

NUREG-1520

Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility

Final Report

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ABSTRACT

This "Standard Review Plan (SRP) for the Review of a License Application for a Fuel Cycle Facility" (NUREG-1520) provides guidance to the staff reviewers in the U.S. Nuclear Regulatory Commission (NRC), Office of Nuclear Material Safety and Safeguards (NMSS) who perform safety and environmental impact reviews of applications to construct or modify and operate nuclear fuel cycle facilities. As such, this SRP ensures the quality, uniformity, and predictability of the staff reviews. This SRP also makes information about licensing acceptance criteria widely available to interested members of the public and the regulated industry. Each SRP section addresses the responsibilities of the staff reviewers, the matters that they review, the Commission's regulations pertinent to specific technical matters, the acceptance criteria used by the staff, the process and procedures used to accomplish the review, and the conclusions that are appropriate to summarize the review.

This SRP also addresses the long-standing health, safety, and environmental protection requirements of Title 10, Parts 20 and 70, of the Code of Federal Regulations (10 CFR Parts 20 and 70) as well as the amended accident safety requirements reflected in the new Subpart H of 10 CFR Part 70. For example, the chapters concerning radiation safety, environmental protection, emergency management, and decommissioning contain acceptance criteria that are primarily set by regulations that remained unaffected by the recent revision to 10 CFR Part 70.

The new Subpart H of 10 CFR Part 70 identifies risk-informed performance requirements and requires applicants and existing licensees to conduct an integrated safety analysis (ISA) and submit an ISA Summary, as well as other information. Chapters 3 (ISA) and 11 (Management Measures) of this SRP are the primary chapters that address the staff's review in relation to the performance and other related requirements of Subpart H.

This SRP is not a substitute for NRC regulations and compliance is not required. The approaches and methods in this report are provided for information only. Methods and solutions different from those described in this report will be acceptable if they provide a basis for the staff to make the determination needed to issue or continue a license.

This SRP focuses on safety and environmental impact reviews. Review criteria applicable to the safeguards sections of license applications were developed earlier and are published in NUREGs 1280 and 1065.¹

¹ Standard format and content guides for Fundamental Nuclear Material Control Plans

10 DECOMMISSIONING

10.1 PURPOSE OF REVIEW

The purpose of the review of the applicant's decommissioning plans 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 again at license renewal, the applicant/licensee may be required to submit a decommissioning funding plan (DFP). The purpose of the NRC's evaluation of the DFP is to determine whether the applicant/licensee has considered decommissioning activities that may be needed in the future, has performed a credible site-specific cost estimate for those activities, and has presented the NRC with financial assurance to cover the cost of those activities in the future. The DFP, therefore, should contain an overview of the proposed decommissioning activities, the methods used to determine the cost estimate, and the financial assurance mechanism. This overview must contain sufficient detail to enable the reviewer to determine whether the decommissioning cost estimate is reasonably accurate.

If required by 10 CFR 70.38(g), the licensee must also submit, for NRC approval a decommissioning plan (DP) before beginning its decommissioning actions. The DP must detail the specific decommissioning activities to be performed, and must describe the radiation protection procedures that will be used to protect workers, the public, and the environment during decommissioning. This information must be sufficient to the reviewer to assess the appropriateness of the decommissioning activities and the adequacy of the procedures to protect the health and safety of workers, the public, 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 the 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

Supporting: Fuel Facility Inspection Staff

10.3 AREAS OF REVIEW

The reviewer will evaluate the applicant's DFP, and/or DP in accordance with the "NMSS Decommissioning Standard Review Plan" NUREG-1727.

Before beginning to review starting the DFP or DP, the reviewer should first evaluate the applicant's proposed "Environmental Protection Measures" (SRP Chapter 9) and, specifically, the commitments to minimize waste associated with decommissioning, as well as 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

The following NRC regulations require planning, financial assurance and recordkeeping for decommissioning, as well as procedures and activities to minimize waste and contamination:

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

10.4.2 Regulatory Guidance

The "NMSS Decommissioning Standard Review Plan," NUREG-1727, defines relevant regulatory guidance and appropriate acceptance criteria for DFPs and DPs contained in license applications and/or amendment requests.

10.5 REVIEW PROCEDURES

The primary reviewer will evaluate the application against the NRC requirements and acceptance criteria identified in the "NMSS Decommissioning Standard Review Program." This review will be supplemented (as appropriate) by a 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), to confirm the review of a new applicant's plans to minimize for waste, as well as plans for existing licensees to minimize contamination and reduce exposures and effluents as part of the radiation protection program established under 10 CFR 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 primary reviewers for consideration and resolution as part of the review discussed in Chapter 9. Similarly, any decommissioning issues that arise in the environmental review that are best suited for review using guidance in this chapter are conveyed to the primary reviewer for consideration and resolution.

If the decommissioning 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 transmitted to the applicant will specify a reasonable amount of time (e.g., 30 to 60 days) for the applicant to reply. Failure of the applicant to provide the requested information by the specified 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 primary reviewer will coordinate with the Division of Waste Management to obtain appropriate technical assistance in reviewing proposed DPs and financial assurance measures. The

primary reviewer will coordinate with reviewers assigned by the Division of Waste Management 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 Standard Review Plan," NUREG-1727, to ensure that the proposed decommissioning methodology, principal remediation activities, and worker and environmental radiation protection programs are acceptable.

10.6 EVALUATION FINDINGS

If the applicant provides sufficient information 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 an SER for the Licensing Project Manager, in support of the licensing action. This SER should address each topic area reviewed, and including an explanation of the bases for the reviewers' conclusions, why the NRC has reasonable assurance that the DFP or DP should be considered acceptable. The SER may also include license conditions where the application is deficient. The SER should include a summary statement of what was evaluated and. The staff will document its evaluation as follows:

The NRC staff has evaluated the applicant's/licensee's plans and financial assurance for decommissioning in accordance with the "NMSS Decommissioning Program Standard Review Plan," NUREG-1727. On the basis of this evaluation, the NRC staff has determined that the applicant's/licensee's plans and financial assurance for decommissioning comply with the NRC's regulations, and provide reasonable assurance of protection for workers, the public, and the environment.

10.7 REFERENCES

Code of Federal Regulations, Title 10, Part 70, "Domestic Licensing of Special Nuclear Material."

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

U.S. Nuclear Regulatory Commission, "NMSS Decommissioning Standard Review Plan," NUREG-1727, September 2000.

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