using guidance in Chapter 10.0 are conveyed to the primary reviewer for consideration and resolution.

If the review identifies the need for the applicant to submit information that has not already been included in the application, the reviewer will document these additional information needs in a Request for Additional Information (RAI). The RAI will be transmitted to the applicant with a request for the information in a reasonable amount of time (e.g., 30 to 60 days). Failure of the applicant to provide the information by the requested date, or on an alternative schedule that is mutually agreeable, could be grounds for terminating or suspending the application review.

In accordance with the Fuel Cycle and International Safeguards Branch licensing manual, the lead reviewer will coordinate with the Division of Waste Management for appropriate technical assistance reviewing proposed DPs and financial assurance. The lead reviewer will coordinate the evaluation of the application with reviewers assigned by the Division of Waste Management and will incorporate, as appropriate, RAIs and review findings in licensing correspondence and SERs related to decommissioning.

10.5.2 Safety Review

The reviewer should perform a safety analysis against the acceptance criteria in the "NMSS Decommissioning Program Standard Review Plan," to ensure that the proposed decommissioning methodology, principal remediation activities, and worker and environmental radiation protection programs are acceptable.

10.6 EVALUATION FINDINGS

If sufficient information has been provided in the application to satisfy the acceptance criteria and requirements identified in Section 10.4, the staff will conclude that the DFP or DP evaluation is complete and satisfactory. The primary reviewer will prepare a Safety Evaluation Report (SER) for the Licensing Project Manager, in support of the licensing action. The SER should address each topic area reviewed and explain why the NRC has reasonable assurance

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that the DFP or DP should be acceptable. License conditions may be imposed where the application is deficient. The SER should include a summary statement of what was evaluated and the bases for the reviewers' conclusions. The staff will document its evaluation as follows:

The NRC staff has evaluated the applicant's/licensee's plans for decommissioning and financial assurance for decommissioning in accordance with the NMSS Decommissioning Program Standard Review Plan. Based on this evaluation, the NRC staff has determined that the applicant's/licensee's plans for decommissioning and financial assurance for decommissioning provide reasonable assurance of protection for members of the public and the environment and comply with the NRC's regulations.

10.7 REFERENCES

U.S. Code of Federal Regulations, Title 10, Part 70, Domestic Licensing of Special Nuclear Material, U.S. Government Printing Office, Washington, DC.

Orlando, D. A., *et al.* *NMSS Handbook for Decommissioning Fuel Cycle and Materials Licensees*, U.S. Nuclear Regulatory Commission, NUREG/BR-0241, 1997.

U.S. Nuclear Regulatory Commission, *NMSS Decommissioning Program Standard Review Plan*, NUREG-XXX, date to be determined.