

## 14.0 DECOMMISSIONING FUNDING PLAN AND FINANCIAL ASSURANCE MECHANISMS

### 14.1 Purpose of Review

The purpose of this Standard Review Plan (SRP) section on decommissioning funding is to present the regulatory requirements and regulatory guidance and to establish the acceptance criteria and review procedures to be used by reviewers. The reviewer should ascertain that the funding requirements, as specified by the regulations, have been assured to enable the applicant to dispose of the waste and depleted uranium and for decontamination and decommissioning activities that are the responsibility of the applicant.

### 14.2 Responsibility for Review

Primary: ~~Low-Level Waste and Decommissioning Projects Branch~~

Secondary: Special Projects Branch

Supporting: Office of the General Counsel

### 14.3 Areas of Review

The staff will evaluate the financial assurance methods required by 10 CFR Part 76, with respect to the decommissioning cost estimate and accompanying documentation submitted by the applicant to ensure that sufficient funds will be available to carry out those portions of the ultimate decommissioning of the facility for which it is responsible. Items to be submitted include a plan outlining the ultimate disposal of the waste and depleted uranium and the decommissioning activities that are the responsibility of the applicant, and **a decommissioning funding plan consisting of** a cost estimate and ~~the~~ financial assurance mechanisms.

**Under Section 1403 of the Atomic Energy Act of 1954, as amended, the U.S. Department of Energy (DOE) is responsible for payment of any costs of decontamination and decommissioning of the gaseous diffusion plant (GDP) facilities leased by DOE to the applicant. The applicant is responsible for the ultimate treatment and disposal of any wastes generated by the applicant from the date of privatization for which DOE is not responsible and for the decontamination and decommissioning of any capital improvements made by the applicant not the responsibility of DOE.**

## 14.4 Review Procedures

### 14.4.1 Acceptance Review

The staff reviews the financial mechanisms and accompanying documentation submitted by the applicant by comparing them with the checklists in ~~Regulatory Guide (RG) 3.66~~ **NUREG-1727, "NMSS Decommissioning Standard Review Plan."** In addition, the wording of the mechanisms should be compared to the language suggested in ~~RG 3.66~~ **NUREG-1727** to ensure that the appropriate information has been submitted. **Staff ensures that the cost estimate is provided for processing, management, disposal, and disposition of depleted uranium, low-level radioactive, and mixed wastes. If the applicant has constructed facilities not covered under the lease agreement with DOE, the staff ensures that a decommissioning cost estimate for such facilities is included in the application.**

If significant deficiencies are identified in the application, the applicant should be requested to submit additional material before the staff resumes the application review.

### 14.4.2 Evaluation

The staff reviews the **decommissioning cost estimate and the** financial mechanisms submitted by the applicant by using the general and specific procedures provided in the following sections.

#### 14.4.2.1 Decommissioning Cost Estimate

**The staff uses the guidance in NUREG-1727, "NMSS Decommissioning Standard Review Plan," to ensure that the applicant's cost estimate is complete, has an appropriate level of detail, and is a reasonable estimate of the depleted uranium disposition, waste disposal, and decontamination and decommissioning costs that are the responsibility of the applicant.**

**The staff reviews the applicant's depleted uranium disposition plan and the projected quantities of depleted uranium requiring disposition. The staff also reviews the projected processing, packaging, transportation, and disposition unit cost estimates and appropriate documentation to support the unit cost estimates.**

**The staff reviews the applicant's projected low-level radioactive and mixed waste projections, unit disposal cost estimates, and applicable documentation to support these projections. Projections based on prior waste generation rates are acceptable. If total waste projections are based on inventories of less than one year in duration, the applicant should request a certificate amendment committing to maintaining waste inventories at less than the level assumed in the cost estimate. Costs of applicable waste processing, packaging, and transportation should be included and documented in the cost estimate. Unit disposal costs based on current and relevant treatment and disposal contracts or costs based on the latest version of NUREG-1307, "Report of Waste Burial Charges," are acceptable. For mixed wastes for which there are no current licensed and permitted means of treatment and disposal, unit treatment and disposal costs are acceptable if based on conservative estimates that reflect the limited generation rates and difficulty of treating of these wastes.**

The staff reviews the applicant's projected decontamination and decommissioning costs of capital improvements that are the applicant's responsibility. The staff reviews descriptions of these facilities, estimated decommissioning costs, and key assumptions. Further guidance of estimating these decommissioning costs is provided in NUREG-1727. No credit for salvage value of contaminated equipment should be taken in the cost estimate unless justified by documented contractual commitments to purchase the contaminated equipment.

The staff reviews the contingency factor assumed in the cost estimate as discussed in NUREG-1727. A contingency factor of at least 25 percent to account of uncertainties in waste generation rates, inventory projections, future waste disposal charges, and decommissioning costs is acceptable.

The staff reviews the applicant's proposed means for periodically adjusting the cost estimate. Cost estimates should be adjusted at least annually. Adjustments should be made to account for inflation, changes in prices of goods and services, changes in assumed decommissioning procedures, changes in facility conditions and projected waste quantities, and changes in waste treatment, packaging, and disposal costs. If adjustments reduce the total decommissioning obligation, the applicant should commit to providing the revised cost estimate to the staff for review.

#### **~~14.4.2.1~~ 14.4.2.2 General Evaluation Procedures Applicable to All Financial Mechanisms**

The staff uses the checklists in ~~RG-3.66~~ NUREG-1727 to ensure that the mechanisms contain all the necessary components. If there are questions about the wording of the chosen financial method or about appropriate documentation, the reviewer consults the Certification Project Manager.

~~The staff checks signatures and verify that the parties signing the various documents are authorized to represent the firm in the transaction. If the applicant is a partnership, the signatory must indicate that person is signing for the partnership by using words such as "for the partnership" or "for the company." If the applicant is not an individual and power of attorney is needed for a signature, a copy of the power of attorney should be attached to the financial assurance mechanism.~~

The staff determines whether the financial assurance mechanism is complete and will be in effect at the proper time, and if the value is consistent with the **decommissioning** cost estimates provided in the ~~decommissioning funding program description~~.

#### **14.4.2.2.1 Financial Assurance Mechanisms Evaluation Procedures**

The staff reviews the financial assurance mechanism submitted by the applicant by using the general and specific procedures provided in the following sections:

##### **1. Escrow Accounts**

The staff ensures that an executed copy of the escrow agreement is provided by the applicant and that the amount of the fund is at least equal to the ~~cost of~~ decommissioning

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**cost estimate.** The staff reviews the checklist (~~RG-3.66~~ **NUREG-1727**) to verify that the applicant has satisfied the conditions necessary for ensuring financial responsibility for decommissioning using this mechanism.

### 2. Cash Deposits, Certificates of Deposit, and Government Securities

The staff ensures that the applicant has submitted a trust agreement or documentation pertaining to the applicant's activities licensed pursuant to 10 CFR Part 76. The staff verifies that the applicant has deposited assets such as cash, certificates of deposit (CDs), or government securities with a third party such as a trust fund. The staff ensures that the amount of the cash deposit, CD, or government security is at least equal to the ~~cost of~~ decommissioning **cost estimate**.

CDs may be either negotiable or nonnegotiable. If a negotiable CD is used the staff verifies that the CD is the property of a trust or escrow account established in accordance with decommissioning rules and guidance. If a nonnegotiable CD is used, the staff verifies that the CD names the trust or escrow account as payee (unless a State agency that can hold the funds will serve as trustee). The staff reviews the checklist of criteria in ~~RG-3.66~~ **NUREG-1727** to verify that the applicant has satisfied the conditions necessary for ensuring financial responsibility for decommissioning using one of these mechanisms.

### 3. Trust Funds (Including Standby Trusts)

The staff ensures that the applicant has provided information so that the staff can verify that the bank, savings and loan association, or other financial institution has the authority to act as trustee and that the trust operations are regulated and examined by a Federal or State agency. To determine whether the trustee is authorized to act as trustee, the staff refers to a list published by the Comptroller of the Currency of financial institutions that are federally authorized to act as trustee, or contacts the applicable bank regulatory agency to determine State authorization. To determine whether the trustee's operations are regulated and examined by a Federal or State agency, the staff refers to a list maintained by the Federal Deposit Insurance Corporation (FDIC) of all federally regulated financial institutions, or calls the applicable state banking regulatory agency for verification of State-regulated entities. For foreign banks with U.S. branches, the staff contacts the applicable State banking regulatory agency.

Where standby trusts are used, the staff verifies that the trustee is qualified to act as trustee by following the same method discussed above for verifying trusts. It also verifies that the standby trust agreement is an originally signed duplicate and that a certificate of acknowledgment accompanies the bond or letter of credit. The staff ensures that the amount of the trust fund is at least equal to the ~~cost of~~ decommissioning **cost estimate**. The staff reviews the checklists in ~~RG-3.66~~ **NUREG-1727** to verify that the applicant has satisfied the conditions necessary for ensuring financial responsibility for decommissioning using these mechanisms.

#### 4. Surety Bonds

The staff ensures that a standby trust fund agreement accompanies the bond and that it complies with the suggested wording and documentation in ~~RG-3.66~~ **NUREG-1727**. The staff ensures that the applicant has submitted information showing that the surety is listed as an acceptable surety in the most recent edition of Circular 570 of the U.S. Department of the Treasury and that the surety company is licensed in the State where the bond will be executed. The staff verifies that the applicant reviewed the broker's or agent's power of attorney to ensure that the broker or agent is authorized by the surety to issue bonds in the necessary amount. The staff ensures that documentation provided by the applicant shows that the applicant will be responsible for notifying the U.S. Nuclear Regulatory Commission (NRC) if the surety company intends to cancel or if it goes bankrupt. The staff ensures that the penal sum of the bond is an amount at least equal to the ~~cost of~~ decommissioning **cost estimate**. The staff reviews the checklist of criteria in ~~RG-3.66~~ **NUREG-1727** to verify that the applicant has satisfied the conditions necessary for ensuring financial responsibility for decommissioning.

#### 5. Letters of Credit

The staff ensures that the applicant has submitted information so that it can verify that the bank, savings and loan association, mutual savings bank, or credit union issuing the letter of credit has authority to issue letters of credit, and that the letter-of-credit operations are regulated and examined by a Federal or State agency. The staff refers to a list maintained by the FDIC of all federally regulated financial institutions or calls the applicable State banking regulatory agency for verification of State-regulated entities. In addition, for foreign banks with U.S. branches, the staff contacts the applicable State banking agency. The staff ensures that the amount of the guarantee is at least equal to the ~~cost of~~ decommissioning **cost estimate**.

The staff ensures that a letter of credit addressed to the NRC is submitted stating that the letter of credit is subject to the most recent edition of the *Uniform Customs and Practice for Documentary Credits*, published by the International Chamber of Commerce, or the *Uniform Commercial Code*, by Lawyer's Cooperative Publishing Company. The staff ensures that a standby trust fund agreement accompanies the letter of credit and that it complies with the suggested wording contained in ~~RG-3.66~~ **NUREG-1727**. The staff reviews the draft "sight draft" using Appendix D of this SRP to ensure that the terms of the letter of credit and the terms of the sight draft are consistent. The staff reviews the checklist of criteria in ~~RG-3.66~~ **NUREG-1727** to verify that the applicant has satisfied the conditions necessary for ensuring financial responsibility for decommissioning.

#### 6. Insurance

The staff ensures that documentation of the insurance policy is provided by the applicant and that the amount of the fund is at least equal to the ~~cost of~~ decommissioning **cost estimate**. The staff reviews the checklists in ~~RG-3.66~~ **NUREG-1727** to verify that the applicant has satisfied the conditions necessary for ensuring financial responsibility for decommissioning using this mechanism.

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### 7. External Sinking Fund

The staff ensures that documentation is provided by the applicant indicating that a fund has been established in the form of cash deposits in an escrow account, trust agreement, certificate of deposit, or government securities. The staff ensures that documentation of a surety method (e.g., letter of credit, surety bond, or insurance) is supplied **for the remaining decommissioning obligation** when this mechanism is used.

The staff ensures that documentation of the external sinking fund and surety method is provided by the applicant and that the amount of the fund is at least equal to the cost of decommissioning. The staff reviews the checklists in ~~RG-3.66~~ **NUREG-1727** to verify that the applicant has satisfied the conditions necessary for ensuring financial responsibility for decommissioning using this mechanism.

## 14.5 Acceptance Criteria

The regulatory requirements, regulatory guidance, and regulatory review criteria applicable to this SRP are listed in the following sections.

### 14.5.1 Regulatory Requirements

Section 76.35(n) of 10 CFR requires that the application include a description of the funding program to ensure that funds will be set aside and available for those aspects of the ultimate disposal of waste and depleted uranium, decontamination, and decommissioning that are the financial responsibility of the applicant. The applicant is required to establish financial surety arrangements to ensure that sufficient funds will be available. Acceptable funding mechanisms include prepayment, surety, insurance, or external sinking fund. The arrangements must ensure availability of funds for any activities that are required to be completed both before and after return of the facility to ~~U.S. Department of Energy (DOE)~~ in accordance with the lease between DOE and the applicant. The funding program must contain a basis for cost estimates used to establish funding levels and must contain means of adjusting cost estimates and associated funding levels over the duration of the lease.

### 14.5.2 Regulatory Guidance

Nuclear Regulatory Commission (U.S.) (NRC). ~~Regulatory Guide 3.66, "Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72."~~ **NUREG-1727, "NMSS Decommissioning Standard Review Plan."** NRC: Washington, D.C. ~~June 1990~~ **September 2000**.

### 14.5.3 Regulatory Review Criteria

The staff should use the following regulatory review criteria, or information demonstrating acceptable alternatives, in its review of the application. Acceptability should be based on the following:

A decommissioning cost estimate is acceptable if it provides a reasonable basis for the projected cost of treatment, management, disposal, and disposition of depleted uranium, low-level radioactive wastes, and mixed wastes. If the applicant has made capital improvements not covered under the lease agreement with DOE, the staff ensures that the decommissioning cost estimate for such facilities is a reasonable project cost for decontamination and decommissioning of these facilities.

An allowable financial mechanism is acceptable if it meets the following conditions:

1. The financial mechanism states whether the principal is a corporation, partnership, or individual and is in a form to allow the staff to determine if it has been properly signed and notarized and is effective at the proper time.
2. With regard to signatures on a financial mechanism:
  - a. The mechanism is legally binding on all signatories.
  - b. ~~The applicant ensures that the parties signing the various documents are authorized to act as representatives for the firm involved in the transactions. Persons signing on behalf of the corporate principal designate their legal capacity and hold the position of president or vice president of the corporation. If persons other than the president or vice president are signing, a resolution or other certified evidence of authority is attached to the mechanism that states that the signatories have the authority to sign on behalf of the principal. If needed for a signature, a copy of the power of attorney is attached to the financial assurance mechanism and the corporate seal is affixed.~~
  - eb. If the principal is a partnership, the firm's name appears in the caption of the financial mechanism.
  - dc. If the principal is joint ownership, but is not a partnership, the firm's name appears in the caption and all owners must sign the financial statement.
  - ed. If applicable, a signature of the attorney-in-fact (representative granted power of attorney) acting on behalf of the issuing organization appears on the financial mechanism. The financial mechanism is accompanied by a properly executed authorization of the power of attorney for the person signing the instrument.
  - fe. If applicable, the financial mechanism contains the signature of the resident agent of the organization issuing the mechanism. The agent is qualified to do business in the State where the facility will be located.
  - gf. Each party signs his/her own name.
3. The financial mechanism is issued by an organization that has the legal authority to execute such an arrangement (e.g., for a surety company, check Circular 570; for other mechanisms, consult the checklists in RG-3.66 **NUREG-1727**).



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4. All financial mechanisms, including the original, any additions, and any replacements, describe and pertain to the activities certified pursuant to 10 CFR Part 76.
5. The financial assurance is open-ended and cannot be canceled without at least 90 days advance notice to the NRC.
6. The mechanism allows for automatic collection by the NRC before its expiration if the applicant cannot provide an acceptable alternative financial assurance mechanism 60 days after the receipt of notification of cancellation. The mechanism does not require proof of forfeiture.
7. When the mechanism is a bond or letter of credit, it is accompanied by a standby trust to receive assets in the event the licensee defaults or goes bankrupt. A standby trust is recommended, but not required, for parent company guarantees. When the mechanism is a government security or certificate of deposit, it is accompanied by either a standby trust or an escrow.
8. The mechanism specifies the NRC as beneficiary.
9. The mechanism, or combination of mechanisms, is sufficient at all times to cover all the **estimated** costs of decommissioning.
10. The mechanism clearly states the terms and conditions under which the applicant may cancel the mechanism and provides for notification and approval by the State or Federal authority before cancellation by the company.
11. Following NRC approval of the mechanism, the following related requirements are to be met:
  - a. The applicant's financial assurance coverage provides coverage throughout the term of the certificate of compliance. The need for cost estimate adjustments are examined at every certification renewal.
  - b. If the current cost estimate exceeds the coverage because of inflationary increases or changes in plans, the applicant arranges to increase coverage and submit evidence of the increase to the NRC within 60 days after the cost estimates increase. If cost estimates decrease, the applicant **requests** ~~applies to the NRC for~~ **review** approval of a decrease in coverage.
  - c. ~~If the applicant changes the financial assurance mechanisms in use with prior written approval from the NRC, the new mechanism, if~~ **acceptable** approved, becomes effective before or at the time the previous mechanism expires. If a letter of credit, surety bond, CD, or government security is used, the applicant also establishes a standby trust fund.
  - d. An applicant obtains alternative financial assurance coverage in the event of bankruptcy of the institution acting as trustee or issuing the financial mechanism.



- e. ~~The applicant informs the NRC within 10 days after it or the organization issuing the financial mechanism learns of the applicant's bankruptcy proceedings.~~
- ef If ownership or operating responsibility for the activities is transferred, the NRC will not allow the applicant to terminate the original financial mechanism until the new applicant has obtained an acceptable assurance.
- fg. The applicant is responsible for obtaining another financial assurance mechanism if the financial institution or corporate guarantor gives notice that it intends to cancel.

## 14.6 Evaluation Findings

The staff's review should verify that sufficient information has been provided in the application for renewal of certification to satisfy the intent of requirements in 10 CFR 76.36, "Renewals," with respect to the decommissioning funding and that the information provided is consistent with the guidance in this SRP. On the basis of this information, the staff should be able to conclude that this evaluation is complete.

The staff could document the evaluation for the application as follows:

*The staff has reviewed the financial assurance documentation submitted by the applicant for [name of facility] according to ~~Regulatory Guide 3.66, "Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72" (June 1990)~~ NUREG-1727, "NMSS Decommissioning Standard Review Plan," (September 2000). The applicant has adequately described the activities and estimated costs for those activities that are the financial responsibility of the applicant. Surety arrangements are adequate to ensure the availability of sufficient funds to perform those activities. The basis for all cost estimates is sufficient to support the staff's finding that the estimates are reasonable. On the basis of its review, the NRC staff concluded that the financial assurance documentation is acceptable to support the recertification.*

## 14.7 References

Code of Federal Regulations, *Title 10, Energy*, Part 76 "Certification of Gaseous Diffusion Plants."

Department of the Treasury (U.S.). Circular 570, "Companies Accepted on Federal Bonds."  
Department of the Treasury: Washington, D.C.

International Chamber of Commerce. *Uniform Customs and Practices for Documentary Credits*. Paris, France. 1983

Lawyer's Cooperative Publishing Co., *Uniform Commercial Code*, Rochester, New York. 1985.

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Nuclear Regulatory Commission (U.S.), Washington, D.C. "General Requirements for Decommissioning Nuclear Facilities-Final Rule." *Federal Register*: Vol 53, No. 123, pp. 24018-24056. June 27, 1988.

Nuclear Regulatory Commission (U.S.) (NRC). ~~Regulatory Guide 3.66, "Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72."~~ **NUREG-1727, "NMSS Decommissioning Standard Review Plan,"** NRC: Washington, D.C. ~~June 1990~~ **September 2000**.