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Vol. 3, Rev. 1

Consolidated Decommissioning Guidance

Financial Assurance, Recordkeeping, and Timeliness

Final Report

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ABSTRACT

The U.S. Nuclear Regulatory Commission (NRC) Office of Federal and State Materials and Environmental Management Programs consolidated and updated numerous decommissioning guidance documents into this three-volume NUREG. Specifically, the three volumes address the following topics:

(1) "Decommissioning Process for Materials Licensees";

(2) "Characterization, Survey, and Determination of Radiological Criteria"; and

(3) "Financial Assurance, Recordkeeping, and Timeliness."

This three-volume NUREG series replaces NUREG-1727 (NMSS Decommissioning Standard Review Plan) and NUREG/BR-0241 (NMSS Handbook for Decommissioning Fuel Cycle and Materials Licensees). This NUREG series is intended for use by NRC staff, licensees, and others.

Volume 3 of this NUREG series provides guidance on the technical aspects of compliance with requirements for timeliness in decommissioning of materials facilities, the requirements for financial assurance for decommissioning, and the recordkeeping requirements related to eventual decommissioning.

Licensees should use this guidance in preparing decommissioning plans, license termination plans, final status surveys, and other technical decommissioning reports for NRC submittal. NRC staff will use this guidance in reviewing these documents and related license amendment requests.

Volume 3 is intended to be applicable only to the decommissioning of materials facilities licensed under 10 CFR Parts 30, 40, 70, and 72.

PAPERWORK REDUCTION ACT STATEMENT

The information collections contained in this NUREG are covered by the requirements of 10 CFR Parts 19, 20, 30, 33, 34, 35, 36, 39, 40, 51, 70, 72, and 150 which were approved by the Office of Management and Budget, approval numbers 3150-0044, 0014, 0017, 0015, 0007, 0010, 0158, 0130, 0020, 0021, 0009, 0132, and 0032.

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FOREWORD

NRC staff suggests that licensees contact NRC or the appropriate Agreement State authority to assure understanding of what actions should be taken to initiate and complete decommissioning at facilities.

In September 2003, U.S. Nuclear Regulatory Commission (NRC) staff in the Office of Federal and State Materials and Environmental Management Programs consolidated and updated the policies and guidance of its decommissioning program in a three-volume NUREG series, NUREG-1757, "Consolidated Decommissioning Guidance." This NUREG series provides guidance on: planning and implementing license termination under the NRC's License Termination Rule (LTR), in the Code of Federal Regulations (CFR), Title 10, Part 20, Subpart E; complying with the radiological criteria for license termination; and complying with the requirements for financial assurance and recordkeeping for decommissioning and timeliness in decommissioning of materials facilities.

NUREG-1757, Volume 3, Revision 1, "Consolidated Decommissioning Guidance: Financial Assurance, Recordkeeping, and Timeliness," addresses demonstration of compliance with the financial assurance, recordkeeping, and timeliness criteria in 10 CFR Parts 30, 40, 70, and 72. Volume 3 identifies issues related to demonstrating compliance with financial assurance and decommissioning recordkeeping and timeliness requirements that licensees may wish to consider, provides guidance on addressing these issues, and describes methods and approaches that are acceptable to NRC staff. The staff periodically updates NUREG-1757, so that it reflects current NRC decommissioning policy.

In 2003, the NRC staff conducted an analysis of decommissioning issues and presented results and recommendations to the Commission. One of the recommendations included changes to financial assurance requirements to address the need for more detailed reporting of licensee financial assurance mechanisms to fund site decommissioning activities and protection of the committed funds in cases of financial distress. The Commission approved the staff's recommendations, and in 2007, the Commission approved publication of a proposed rule for public comment that would implement those recommendations. The objective of the rulemaking was to improve decommissioning planning and reduce the number of funding shortfalls caused, in the past, by: (1) overly optimistic decommissioning assumptions; (2) lack of adequate updating of cost estimates during operation; and (3) licensees falling into financial distress with financial assurance funds unavailable for decommissioning.

The proposed rule on Decommissioning Planning was published for public comment on January 22, 2008 (73 FR 3812). Draft guidance on financial assurance, compatible with the proposed changes to financial assurance requirements in the proposed rule, was released for public comment concurrently with the proposed rule. The draft guidance document was modeled on the financial assurance guidance in NUREG-1757, Volume 3.

The staff finalized the Decommissioning Planning rule and associated guidance, after consideration of public comments, and published the final rule on XXXXX, 200X (XX FR

XXXXX). NRC staff responses to public comments on the draft financial assurance guidance are included as Appendix B to this NUREG report.

The current document, Revision 1 of Volume 3, incorporates changes based on the Final Decommissioning Planning rule. This volume has also been updated to reflect other NRC staff changes. Table 1 describes the most significant changes to the guidance in this volume.

Table 1. Summary of Major Changes to Volume 3, Revision 1

Subject	Affected Sections of Volume 3	
	Previous version	**Rev. 1 (current)**
Elimination of Discussion of Site Decommissioning Management Plan Sites	Section 2.4	Section 2.4
New guidance on Returning, Canceling, or Reducing Financial Assurance Instruments		Chapter 8
Elimination of Escrow Account	Sections 4.3.2.2, A.1.4, A.5	Section A.1.4
Elimination of Government Fund	Sections 4.3.2.3, A.1.4, A.6	Section A.1.4
Elimination of Certificate of Deposit	Sections 4.3.2.4, 6.3, A.1.4, A.7	Section A.1.4
Elimination of Deposit of Government Securities	Sections 4.3.2.5, 6.3, A.1.4, A.8	Section A.1.4
Elimination of Line of Credit	Sections 4.3.2.8, A.1.4, A.11	Section A.1.4
Addition of Requirements on Subsurface Residual Radioactivity	Sections 4, A.1.3	Sections 4, A.1.3
Addition of Evaluation Criteria for Cost Estimates	Sections 4.1, A.3	Sections 4.1, A.3
Addition of Requirements for Revisions to Cost Estimates	Section A.3.2	Section A.3.2
Revisions to the Financial Test for Parent Company Guarantees	Sections 4.3.2, A.13	Sections 4.3.2, A.8
Revisions to the Financial Test for Self-Guarantees	Sections 4.3.2, A.14	Sections 4.3.2, A.9
Incorporation of New Prescribed Amounts for Certification	Sections A.1.3, A.2.1; Attachments 1 and 2	Sections A.1.3, A.2.1; Attachments 1 and 2
Revisions to Financial Instruments that may be Used for License Termination Under Restricted Conditions	Section A.18.2.2	Section A.13.2.2.
Update of Appendix B: NRC Responses to Comments	Appendix B	Appendix B

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The primary decommissioning guidance documents used by licensees and NRC staff are NUREG-1757 and NUREG-1700, "Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans." Table 2 below describes the general applicability of these documents. NUREG-1537, "Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors," contains guidance for non-power reactor licensees and NRC staff, which includes a section on decommissioning and license termination for non-power reactors.

Table 2. Content and Applicability of Key Decommissioning Guidance Documents

Volume and Status [1]	Title	Licensees to Which the Guidance Applies
NUREG-1757, Vol. 1, Rev. 2; September 2006	Consolidated Decommissioning Guidance: Decommissioning Process for Materials Licensees	Fuel cycle, fuel storage, and materials licensees. [2] Limited applicability to reactor licensees.
NUREG-1757, Vol. 2, Rev. 1; September 2006 [3]	Consolidated Decommissioning Guidance: Characterization, Survey, and Determination of Radiological Criteria	All licensees that are subject to the LTR (fuel cycle, fuel storage, materials, and reactor licensees).
NUREG-1757, Vol. 3; Rev. 1, XXXXX 200X	Consolidated Decommissioning Guidance: Financial Assurance, Recordkeeping, and Timeliness	Fuel cycle, fuel storage, and materials licensees. [4]
NUREG-1700, Rev. 1; April 2003	Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans	Power reactor licensees.

[1] Versions listed are current as of XXXXX 200X. Please refer to the NRC's Public Electronic Reading Room at http://www.nrc.gov/reading-rm/doc-collections/nuregs to obtain the most up-to-date version.

[2] Licensees regulated under 10 CFR Parts 30, 40, 60, 61, 63, 70, and 72 (for 10 CFR Parts 60, 61, and 63, only the ancillary surface facilities that support radioactive waste disposal activities). Because uranium recovery facilities are not subject to 10 CFR Part 20, Subpart E, refer to NUREG-1620, Rev. 1, Section 5, and NUREG-1569, Rev. 1, Section 6.5, for decommissioning guidance for uranium recovery facilities that are subject to 10 CFR 40, Appendix A.

[3] On August 16, 2007 (72 FR 46102), certain portions of ALARA-related guidance in Volume 2 were retracted. NRC staff intends to update the guidance to address these retractions.

[4] Licensees regulated under 10 CFR Parts 30, 40, 60, 61, 63, 70, and 72 (for 10 CFR Parts 60, 61, and 63, only the ancillary surface facilities that support radioactive waste disposal activities). For uranium recovery facilities, only the guidance on recordkeeping and timeliness for decommissioning in this volume is applicable.

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NUREG-1757 is intended for use by applicants, licensees, NRC license reviewers, and other NRC personnel. It is also available to Agreement States and the public.

This NUREG is not a substitute for NRC regulations, and compliance with it is not required. The NUREG describes approaches that are acceptable to NRC staff. However, methods and solutions different than those in this NUREG will be acceptable, if they provide a basis for concluding that the decommissioning actions are in compliance with NRC regulations.

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ABBREVIATIONS

The following terms are defined for the purposes of this three-volume NUREG report.

ACAP	Alternative Cover Assessment Program
ADAMS	Agencywide Documents Access and Management System
AEA	Atomic Energy Act (of 1954, as amended)
AEC	U.S. Atomic Energy Commission (became Energy Resource Development Agency and Nuclear Regulatory Commission)
ALARA	As low as is reasonably achievable
ALCD	Alternative Landfill Cover Demonstration
ANSI	American National Standards Institute
APF	Assigned Protection Factors
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
Bq	becquerel
BRT	Bankruptcy Review Team
BTP	Branch Technical Position
CAM	Continuous Air Monitor
CATX	Categorical Exclusion
CEDE	Committed Effective Dose Equivalent
CEO	Chief Executive Officer
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFO	Chief Financial Officer
CFR	Code of Federal Regulations
Ci	curie
cpm	counts per minute
DCGLs	Derived Concentration Guideline Levels
DFP	Decommissioning Funding Plan
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DP	Decommissioning Plan

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dpm	disintegrations per minute
DQA	Data Quality Assessment
DQO	Data Quality Objective
DURLD	Decommissioning and Uranium Recovery Licensing Directorate (Nuclear Regulatory Commission)
DWMEP	Division of Waste Management and Environmental Protection (Nuclear Regulatory Commission)
EA	Environmental Assessment
Eh	redox potential
EIS	Environmental Impact Statement
EMC	Elevated Measurement Comparison
EML	DOE Environmental Measurements Laboratory (formerly the Health and Safety Laboratory)
EPA	U.S. Environmental Protection Agency
EPPAD	Environmental Protection and Performance Assessment Directorate (Nuclear Regulatory Commission)
EPA/NRC MOU	Memorandum of Understanding between the Environmental Protection Agency and the Nuclear Regulatory Commission dated October 9, 2002
ER	Environmental Report
FEP	Feature, Event, and/or Process
FFIEC	Federal Financial Institutions Examination Council
FHLM	Federal Home Loan Mortgage Corporation
FNMA	Federal National Mortgage Association
FONSI	Finding of No Significant Impact
FR	*Federal Register*
FSME	Office of Federal and State Materials and Environmental Management Programs (Nuclear Regulatory Commission)
FSS	Final Status Survey
FSSP	Final Status Survey Plan
FSSR	Final Status Survey Report
FUSRAP	Formerly Utilized Sites Remedial Action Program
GEIS	Generic Environmental Impact Statement
GNMA	Government National Mortgage Association
GPO	Government Printing Office

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HEPA	high-efficiency particulate air
HSA	Historical Site Assessment
IC	Institutional Control
ICRP	International Commission on Radiological Protection
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IROFS	Items Relied on for Safety
ISA	Integrated Safety Analysis
ISCORS	Interagency Steering Committee on Radiation Standards
ISFSI	Independent Spent Fuel Storage Installation
ISO	International Organization for Standardization
LA	License Amendment
LA/RC	legal agreement and restrictive covenant
LBGR	Lower Bound [of the] Gray Region
LLD	lower limit of detection
LPDR	Local Public Document Room
LTC	long-term control
LTP	License Termination Plan
LTR	License Termination Rule
MARLAP	Multi-Agency Radiological Laboratory Analytical Protocols Manual
MARSSIM	Multi-Agency Radiological Survey and Site Investigation Manual (NUREG-1575)
mCi	millicurie
MCL	Maximum Contaminant Level
MDA	Minimum Detectable Activity
MDC	Minimum Detectable Concentration
MIP	Master Inspection Plan
MOU	Memorandum of Understanding
mrem	millirem
mSv	millisievert
NAIC	National Association of Insurance Commissioners
NAS	National Academy of Sciences
NCRP	National Council on Radiation Protection and Measurements

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NCS	Nuclear Criticality Safety
NCSA	Nuclear Criticality Safety Analysis
NEPA	National Environmental Policy Act
NIST	National Institute of Standards and Technology
NMMSS	Nuclear Materials Management and Safeguards System
NMSS	Office of Nuclear Material Safety and Safeguards (Nuclear Regulatory Commission)
NOAA	National Oceanic and Atmospheric Administration
NORM	Naturally Occurring Radioactive Material
NRC	U.S. Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation (Nuclear Regulatory Commission)
OC	Office of Controller
OCC	Office of the Comptroller of the Currency
OCFO	Office of the Chief Financial Officer (Nuclear Regulatory Commission)
OE	Office of Enforcement (Nuclear Regulatory Commission)
OGC	Office of the General Counsel (Nuclear Regulatory Commission)
OSHA	U.S. Occupational Safety and Health Administration
PCBs	Polychlorinated Biphenyls
pCi	picocurie
PDF	Probability Density Function
PDR	Public Document Room (Nuclear Regulatory Commission)
P&GD	Policy and Guidance Directive
pH	hydrogen power
PM	Project Manager
PMF	probable maximum flood
PMP	probable maximum precipitation
PPE	personal protective equipment
PSR	Partial Site Release
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance and Quality Control
RAI	Request for Additional Information
RCRA	Resource Conservation and Recovery Act

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REMP	Radiological Environmental Monitoring Program
RF	Resuspension Factor
RG	Regulatory Guide (also known as Reg Guide)
RIS	Regulatory Issue Summary
ROD	Record of Decision
RSO	Radiation Safety Officer
RSSI	Radiation Site Survey and Investigation [Process]
RWP	Radiation Work Permit
SCP	Site Characterization Plan
SCR	Site Characterization Report
SDMP	Site Decommissioning Management Plan
SDWA	Safe Drinking Water Act
SER	Safety Evaluation Report
SOPs	Standard Operating Procedures
SRP	[NMSS Decommissioning] Standard Review Plan (NUREG-1727)
SSAB	site-specific advisory board
Sv	sievert
TAR	Technical Assistance Request
TDS	Total Dissolved Solids
TEDE	Total Effective Dose Equivalent
TENORM	Technologically Enhanced Naturally Occurring Radioactive Material
TI	Transport Index
TLD	Thermoluminescent Dosimeter
TOC	Total Organic Carbon
TODE	Total Organ Dose Equivalent
TRU	Transuranic(s) [radionuclides]
UECA	Uniform Environmental Covenants Act
UMTRA	Uranium Mill Tailings Remedial Action
UMTRCA	Uranium Mill Tailings Radiation Control Act
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

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WAC	waste acceptance criteria
WRS	Wilcoxon Rank Sum [test]

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GLOSSARY

The following terms are defined for the purposes of this three-volume NUREG report.

Acceptance Review. The evaluation the NRC staff performs upon receipt of a license amendment request to determine if the information provided in the document is sufficient to begin the technical review.

Activity. The rate of disintegration (transformation) or decay of radioactive material. The units of activity are the curie (Ci) and the becquerel (Bq) (see 10 CFR 20.1003).

Affected parties. Representatives of a broad cross-section of individuals and institutions in the community or vicinity of a site that may be affected by the decommissioning of the site.

ALARA. Acronym for "as low as is reasonably achievable," which means making every reasonable effort to maintain exposures to radiation as far below the dose limits as is practical, consistent with the purpose for which the licensed activity is undertaken, and taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to the benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest (see 10 CFR 20.1003).

Alternate Criteria. Dose criteria for residual radioactivity that are greater than the dose criteria described in 10 CFR 20.1402 and 20.1403, as allowed in 10 CFR 20.1404. Alternate criteria must be approved by the Commission.

Aquifer. A geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

Background Radiation. Radiation from cosmic sources, naturally occurring radioactive material, including radon (except as a decay product of source or special nuclear material) and global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents such as Chernobyl that contribute to background radiation and are not under the control of the licensee. Background radiation does not include radiation from source, byproduct, or special nuclear materials regulated by NRC (see 10 CFR 20.1003).

Broad Scope Licenses. A type of specific license authorizing receipt, acquisition, ownership, possession, use, and transfer of any chemical or physical form of the byproduct material specified in the license, but not exceeding quantities specified in the license. The requirements for specific domestic licenses of broad scope for byproduct material are found in 10 CFR Part 33. Examples of broad scope licensees are facilities such as large universities and large research and development facilities.

Byproduct Material. (1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material; (2) The tailings or wastes produced by the extraction or concentration of

uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition; (3)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or (ii) Any material that—(A) Has been made radioactive by use of a particle accelerator; and (B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and (4) Any discrete source of naturally occurring radioactive material, other than source material, that—(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and (ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity (see 10 CFR 20.1003).

Categorical Exclusion (CATX). A category of regulatory actions which do not individually or cumulatively have a significant effect on the human environment and which the Commission has found to have no such effect in accordance with procedures set out in 10 CFR 51.22 and for which, therefore, neither an environmental assessment nor an environmental impact statement is required (see 10 CFR 51.14(a)).

Certification Amount of Financial Assurance. See *prescribed amount of financial assurance*.

Certification of Financial Assurance. The document submitted to certify that financial assurance has been provided as required by regulation.

Characterization survey. A type of survey that includes facility or site sampling, monitoring, and analysis activities to determine the extent and nature of residual radioactivity. Characterization surveys provide the basis for acquiring necessary technical information to develop, analyze, and select appropriate cleanup techniques.

Cleanup. See *decontamination.*

Closeout Inspection. An inspection performed by NRC, or its contractor, to determine if a licensee has adequately decommissioned its facility. Typically, a closeout inspection is performed after the licensee has demonstrated that its facility is suitable for release in accordance with NRC requirements.

Confirmatory Survey. A survey conducted by NRC, or its contractor, to verify the results of the licensee's final status survey. Typically, confirmatory surveys consist of measurements at a fraction of the locations previously surveyed by the licensee, to determine whether the licensee's results are valid and reproducible.

Critical Group. The group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances (see 10 CFR 20.1003).

DandD code. The Decontamination and Decommissioning (DandD) software package, developed by NRC, that addresses compliance with the dose criteria of 10 CFR Part 20, Subpart E. Specifically, DandD embodies NRC's guidance on screening dose assessments to allow licensees to perform simple estimates of the annual dose from residual radioactivity in soils and on building surfaces.

Decommission. To remove a facility or site safely from service and reduce residual radioactivity to a level that permits (1) release of the property for unrestricted use and termination of the license or (2) release of the property under restricted conditions and termination of the license (see 10 CFR 20.1003).

Decommissioning Funding Plan (DFP). A document that provides: a detailed site-specific cost estimate for decommissioning, based on the costs of an independent contractor to meet the criteria for unrestricted use in 10 CFR 20.1402 (except that, if the applicant or licensee can demonstrate its ability to meet the restricted use provisions of 10 CFR 20.1403, then the cost estimate may be based on meeting the §20.1403 criteria); key assumptions used to develop the cost estimate; the method for assuring funds for decommissioning; the means for adjusting both the cost estimate and funding level over the life of the facility; the volume of material containing residual radioactivity that will require remediation; and, the certification of financial assurance and the signed originals of the financial instruments provided as financial assurance.

Decommissioning Groups. For the purposes of this guidance document, the categories of decommissioning activities that depend on the type of operation and the residual radioactivity.

Decommissioning Plan (DP). A detailed description of the activities that the licensee intends to use to assess the radiological status of its facility, to remove radioactivity attributable to licensed operations at its facility to levels that permit release of the site in accordance with NRC's regulations and termination of the license, and to demonstrate that the facility meets NRC's requirements for release. A DP typically consists of several interrelated components, including (1) site characterization information; (2) a remediation plan that has several components, including a description of remediation tasks, a health and safety plan, and a quality assurance plan; (3) site-specific cost estimates for the decommissioning; and (4) a final status survey plan (see 10 CFR 30.36(g)(4).

Decontamination. The removal of undesired residual radioactivity from facilities, soils, or equipment prior to the release of a site or facility and termination of a license. Also known as remediation, remedial action, and cleanup.

Derived Concentration Guideline Levels (DCGLs). Radionuclide-specific concentration limits used by the licensee during decommissioning to achieve the regulatory dose standard that permits the release of the property and termination of the license. The DCGL applicable to the average concentration over a survey unit is called the $DCGL_W$. The DCGL applicable to limited areas of elevated concentrations within a survey unit is called the $DCGL_{EMC}$.

Dose (or *radiation dose*). A generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, or total

effective dose equivalent, as defined in other paragraphs of 10 CFR 20.1003 (see 10 CFR 20.1003). In this NUREG report, dose generally refers to *total effective dose equivalent (TEDE)*.

Durable institutional controls. A legally enforceable mechanism for restricting land uses to meet the radiological criteria for license termination (10 CFR Part 20, Subpart E). Durable institutional controls are reliable and sustainable for the time period needed.

Effluent. Material discharged into the environment from licensed operations.

Environmental Assessment. A concise public document for which the Commission is responsible that serves to (1) briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact, (2) aid the Commission's compliance with NEPA when no environmental impact statement is necessary, and (3) facilitate preparation of an environmental impact statement when one is necessary (see 10 CFR 51.14(a)).

Environmental Impact Statement. A detailed written document that ensures the policies and goals defined in the NEPA are considered in the actions of the Federal government. It discusses significant impacts and reasonable alternatives to the proposed action.

Environmental Monitoring. The process of sampling and analyzing environmental media in and around a facility (1) to confirm compliance with performance objectives and (2) to detect radioactive material entering the environment to facilitate timely remedial action.

Environmental Report (ER). A document submitted to the NRC by an applicant for a license amendment request (see 10 CFR 51.14(a)). The ER is used by NRC staff to prepare environmental assessments and environmental impact statements. The requirements for ERs are specified in 10 CFR 51.45–51.69.

Exposure Pathway. The route by which radioactivity travels through the environment to eventually cause radiation exposure to a person or group.

Exposure Scenario. A description of the future land uses, human activities, and behavior of the natural system as related to a future human receptor's interaction with (and therefore exposure to) residual radioactivity. In particular, the exposure scenario describes where humans may be exposed to residual radioactivity in the environment, what exposure group habits determine exposure, and how residual radioactivity moves through the environment.

External Dose. That portion of the dose equivalent received from radiation sources outside the body (see 10 CFR 20.1003).

Final Status Survey (FSS). Measurements and sampling to describe the radiological conditions of a site or facility, following completion of decontamination activities (if any) and in preparation for release of the site or facility.

Final Status Survey Plan (FSSP). The description of the final status survey design.

Final Status Survey Report (FSSR). The results of the final status survey conducted by a licensee to demonstrate the radiological status of its facility. The FSSR is submitted to NRC for review and approval.

Financial Assurance. A guarantee or other financial arrangement provided by a licensee that funds for decommissioning will be available when needed. This is in addition to the licensee's regulatory obligation to decommission its facilities.

Financial Assurance Mechanism. Financial instruments used to provide financial assurance for decommissioning.

Floodplain. The lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands. Areas subject to a one percent or greater chance of flooding in any given year are included (see 10 CFR 72.3).

Footprint. The portion of a site undergoing decommissioning, which is comprised of all of the areas of soil containing residual radioactivity, where intentional mixing is proposed to meet the release criteria. [This definition is applicable only to proposed intentional mixing cases.]

General Licenses. Licenses that are effective without the filing of applications with NRC or the issuance of licensing documents to particular persons.

Ground Water. Water contained in pores or fractures in either the unsaturated or saturated zones below ground level.

Historical Site Assessment (HSA). The identification of potential, likely, or known sources of radioactive material and radioactive contamination based on existing or derived information for the purpose of classifying a facility or site, or parts thereof, as impacted or non-impacted (see 10 CFR 50.2).

Hydraulic Conductivity. The volume of water that will move through a medium in a unit of time under a unit hydraulic gradient through a unit area measured perpendicular to the direction of flow.

Hydrology. Study of the properties, distribution, and circulation of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere.

Impact. The positive or negative effect of an action (past, present, or future) on the natural environment (land use, air quality, water resources, geological resources, ecological resources, aesthetic and scenic resources) and the human environment (infrastructure, economics, social, and cultural).

Impacted Areas. The areas with some reasonable potential for residual radioactivity in excess of natural background or fallout levels (see 10 CFR 50.2).

Inactive Outdoor Area. The outdoor portion of a site not used for licensed activities or materials for 24 months or more.

Infiltration. The process of water entering the soil at the ground surface. Infiltration becomes percolation when water has moved below the depth at which it can be removed (to return to the atmosphere) by evaporation or transpiration.

Institutional Controls. Measures to control access to a site and minimize disturbances to engineered measures established by the licensee to control the residual radioactivity. Institutional controls include administrative mechanisms (e.g., land use restrictions) and may include, but are not limited to, physical controls (e.g., signs, markers, landscaping, and fences).

Karst. A type of topography that is formed over limestone, dolomite, or gypsum by dissolution, characterized by sinkholes, caves, and underground drainage.

Leak Test. A test for leakage of radioactivity from sealed radioactive sources. These tests are made when the sealed source is received and on a regular schedule thereafter. The frequency is usually specified in the sealed source and device registration certificate and/or license.

Legacy site. An existing decommissioning site that is complex and difficult to decommission for a variety of financial, technical, or programmatic reasons.

License Termination Plan (LTP). A detailed description of the activities a reactor licensee intends to use to assess the radiological status of its facility, to remove radioactivity attributable to licensed operations at its facility to levels that permit release of the site in accordance with NRC's regulations and termination of the license, and to demonstrate that the facility meets NRC's requirements for release. An LTP consists of several interrelated components including: (1) a site characterization; (2) identification of remaining dismantlement activities; (3) plans for site remediation; (4) detailed plans for the final radiation survey; (5) a description of the end use of the facility, if restricted; (6) an updated site-specific estimate of remaining decommissioning costs; and (7) a supplement to the environmental report, pursuant to 10 CFR 51.33, describing any new information or significant environmental change associated with the licensee's proposed termination activities (see 10 CFR 50.82).

License Termination Rule (LTR). The License Termination Rule refers to the final rule on "Radiological Criteria for License Termination," published by NRC as Subpart E to 10 CFR Part 20 on July 21, 1997 (62 FR 39058).

Licensee. A person who possesses a license, or a person who possesses licensable material, who NRC could require to obtain a license.

MARSSIM. The *Multi-Agency Radiation Site Survey and Investigation Manual (NUREG-1575)* is a multi-agency consensus manual that provides information on planning, conducting, evaluating, and documenting building surface and surface soil final status radiological surveys for demonstrating compliance with dose- or risk-based regulations or standards.

Model. A simplified representation of an object or natural phenomenon. The model can be in many possible forms, such as a set of equations or a physical, miniature version of an object or system constructed to allow estimates of the behavior of the actual object or phenomenon when the values of certain variables are changed. Important environmental models include those estimating the transport, dispersion, and fate of chemicals in the environment.

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Monitoring. Monitoring (radiation monitoring, radiation protection monitoring) is the measurement of radiation levels, concentrations, surface area concentrations, or quantities of radioactive material and the use of the results of these measurements to evaluate potential exposures and doses (see 10 CFR 20.1003).

mrem/y (millirem per year). One one-thousandth (0.001) of a rem per year. (See also *sievert*.)

National Environmental Policy Act (NEPA). The National Environmental Policy Act of 1969, which requires Federal agencies, as part of their decision-making process, to consider the environmental impacts of actions under their jurisdiction. Both the Council on Environmental Quality (CEQ) and NRC have promulgated regulations to implement NEPA requirements. CEQ regulations are contained in 40 CFR Parts 1500 to 1508, and NRC requirements are provided in 10 CFR Part 51.

Naturally Occurring Radioactive Material (NORM). The natural radioactivity in rocks, soils, air and water. NORM generally refers to materials in which the radionuclide concentrations have not been enhanced by or as a result of human practices. NORM does not include uranium or thorium in source material.

Non-impacted Areas. The areas with no reasonable potential for residual radioactivity in excess of natural background or fallout levels (see 10 CFR 50.2).

Pathway. See *exposure pathway*.

Performance-Based Approach. Regulatory decisionmaking that relies upon measurable or calculable outcomes (i.e., performance results) to be met, but provides more flexibility to the licensee as to the means of meeting those outcomes.

Permeability. The ability of a material to transmit fluid through its pores when subjected to a difference in head (pressure gradient). Permeability depends on the substance transmitted (oil, air, water, and so forth) and on the size and shape of the pores, joints, and fractures in the medium and the manner in which they are interconnected.

Porosity. The ratio of openings, or voids, to the total volume of a soil or rock expressed as a decimal fraction or as a percentage.

Potentiometric Surface. The two-dimensional surface that describes the elevation of the water table. In an unconfined aquifer, the potentiometric surface is at the top of the water level. In a confined aquifer, the potentiometric surface is above the top of the water level because the water is under confining pressure.

Prescribed Amount of Financial Assurance. An amount of financial assurance based on the authorized possession limits of the NRC license, as specified in 10 CFR 30.35(d), 40.36(b), or 70.25(d).

Principal Activities. Activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no licensed

material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities (see 10 CFR 30.4).

Probabilistic. Refers to computer codes or analyses that use a random sampling method to select parameter values from a distribution. Results of the calculations are also in the form of a

distribution of values. The results of the calculation do not typically include the probability of the scenario occurring.

Reasonable Alternatives. Those alternatives that are practical or feasible from a technical and economic standpoint.

Reasonably foreseeable land use. Land use scenarios that are likely within 100 years, considering advice from land use planners and stakeholders on land use plans and trends.

rem. The special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rems is equal to the absorbed dose in rads multiplied by the quality factor (1 rem = 0.01 sievert) (see 10 CFR 20.1004).

Remedial Action. See *decontamination*.

Remediation. See *decontamination*.

Residual Radioactivity. Radioactivity in structures, materials, soils, ground water, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of 10 CFR Part 20 (see 10 CFR 20.1003).

RESRAD Code. A computer code developed by the U.S. Department of Energy and designed to estimate radiation doses and risks from RESidual RADioactive materials in soils.

RESRAD-BUILD Code. A computer code developed by the U.S. Department of Energy and designed to estimate radiation doses and risks from RESidual RADioactive materials in BUILDings.

Restricted Area. Any area to which access is limited by a licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials (see 10 CFR 20.1003).

Risk. Defined by the "risk triplet" of a scenario (a combination of events and/or conditions that could occur) or set of scenarios, the probability that the scenario could occur, and the consequence (e.g., dose to an individual) if the scenario were to occur.

Risk-Based Approach. Regulatory decision making that is based solely on the numerical results of a risk assessment. (Note that the Commission does not endorse a risk-based regulatory approach.)

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Risk-Informed Approach. Regulatory decision making that represents a philosophy whereby risk insights are considered together with other factors to establish requirements that better focus licensee and regulatory attention on design and operational issues commensurate with their importance to public health and safety.

Risk Insights. Results and findings that come from risk assessments.

Robust engineered barrier. A man-made structure that is designed to mitigate the effect of natural processes or human uses that may initiate or accelerate release of residual radioactivity through environmental pathways. The structure is designed so that the radiological criteria for license termination (10 CFR Part 20, Subpart E) can be met. Robust engineered barriers are designed to be more substantial, reliable, and sustainable for the time period needed without reliance on active ongoing maintenance.

Safety Evaluation Report. NRC staff's evaluation of the radiological consequences of a licensee's proposed action to determine if that action can be accomplished safely.

Saturated Zone. That part of the earth's crust beneath the regional water table in which all voids, large and small, are ideally filled with water under pressure greater than atmospheric.

Scoping Survey. A type of survey that is conducted to identify (1) radionuclide contaminants, (2) relative radionuclide ratios, and (3) general levels and extent of residual radioactivity.

Screening Approach/Methodology/Process. The use of (1) predetermined building surface concentration and surface soil concentration values, or (2) a predetermined methodology (e.g., use of the DandD code) that meets the radiological decommissioning criteria without further analysis, to simplify decommissioning in cases where low levels of residual radioactivity are achievable.

Sealed Source. Any special nuclear material or byproduct material encased in a capsule designed to prevent leakage or escape of the material.

sievert (Sv). The SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in sieverts is equal to the absorbed dose in grays multiplied by the quality factor (1 sievert = 100 rem) (see 10 CFR 20.1004).

Site. The area of land, along with structures and other facilities, as described in the original NRC license application, plus any property outside the originally licensed boundary added for the purpose of receiving, possessing, or using radioactive material at any time during the term of the license, as well as any property where radioactive material was used or possessed that has been released prior to license termination.

Site Characterization. Studies that enable the licensee to sufficiently describe the conditions of the site, separate building, or outdoor area to evaluate the acceptability of the decommissioning plan.

Site Characterization Survey. See *characterization survey*.

Site Decommissioning Management Plan (SDMP). The program established by NRC in March 1990 to help ensure the timely cleanup of sites with limited progress in completing the remediation of the site and the termination of the facility license. In 2004, NRC eliminated the SDMP because the original intent of the SDMP and SDMP Action Plan had been achieved. As of 2004, all sites are managed under the Comprehensive Decommissioning Program. SDMP sites typically had buildings, former waste disposal areas, large volumes of tailings, ground-water contamination, and soil contaminated with low levels of uranium or thorium or other radionuclides.

Site-Specific Dose Analysis. Any dose analysis that is done other than by using the default screening tools.

Smear. A radiation survey technique which is used to determine levels of removable surface contamination. A medium (typically filter paper) is rubbed over a surface (typically of area 100 cm^2), followed by a quantification of the activity on the medium. Also known as a swipe.

Source Material. Uranium or thorium, or any combination of uranium and thorium, in any physical or chemical form, or ores that contain by weight one-twentieth of one percent (0.05 percent) or more of uranium, thorium, or any combination of uranium and thorium. Source material does not include special nuclear material (see 10 CFR 20.1003).

Source Term. A conceptual representation of the residual radioactivity at a site or facility.

Special Nuclear Material. (1) Plutonium, uranium-233 (U-233), uranium enriched in the isotope 233 or in the isotope 235, and any other material that the Commission, pursuant to the provisions of Section 51 of the Atomic Energy Act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material (see 10 CFR 20.1003).

Specific Licenses. Licenses issued to a named person who has filed an application for the license under the provisions of 10 CFR Parts 30, 32 through 36, 39, 40, 61, 70 and 72. Examples of specific licenses are industrial radiography, medical use, irradiators, and well logging.

Survey. An evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation. When appropriate, such an evaluation includes a physical survey of the location of radioactive material and measurements or calculations of levels of radiation, or concentrations or quantities of radioactive material present (see 10 CFR 20.1003).

Survey Unit. A geographical area consisting of structures or land areas of specified size and shape at a site for which a separate decision will be made as to whether or not the unit attains the site-specific reference-based cleanup standard for the designated pollution parameter. Survey units are generally formed by grouping contiguous site areas with similar use histories and having the same contamination potential (classification). Survey units are established to facilitate the survey process and the statistical analysis of survey data.

Technologically Enhanced Naturally Occurring Radioactive Material (TENORM). Naturally occurring radioactive material with radionuclide concentrations increased by or as a result of past

or present human practices. TENORM does not include background radioactive material or the natural radioactivity of rocks and soils. TENORM does not include uranium or thorium in source material.

Timeliness. Specific time periods stated in NRC regulations for decommissioning unused portions of operating nuclear materials facilities and for decommissioning the entire site upon termination of operations.

Total Effective Dose Equivalent (TEDE). The sum of the deep-dose equivalent (for external exposures) and the committed effective dose equivalent (CEDE) (for internal exposures) (see 10 CFR 20.1003).

Transmissivity. The rate of flow of water through a vertical strip of aquifer which is one unit wide and which extends the full saturated depth of the aquifer.

Unrestricted Area. An area, access to which is neither limited nor controlled by the licensee (see 10 CFR 20.1003).

Unsaturated Zone. The subsurface zone in which the geological material contains both water and air in pore spaces. The top of the unsaturated zone typically is at the land surface, otherwise known as the vadose zone.

Vadose Zone. See *unsaturated zone*.

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1 PURPOSE, APPLICABILITY, AND ROADMAP

1.1 PURPOSE AND APPLICABILITY

The purpose of this volume is to provide guidance to NRC staff and licensees on the following:

- **recordkeeping and timeliness in decommissioning, and**
- **financial assurance for decommissioning.**

This NUREG provides guidance regarding decommissioning leading to termination of a license. Licensees of Agreement States should contact the appropriate regulatory authority. This volume is also intended to be used in conjunction with NRC Inspection Manual Chapter 2605, "Decommissioning Inspection Program for Fuel Cycle and Materials Licensees."

This volume of NUREG-1757 is being issued to describe, and make available to licensees and the public, (a) guidance on technical aspects of compliance with specific parts of the Commission's regulations; (b) methods acceptable to NRC staff in implementing these regulations; and (c) some of the techniques and criteria used by NRC staff in evaluating licensee submittals. This guidance is not a substitute for regulations, and compliance with the guidance is not required. Methods and solutions different from those set down in this volume will be acceptable, if they provide a basis for NRC staff to conclude that the licensee's decommissioning actions are in compliance with the Commission's regulations. Licensees should note that approaches consistent with the guidance in this volume may be easier for NRC staff to review, potentially resulting in more effective and efficient staff reviews.

This volume applies to the timeliness and recordkeeping requirements for licensees under 10 CFR Parts 30, 40, 70, and 72. It also applies to financial assurance requirements for licensees under 10 CFR Parts 30, 40, 70, and 72, with the exception of licensees subject to criteria 9 and 10 of Appendix A to Part 40 (uranium recovery facilities).

This volume does not apply to Part 50 licensees. Guidance on financial assurance for Part 50 licensees is provided in Regulatory Guide 1.159, Rev. 1 "Assuring the Availability of Funds for Decommissioning Nuclear Reactors," (NRC 2003).

Other documents address the decommissioning financial assurance requirements for other types of licensees. Guidance on financial assurance for uranium recovery facilities under Part 40 is provided in the Branch Technical Position (BTP) "Technical Position on Financial Assurances for Reclamation, Decommissioning, and Long-Term Surveillance and Control of Uranium Recovery Facilities" (October 1988). Information on low-level waste disposal facilities under 10 CFR Part 61 is provided in Revision 1 of NUREG-1199, "Standard Format and Content of a License Application for a Low-Level Radioactive Waste Disposal Facility" (NRC 1988), and Revision 3 of NUREG-1200, "Standard Review Plan for the Review of a License Application for a Low-Level Radioactive Waste Disposal Facility" (NRC 1994).

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1.2 ROADMAP TO THIS VOLUME

This volume contains guidance on three areas of regulation: (1) timeliness in decommissioning, (2) recordkeeping for decommissioning, and (3) financial assurance. In addition, the standard format and content for financial instruments is contained in Appendix A to this volume.

- Chapter 1 contains the document roadmap and reference lists. Table 1.1 identifies various source documents used to develop the guidance in this volume. Source documents that have been superseded are identified in Table 1.2 in Section 1.3.3.
- Chapter 2 contains guidance on timeliness. Figure 2.1 summarizes the requirements for compliance with timeliness requirements.
- Chapter 3 contains guidance on recordkeeping. A list of documents to retain is contained in Section 3.4.
- Chapter 4 contains guidance on financial assurance. A brief outline of the steps necessary to prepare a financial assurance demonstration is found at the end of Section 4.0 under the heading "How to Use Chapter 4."
- Chapter 5 directs the reader to NUREG-1556, Volume 15, for guidance on handling bankruptcy situations.
- Chapter 6 provides procedures for drawing on financial assurance instruments.
- Chapter 7 provides a procedure for approving disbursements of funds from a decommissioning trust.
- Chapter 8 provides guidance on returning, canceling, or reducing financial assurance instruments.
- Appendix A contains detailed guidance on drafting and preparing the package for submittal of financial instruments. Checklists in each section of Appendix A are provided to summarize the necessary elements of each package.

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Table 1.1 Origin of Guidance in this Volume

Section of this Guidance		Section of SRP or Other Guidance
1.0	Purpose, Applicability, and Roadmap	N/A
1.1	Purpose and Applicability	N/A
1.2	Roadmap to this Volume	N/A
1.3	Documents Referenced in this NUREG	N/A
Part I: Timeliness and Recordkeeping		
2.0	Timeliness in Decommissioning Overview	NRC AL 96-05, Rev 1 & NUREG/BR-0241, Sec. 3
2.1	Initiation of the Decommissioning Process	NRC AL 96-05, Rev 1 & NUREG/BR-0241, Sec. 3
2.2	Extension or Alternative Schedule for Decommissioning	NRC AL 96-05, Rev 1 & NUREG/BR-0241, Sec. 3
2.3	Completion of the Decommissioning Process	NRC AL 96-05, Rev 1
2.4	Application of the Timeliness Rule to Special Cases	NRC AL 96-05, Rev 1, NRC IN 96-47 & NUREG/BR-0241, Sec 6
2.5	Enforcement	NRC AL 96-05, Rev 1
2.6	Review Criteria for Extension or Alternative Time Schedule Requests	NRC AL 96-05, Rev 1
3.0	Recordkeeping Overview	N/A
3.1	Recordkeeping Requirements During Licensed Operations	IN 96-47; DG-3001
3.2	Recordkeeping Information for Decommissioning Plans	N/A
3.3	Record Disposition Requirements at License Termination or Transfer	61 FR 24669
3.4	NRC Staff Record Retention Requirements	NUREG/BR-0241 Section 5 & Appendix D
Part II: Financial Assurance		
4.0	Financial Assurance Overview	NUREG-1727, Sec. 15.0
4.1	Cost Estimate (As Contained in a Decommissioning Funding Plan or Decommissioning Plan)	NUREG-1727, Sec. 15.1
4.2	Prescribed Amount	NUREG-1727, Sec. 15.2
4.3	Financial Assurance Mechanisms	NUREG-1727, Sec. 15.3

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Table 1.1 Origin of Guidance in this Volume (continued)

Section of this Guidance		Section of SRP or Other Guidance
Part III: Bankruptcy, Bankruptcy Review Team, and Drawing on Financial Assurance Instruments		
5.0	Bankruptcy Overview	N/A
5.1	Bankruptcy	N/A
5.2	Bankruptcy Review Team	NUREG-1556, App. H
6.0	Procedures for Drawing on Financial Assurance Instruments	NUREG-1556, App. I
6.1	Letter of Credit	NUREG-1556, App. I
6.2	Surety Bond	NUREG-1556, App. I
6.3	Parent Company Guarantee	NUREG-1556, App. I
6.4	Self-Guarantee	NUREG-1556, App. I
7.0	Procedure for Approving Disbursements from Decommissioning Funds	N/A
Appendix A	Standard Format and Content of Financial Assurance Mechanisms for Decommissioning	NUREG-1727, App. F
Appendix B	Response to Comments	N/A

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1.3 DOCUMENTS REFERENCED IN THIS NUREG

This section provides the referenced and superseded documents list for this volume. While Chapter 4 of Volume 1 and Chapter 1 of Volume 2 of this NUREG series provided lists of decommissioning references, Section 1.3.3 provides a complete list of superseded documents for this NUREG series.

Use of References Cited in this Volume

This volume refers to a number of other documents for guidance. In some cases, this volume will state that the referenced guidance is approved by NRC staff. However, in some cases, the documents are only referenced for information. In these cases, the specific applicability to a facility should be determined by the licensee, in consultation with NRC staff, as appropriate.

1.3.1 DOCUMENTS REFERENCED BY VOLUME 3

- Nuclear Regulatory Commission (U.S.) (NRC). Management Directive 8.12, "Decommissioning Financial Assurance Instrument Security Program." NRC: Washington, DC. April 3, 1998.
- ——————. NUREG/CR-0129, "Technology, Safety and Costs of Decommissioning a Reference Small Mixed Oxide Fuel Fabrication Plant." NRC: Washington, DC. February 1979.
- ——————. NUREG/CR-1266, "Technology, Safety and Costs of Decommissioning a Reference Uranium Fuel Fabrication Plant." NRC: Washington, DC. October 1988.
- ——————. NUREG/CR-1757, "Technology, Safety and Costs of Decommissioning a Reference Uranium Hexafluoride Conversion Plant." NRC: Washington, DC. October 1981.
- ——————. NUREG/CR-2210, "Technology, Safety and Costs of Decommissioning a Reference Independent Spent Fuel Storage Installation." NRC: Washington, DC. January 1984.
- ——————. NUREG/CR-2241, "Technology and Costs of Termination Surveys Associated with Decommissioning of Nuclear Facilities." NRC: Washington, DC. February 1982.
- ——————. NUREG/CR-3293, "Technology, Safety and Costs of Decommissioning Reference Nuclear Fuel Cycle and Non Fuel Cycle Facilities Following Postulated Accidents." NRC: Washington, DC. May 1985.
- ——————. NUREG/CR-5884, Vols. 1 and 2, "Revised Analyses of Decommissioning for the Reference Pressurized Water Reactor Power Station." NRC: Washington, DC. November 1995.

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- ———————. NUREG/CR-6054, "Estimating Pressurized Water Reactor Decommissioning Costs: A User's Manual for the PWR Cost Estimating Computer Program (CECP) Software." NRC: Washington, DC. November 1995.
- ———————. NUREG/CR-6174, Vols. 1 and 2, "Revised Analyses of Decommissioning for the Reference Boiling Water Reactor Power Station." NRC: Washington, DC. July 1996.
- ———————. NUREG/CR-6270, "Estimating Boiling Water Reactor Decommissioning Costs: A User's Manual for the BWR Cost Estimating Computer Program (CECP) Software." NRC: Washington, DC. June 1996.
- ———————. NUREG/CR-6280, "Technology, Safety, and Costs of Decommissioning a Reference Large Irradiator and Reference Sealed Sources." NRC: Washington, DC. January 1996.
- ———————. NUREG/CR-6477, "Revised Analyses of Decommissioning Reference Non-Cycle Facilities." NRC: Washington, DC. September 1997.
- ———————. NUREG-1307, Rev. 10, "Report on Waste Burial Charges." NRC: Washington, DC. October 2002.
- ———————. NUREG-1556, Vol. 15, "Consolidated Guidance About Materials Licenses: Guidance About Changes of Control and About Bankruptcy Involving Byproduct, Source, or Special Nuclear Material Licenses." NRC: Washington, DC. November 2000.
- ———————. NUREG-1600, "General Statement of Policy and Procedure for NRC Enforcement Actions." NRC: Washington, DC. May 2000.
- ———————. Regulatory Guide 1.159, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors." NRC: Washington, DC. October 2003.
- ———————. Regulatory Guide 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning." NRC: Washington, DC. June 2008.

1.3.2 DOCUMENTS SUPERSEDED BY VOLUME 3

- Nuclear Regulatory Commission (U.S.) (NRC). Administrative Letter 96-05, Rev. 1, "Compliance with the Rule 'Timeliness in Decommissioning of Material Facilities.'" (July 14, 1998).
- ———————. Information Notice 96-47, "Recordkeeping, Decommissioning Notifications for Disposals of Radioactive Waste by Land Burial Authorized under Former 10 CFR 20.304, 20.302, and Current 20.2002." NRC: Washington, DC. August 16, 1996.
- ———————. NUREG/BR-0241, "NMSS Handbook for Decommissioning Fuel Cycle and Materials Licensees." NRC: Washington, DC. March 1997.
- ———————. NUREG-1727, "NMSS Decommissioning Standard Review Plan." NRC: Washington, DC. September 2000.

1.3.3 DOCUMENTS SUPERSEDED BY NUREG-1757, VOLUMES 1, 2, AND 3

This NUREG series supersedes the Regulatory Guides (RGs), Policy and Guidance Directives (P&GDs), Branch Technical Positions (BTPs), and NUREGs listed in Table 1.2.

Table 1.2 List of Documents Superseded by this NUREG Series

Document Identification	Title	Date
RG 3.65	"Standard Format and Content Decommissioning Plans for Licensees Under 10 CFR Parts 30, 40, and 70"	06/1989
RG 3.66	"Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72"	06/1990
P&GD FC 90-2	"Standard Review Plan for Evaluating Compliance with Decommissioning Requirements for Source, Byproduct, and Special Nuclear Material License Applications"	04/1991
P&GD FC 91-2	"Standard Review Plan: Evaluating Decommissioning Plans for Licensees Under 10 CFR Parts 30, 40, and 70"	08/1991
P&GD FC 83-3	"Standard Review Plan for Termination of Special Nuclear Material Licenses of Fuel Cycle Facilities"	03/1983
NRC Memorandum	"Draft Staff Guidance for Dose Modeling of Proposed Partial Site Releases"	09/28/2001
BTP	"Draft Branch Technical Position on Site Characterization for Decommissioning"	11/1994
NUREG-1500	"Working Draft Regulatory Guide on Release Criteria for Decommissioning: NRC Staff's Draft for Comment"	08/1994
NUREG/CR-5849	"Manual for Conducting Radiological Surveys in Support of License Termination"	06/1992
NUREG/BR-0241	"NMSS Handbook for Decommissioning Fuel Cycle and Materials Facilities"	03/1997
NUREG-1727	"NMSS Decommissioning Standard Review Plan"	09/2000

The Standard Review Plan (SRP) (NUREG-1727) and the Handbook (NUREG/BR-0241) have been incorporated into this NUREG series. This three-volume NUREG series supersedes NUREG/BR-0241 and NUREG-1727 in their entirety.

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1.3.4 REQUEST COPIES OF DOCUMENTS

To request copies of the regulations cited in this volume, call the Government Printing Office (GPO) order desk in Washington, DC, at (202) 512-1800. Order the two-volume bound version of title 10, *Code of Federal Regulations*, Parts 0–50 and 51–199 from the GPO, Superintendent of Documents, Post Office Box 371954, Pittsburgh, Pennsylvania 15250-7954. You may also contact the GPO electronically at <http://www.gpo.gov>.

Note that NRC publishes amendments to its regulations in the *Federal Register*. Documents may be obtained from NRC's Public Document Room (PDR), at the following contact:

Telephone: 1-800-397-4209 or 301-415-4737

TDD (for the hearing impaired): 1-800-635-4512

Facsimile: 301-415-3548

U.S. Mail: U. S. NRC, PDR, O1F13, Washington, DC 20555

Onsite visit to the PDR: One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852 (opposite the White Flint Metro Station on the Red Line)

In an effort to make NRC documents and information readily available to licensees and the general public, NRC is placing documents and information on its Internet Web site. Many of the reference sections of this volume refer to a World Wide Web address on the Internet (e.g., <http://www.nrc.gov>). Applicants and licensees who have Internet access may use the referenced address to find more information on a topic, the referenced document, or information on obtaining the referenced document.

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PART I: TIMELINESS AND RECORDKEEPING

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2 TIMELINESS IN DECOMMISSIONING OVERVIEW

"Timeliness in Decommissioning of Material Facilities" (known hereafter as the Timeliness Rule) established criteria for timely decommissioning upon termination of operations by amending 10 CFR Parts 2, 30, 40, 70, and 72. The Timeliness Rule establishes requirements for notifying NRC of pending decommissioning actions and cessations in licensee operations, establishes requirements for when decommissioning plans (DPs) need to be submitted, and establishes requirements for completing decommissioning activities. Chapter 5 of Volume 1 of this NUREG series provides an overview of the decommissioning process which includes a brief discussion of the timing of decommissioning and the Timeliness Rule. This section of Volume 3, however, provides more detailed information regarding the timing of decommissioning and the Timeliness Rule.

Note that the regulations also allow licensees to request relief from the timeliness requirements when justified. The effective date of the Timeliness Rule was August 15, 1994 (59 FR 36026, July 15, 1994).

The Timeliness Rule applies to situations when (a) the licensee has decided to permanently cease principal activities at the entire site, or at any separate building or outdoor area, or (b) no principal activities have been conducted in such areas for a period of 24 months, even if no decision has been made to permanently cease principal activities. Further, the criteria apply to all licensees for whom the authorization to perform licensed activities has expired or been revoked.

The purpose of the Timeliness Rule is to avoid future problems and reduce potential risk, to the public and environment, that may result from delayed decommissioning of inactive facilities and sites. Specific concerns that prompted the Timeliness Rule include the potential risk of safety practices becoming lax because of attrition of key personnel and lack of management interest at facilities once operations cease, as well as the potential for bankruptcy, corporate takeover, or other unforeseen changes in a company's financial status that may complicate or delay decommissioning.

This chapter contains guidance on compliance with Timeliness Rule requirements. The contents of this chapter are:

2.1 Initiation of the Decommissioning Process

2.2 Extension or Alternative Schedule for Decommissioning

2.3 Completion of the Decommissioning Process

2.4 Application of the Timeliness Rule to Special Cases

2.5 Enforcement

2.6 Review Criteria for Extension or Alternative Time Schedule Requests

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Flowcharts to assist in determining compliance with the Timeliness Rule are provided in Figures 2.1a and 2.1b. If licensees find that they are out of compliance, they must take all necessary corrective actions to restore compliance. Licensees may contact NRC for assistance in determining whether their actions meet regulatory requirements and for regulatory guidance documents containing NRC recommendations of adequate methods of compliance.

Licensees who notify NRC in accordance with the Timeliness Rule should provide such notices to the appropriate offices listed in 10 CFR 30.6, 40.5, and 70.5.

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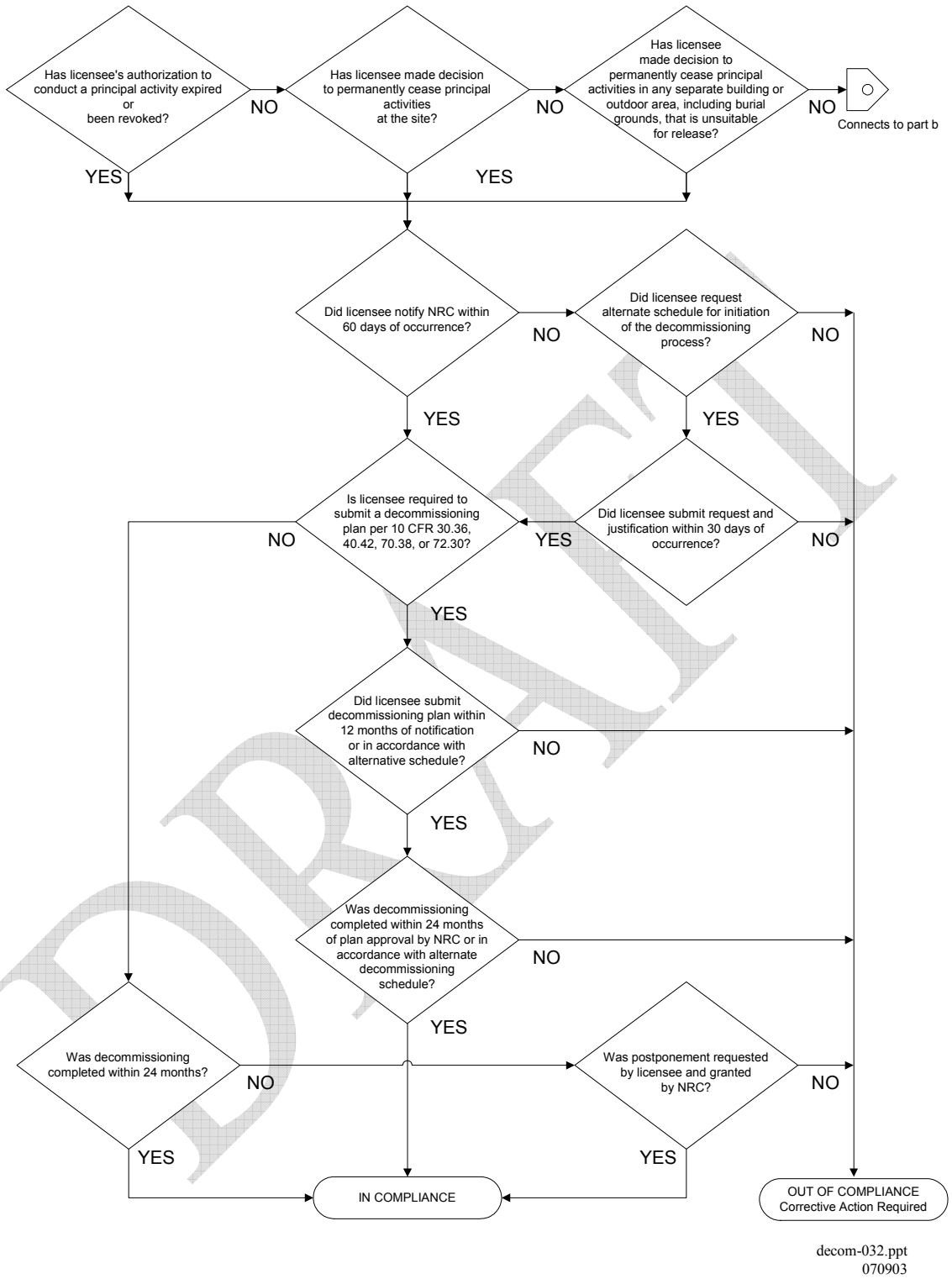

Figure 2.1a Determining Compliance with the Timeliness Rule (1 of 2)

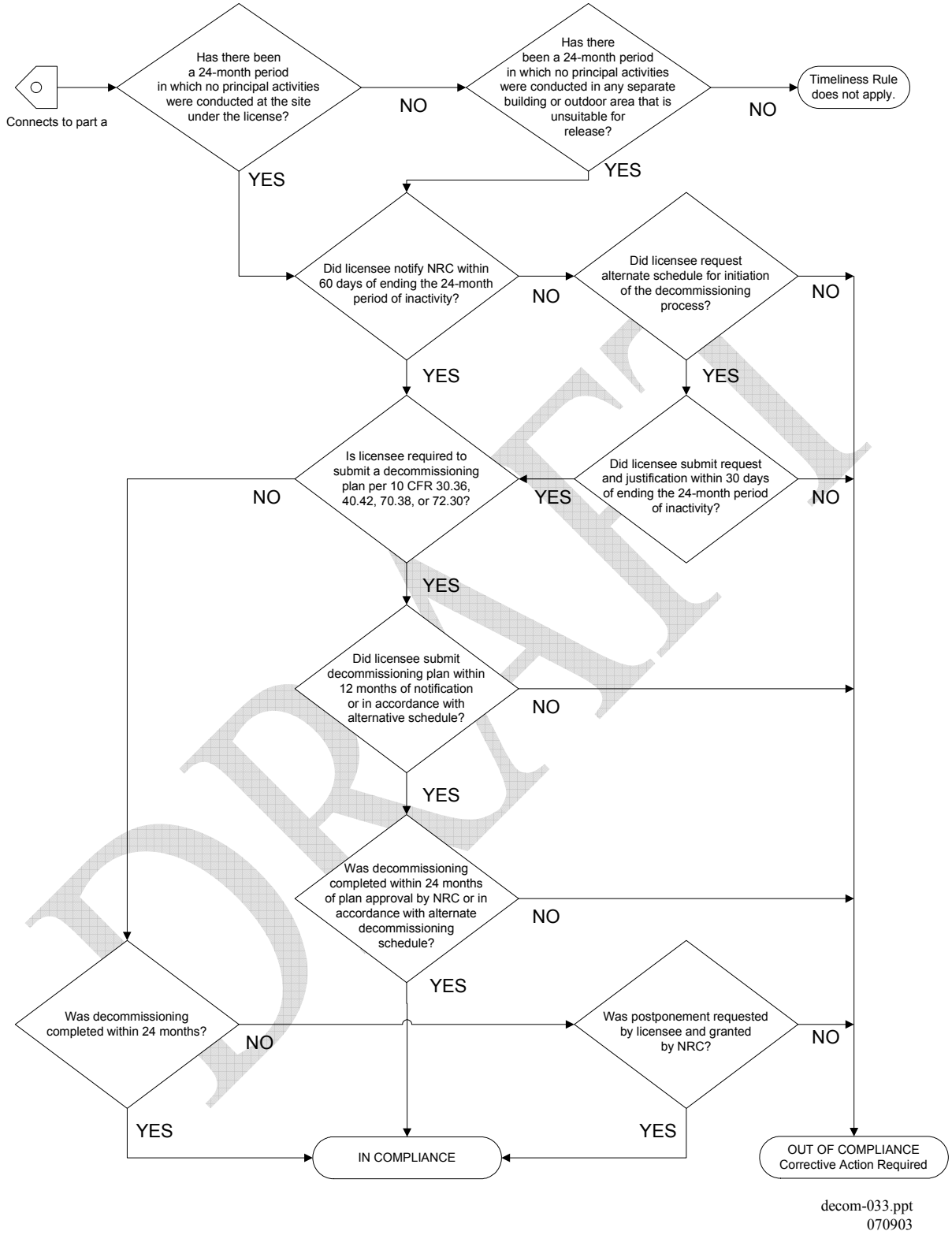

Figure 2.1b Determining Compliance with the Timeliness Rule (2 of 2)

2.1 INITIATION OF THE DECOMMISSIONING PROCESS

There are four situations that lead to the requirement for a licensee to notify NRC and to initiate the decommissioning process. These occurrences include the following:

1. The license to conduct a principal activity has expired or been revoked. (A principal activity is one that is essential to achieving the purpose for which a license was issued or amended. Storage, during which no licensed material is accessed for use or disposal, and activities incidental to decontamination or decommissioning are not principal activities.)
2. The licensee has made the decision to permanently cease principal activities at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area (this includes inactive burials, and land used for waste disposal under 10 CFR 20.302, 20.304, or the current 20.2002) is unsuitable for release in accordance with the requirements in Subpart E of Part 20. See Volume 2 of this NUREG report for guidance on unsuitable release: Chapter 5 and Appendices H and I offer general guidance for dose modeling, and Appendix J offers specific guidance on burials.
3. There has been a 24-month duration in which no principal activities have been conducted under the license (regardless of the level of contamination), whether or not a decision was made to permanently cease principal activities.
4. There has been a 24-month duration in which no principal activities have been conducted in any separate building or outdoor area (including inactive burial grounds) that is unsuitable for release in accordance with the requirements in Subpart E of Part 20, whether or not a decision was made to permanently cease principal activities.

A licensee is required to assess the dose consequences of unused outdoor areas, including onsite buried material and unused separate buildings, in order to determine whether the area is suitable for release in accordance with 10 CFR Part 20, Subpart E.

Within 60 days of the occurrence of any of the above, the licensee is required to inform NRC of the occurrence in writing. In addition, the licensee is required to begin decommissioning the facility ***or*** within 12 months, submit a DP to NRC for review. If no DP is needed, the licensee is to begin decommissioning within the 60-day notification period. When a DP is required, the written notification serves to initiate the decommissioning process, and the licensee must submit a DP within 12 months of the notification date. The licensee must begin decommissioning in accordance with the DP, following NRC's approval of the DP.

MULTIPLE LICENSES AT A SITE OR MULTIPLE ACTIVITIES ON A LICENSE

If there are multiple licenses at a site, the requirements of the Timeliness Rule apply to each individual license. In situations where a license has expired, but principal activities will continue under other licenses in the same building or outdoor area, the licensee would need to submit an alternative schedule request to delay decommissioning until all licensed activities are terminated in that building or outdoor area. NRC may find this delay acceptable provided that the radioactive material from the expired license is not significantly migrating, the licensee has

sufficient financial assurance for decommissioning, and adequate controls are in place to ensure protection of the public and the environment.

If there are multiple activities authorized under the same license, the requirements of the Timeliness Rule apply to the license and not to each individual activity. That is, an individual activity could permanently cease without necessarily requiring the licensee to initiate the decommissioning process. As long as at least one principal activity continues, the licensee is not required to decommission its entire site. However, parts of the licensee's site may require initiation of the decommissioning process, even if principal activities continue in other parts of the site. If a building or an area is unsuitable for release under NRC requirements, then the licensee should either submit an extension request, or initiate the decommissioning process for that building or area when (a) a decision is made to permanently cease principal activities in a separate building or outdoor area or (b) no principal activity has been conducted in such areas for 24 months.

TIMELINESS REQUIREMENTS FOR A DECOMMISSIONING PLAN

If the licensee is required to submit a DP per license condition or per 10 CFR 30.36(g), 40.42(g), or 70.38(g), the plan must be submitted to NRC within 12 months of the notification date, unless the licensee has submitted an alternative schedule request. NRC may approve an alternate schedule for the submittal of the DP, per 10 CFR 30.36(g)(2), 40.42(g)(2), 70.38(g)(2), and 72.54(f)(2). For additional information on an alternative schedule for decommissioning, see Section 2.6.

DECOMMISSIONING SCHEDULE REQUIREMENTS

If the licensee is required to submit a DP, then decommissioning must be initiated upon NRC's approval of the plan. Decommissioning must be completed (including the submittal of a complete final survey report), and a request for license termination submitted (when decommissioning involves the entire site), as soon as practicable but no later than 24 months after the initiation of decommissioning, unless a delay or postponement has been requested by the licensee and granted by NRC. (Note that the fee schedule for NRC review of DPs is presented in 10 CFR 170.31.) Decommissioning by a licensee not required to submit a DP must also be completed, and a request for license termination submitted (when decommissioning involves the entire site), as soon as practicable but no later than 24 months after the initiation of decommissioning, unless a delay or postponement has been requested by the licensee and granted by NRC.

2.2 EXTENSION OR ALTERNATIVE SCHEDULE FOR DECOMMISSIONING

The licensee may request to delay initiation of the decommissioning process. This request must be provided to NRC within 30 days of the occurrence of any of the situations described in Section 2.1 and contain justification for the proposed delay. Pursuant to 10 CFR 30.36(f), 40.42(f), 70.38(f), and 72.54(f)(1), NRC may grant a request to delay initiation of the

decommissioning process. The decommissioning process does not start until NRC makes a determination on the request.

For additional information regarding the criteria that NRC staff will use to review requests for alternative time schedules for initiation of decommissioning activities see Section 2.6.

2.3 COMPLETION OF THE DECOMMISSIONING PROCESS

As the final step in decommissioning, the licensee shall certify the disposition of all licensed material, including accumulated wastes, and conduct a radiation survey of the premises where the licensed activities were carried out. The licensee must either submit a report of the results of this survey or demonstrate that the premises are suitable for release in some other manner. This information must be submitted within the 24-month period after notification or approval of the DP, if required, unless an alternative schedule has been approved. Licenses, including expired licenses, will be terminated by written notice to the licensee when the Commission determines that (a) the radioactive material has been properly disposed of, (b) a reasonable effort has been made to eliminate residual radioactive contamination, and (c) either a radiation survey has been performed, or other information is submitted by the licensee which demonstrates that the premises are suitable for release in accordance with NRC requirements.

2.4 APPLICATION OF THE TIMELINESS RULE TO SPECIAL CASES

STORAGE-ONLY LICENSES

There are two different types of licenses where the authorized activity is "storage-only."

1. A storage-only license issued to address the inability to transfer or dispose of the material: Storage under these circumstances is not a principal activity as defined in 10 CFR 30.4. Therefore, the requirements to notify NRC and undertake decommissioning of the material kept in storage are not applicable. For these licensees, any decommissioning issues will be addressed by NRC when the license comes up for renewal. (Possible examples could include "greater than class C" and transuranic waste.)
2. A license where storage of material is the principal activity (i.e., spent fuel storage under 10 CFR Part 72):

In such cases, storage will be treated as the principal activity under the license. Thus, the notification and decommissioning requirement would apply, but would be applicable only if the licensee ceases storage (i.e., transfers all material).

ONSITE DISPOSALS (BURIAL GROUNDS)

The Timeliness Rule includes requirements pertaining to buildings and outdoor areas that have been unused for a period of 24 months at facilities licensed under 10 CFR Parts 30, 40, and 70. Outdoor areas include those where disposals were made pursuant to former 10 CFR 20.304 and 20.302, and current 10 CFR 20.2002. Note that outdoor areas where radioactive materials were

used that currently meet NRC's criteria for unrestricted use are not subject to the notification requirements of the Timeliness Rule.

Outdoor areas include those where disposals were made pursuant to former 10 CFR 20.304 and 20.302, and current 10 CFR 20.2002. A licensee is required to assess the dose consequences of existing onsite buried material in order to determine whether the area is suitable for release in accordance with 10 CFR Part 20, Subpart E.

For proposed new onsite disposals, NRC guidance suggests constraining doses from onsite disposals to a few millirem per year, so that it is more likely that the entire site (including the contribution from onsite disposals) will meet the release criteria in 10 CFR 20, Subpart E without remediation of the onsite disposal. Guidance for onsite disposal of radioactive material under 10 CFR 20.2002 is provided in Section 15.12 of Volume 1 of this NUREG report.

Burial of certain quantities of radioactive waste in soil by a licensee without prior Agency approval was authorized on January 29, 1959 (22 FR 548). Originally, this authorization was codified in former 10 CFR 20.304. On January 28, 1981, the Commission concluded that it was inappropriate to continue generic authorizations of burials pursuant to 10 CFR 20.304 without regard to factors such as location of burial, concentrations of radioactive material, form of packaging, and notification of NRC. Therefore, NRC rescinded 10 CFR 20.304 (45 FR 7161). As of January 28, 1981, a licensee wishing to perform onsite disposals of the type previously authorized under 10 CFR 20.304 was required to obtain NRC's prior approval in accordance with 10 CFR 20.302. The current requirements of 10 CFR 20.2002 (revised from 20.302) remain in force. For proposed new onsite disposals, refer to the guidance for onsite disposal of radioactive material under 10 CFR 20.2002, in Section 15.12 of Volume 1 of this NUREG report.

During decommissioning, NRC will evaluate onsite disposals authorized under former 10 CFR Sections 20.304, 20.302, and current 20.2002 to determine their potential impact on the health and safety of the public. The acceptability of a disposal will depend on two factors: (1) the potential for the disposed material to migrate and significantly contaminate the ground water, and (2) the potential for significant exposure to members of the public who may, at some time in the future, develop and use the disposal site for a private residence, farm, business, or other purpose.

BROAD-SCOPE LICENSES

The requirements of the Timeliness Rule apply to licensees regulated by 10 CFR Part 33, "Specific Licenses of Broad Scope for Byproduct Material." The permanent cessation of principal activities in an individual room or laboratory may require the licensee to notify NRC if no other licensed activities are being performed in the building. Licensees should note, even if licensed activities are being performed in other parts of the building, they are required to keep lists of restricted (and formerly restricted) areas pursuant to 10 CFR 30.35(g)(3). Inspectors will review these lists to identify individual rooms that have been released, and verify that the rooms have been properly decommissioned.

URANIUM AND THORIUM MILLING

As published on January 1, 2003, 10 CFR 40.42(l) incorrectly states that uranium and thorium milling are exempt from 10 CFR 40.42(f) and 40.42(g) with respect to reclamation of tailings impoundments and/or waste disposal areas. These references should actually be 10 CFR 40.42(g) and 40.42(h), respectively. Conforming changes to the rule will be used to correct these typographical errors. Per 10 CFR 40.42(l), specific licenses for uranium and thorium milling are exempt from selected provisions in the Timeliness Rule, with respect to the reclamation of tailings impoundments and/or disposal areas in 10 CFR 40.42(d)(4) for the 24-month period of inactivity; 10 CFR 40.42(g) for the content of the DP; and 10 CFR 40.42(h) for the timing of completion of the plan. The Timeliness Rule applies to the buildings and onsite areas other than the impoundment. It also applies to the wellfields at in-situ leach uranium recovery facilities.

TEMPORARY JOB SITES

The Timeliness Rule applies to licensees who conduct licensed activities at temporary job sites and are licensed pursuant to 10 CFR Parts 30, 40, and 70. Examples of these activities include, but are not limited to, reactor component repair service; well logging; radiography; portable gauge use; mobile nuclear medicine service; and field flood studies. The rule also applies to Agreement State licensees conducting licensed activities at temporary job sites within NRC jurisdiction pursuant to the provisions for reciprocity in 10 CFR Part 150. However, operations conducted at temporary job sites generally do not result in site contamination. Additionally, all radioactive materials used at temporary job sites are required to be removed at the completion of the licensed work. Hence, the Timeliness Rule will not apply to such operations that are conducted in compliance with NRC regulations and license conditions and do not result in site contamination that would involve site decommissioning.

Further, NRC or Agreement State licensees conducting licensed activities at temporary job sites are not expected to notify NRC upon release of each job site under normal operations. These licensees are, however, expected to comply with applicable notification requirements, if significant contamination does occur (i.e., 10 CFR 30.50 and 39.77). In case of site contamination, decommissioning may be required and compliance with the Timeliness Rule may be applicable. Such occurrences will be reviewed on a case-by-case basis.

2.5 ENFORCEMENT

Failure to comply with the Timeliness Rule may be classified as a Severity Level III violation (as defined in NUREG-1600) and may result in consideration of monetary civil penalties or other enforcement action, as appropriate. Examples of noncompliance include the following:

- failure to notify NRC as required by regulation or license condition,
- failure to meet decommissioning standards,

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- failure to complete decommissioning activities in accordance with regulation or license condition, and
- failure to meet required schedules without adequate justification.

NRC's enforcement policies are described in NUREG-1600, "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy). The current Enforcement Policy is included on NRC's Web site at <http://www.nrc.gov>.

2.6 REVIEW CRITERIA FOR EXTENSION OR ALTERNATIVE TIME SCHEDULE REQUESTS

NRC staff will review a request to extend the time limits established for the initiation or completion of decommissioning activities in accordance with the requirements of the Timeliness Rule. *The Timeliness Rule requirements are presented in 10 CFR 30.36, 40.42, 70.38, and 72.54. Throughout the remainder of this section, reference will be made to various sections of 10 CFR 30.36. Readers should substitute similar sections in 10 CFR 40.42, 70.38, and 72.54 as applicable, for other licensing situations.*

There are two relevant time schedules:

- one for initiating decommissioning (30.36(d)), and
- another for completion of decommissioning (30.36(h)).

The time schedules can be extended for initiation of decommissioning. Section 30.36(f) provides the requirements for extending the time periods established in Section 30.36(d). Specifically, whether the relief is not detrimental to the public health and safety and is otherwise in the public interest. In addition to the criteria in 10 CFR 30.36(f), the criteria in 10 CFR 30.36(i) may also be helpful in evaluating an extension request.

The time schedules for the completion of decommissioning can also be extended. A request for an extension or alternative schedule for decommissioning may be approved, pursuant to 10 CFR 30.36(i), if warranted, after considering the following:

- whether it is technically feasible to complete the decommissioning within the 24-month period;
- whether sufficient waste disposal capacity is available to allow the completion of the decommissioning within the 24-month period;
- whether a significant volume reduction in waste requiring disposal will be achieved by allowing short-lived radionuclides to decay;
- whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and
- whether there are other site-specific factors such as the regulatory requirements of other agencies, lawsuits, ground water treatment activities, monitored natural ground water

restoration, actions that could result in more environmental harm than deferred cleanup, and other NRC-agreed upon factors beyond the control of the licensee.

NRC's review should include the following:

- acceptance reviews,
- detailed reviews,
- requests for additional information,
- documentation of the safety and environmental review, and
- determination of whether factors alleged to be beyond the control of the licensee are, in fact, beyond their control.

2.6.1 ACCEPTANCE REVIEW

NRC staff will review a request to extend the time period established in 10 CFR 30.36(d) in accordance with this section. If the licensee's information is inadequate or incomplete, the staff will request that the licensee supply additional information. NRC staff may elect to perform any of the following:

- reject a request because of inadequate information,
- place a request on hold pending submittal of requested information, or
- accept a request for a detailed review.

2.6.2 DETAILED REVIEW

NRC staff will determine whether the licensee has met the requirements of the Timeliness Rule. NRC staff will verify the following:

- The licensee met the notification requirements of the Timeliness Rule.
- The licensee provided sufficient evidence to show that the regulatory evaluation criteria described below were met.

2.6.3 REQUESTS FOR ADDITIONAL INFORMATION

NRC staff will document insufficient or inadequate information submitted by the licensee and communicate what additional information is needed to address the identified deficiencies.

SAFETY AND ENVIRONMENTAL REVIEW REPORTS

NRC staff will document and communicate to the licensee their position on the safety and environmental acceptability of the request, which forms the basis for the subsequent licensing action.

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REGULATORY EVALUATION CRITERIA

Notification Requirements of the Timeliness Rule

A request to extend the time period established for initiation of decommissioning may be accepted if it demonstrates that the extension is not detrimental to public health and safety and is otherwise in the public interest.

Evidence that an Extension of the Time Period will not be Detrimental to Public Health and Safety

To demonstrate that delaying the start of decommissioning will not be detrimental to public health and safety, a licensee should submit the following:

- A discussion of its record of regulatory compliance, particularly its compliance with NRC regulations, and
- the health and safety plan that will be in effect during the standby period.

If the current health and safety plan will remain in effect during standby, state when it was submitted and when the NRC-approved Health and Safety Plan will be reviewed in accordance with Volume 1 of this NUREG series.

Demonstration that an Extension of the Time Period for Initiation of Decommissioning is Otherwise in the Public Interest

Factors that may form the basis for an argument that an extension of the time period for initiation of decommissioning is otherwise in the public interest include:

- future needs of the national defense industry,
- a substantial increase in the efficiency of decommissioning thus reducing anticipated dose to workers
- reduced decommissioning costs for Federal facilities,
- postponing the initiation of decommissioning will not result in the spread of contamination, particularly ground water contamination, that may adversely affect the ultimate termination of the license.

This list is not meant to be exhaustive. There are likely to be other valid licensee-specific arguments for extending the time period established for decommissioning. NRC's determination of what is in the public interest will not be based solely on what is in the applicant's best economic interest, because the applicant's economic interest and the public's interest may not necessarily coincide.

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2.6.4 ACCEPTANCE CRITERIA

INFORMATION TO BE SUBMITTED

To support a request for an extension of the time period in 10 CFR 30.36(d), a licensee should provide the following:

- The date that principal activities ceased at the site, separate building, or outdoor area, as provided for in 10 CFR 30.36(d)(3) and 30.36(d)(4).
- The date a request for an extension of the time period is required, as provided for in 10 CFR 30.36(f).
- The length of postponement requested.
- Whether a DP will ultimately be required for the site.
- The reason the licensee is requesting an extension of the time period for initiation of decommissioning schedule and an explanation of how the public's interest will be served by NRC approval of the extension. For example, licensees who request to go on standby rather than decommission could address whether decommissioning of the facility will require dismantlement, such that the facility will no longer be available for nuclear purposes. Operators of Federal facilities could explain how an extension of the time period for initiation of decommissioning would better take into account a broader Federal plan for decommissioning that establishes priority, funding, and schedules, thereby reducing the public funds needed for decommissioning the facility.
- A demonstration that the facilities will not significantly deteriorate during a standby period, if applicable. Facilities should be sufficiently maintained such that they may become operational without extensive repairs and decommissioning is not significantly more complex at a later date.
- A discussion of the current decommissioning cost estimate and the potential for increased decommissioning costs if an extension of the time period is approved.
- Evidence of adequate financial assurance for the ultimate decommissioning of the site. Financial assurance documentation will be reviewed in accordance with Chapter 4 and Appendix A of this volume.
- A discussion (a) of the extent and nature of contamination and the potential for migration by airborne or ground water pathways and (b) of the plan for monitoring and maintaining the site, separate building, or outdoor area during the extension period. The plan should be sufficiently detailed to demonstrate that public and worker health and safety and the environment will not be negatively affected during the extension period. The operating maintenance and radiation protection programs previously approved by NRC may be continued during the extension period. The plan should also demonstrate that the applicant will conduct sufficient monitoring, during the extension period, to assure that residual contamination does not become a public or a worker health and safety issue.

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2.6.5 SAMPLE EVALUATION FINDINGS

Documentation of the evaluation findings by NRC staff should include the elements shown below:

- NRC staff has reviewed the licensee's request to extend the time period established in 10 CFR 30.36(d), according to NUREG-1757, Volume 3, Rev. 1, "Consolidated Decommissioning Guidance: Financial Assurance, Recordkeeping, and Timeliness."
- [*Insert name and license number of facility*] ceased principal activities at [*insert location of facility*] on [*insert date*]. NRC received a request to extend the time period established for initiation of decommissioning by [*insert number*] years, on [*insert date*], in accordance with the requirements of 10 CFR 30.36(f). [*Insert name of licensee*] has acknowledged that a DP will be required to decommission the site before license termination.
- The Health and Safety Plan submitted [*or referenced*] by [*insert name of licensee*] is adequate to ensure that public health and safety will be protected during the extension period. In addition, results of past inspections indicate that [*insert name of licensee*] can successfully implement its operational health and safety plan.
- [*Insert name of licensee*] has secured financial surety equal in amount to the decommissioning cost estimate that NRC previously approved. Provisions have been made to vary the amount of financial surety if necessary, to cover changing decommissioning costs with time.
- The monitoring and maintenance plan submitted by [*insert name of licensee*] is adequate to ensure that worker and public health and safety, and the environment, will not be negatively affected during the extension period.
- It is in the public's interest to allow [*insert name of licensee*] to extend the time period established for initiation of decommissioning for a period of time, not to exceed [*insert number*] years, for the following reason(s). [*Insert reason(s).*] [*Examples*: The standby period will allow economic conditions in the uranium market to improve. Existing statutes oblige the Secretary of Energy to gather information on the uranium mining industry and to have a continuing responsibility for the domestic industry, to encourage the use of domestic uranium. See 42 U.S.C. 2201b and 2296b-3. Although this responsibility is not NRC's, we recognize that the viability of the industry is a Federal concern. **OR** An alternate schedule involving some of the Federal licensee's other facilities would better take into account the Federal licensee's overall decommissioning needs, thereby reducing public funds needed for the ultimate decommissioning of the facility, etc.]

The NRC letter documenting its evaluation findings to the licensee will also state that within 60 days of the termination of the extension period, the licensee must notify NRC in writing of such occurrence, and either begin decommissioning or submit within 12 months of notification a DP, if required by 10 CFR 30.36(g)(1), and begin decommissioning upon approval of that plan. An extension of a time schedule (for either initiation or completion of decommissioning) for greater than 6 months should be by license amendment, and the amendment should layout the time schedule.

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3 RECORDKEEPING OVERVIEW

NRC regulations prescribe recordkeeping responsibilities for NRC licensees. During licensed operations NRC requires licensees to maintain records important to safe and effective decommissioning. For licensees who must submit a DP, these records should subsequently be used to develop the site description portion of the DP. Following decommissioning and before license termination, additional NRC regulations prescribe the disposition of these records, in most cases to NRC. Finally, NRC staff is responsible for maintaining decommissioning records following license termination.

This chapter contains guidance for these recordkeeping requirements. The contents of this chapter are as follows:

3.1 Recordkeeping Requirements During Licensed Operations

3.2 Recordkeeping Information for Decommissioning Plans

3.3 Record Disposition Requirements at License Termination or Transfer

3.4 Record Retention Requirements for NRC Staff

3.1 RECORDKEEPING REQUIREMENTS DURING LICENSED OPERATIONS

INTRODUCTION

This section provides guidance on NRC's recordkeeping requirements for licensees while they are conducting licensed operations. Section 3.2 of this chapter discusses how this information should be incorporated into a DP.

The purpose of NRC's recordkeeping requirements is to provide an adequate knowledge base of the radiological conditions of a facility to enable decommissioning planning. This information will serve to facilitate decommissioning by minimizing occupational exposure and reducing the risk of any public exposure. The purpose of decommissioning records is to keep and maintain information concerning contamination remaining from spills or other occurrences and to maintain up-to-date drawings of both (a) restricted areas where radioactive materials are used or stored and (b) inaccessible areas, such as buried pipes that could have been contacted by radioactive materials, so that this information can be used when planning for decommissioning.

REGULATORY REQUIREMENTS

10 CFR 20.1501, 20.2101, 20.2108, 20.2110, 30.35(g), 30.51(c)(1), 40.36(f), 40.61(c)(1), 70.25(g), 70.52(i)(1), and 72.30(f).

3.1.1 METHODS FOR IMPLEMENTING RECORDKEEPING REQUIREMENTS

GENERAL

1. The location of decommissioning records must be clearly identified and designated to contain records and information important to safe decommissioning.
2. Information related to decommissioning need not be submitted to NRC as it is collected and filed, but the necessary documents must be maintained in appropriate files and be available for inspection upon request by NRC.
3. Pertinent documents such as licensee operating procedures and incident reporting requirements should specify the type of information to be kept and the means for retention and updating of the records.
4. Records may be originals, copies, or clear and specific references to documents in other files. Computerized records systems may be used provided the other provisions of this guidance (e.g., provisions for retrievability and protection against damage) are followed.
5. The records must be protected against tampering and loss (e.g., fire, theft, or misplacement). The records should be updated as necessary, at least annually, to include pertinent new information such as recent unusual occurrences or facility modifications.
6. There should be provisions for efficient retrieval of the records at the time of decommissioning so that the records can be used as part of decommissioning planning.
7. Licensee operating procedures should contain a clear definition of responsibility for collection, retention, maintenance, updating, and recall of the decommissioning records.
8. Decommissioning records should be reviewed by licensee management, at least annually, to ensure their completeness and ability to serve their intended function.

REFERENCES TO OTHER RECORDS

Paragraphs 30.35(g), 40.36(f), 70.25(g), and 72.30(f) indicate that, if records of information relevant to decommissioning are kept for other purposes, reference to those records and their locations may be substituted. If reference is made to other records, the following should be considered:

1. There must be an entry in the decommissioning records referring to the other record. The reference should be clear and specific, providing at least a one-sentence description of the subject and providing the referenced file location.
2. The licensee's procedures should contain provisions to avoid loss of the information in the original document in the referenced file in case that file is destroyed before the license is terminated, for example, by cross-referencing the original document or its file to the decommissioning records. Records that are referenced but not included in the decommissioning records themselves should be so labeled and marked not to be removed or destroyed without approval by the individual responsible for maintaining decommissioning records.

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3. It is acceptable to reference reports made under other regulatory requirements concerning spills. However, the record for decommissioning purposes should specifically consider the contaminant levels remaining after any cleanup activities.

3.1.2 CONTENT OF DECOMMISSIONING RECORDS FILE

1. Paragraph 20.1501(a) requires each licensee to make or cause to be made, surveys of areas, including the subsurface, that may be necessary for the licensee to comply with the regulations in Part 20 and are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels, and concentrations or quantities of residual radioactivity, and the potential radiological hazards of the radiation levels and residual radioactivity detected. Paragraph 20.1501(b) requires records from surveys describing the location and amount of subsurface residual radioactivity identified at the site to be kept with records important for decommissioning.
2. Paragraphs 30.35(g)(1), 40.36(f)(1), 70.25(g)(1), and 72.30(f)(1) state that records are to be kept of spills and other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site; that the records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants have spread to inaccessible areas, as in the case of possible seepage into porous material such as concrete, and that the records must include any known information on involved nuclides, quantities, forms, and concentrations
   - The records should contain a description of the spill or occurrence (including the date), cleanup activities taken, and the location of the remaining contamination. Inaccessible areas would be areas beyond those normally encountered in operations, such as cracks in concrete, seepage into porous material such as concrete, wood, or tile, seepage into equipment and components, or areas behind, below, or obstructed by equipment or structures. The records should contain sketches, diagrams, or drawings marked to show areas of contamination and points where radionuclide and radiation measurements were made.
   - The records should contain information related to site characterization, including information on radiological spills on the site, residual soil contamination levels, principal contaminant radionuclides, onsite locations that may have been used for burial of radioactive materials, and any problems with the hydrology and geology if the site contained or still contains settling ponds, lagoons, or other potential sources of ground water contamination.
   - As noted above, the records are to clearly indicate the specific radionuclides involved and the locations, quantity, form, and concentration of the radionuclide contamination, where known, and the basis for this information.
   - Records on contamination that could contribute to exposure or impact decommissioning methods, costs, or radiation exposures should be included in the record file.
3. Paragraphs 30.35(g)(2), 40.36(f)(2), 70.25(g)(2), and 72.30(f)(2) state that decommissioning records must include as-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used or stored and locations of possible inaccessible contamination. Normal facility as-built drawings are acceptable. If the records

reference other required drawings, each relevant document need not be indexed individually. If drawings are not available, appropriate records of available information concerning these areas and locations are to be substituted.

- Drawings of restricted areas where radioactive materials are used or stored should include drawings showing the location of structures, systems, equipment, and components in restricted areas as defined in 10 CFR 20.1003.
- Drawings of areas of possible inaccessible contamination should include buried pipes or other areas obstructed by equipment or structures.
- If other drawings are referenced, it is sufficient to reference the general category of drawings being referenced (for example, drawings of a particular laboratory location or facility structure or equipment) and the specific location where those drawings are kept (for example, the facility's specific file number).
- If drawings are unavailable, appropriate records of available information maybe substituted, including written descriptions of particular areas, recent sketches, or photographs
- Drawings should be maintained and should be updated as systems, components, and structures are modified or added. Old or superseded drawings must be retained if they contain information relevant to potential locations of contamination.
- To ensure that previously used work sites are not forgotten if they are inactive when final decommissioning occurs, the records should include information on all locations where radioactive operations were ever performed during the life of the facility, including a list of what licensed materials were handled, a general description of the operations performed, and typical contamination and radiation levels during operations.
- To provide a baseline history of background radiation levels prior to work with radioactive materials, the records should include surveys and isotopic analyses of building materials and soil samples made prior to initial use of new facilities or existing facilities not previously used for work with radioactive materials. This information can be used to verify the actual contribution of licensee operations to contamination and radiation levels at decommissioning.

4. Except for radionuclides and materials excluded by regulations 10 CFR 30.35(g)(3), 40.36(f)(3), and 70.25(g)(3), a list of the following must be maintained and updated every 2 years:
   - all areas designated and formerly designated as restricted (under 10 CFR 20.1003);
   - all areas outside of restricted areas that require documentation (under 10 CFR 30.35(g)(1), 40.36(f)(1), 70.25(g)(1), and 72.30(f)(1) respectively);
   - all areas outside of restricted areas where wastes have been buried as documented under 10 CFR 20.2108; and
   - all areas outside of restricted areas that contain material, which if the license expired, would require remediation to meet the criteria in 10 CFR Part 20, Subpart E, or application for disposal under 10 CFR 20.2002.

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5. Paragraphs 30.35(g)(4), 40.36(f)(4), 70.25(g)(4), and 72.30(f)(4) state that decommissioning records must include records of the cost of decommissioning. These records must include the prescribed amount of financial assurance provided (referred to in the regulation as "the amount certified for decommissioning"), or the cost estimate performed for the decommissioning funding plan (DFP), as applicable. Additionally, records of the funding method used to provide financial assurance must be maintained.

3.1.3 SPECIFIC RECORDKEEPING REQUIREMENTS FOR DISPOSAL OF RADIOACTIVE WASTE BY LAND BURIAL UNDER FORMER 10 CFR 20.302, 20.304, AND CURRENT 20.2002

Onsite burials under 10 CFR 20.2002 (revision to the former 10 CFR 20.302) and under the former 10 CFR 20.304 have been problematic for licensees during their decommissioning of sites containing such burials. For some of these previous burials, it has been necessary to exhume material and dispose of it offsite, even though the material was originally disposed of in accordance with existing regulations. Based on this experience, NRC regulations require licensees to notify NRC if they have burial sites that may require decommissioning (see Chapter 4) and also to maintain records of these burials.

At the time of decommissioning, completed records of 10 CFR 20.304, 20.302, and 20.2002 disposals are necessary for NRC to evaluate the acceptability of the disposals. Each licensee is required per 10 CFR 20.2108 to maintain records of disposals made under 10 CFR 20.2002 and to preserve such records until the Commission terminates the license requiring these records. Former 10 CFR 20.401(c)(3) stated that records of disposals made pursuant to 10 CFR 20.302, and 20.304 must be maintained until the Commission authorizes their disposition. In addition, the final rule on "Decommissioning Recordkeeping and License Termination" (58 FR 39628) requires a single document listing (a) all areas outside restricted areas where current and previous wastes have been buried (as documented under 10 CFR 20.2108); and (b) other information necessary to ensure that decommissioning is carried out in accordance with the Commission's regulations.

At present, 10 CFR 20.2002 states that the licensee must apply to the Commission for approval of proposed procedures to dispose of licensed material in a manner not otherwise authorized in 10 CFR Part 20. The former 10 CFR also required this. After the application is approved by NRC, records of actual disposals must be maintained per 10 CFR 20.2108. These records should be sufficient to demonstrate compliance with the approved procedures contained in the application.

Pursuant to the former 10 CFR 20.401 requirements, the records of disposals performed under former 20.304 were required. The following requirements were placed on burials made under 10 CFR 20.304:

1. The total quantity of licensed and other radioactive material buried at any one location and time does not exceed, at the time of burial, 1000 times the amount specified in Appendix C to Part 20.
2. The burial is at a minimum depth of four feet.

3. Successive burials are separated by distances of at least 6 feet and not more than 12 burials are made in any year.

NRC expects that licensees who disposed of radioactive waste in accordance with 10 CFR 20.304, 20.302, and 20.2002 comply with the applicable recordkeeping requirements. Further, if NRC determines that the licensee has not kept the minimum records required for disposals that may pose a significant risk to the public after release, the licensee may then be expected to characterize the disposal sites by compiling the necessary information (e.g., sampling and survey data). The acceptability of the timing and extent of characterization will be determined by NRC on a case-by-case basis.

3.2 RECORDKEEPING INFORMATION FOR DECOMMISSIONING PLANS

Volume 1 of this NUREG series contains NRC guidance on developing and reviewing DPs. Specifically, Chapter 16 of Volume 1 details the site description portion of DPs. The records maintained in accordance with NRC Regulations discussed in this volume should be used in the licensee's development of the site description as well as the facility operating history, the facility description, and the radiological status of the facility. Refer to Volume 1 of this NUREG series for specific guidance in this regard.

3.3 RECORD DISPOSITION REQUIREMENTS AT LICENSE TERMINATION OR TRANSFER

This section provides guidance on NRC's recordkeeping requirements for licensees at license termination or during license transfer. The purpose of these requirements is to ensure that records important to decommissioning remain available in the event that safety concerns arise after license termination or transfer. Since NRC may not be able to determine what problems will arise in the future, the best course of action is to have the records available after license transfer or termination.

REGULATORY REQUIREMENTS

10 CFR 30.35(g), 30.36, 30.51, 40.36(f), 40.42, 40.61, 70.25(g), 72.30(f), 70.38, 70.51, and 72.54

RECORD DISPOSITION

In addition to maintaining records important to facility decommissioning, licensees are also required to assure that such records are not lost at license transfer or termination.

When a license is transferred, the records kept in accordance with Section 3.1 of this volume must be transferred to the new licensee. Before NRC consents to a license transfer, the licensee is responsible for assuring that the appropriate records have been transferred in accordance with NRC regulations.

Before NRC terminates a license, a licensee should transfer all records kept in accordance with Section 3.1 of this volume to the appropriate NRC Regional Office. NRC staff is responsible for verifying that all of these records were received, before termination of the NRC license.

3.4 RECORD RETENTION REQUIREMENTS FOR NRC STAFF

INTRODUCTION

The decommissioning process can generate a considerable amount of records, particularly in conducting a final status survey (FSS). This section provides general record retention guidance for NRC staff responsible for project management of facilities undergoing decommissioning. The guidance is not meant to capture the totality of NRC staff requirements for record retention and document control. Refer to NUREG-0910 for detailed record retention guidelines. This section provides an overview of the records that, at a minimum, the NRC project manager should ensure are retained in the Agency's official records management system. Note that additional information in this regard can be obtained from NRC's Office of Federal and State Materials and Environmental Management Programs (FSME), Records Management Liaison.

This volume does not contain staff requirements on electronic document maintenance. Because this an evolving area, such guidance would become outdated with technological improvements and process changes and is therefore not appropriate for this consolidated guidance document. Additional information on electronic document submittal may be found at NRC's Web site <http://www.nrc.gov>.

DOCUMENTS TO RETAIN

The NRC project manager should ensure, at a minimum, that the following records are retained for decommissioned facilities:

- all license applications, amendment requests, and renewal requests;
- complete license, including all amendments;
- any licensee request for license termination and all supporting documentation, including plans for completion of decommissioning;
- forms dealing with disposition of material (NRC/AEC Form 314, AEC Form HQ-277, and other forms) and/or letters from licensees dealing with disposition and status of material;
- any documents dealing with the disposition of waste or other material or residual contamination on the site, including records of onsite burials;
- all documents related to financial assurance for decommissioning, including DFPs, certifications of financial assurance for decommissioning, related cost estimates, and records of funding methods;
- records of spills and other unusual occurrences involving the spread of contamination and around the facility, equipment, or site;

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- as-built drawings and modifications of structures and equipment in restricted areas where radioactive materials were used or stored and locations of possible inaccessible contamination;
- any additional documents that refer to decommissioning, decontamination, or termination of the license, including interim or partial decommissioning of specific facilities at any time during the history of licensed operations;
- any enforcement documents related to decommissioning and decontamination activities;
- a copy of the final status survey plan (FSSP) and DP, if required;
- FSSR from the licensee which should include the following:
  - summary measurements for each survey unit in the FSS,
  - elevated area ("hot-spot") evaluations,
  - survey instrument description and calibration records,
  - records of data reductions and comparisons with guidelines, and
  - the results of any investigations to determine the cause of the failure to meet the decommissioning criteria;
- results of site inspections, meeting reports, and correspondence;
- results of closeout surveys and inspections, including split sample collection and evaluation and independent verification reports; and
- any other records provided by the licensee at termination in accordance with the preceding section of this volume.

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PART II: FINANCIAL ASSURANCE

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4 FINANCIAL ASSURANCE OVERVIEW

NRC regulations at 10 CFR 30.35, 40.36, 70.25, and 72.30 specify the requirements for certain licensees to provide financial assurance for decommissioning. The requirement to provide financial assurance is based on the authorized possession limits specified in the NRC license. In general, above a threshold quantity of radioactive material, the licensee must provide increasing amounts of financial assurance as its authorized possession limit increases. Financial assurance may be provided in certain prescribed amounts where the authorized possession limit falls within specified bounds and no significant subsurface contamination has occurred. The threshold quantities and specified bounds are listed in Appendix A.2. Such licensees must provide the NRC with a certification of financial assurance and the original financial instruments obtained to guarantee that funds will be available for decommissioning. A licensee with authorized possession limits within the specified bounds but with significant subsurface contamination or a licensee with authorized possession limits greater than the upper bound of the prescribed amounts must perform a site-specific cost estimate to determine the amount of financial assurance required. Such licensees must provide the NRC with a DFP, which includes the original financial instruments and a certification of financial assurance. Part 72 licensees must submit a DFP and are not required to submit the originals of the financial instruments but are required to submit a certification of financial assurance. However, if certain information in the financial instrument (licensee's name, license number, and docket number; and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee) changes, the licensee must, within 30 days, submit financial instruments reflecting such changes. This information is typically presented to NRC for review and approval in the license application or renewal. The information in the DFP is updated periodically to reflect changes in the cost of decommissioning. Later the information is updated in the DP.

A certification of financial assurance is a statement by the licensee that a prescribed amount of funding has been obtained for decommissioning. The amount is established in NRC regulations and is summarized in the introduction to Appendix A to this volume.

A DFP outlines the work required to decommission a facility, provides a site-specific cost estimate for the decommissioning, and states that the funds necessary to complete the decommissioning have been obtained. During operations, residual radioactivity that would be significant for decommissioning planning would be a quantity of radioactive material that would later require remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402. The cost estimate must provide for decommissioning the facility to allow unrestricted release, unless the applicant or licensee can demonstrate its ability to meet the provisions of § 20.1403, "Criteria for license termination under restricted conditions," in which case the cost estimate may be based on meeting the criteria of that section. The estimate should assume the work will be performed by an independent third-party contractor and not take credit for salvage value or reduced taxes. However, for certain sites where the licensee provides a viable alternative approach, or alternative basis for the cost estimate, the DFP may be approved if the approach provides sufficient assurance of funding for decommissioning.

The objective of NRC's financial assurance requirements is to ensure that a suitable mechanism for financing the decommissioning of licensed facilities is in place in the event that a licensee is

unable or unwilling to complete decommissioning. Financial assurance is achieved through the use of financial instruments. Some financial instruments provide a special account into which the licensee may essentially prepay the applicable costs. Other financial instruments guarantee funding by a suitably qualified third party, thereby providing "defense in depth" in the event the licensee is unable or unwilling to pay these costs when they arise. Financial assurance for decommissioning must be obtained prior to the commencement of licensed activities or receipt of licensed material, and it must be maintained until termination of the license. If the license is being terminated under restricted conditions, then financial assurance for site control and maintenance must be obtained prior to license termination. The amount of financial assurance obtained is often based on a site-specific cost estimate and must be increased if the cost estimate increases. Under NRC regulations, a number of different types of financial instruments may be used to demonstrate financial assurance, including trusts, letters of credit, surety bonds, and guarantees.

This chapter provides guidance to NRC licensees and license applicants on how to demonstrate financial assurance for decommissioning and, if applicable, for site control and maintenance following license termination. It also addresses the financial assurance requirements that apply when the license will be terminated for unrestricted release and when the license will be terminated under restricted conditions. Appendix A establishes a standard format for presenting the information to NRC that will (a) aid the licensee or license applicant in ensuring that the information is complete, (b) help ensure that applicable requirements in 10 CFR Parts 30, 40, 70, and 72 have been met, and (c) help achieve the intent of the regulations, which is to ensure that the decommissioning of all licensed facilities will be accomplished in a safe and timely manner and that licensees will provide adequate funds to cover all costs associated with decommissioning and, if applicable, with site control and maintenance.

Unlike other materials licensees, Part 72 licensees are not required to submit originals of the financial instruments used to provide financial assurance. However, if certain information in the financial instrument (licensee's name, license number, and docket number; and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee) changes, the licensee must, within 30 days, submit financial instruments reflecting such changes. Financial assurance for Part 72 licenses is administered by the NRC's Office of Nuclear Reactor Regulation (NRR) in conjunction with financial assurance for the associated reactor. For Part 72 licenses that are not associated with a reactor, the Division of Spent Fuel Storage and Transportation in the Office of Nuclear Material Safety and Safeguards (NMSS) has the project lead and may request assistance from NRR or FSME staff for performing the financial assurance review.

This volume does not address the financial assurance requirements in 10 CFR Part 50.

This applies only to licensees and license applicants covered under the following parts of 10 CFR:

- *Part 30—Byproduct Material*. Financial assurance requirements can be found in 10 CFR 30.35 and 30.36.

- *Part 40—Source Material (except uranium recovery facilities)*. Financial assurance requirements can be found in 10 CFR 40.36 and 40.42.
- *Part 70—Special Nuclear Material*. Financial assurance requirements can be found in 10 CFR 70.25 and 70.38.
- *Part 72—Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste.* Financial assurance requirements can be found in 10 CFR 72.30 and 72.54.
- *Part 20 (Subpart E)—License Termination*. Financial assurance requirements can be found in 10 CFR 20.1403.

Other documents also address the decommissioning financial assurance requirements. Guidance on uranium recovery facilities under Part 40 is provided in "Technical Position on Financial Assurances for Reclamation, Decommissioning, and Long-Term Surveillance and Control of Uranium Recovery Facilities" (NRC 1988). Information on low-level waste disposal facilities under 10 CFR Part 61 is provided in Revision 1 of NUREG-1199, "Standard Format and Content of a License Application for a Low-Level Radioactive Waste Disposal Facility" (NRC 1988), and Revision 3 of NUREG-1200, "Standard Review Plan for the Review of a License Application for a Low-Level Radioactive Waste Disposal Facility" (NRC 1994).

The information in this volume is taken directly from the Standard Review Plan (SRP) (NUREG-1727). The SRP was developed specifically for reviewing DPs written to comply with the License Termination Rule (LTR). There has been some minor editing to remove redundancy and use consistent terminology in this document, but the essential information is the same. The difference in writing styles between the documents is because of different objectives and different authors for the documents. While there is some difference in writing style, this was the most efficient means to capture the contents of the SRP, which was finalized after significant public comment.

The financial assurance demonstrations discussed below are independent of the cost-benefit analysis required as part of the demonstration that residual radioactivity has been reduced to a level that is as low as reasonably achievable (ALARA). Appendix N of Volume 2 of this NUREG report includes guidance on preparing and reviewing the cost-benefit calculation for the ALARA analysis.

Note that throughout the remainder of this section, the term "licensee" is used generally to refer to licensees, applicants, and other responsible parties.

FINANCIAL ASSURANCE DEMONSTRATIONS REQUIRED AT LICENSE APPLICATION OR RENEWAL

At the time of license application or renewal, licensees who are authorized to possess nuclear material in excess of certain thresholds specified in 10 CFR Part 30, 40, or 70 must submit a certification to demonstrate that sufficient assurance is in place to cover prescribed amounts (as

specified in 10 CFR 30.35 (b)(2), 30.35 (c)(2), 40.36(b)(2), 40.36 (c)(2), 70.25 (b)(2), 70.25(c)(2), or 70.25 (c) (3)).

Licensees having possession limits exceeding the upper bonds of the prescribed amounts must provide a certification of financial assurance to demonstrate that the dollar amount of the financial assurance provided is sufficient to cover the cost estimate for decommissioning (as specified in 30.35 (c)(2), 30.35 (e), 40.36 (c)(2), 40.36 (d), 70.25 (c)(2), 70.25 (c)(3), 72.25 (e) or 72.30 (b) (6)).

The amount of financial assurance certified must be either the prescribed amount specified in the NRC regulations, or the amount of the cost estimate provided in the DFP. (Part 72 licensees cannot submit a prescribed amount of financial assurance, they must submit a DFP.)

- A DFP is based on a site-specific cost estimate for decommissioning.
- A certification of financial assurance relies on coverage levels specified in NRC regulations.

Licensees may choose among a number of different mechanisms to comply with the financial assurance requirements for decommissioning. The following financial assurance "methods" are specifically allowed under 10 CFR Parts 30, 40, 70, and 72:

- *Prepayment*. Under this method, the licensee provides advance decommissioning funding in full using an account segregated from licensee assets and outside the licensee's administrative control. An acceptable prepayment mechanism is a trust fund.
- *Surety, insurance, or guarantee*. Under this method, an entity with adequate financial strength (e.g., bank, insurer, or other financial institution) guarantees that the required amount of funds will be available whenever needed. Acceptable surety, insurance, or guarantee mechanisms include surety bonds, letters of credit, insurance policies, parent company guarantees, and self-guarantees.
- *External sinking fund*. This method allows a licensee to gradually prepay for decommissioning by combining the use of a partially funded prepayment instrument (i.e., a trust fund) with a surety bond, a letter of credit, parent company guarantee or self-guarantee, or insurance covering the unfunded balance.
- *Statement of intent*. This method is a commitment by a Federal, State, or local government licensee to request and obtain decommissioning funds from its funding body, when necessary. A Statement of Intent needs to state the estimated cost of decommissioning, as required in NRC regulations, as well as a demonstration that the party signing the statement has the authority to make such a statement on behalf of the government. The signatory should be the head of the agency or the designee.

Licensees may also use combinations of the above instruments, except in the case of parent company guarantees and self-guarantees, which cannot be combined with other mechanisms except sinking funds. Note that a DFP must contain a certification of financial assurance. The licensee must include a signed original (or signed duplicate original) of the financial

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mechanism(s) obtained to satisfy the requirements for decommissioning, whether using a certification of financial assurance alone or a DFP.

Note that Part 72 has different requirements. Part 72 licensees must submit a certification of financial assurance. Licensees providing financial assurance under Part 72 are not required to submit originals of the financial instruments obtained to satisfy financial assurance requirements. However, if certain information in the financial instrument (licensee's name, license number, and docket number; and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee) changes, the licensee must, within 30 days, submit financial instruments reflecting such changes.

FINANCIAL ASSURANCE DEMONSTRATIONS REQUIRED AT THE END OF LICENSED OPERATIONS

At the end of licensed operations, licensees must maintain all financial assurance established pursuant to 10 CFR Parts 30, 40, 70, or 72. In addition, licensees must submit a DP (a) if such a plan is required by a license condition, or (b) if the procedures and activities necessary to carry out decommissioning (and, if applicable, site control and maintenance) have not been approved by NRC and these procedures could increase the potential health and safety impacts to workers or the public.

A DP must include the following:

- an updated, detailed cost estimate for decommissioning,
- a comparison of that estimate with present funds set aside for decommissioning, and
- a plan for assuring the availability of adequate funds for completion of decommissioning.

If the license is being terminated under restricted conditions, the DP also must include estimated costs for control and maintenance of the site, along with financial assurance coverage for these costs. In addition to the cost estimate and financial assurance mechanism(s), the financial assurance demonstration in a DP should contain a description of the means the licensee will employ for adjusting the cost estimate and associated funding level over any storage or surveillance period.

Licensees may choose among the mechanisms listed above to comply with the financial assurance requirements for decommissioning and, if applicable, for site control and maintenance. However, external sinking funds may *not* be used to cover costs for site control and maintenance. In addition, if the license is being terminated under restricted conditions, 10 CFR 20.1403 allows financial assurance to be provided through special arrangements with a government entity that assumes custody and ownership of the site.

NRC staff will evaluate the decommissioning financial assurance demonstrations submitted by licensees pursuant to the requirements in 10 CFR Parts 30, 40, 70, and 72. NRC staff will evaluate the licensee's financial assurance demonstration to ensure that sufficient funds will be

available to carry out decommissioning activities and site control and maintenance (if applicable) in a safe and timely manner. This information must include the following:

- for a DFP, (a) a site-specific cost estimate for decommissioning, (b) a description of the means for adjusting the cost estimate and associated funding level periodically over the life of the facility, (c) a certification of financial assurance by the licensee that financial assurance has been provided in the amount of the cost estimate, and (d) one or more financial assurance mechanisms (including supporting documentation) (note that Part 72 licensees are not required to submit the certification of financial assurance of the third item (c) or the mechanisms of the fourth item (d) with the DFP);
- for a certification of financial assurance, (a) a "certification of financial assurance" (which certifies that the licensee has provided financial assurance in the appropriate amount specified in 10 CFR Parts 30, 40, 70, or 72), and (b) one or more financial assurance mechanisms (including supporting documentation); and
- for a DP, (a) an updated, detailed cost estimate for decommissioning and, if the license is being terminated under restricted conditions, for control and maintenance of the site following license termination; (b) one or more financial assurance mechanisms (including supporting documentation); (c) a comparison of the cost estimate with the present funds set aside for decommissioning and, if the license is being terminated under restricted conditions, for control and maintenance of the site following license termination; and (d) a plan for assuring the availability of adequate funds for completion of decommissioning.

NRC staff will review the financial assurance demonstration submitted by the licensee in accordance with the procedures outlined in this volume. NRC staff will ensure that, at a minimum, the financial assurance submission includes the information summarized above in addition to the following:

- For a licensee submitting a DFP at the time of license application or renewal, NRC staff will review the following:
  - the accuracy and appropriateness of the methods used by the licensee to estimate the costs of decommissioning;
  - the acceptability of the licensee's submitted financial assurance mechanism(s) for decommissioning; and
  - the means identified in the DFP for adjusting the cost estimate and associated funding level over the life of the facility.
- For a licensee submitting a certification of financial assurance at the time of license application or renewal, NRC staff will review the following:
  - the certification of financial assurance, to ensure that it certifies compliance with the appropriate requirements and that it specifies the correct amount of financial assurance; and
  - the acceptability of the licensee's submitted financial assurance mechanism(s).

- For a licensee submitting a DP at the end of licensed operations, NRC staff will review the following:
  - the accuracy and appropriateness of the methods used by the licensee to estimate the costs of decommissioning and, if the license is being terminated under restricted conditions, the costs of site control and maintenance;
  - the acceptability of the licensee's submitted financial assurance mechanism(s) for decommissioning and, if the license is being terminated under restricted conditions, for site control and maintenance; and
  - the means identified in the DP for adjusting the cost estimate and associated funding level over any storage or surveillance period.

The material to be reviewed by NRC staff is technical in nature. NRC staff will make a quantitative evaluation of the licensee's or responsible party's cost estimate or prescribed amount, and financial assurance mechanism(s).

If the licensee has provided adequate financial assurance for decommissioning, NRC staff will prepare a letter for signature of the license reviewer, informing the licensee that the financial assurance for decommissioning is adequate. A sample post-review letter from NRC to licensees for cases where no deficiencies are found in the submittal is provided at the end of this section. If NRC staff determines that the licensee has not complied with NRC's requirements for financial assurance for decommissioning, the staff will prepare a deficiency letter for signature at the Branch Chief level or higher outlining these deficiencies and requiring the licensee to respond within a brief period (e.g., 30 to 60 days) to provide financial assurance. No existing financial assurance will be canceled and returned to the licensee until adequate assurance has been received by NRC. It is important to maintain control and security of the financial instruments once received by NRC.

The staff will follow NRC Management Directive 8.12, "Decommissioning Financial Assurance Instrument Security Program," to ensure security and control of the instrument. In the event a licensee defaults before completing the decommissioning, the management directive specifies procedures for acting on the instrument. Additional guidance is found in Chapters 5 and 6 of this volume.

HOW TO USE CHAPTER 4

This Chapter 4 is organized around the various components of a financial assurance demonstration (e.g., the cost estimate, the financial instrument). Each component of a financial assurance demonstration is addressed briefly in this introduction and then is addressed again in greater detail in its own section. Each subsequent section provides narrative guidance on a particular component and contains one or more checklists to help guide the reader. By completing the tasks on the checklists, a licensee can be sure that its financial assurance demonstration is complete and likely to be acceptable to NRC.

Licensees should read this chapter in its entirety. This chapter directs licensees to Checklist 1 in Section A.1, a checklist that directs the reader to other relevant sections and checklists in

Appendix A of this volume. To prepare a financial assurance demonstration that is likely to be acceptable to NRC, a licensee should simply complete the following steps:

1. Complete Checklist 1 in Appendix A.
2. Complete applicable checklists called for by Checklist 1 in Appendix A.
3. Prepare any documentation called for in the completed checklists.
4. Submit the completed checklists and accompanying documentation to NRC for review and approval.

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SAMPLE POST-REVIEW LETTER FROM NRC TO LICENSEES

(No Deficiencies in Submittal)

(**NOTE:** *Letters will be printed on NRC letterhead paper*.)

[*Date*]
[*Names of licensee representative*]
[*Title*]
[*Names of a licensee*]
[*Address*]

SUBJECT: DECOMMISSIONING FINANCIAL ASSURANCE

Dear [*insert "Dr.," "Mr.," or "Ms."*] [*insert last name of licensee representative*]:

We have reviewed your [*insert description of information submitted by the licensee (e.g., decommissioning funding plan, certification of financial assurance, cost estimate, financial assurance mechanism)*] dated [*insert date*]. Based on our review, we have no further comments at this time.

If you have any questions, you may contact us at [*insert telephone number*].

Sincerely,

[*Name of NRC representative*]
[*Branch*]

License No. [*insert all applicable NRC license numbers*]
Docket No. [*insert all applicable NRC docket numbers*]

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4.1 COST ESTIMATE (AS CONTAINED IN A DECOMMISSIONING FUNDING PLAN OR DECOMMISSIONING PLAN)

The purpose of the review of the cost estimate is to ensure that the licensee or responsible party has developed a cost estimate for decommissioning the facility based on documented and reasonable assumptions and that the estimated cost is sufficient to allow an independent third party to assume responsibility for decommissioning the facility if the licensee or responsible party is unable to complete the decommissioning. In addition, if the licensee or responsible party intends to request license termination under restricted conditions, the cost estimate should be sufficient to allow an independent third party to assume responsibility for all necessary control and maintenance activities at the site.

INFORMATION TO BE SUBMITTED

The information supplied by the licensee or responsible party should be sufficient to allow NRC staff to determine if the cost estimates for decommissioning and site control and maintenance (if applicable) are reasonable, and were developed in accordance with NRC regulations and guidance. NRC staff's review should verify that the cost estimates for decommissioning and site control and maintenance incorporate all of the information summarized under "Evaluation Criteria," below.

Section A.3 of Appendix A to this volume contains guidance—including cost estimating tables—to assist licensees in preparing cost estimates that will be acceptable to NRC. NRC staff should use this guidance to the extent necessary in reviewing costs estimates submitted by licensees.

EVALUATION CRITERIA

The information supplied by the licensee or responsible party should be sufficient to allow NRC staff to determine if the licensee's cost estimate(s) is adequate by comparing the information presented in the decommissioning financial plan or decommissioning plan with applicable NRC regulations and guidance. A cost estimate for decommissioning and site control and maintenance (if applicable) is acceptable if it meets *all* of the conditions in this section.

Evaluation Criteria Applicable to All Cost Estimates for Unrestricted or Restricted Release

At minimum, all cost estimates for unrestricted or restricted release must meet all eleven of the following conditions:

1. The cost estimate meets the applicable regulatory requirements in 10 CFR 20.1403(c), 20.1403(e)(2)(iii), 30.35(b), 30.35(c), 30.35(e), 30.36(e), 30.36(g)(4)(v), 40.36(b), 40.36(c), 40.36(d), 40.42(e), 40.42(g)(4)(v), 70.25(b), 70.25(c)(5), 70.25(e), 70.38(e), 70.38(g)(4)(v), 72.30(b), and 72.54(g)(5).
2. The cost estimate is based on documented and reasonable assumptions. The key assumptions are identified and justified.

3. The unit cost factors used in the cost estimate are reasonable and consistent with NRC cost estimation reference documents.
4. The cost estimate is based on the cost of an independent contractor to perform all decommissioning activities.
5. The cost estimate includes costs for labor, equipment and supplies, overhead and contractor profit, sampling and laboratory analysis, and miscellaneous expenses (e.g., license fees, insurance, and taxes).
6. The cost estimate is based on the volume of *all* contaminated material, including (but not limited to) surface and subsurface soil material, buildings and building materials, and equipment containing residual radioactivity that will require remediation to meet the criteria for license termination.
7. The cost estimate applies a contingency factor of at least 25 percent to the sum of all estimated costs.
8. The cost estimate does not take credit for (a) any salvage value that might be realized from the sale of potential assets during or after decommissioning or (b) reduced taxes that might result from payment of decommissioning costs or site control and maintenance costs.
9. The means identified in the DFP or DP for adjusting the cost estimate and associated funding level over the life of the facility and any storage or surveillance period is adequate.
10. The cost estimate reflects decommissioning under appropriate facility conditions (for a DFP, routine facility conditions should be assumed; for a DP, facility conditions at the end of licensed operations should be assumed).
11. The cost estimate includes costs for all major decommissioning and site control and maintenance activities specified in Section A.3 of this volume, including (a) planning and preparation, (b) decontamination and/or dismantling of facility components, (c) packaging, shipment, and disposal of radioactive wastes, (d) a final radiation survey, (e) restoration of contaminated areas on facility grounds (if necessary), and (f) site stabilization and long-term surveillance (if necessary).

Additional Evaluation Criteria Applicable to Cost Estimates for Restricted Release

In addition, cost estimates for restricted release must meet all six of the following conditions:

1. The cost estimate for site control and maintenance is consistent with the amount of radioactivity remaining at the site, the radionuclides involved, the characteristics of the residual radioactivity at the site, and site-specific exposure scenarios, pathways, and parameters.
2. The cost estimate for site control and maintenance includes all costs for enforcement of institutional controls, if needed, including activities related to physical barriers at the site (e.g., periodic inspection, surveys, control, maintenance) and maintenance/monitoring of deed restrictions or other institutional controls.

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3. The cost estimate for site control and maintenance accounts for the costs of establishing and implementing institutional controls, recordkeeping related to the controls, and corrective actions.
4. The cost estimate for site maintenance includes adequate periods of site control and accounts for all associated costs during this period.
5. The cost estimate for site control and maintenance assumes that all activities will be carried out to a level sufficient to prevent the annual dose to the average member of the critical group from exceeding 0.25 millisievert (mSv) (25 millirem (mrem)).
6. The cost estimate required under 10 CFR 20.1403(e)(2) (if applicable) for site control and maintenance accounts for periodic checks and inspections of the site no less frequently than every 5 years by the party responsible for site control and maintenance.

SPECIFIC REVIEW PROCESS GUIDELINES

Before the site-specific cost estimate can be reviewed, the license reviewer or licensing project manager will review the cost estimate to verify that the contamination sources assumed in the cost estimate are reasonable, based on the license reviewer's or licensing project manager's knowledge of the site and site operations:

- If the contamination sources are reasonable, the license reviewer or licensing project manager may either conduct a technical review of the cost estimate or prepare a Technical Assistance Request (TAR) to the Deputy Director of the Decommissioning and Uranium Recovery Licensing Directorate (DURLD), for the review of the site-specific cost estimate by DURLD staff.
- If there are deficiencies in the assumed contamination sources, the license reviewer or licensing project manager will make a decision on whether there is sufficient information in the submittal to warrant a review of the cost estimate. For DURLD TARs, if there is sufficient information, the license reviewer or licensing project manager will prepare a note describing the source deficiencies so that DURLD staff comments appropriately consider this information.

The reviewer will provide a memorandum documenting the review of the cost estimate. If there are any deficiencies, the reviewer will provide specific comments for inclusion into a deficiency letter, which will be prepared by the licensing project manager.

SAMPLE EVALUATION FINDINGS

Documentation of the evaluation findings by NRC staff should include the following:

> "NRC staff has reviewed the cost estimate[s] for the [*insert name and license number of facility*] located at [*insert location of facility*] according to NUREG-1757, Volume 3, "Financial Assurance, Recordkeeping, and Timeliness." Based on this review, NRC staff has determined that the cost estimate[s] submitted by the licensee [*adequately* **OR** *does not adequately*] reflect[s] the costs to carry out all required

decommissioning activities prior to license termination [and, if the license is being terminated under restricted conditions, to enable an independent third party to assume and carry out responsibilities for any necessary control and maintenance of the site]."

4.2 PRESCRIBED AMOUNT

This section applies only to reviews of submissions that demonstrate financial assurance using one or more of the three prescribed amounts established in 10 CFR Parts 30, 40, and 70.

When a licensee proposes to use a prescribed amount of financial assurance, the purpose of the review of the certification of financial assurance is to ensure that, based on the licensed possession limits and the applicable quantities specified in 10 CFR 30.35(d), 40.36(b), or 70.25(d), the licensee is eligible to use a prescribed amount and, if eligible, that the prescribed amount is appropriate.

INFORMATION TO BE SUBMITTED

The information supplied by the licensee or responsible party should be sufficient to allow NRC staff to determine if the certification of financial assurance was developed in accordance with NRC regulations and guidance. NRC staff's review should verify that the certification of financial assurance satisfies all of the information summarized under "Evaluation Criteria," below.

In determining whether use of a prescribed amount is allowable and whether the prescribed amount is appropriate, NRC staff will use the method outlined in 10 CFR 30.35, 40.36, and 70.25. Additional guidance on this method is contained in Appendix A to this volume. Appendix A also contains a table showing (for each isotope with a half-life greater than 120 days) the activity levels for which prescribed amounts of financial assurance are allowed under NRC regulations. The table also shows the prescribed amounts that are applicable to specific activity levels for each isotope.

Note that the prescribed amounts of financial assurance listed are current at the time of publication. Check the applicable parts of 10 CFR Parts 30, 40, and 70 for the appropriate prescribed amounts.

The worksheet below can be used to help determine the total prescribed amount required for one or more licenses. In completing the worksheet, the required prescribed amounts under all applicable parts of 10 CFR (i.e., Parts 30, 40, and 70) should be entered on the appropriate lines and added to yield the total required prescribed amount.

Appendix A to this volume contains guidance—including recommended wording and checklists—to assist licensees in preparing certifications of financial assurance that will be acceptable to NRC. NRC staff should use this guidance to the extent necessary in reviewing certifications of financial assurance submitted by licensees.

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EVALUATION CRITERIA

The information supplied by the licensee should be sufficient to allow NRC staff to determine if the licensee's certification of financial assurance is adequate by comparing it with applicable NRC regulations and guidance. A certification of financial assurance is acceptable if it meets all *of the following four conditions*:

- Use of a prescribed amount of financial assurance is allowed, based on the licensed possession limits and the applicable quantities specified in 10 CFR 30.35(d), 40.36(b), or 70.25(d), and on the absence of subsurface contamination, as specified in 10 CFR 30.35(b), 40.36(b), or 70.25(b).
- Where the licensee is authorized to possess more than one radionuclide, the unity rule is applied to all radionuclides with half life greater than 120 days.
- The prescribed amount is correct, based on the licensed possession limits and the applicable quantities specified in 10 CFR 30.35(d), 40.36(b), or 70.25(d).
- The certification of financial assurance includes all necessary information, including the name of the licensee, the locations of the facilities for which financial assurance is provided, the amount and types of materials authorized for possession under the license, and the prescribed amount(s).

WORKSHEET FOR DETERMINING THE REQUIRED PRESCRIBED AMOUNT

Applicable Part of 10 CFR (Check all that apply): ☐ Part 30 ☐ Part 40 ☐ Part 70

	Required Prescribed Amount ($)
Part 30 (Sealed Sources):	_____
Part 40:	_____
Part 70:	_____
Total of all prescribed amounts for all licenses:	_____

Figure 4.1 Worksheet for Determining the Required Prescribed Amount

SPECIFIC REVIEW PROCESS GUIDELINES

The license reviewer or licensing project manager will compare the wording of the certification of financial assurance to the recommended wording contained in Section A.2.4 of Appendix A. If the wording is identical, the certification of financial assurance is acceptable. If the wording is not identical, the license reviewer or licensing project manager will verify that the certification of financial assurance includes all necessary information, including the name of the licensee, the locations of the facilities for which financial assurance is provided, the amount and types of materials authorized for possession under the license, and the prescribed amount(s).

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The reviewer will provide a memorandum documenting the review of the certification of financial assurance. If there are any deficiencies, the reviewer will provide specific comments for inclusion into a deficiency letter.

SAMPLE EVALUATION FINDINGS

Documentation of the evaluation findings by NRC staff should include the following:

> "NRC staff has reviewed the certification of financial assurance for the [*insert name and license number of facility*] located at [*insert location of facility*] according to NUREG-1757, Volume 3, "Financial Assurance, Recordkeeping, and Timeliness." Based on this review, NRC staff has determined that the certification of financial assurance submitted by the licensee [specifies or does not specify] the appropriate information and level of financial assurance coverage."

Note that the introduction to Chapter 4 of this volume contains a sample post-review letter from NRC to licensees for cases where no deficiencies are found in the submittal.

4.3 FINANCIAL ASSURANCE MECHANISMS

The purpose of the review of the licensee's financial assurance mechanism is to ensure that sufficient funds will be available to carry out all required decommissioning activities prior to license termination and, if the license is being terminated under restricted conditions, to enable an independent third party to assume and carry out responsibilities for any necessary control and maintenance of the site.

INFORMATION REQUIREMENTS

The financial assurance mechanism supplied by the licensee or responsible party shall consist of one or more of the following instruments:

- trust fund,
- surety bond,
- letter of credit,
- insurance policy,
- parent company guarantee,
- self-guarantee,
- external sinking fund,
- statement of intent, or
- special arrangements with a government entity that assumes custody and ownership of the site.

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Note that for DPs, external sinking funds may not be used to cover costs for site control and maintenance. Special arrangements with a government entity that assumes custody and ownership of the site may be used on only if the license is being terminated under restricted conditions.

NRC staff will verify that the financial assurance mechanism for decommissioning and site maintenance and control meets the criteria summarized under "Evaluation Criteria," below. Appendix A of this volume contains guidance—including recommended wording and checklists—to assist licensees in preparing financial mechanisms that will be acceptable to NRC. NRC staff should use this guidance to the extent necessary in reviewing financial mechanisms submitted by licensees.

EVALUATION CRITERIA

NRC staff will verify that the financial assurance mechanism supplied by the licensee or responsible party meets the general requirements for all financial assurance mechanisms listed below *and* the applicable specific requirements listed in the following sections.

4.3.1 GENERAL CRITERIA APPLICABLE TO ALL FINANCIAL ASSURANCE MECHANISMS

- The financial assurance mechanism is an originally signed duplicate; and
- The wording of the financial assurance mechanism and supporting documents conforms to the model documents provided in Appendix A of this volume (e.g., for a trust fund, refer to the section on trust funds).
- If the wording and supporting documents do not conform exactly to the model documents in Appendix A, NRC staff will follow the procedures outlined in Section 4.3.3.

4.3.2 SPECIFIC CRITERIA FOR FINANCIAL ASSURANCE MECHANISMS

4.3.2.1 TRUST FUNDS

In addition to the general criteria outlined in Section 4.3.1, a trust fund submission that meets the following *additional* criteria will be acceptable to NRC:

- The following items have been included in the submission:
  - trust agreement;
  - Schedule A;
  - Schedule B;
  - Schedule C;
  - specimen certificate of events;
  - specimen certificate of resolution;

- letter of acknowledgment; and
- receipt or statement from the trustee showing the trust's current market value.

- The trustee is an appropriate Federal or State government agency or a financial institution that has the authority to act as trustee and whose trust operations are regulated and examined by a Federal or State agency. If evidence of the trustee's qualifications is not provided in the submission, the reviewer will evaluate the trustee's qualifications as follows:
  - The word "National" in the title of a financial institution signals that the institution is *Federally regulated*, as do the words "National Association" or the initials "N.A." following its title. To determine whether such a financial institution qualifies as an acceptable trustee, the reviewer will access the Federal Financial Institutions Examination Council's (FFIEC) Trusts Institutions Search database on the World Wide Web at <http://www.fdic.gov/bank/individual/trust/>, and look to see that the bank branch has full trust powers.

    Alternatively, the reviewer may contact the appropriate district office of the Office of the Comptroller of the Currency (OCC) and confirm that the institution (a) is Federally regulated *and* (b) has Federally regulated trust operations. The OCC's home page on the World Wide Web is located at <http://www.occ.treas.gov>. The six district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:
    - Northeastern District Office (Telephone: (212) 819-9860)—CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, District of Columbia, Puerto Rico, and Virgin Islands.
    - Southeastern District Office (Telephone: (404) 659-8855)—AL, FL, GA, MS, NC, SC, TN, VA, and WV.
    - Central District Office (Telephone: (312) 360-8800)—IL, IN, KY, MI, OH, and WI.
    - Midwestern District Office (Telephone: (816) 556-1800)—IA, KS, MN, MO, NE, ND, and SD.
    - Southwestern District Office (Telephone: (214) 720-0656)—AR, LA, OK, and TX.
    - Western District Office (Telephone: (415) 545-5900)—AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY, and Guam.
  - The word "State" in the title of a financial institution signals that the institution is State regulated. U.S. branches of foreign banks are usually regulated by the State in which they are located. To determine whether a State-regulated financial institution qualifies as an acceptable trustee, the reviewer will access the FFIEC's Trusts Institutions Search database on the World Wide Web at <http://www.fdic.gov/bank/individual/trust/>, and look to see that the bank branch has full trust powers.

    Alternatively, the reviewer may contact the applicable State banking authority and confirm that the institution (a) is State regulated, ***and*** (b) has State-regulated trust operations.
  - The titles of some financial institutions do not suggest that they are either Federally regulated or State regulated. In many such cases (but not all), these institutions are State regulated. This is also often true in the case of domestic branches of foreign banks.

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- The licensee has not assumed any real rate of return on funds in the trust that apply to decommissioning.
- The licensee has not assumed a real (i.e., inflation adjusted), after-tax rate of return greater than one percent per year on funds in the trust that apply to site control and maintenance.
- Under the appropriate assumptions regarding earnings on the trust, the current market value of the trust is sufficient to pay for all required activities. **Exception:** If the trust is being used in combination with another financial assurance mechanism(s), the value of the trust (accounting for earnings on pre-paid funds for site control and maintenance activities, if applicable) must at least equal the difference between the cost estimate or prescribed amount and the sum of the coverages being provided by the other mechanism(s).
- The maximum withdrawal of funds at one time for a particular activity (i.e., decommissioning or site control/maintenance) is limited to 10 percent of the remaining funds available for that activity unless approval from the appropriate party (i.e., NRC, or the party responsible for site control and maintenance) is attached.
- Schedule A to the trust agreement allows the trustee to access the full amount of coverage (using multiple withdrawals as necessary) to conduct all decommissioning and/or site control and maintenance activities. The amount shown in Schedule A must be at least as great as the licensee's cost estimate or prescribed amount.

4.3.2.2 SURETY BONDS

In addition to the general criteria outlined in Section 4.3.1, a surety bond submission that meets the following *additional* criteria will be acceptable to NRC:

- The following items have been included in the submission:
  - surety bond;
  - standby trust agreement and all supporting documentation (see Section 4.3.2.10); and
  - copy of broker/agent's power of attorney authorizing the broker/agent to issue bonds.
- The company issuing the surety bond is listed in the most recent edition of the U.S. Department of the Treasury's *Circular 570* for the State where the surety bond was signed, and has an underwriting limitation greater than or equal to the level of coverage specified in the bond. If evidence of the issuing company's qualifications is not provided in the submission, the reviewer will consult the most recent edition of *Circular 570*, which is published annually on approximately July 1 and is updated periodically in the Federal *Register*. (*Circular 570* can also be found on the World Wide Web at <http://www.fms.treas.gov/c570/index.html>.)
- The surety bond is payable to a standby trust fund that meets all applicable NRC requirements, as discussed in the section on standby trust funds (Section 4.3.2.10).
- The broker/agent's power of attorney authorizes the broker or agent to issue bonds on behalf of the issuing company.

- The surety bond is in an amount that is at least as great as the licensee's cost estimate or prescribed amount—unless the surety bond is being used in combination with another financial assurance mechanism(s), in which case the amount of the surety bond must at least equal the difference between the cost estimate or prescribed amount and the sum of the coverages being provided by the other mechanism(s).
- No credit is taken for earnings on any financial assurance mechanism (e.g., a surety bond) that does not set aside actual funds as prepayment for site control and maintenance activities.

4.3.2.3 LETTERS OF CREDIT

In addition to the general criteria outlined in Section 4.3.1, a letter of credit submission that meets the following *additional* criteria will be acceptable to NRC:

- The following items have been included in the submission:
  - letter of credit; and
  - standby trust agreement and all supporting documentation (see Section 4.3.2.10).
- The bank issuing the letter of credit is a financial institution whose operations are regulated and examined by a Federal or State agency. If evidence of the issuer's qualifications is not provided in the submission, the reviewer will verify the qualifications of the issuer as follows:
  - The word "National" in the title of a financial institution signals that the institution is *Federally regulated*, as do the words "National Association" or the initials "N.A." following its title. To determine whether such a financial institution qualifies as an acceptable issuer of a letter of credit, the reviewer will access the Federal Deposit Insurance Corporation's (FDIC) Institution Directory on the World Wide Web at <http://www2.fdic.gov/idasp/>.

    Alternatively, the reviewer may contact the appropriate district office of the Office of the Comptroller of the Currency OCC) and confirm that the institution is Federally regulated. The OCC's home page on the World Wide Web is located at <http://www.occ.treas.gov>. The six district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:
    - Northeastern District Office (Telephone: (212) 819-9860)—CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, District of Columbia, Puerto Rico, and Virgin Islands.
    - Southeastern District Office (Telephone: (404) 659-8855)—AL, FL, GA, MS, NC, SC, TN, VA, and WV.
    - Central District Office (Telephone: (312) 360-8800)—IL, IN, KY, MI, OH, and WI.
    - Midwestern District Office (Telephone: (816) 556-1800)—IA, KS, MN, MO, NE, ND, and SD.
    - Southwestern District Office (Telephone: (214) 720-0656)—AR, LA, OK, and TX.
    - Western District Office (Telephone: (415) 545-5900)—AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY, and Guam.

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  - The word "State" in the title of a financial institution signals that the institution is State regulated. U.S. branches of foreign banks are usually regulated by the State in which they are located. To determine whether a State-regulated financial institution qualifies as an acceptable issuer of a letter of credit, the reviewer will access the FDIC's Institution Directory on the World Wide Web at < http://www2.fdic.gov/idasp/>.

  Alternatively, the reviewer may contact the applicable State banking authority and confirm that the institution is State regulated.

  - The titles of some financial institutions do not suggest that they are either Federally regulated or State regulated. In many such cases (but not all), these institutions are State regulated. This is also often true in the case of domestic branches of foreign banks.

- The letter of credit is payable to a standby trust fund that meets all applicable NRC requirements, as discussed in the section on standby trust funds (Section 4.3.2.10).
- The letter of credit is in an amount that is at least as great as the licensee's cost estimate or prescribed amount—unless the letter of credit is being used in combination with another financial assurance mechanism(s), in which case the amount of the letter of credit must at least equal the difference between the cost estimate or prescribed amount and the sum of the coverages being provided by the other mechanism(s).
- No credit is taken for earnings on any financial assurance mechanism (e.g., a letter of credit) that does not set aside actual funds as prepayment for site control and maintenance activities.

4.3.2.4 INSURANCE POLICIES

In addition to the general criteria outlined in Section 4.3.1, an insurance policy submission that meets the following *additional* criteria will be acceptable to NRC:

- The following items have been included in the submission:
  - insurance policy; and
  - standby trust agreement and all supporting documentation.
- The insurer is licensed by a State regulatory authority to transact business as an insurer in one or more U.S. States. If evidence of the insurer's qualifications is not provided in the submission, NRC staff will contact the State insurance commission for the State in which the insurer is located, or the National Association of Insurance Commissioners (NAIC) at (816) 842-3600 or at <http://www.naic.org/cis/>, and confirm that the insurer is licensed by a State regulatory authority to transact business as an insurer in one or more U.S. States.
- The insurance policy is payable to a standby trust fund that meets all applicable NRC requirements, as discussed in the section on standby trust funds (Section 4.3.2.10).
- The insurance policy provides coverage in an amount that is at least as great as the licensee's cost estimate or prescribed amount—unless the insurance policy is being used in combination with another financial assurance mechanism(s), in which case the amount of the insurance must at least equal the difference between the cost estimate or prescribed amount and the sum of the coverages being provided by the other mechanism(s).

- No credit is taken for earnings on any financial assurance mechanism (e.g., an insurance policy) that does not set aside actual funds as prepayment for site control and maintenance activities.

4.3.2.5 PARENT COMPANY GUARANTEES

In addition to the general criteria outlined in Section 4.3.1, a parent company guarantee submission that meets the following *additional* criteria will be acceptable to NRC:

- The following items have been included in the submission:
  - parent company (corporate) guarantee agreement;
  - letter from chief executive officer (CEO) of *licensee;*
  - letter from chief financial officer (CFO) of parent company, including parent company guarantee financial test (Financial Test I or II);
  - auditor's special report confirming CFO letter and reconciling amounts in the CFO letter with parent company's financial statements;
  - parent company's audited financial statements for the most recent fiscal year, including the auditor's opinion on the financial statements; and
  - standby trust agreement and all supporting documentation.
- The parent company guarantor has majority control of the licensee's voting stock (greater than 50 percent), although NRC may consider exceptions to this rule on a case-by-case basis. Evidence might include the guarantor's most recent Form SEC 10K or a certified corporate resolution certifying the direct parent relationship.
- The parent company guarantor meets one of the two financial tests specified in Appendix A to 10 CFR Part 30. Furthermore, the guarantor passes the financial test for *all* costs covered by a financial test, including (a) the parent company guarantee, (b) other NRC or Agreement State parent company guarantees or self-guarantees, and (c) parent company guarantees, self-guarantees, or financial tests of other Federal or State agencies (e.g., EPA).
- The parent company guarantor's annual financial statements have received a "clean" opinion from an independent certified public accountant. The accountant's opinion must state that the financial statements fairly and unconditionally present the firm's financial condition in accordance with generally accepted accounting principles. If an accountant's opinion is an adverse opinion, a disclaimer of opinion, or an opinion that raises "going concern" issues, NRC staff will not allow the use of a parent company guarantee. NRC staff will evaluate other types of accountant's opinions on a case-by-case basis in the context of the guarantor's financial statements so that the reviewer can determine the implications for the accuracy of the financial test. If NRC staff cannot make a decision because the information in the opinion or the financial statements is insufficient, it will require that the guarantor submit additional information. If the matter is still unresolved, NRC staff will request assistance from its legal counsel. If there is any doubt about the qualifications of the guarantor's independent certified public accountant, NRC staff will verify the accountant's credentials by contacting the State Board of Accountancy in the accountant's State.

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- Except for an external sinking fund, a parent company guarantee may not be used in combination with any other financial methods. However, an external sinking fund cannot be used as financial assurance for site control and maintenance.
- The standby trust fund submitted with the parent company guarantee must meet all applicable NRC requirements, as discussed in the section on standby trust funds (Section 4.3.2.10).
- The parent company guarantee is in an amount that is at least as great as the amount of decommissioning funds being assured by a parent company guarantee for the total of all nuclear facilities or parts thereof (or prescribed amount if a certification is used).
- No credit is taken for earnings on any financial assurance mechanism (e.g., a parent company guarantee) that does not set aside actual funds as prepayment for site control and maintenance activities.

4.3.2.6 SELF-GUARANTEES

In addition to the general criteria outlined in Section 4.3.1, a self-guarantee submission that meets the following *additional* criteria will be acceptable to NRC:

- The following items have been included in the submission:
  - self-guarantee agreement;
  - Letter from CEO or CFO of licensee, including applicable self-guarantee financial test;
  - Auditor's special report confirming CEO or CFO letter and reconciling amounts in the CEO or CFO letter with licensee's financial statements; and
  - Licensee's audited financial statements for the most recent fiscal year, including the auditor's opinion on the financial statements.
- The licensee does **not** have a parent company holding majority control of its voting stock (greater than 50 percent).
- The licensee meets the applicable financial test specified in Appendix C, D, or E to 10 CFR Part 30. Furthermore, the licensee passes the financial test for *all* costs covered by a financial test, including (a) the self-guarantee, (b) other NRC or Agreement State parent company guarantees or self-guarantees, and (c) parent company guarantees, self-guarantees, or financial tests of other Federal or State agencies (e.g., EPA).
- The licensee's annual financial statements have received a "clean" opinion from an independent certified public accountant. The accountant's opinion must state that the financial statements fairly and unconditionally present the firm's financial condition in accordance with generally accepted accounting principles. If an accountant's opinion is an adverse opinion, a disclaimer of opinion, or an opinion that raises "going concern" issues, NRC staff will not allow the use of a self-guarantee. NRC staff will evaluate other types of accountant's opinions on a case-by-case basis in the context of the licensee's financial statements so that the reviewer can determine the implications for the accuracy of the financial test. If NRC staff cannot make a decision because the information in the opinion or the financial statements is insufficient, it will require that the licensee submit additional

information. If the matter is still unresolved, NRC staff will request assistance from its legal counsel. If there is any doubt about the qualifications of the licensee's independent certified public accountant, NRC staff will verify the accountant's credentials by contacting the State Board of Accountancy in the accountant's State.

- Except for an external sinking fund, a self-guarantee may not be used in combination with any other financial methods. However, an external sinking fund cannot be used as financial assurance for site control and maintenance.
- The standby trust fund meets all applicable NRC requirements, as discussed in the section on standby trust funds (Section 4.3.2.10).
- The self-guarantee is in an amount that is at least as great as amount of decommissioning funds being assured by a self-guarantee for the total of all nuclear facilities or parts thereof (or prescribed amount if a certification is used).
- No credit is taken for earnings on any financial assurance mechanism (e.g., a self-guarantee) that does not set aside actual funds as prepayment for site control and maintenance activities.

4.3.2.7 EXTERNAL SINKING FUNDS

In addition to the general criteria outlined in Section 4.3.1, an external sinking fund submission that meets the following *additional* criteria will be acceptable to NRC:

- The following items have been included in the submission:
  - prepayment mechanism (trust fund is the only allowable form of prepayment) and all supporting documentation; and
  - surety method (i.e., surety bond or letter of credit) or insurance and all supporting documentation.
- The external sinking fund is *not* being used to provide financial assurance for site control and maintenance following license termination under restricted conditions.
- The prepayment mechanism (trust fund is the only allowable form of prepayment) and the surety/insurance mechanism (i.e., surety bond, letter of credit, insurance) that comprise the external sinking fund meet all applicable NRC requirements, as discussed earlier in this section.
- The assurance provided by the prepayment mechanism, in combination with the assurance provided by the surety method or insurance, totals an amount that is at least as great as the licensee's decommissioning cost estimate or prescribed amount. **Exception:** Part 72 licensees that qualify to use the assurance method of 10 CFR 72.30(e)(5) and either (1) recover, either directly or indirectly, the estimated total cost of decommissioning through rates established by "cost of service" or similar ratemaking regulation, or (2) have a source of revenues for its external sinking fund that is a "non-bypassable charge," the total amount of which will provide funds estimated to be needed for decommissioning, may use an external sinking fund without having to couple it with a surety method or insurance. For qualified licensees, a sinking fund that is not coupled with another financial assurance mechanism is acceptable if the amount accumulated in the fund, plus the amount authorized for recovery

through rates or as a "non-bypassable charge," plus earnings consistent with 10 CFR 50.75(e)(1)(ii), covers the total estimated cost of decommissioning.

4.3.2.8 STATEMENTS OF INTENT

In addition to the general criteria outlined in Section 4.3.1, a statement of intent submission that meets the following *additional* criteria will be acceptable to NRC:

- The following items have been included in the submission:
  - statement of intent; and
  - documentation verifying that the signatory is authorized to represent the licensee in providing the statement of intent.
- The licensee is a Federal, State, or local government entity.
- The individuals signing the statement of intent on behalf of the licensee have the authority to request funds from the appropriate funding body.
- The statement of intent is in an amount that is at least as great as the licensee's cost estimate or prescribed amount—unless the statement of intent is being used in combination with another financial assurance mechanism(s), in which case the amount of the statement of intent must at least equal the difference between the cost estimate or prescribed amount and the sum of the coverages being provided by the other mechanism(s).
- No credit is taken for earnings on any financial assurance mechanism (e.g., a statement of intent) that does not set aside actual funds as prepayment for site control and maintenance activities.

4.3.2.9 SPECIAL ARRANGEMENTS WITH A GOVERNMENT ENTITY THAT ASSUMES CUSTODY AND OWNERSHIP OF THE SITE

In addition to the general criteria outlined in Section 4.3.1, a special arrangement submission that meets the following *additional* criteria will be acceptable to NRC:

- The following item has been included in the submission:
  - documentation of the special arrangement.
- The government entity has the authority to receive and hold funds for specified purposes (e.g., site control and maintenance).
- The arrangement provides financial assurance in an amount at least as great as the licensee's cost estimate.
- No credit is taken for earnings on any special arrangement that does not set aside actual funds as prepayment for site control and maintenance activities.

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4.3.2.10 STANDBY TRUST FUNDS

In addition to the general criteria outlined in Section 4.3.1, a standby trust fund submission that meets the following *additional* criteria will be acceptable to NRC:

- The following items have been included in the submission:
  - standby trust agreement;
  - Schedule A;
  - Schedule B;
  - Schedule C;
  - specimen certificate of events;
  - specimen certificate of resolution; and
  - letter of acknowledgment.
- The trustee is an appropriate Federal or State government agency or a financial institution that has the authority to act as trustee and whose trust operations are regulated and examined by a Federal or State agency. If evidence of the trustee's qualifications is not provided in the submission, the reviewer will evaluate the trustee's qualifications as follows:
  - The word "National" in the title of a financial institution signals that the institution is *Federally regulated*, as do the words "National Association" or the initials "N.A." following its title. To determine whether such a financial institution qualifies as an acceptable trustee, the reviewer will access the Federal Financial Institutions Examination Council's (FFIEC) Trusts Institutions Search database on the World Wide Web at <http://www.fdic.gov/bank/individual/trust/>, and look to see that the bank branch has full trust powers.

    Alternatively, the reviewer may contact the appropriate district office of the Office of the Comptroller of the Currency (OCC) and confirm that the institution (a) is Federally regulated ***and*** (b) has Federally regulated trust operations. The OCC's home page on the World Wide Web is located at <http://www.occ.treas.gov>. The six district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:
    - Northeastern District Office (Telephone: (212) 819-9860)—CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, District of Columbia, Puerto Rico, and Virgin Islands.
    - Southeastern District Office (Telephone: (404) 659-8855)—AL, FL, GA, MS, NC, SC, TN, VA, and WV.
    - Central District Office (Telephone: (312) 360-8800)—IL, IN, KY, MI, OH, and WI.
    - Midwestern District Office (Telephone: (816) 556-1800)—IA, KS, MN, MO, NE, ND, and SD.
    - Southwestern District Office (Telephone: (214) 720-0656)—AR, LA, OK, and TX.
    - Western District Office (Telephone: (415) 545-5900)—AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY, and Guam.

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  - The word "State" in the title of a financial institution signals that the institution is State regulated. U.S. branches of foreign banks are usually regulated by the State in which they are located. To determine whether a State-regulated financial institution qualifies as an acceptable trustee, the reviewer will access the FFIEC's Trusts Institutions Search database on the World Wide Web at <http://www.fdic.gov/bank/individual/trust/>, and look to see that the bank branch has full trust powers.

    Alternatively, the reviewer may contact the applicable State banking authority and confirm that the institution (a) is State regulated, ***and*** (b) has State-regulated trust operations.
  - The titles of some financial institutions do not suggest that they are either Federally regulated or State regulated. In many such cases (but not all), these institutions are State regulated. This is also often true in the case of domestic branches of foreign banks.

- The licensee has not assumed any real rate of return on funds in the standby trust that apply to decommissioning.
- The licensee has not assumed a real (i.e., inflation adjusted), after-tax rate of return greater than one percent per year on funds in the standby trust that apply to site control and maintenance.
- In the event that funds from the licensee's primary financial assurance mechanism(s) have been deposited into the standby trust fund, and under the appropriate assumptions regarding earnings on the trust, the current market value of the standby trust is sufficient to pay for all required activities.
- The maximum withdrawal of funds at one time for a particular activity (i.e., decommissioning or site control/maintenance) is limited to 10 percent of the remaining funds available for that activity unless approval from the appropriate party (i.e., NRC or the party responsible for site control and maintenance) is attached.
- Schedule A to the standby trust agreement allows the trustee to access the full amount of coverage (using multiple withdrawals as necessary) to conduct all decommissioning and/or site control and maintenance activities. The amount shown in Schedule A must be at least as great as the licensee's cost estimate or prescribed amount.

4.3.3 SPECIFIC REVIEW PROCESS GUIDELINES

- On receipt of a licensee's financial assurance instrument, the license reviewer or licensing project manager will enter the financial assurance information (including type of mechanism, amount of mechanism, expiration date, and name and address of issuer) into the License Tracking System or other applicable license tracking database, and will update existing information as necessary. The license reviewer or licensing project manager will use standard Regional or division procedures for entering information into the License Tracking System.
- The license reviewer or licensing project manager will secure all financial assurance instruments in a safe in accordance with Management Directive 8.12, "Decommissioning Financial Assurance Instrument Security Program."

- The license reviewer or licensing project manager, in coordination with DURLD, will use the specific guidelines below to perform an initial review of all parent company guarantees, self-guarantees, insurance policies, and special arrangements with a government entity. When the initial review determines that an in-depth review is needed, copies of the instruments should be sent to DURLD for review via a TAR. DURLD and, if necessary, both the Office of the General Counsel (OGC) and contractor staff will review these submittals to ensure (a) that the supporting financial information provided with the instrument is correct and complete and (b) that the instruments provide an adequate level of financial assurance. (See additional specific guidance below.)
- In all other cases, the license reviewer or licensing project manager will review the financial assurance instrument(s) submitted by the licensee to ensure that instrument(s) meets all applicable regulatory requirements. If the mechanism is identical to the recommended wording in Appendix A, the mechanism is acceptable. If there are only *minor* differences in the wording, the Region may forward the mechanism to its Regional Counsel for review. In all other cases, a TAR should be prepared for DURLD review. If there are questions about the wording of financial instruments or about documentation, the reviewing staff will consult the appropriate NRC office for assistance.
- If requested, via a TAR, to review a submission, the DURLD staff will provide a memorandum documenting the review of the financial assurance instrument(s) to the license reviewer or licensing project manager. The memorandum will identify any non-conforming language or documentation found in the licensee's submittal that does not provide a level of financial assurance equivalent to that provided by the model documentation illustrated in Appendix A to this volume. The license reviewer or licensing project manager will incorporate the comments into a letter directing the licensee to correct the non-conforming language or documentation and resubmit their financial assurance package.

SPECIFIC GUIDELINES FOR PARENT COMPANY GUARANTEES AND SELF-GUARANTEES

NOTE: As stated above, all parent company guarantees and self-guarantees should be reviewed against the specific guidelines below to determine if they should be forwarded to DURLD for review via a TAR (although Regions may also conduct their own separate reviews).

- NRC staff will verify that all of the necessary items (as identified in Section 4.3.2) have been included in the submission. If any necessary items are not included, NRC staff will obtain the missing items from the licensee. (Note that, at NRC staff's discretion, the request for the missing items may be postponed until other deficiencies, if any, have been identified.)
- NRC staff will compare the wording of the mechanism (including all attachments) to the recommended wording contained in Appendix A to this volume. The submitted wording is acceptable if it is identical to the recommended wording. If the submitted wording is not identical, NRC staff will determine (with assistance from DURLD as necessary) whether any deviations potentially reduce the likelihood that NRC will have ready access to adequate funding for decommissioning and/or site control and maintenance. Where such potential exists, NRC staff should forward the instruments to DURLD for review. NRC staff will

complete the applicable "terms and conditions checklist" in Appendix A as an aid in determining whether appropriate provisions are included in the text of the mechanism.

SPECIFIC GUIDELINES FOR INSURANCE POLICIES AND SPECIAL ARRANGEMENTS WITH A GOVERNMENT ENTITY

NOTE: As stated above, all insurance policies and special arrangements with a government entity should be reviewed against the specific guidelines below to determine if they should be forwarded to DURLD for review via a TAR (although Regions may also conduct their own separate reviews). This section outlines the procedures for review of the submittal by DURLD staff.

- NRC staff will verify that all of the necessary items (as identified in Section 4.3.2) have been included in the submission. If any necessary items are not included, NRC staff will obtain the missing items from the licensee. (Note: At NRC staff's discretion, the request for the missing items may be postponed until other deficiencies, if any, have been identified.)
- NRC staff will complete the applicable "terms and conditions checklist" in Appendix A to this volume to determine whether the submitted mechanism includes the appropriate provisions. The submitted mechanism is acceptable if it includes all of the necessary provisions. For all deviations from the checklist or additional provisions contained in the mechanism, NRC staff will determine (with assistance from DURLD as necessary) whether the deviations potentially reduce the mechanism's protections in ensuring that NRC will have ready access to adequate funding for decommissioning and/or site control and maintenance. Where such potential exists, NRC staff should forward the instruments to DURLD for review.

SPECIFIC GUIDELINES FOR ALL OTHER FINANCIAL ASSURANCE MECHANISMS

- The license reviewer or licensing project manager will compare the wording of the mechanism (including all attachments) to the recommended wording contained in Appendix A to this volume. The submitted wording is acceptable if it is identical to the recommended wording. If there are only minor differences in the wording, the Region may forward the mechanism to its Regional Counsel for review. In all other cases, the license reviewer or licensing project manager will forward the submittal to DURLD for review as a "nonstandard" submittal via a TAR.
- For all deviations from the recommended wording, the reviewer will determine (with assistance from contractor staff, OGC staff, and/or Regional Counsel staff as necessary) whether any deviations significantly reduce the mechanism's protections in ensuring that NRC will have ready access to adequate funding for decommissioning and/or site control and maintenance. The reviewer will complete the applicable "terms and conditions checklist" in Appendix A as an aid in determining whether appropriate provisions are included in the text of the mechanism.
- The reviewer will verify that all of the necessary items (as identified in Section 4.3.2) have been included in the submission. If any necessary items are not included with a standard submittal, or if any necessary items are not included with a nonstandard submittal, the

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reviewer will obtain the missing items from the licensee. (Note: At the reviewer's discretion, the request for the missing items may be postponed until other deficiencies, if any, have been identified.) However, if the submission contains additional items that are not listed above but that might affect the workings of the mechanism, the license reviewer or licensing project manager will forward the submittal to DURLD for review as a nonstandard submittal via a TAR.

SAMPLE EVALUATION FINDINGS

Documentation of the evaluation findings by NRC staff (internal memorandum to the license reviewer or licensing project manager) should include one of the following:

- Documentation conforms to NRC guidance and the amount of assurance covers the decommissioning costs:

  NRC staff has reviewed the financial assurance mechanism(s) for the [*insert name and license number of facility*] located at [*insert location of facility*] according to NUREG-1757, Volume 3, "Financial Assurance, Recordkeeping, and Timeliness." Based on this review, NRC staff has determined that the financial assurance mechanism(s) and supporting documentation submitted by the licensee conform to NRC guidance. The amount of financial assurance covers the [*required prescribed amount or decommissioning cost estimate*].

- Documentation conforms to NRC guidance, but the amount of assurance does not cover the decommissioning costs:

  "NRC staff has reviewed the financial assurance mechanism(s) for the [*insert name and license number of facility*] located at [*insert location of facility*] according to NUREG-1757, Volume 3, "Financial Assurance, Recordkeeping, and Timeliness." Based on this review, NRC staff has determined that the financial assurance mechanism(s) and supporting documentation submitted by the licensee conform to NRC guidance. However, the amount of financial assurance does not cover the [*required prescribed amount* or *decommissioning cost estimate*].

- Documentation does not conform to NRC guidance, but the amount of assurance covers the decommissioning costs:

  "NRC staff has reviewed the financial assurance mechanism(s) for the [*insert name and license number of facility*] located at [*insert location of facility*] according to NUREG-1757, Volume 3, "Financial Assurance, Recordkeeping, and Timeliness." Based on this review, NRC staff has determined that the financial assurance mechanism(s) and supporting documentation submitted by the licensee do not conform to NRC guidance. However, the amount of financial assurance covers the [*required prescribed amount* or *decommissioning cost estimate*].

- Documentation does not conform to NRC guidance and the amount of assurance does not covers the decommissioning costs:

  NRC staff has reviewed the financial assurance mechanism(s) for the [*insert name and license number of facility*] located at [*insert location of facility*] according to

NUREG-1757, Volume 3, "Financial Assurance, Recordkeeping, and Timeliness." Based on this review, NRC staff has determined that the financial assurance mechanism(s) and supporting documentation submitted by the licensee do not conform to NRC guidance. In addition, the amount of financial assurance does not cover the [*required prescribed amount* or *decommissioning cost estimate*].

NOTIFICATION TO LICENSEE OF NON-CONFORMANCES

If NRC staff identifies non-conformances in the licensee's submittal that reduce the level of financial assurance below the level provided by the models in Appendix A of this volume, NRC staff will send a letter to the licensee identifying the non-conforming language or documentation. Where appropriate, NRC staff will identify the reasons that the non-conforming language or documentation needs to be changed. In addition, the letter will instruct the licensee how to change its documents to conform to Appendix A and to resubmit its financial assurance package. Non-conformances may include, but are not limited to, the following:

- inadequate amount of financial assurance,
- missing documents,
- lack of original signature,
- language that differs from Appendix A, or
- typographical errors.

Note that the introduction to Chapter 4 of this volume contains a sample post-review letter from NRC to licensees for cases where no deficiencies are found in the submittal.

4.4 WEB SITES FOR FINANCIAL REVIEW

NRC's policy is to reference Web sites by the highest possible level (i.e., closer to the home page). In the sections on financial review, specific Web addresses to non-NRC entities have been provided to make it easy for stakeholders to find information. As of September 2008, these Web site addresses are valid; over time, these addresses may no longer be accurate due to the fluid nature of the Internet. Table 4.1 lists alternative Web site addresses and methods to obtain the same information.

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Table 4.1 Alternative Addresses for Web Sites Referenced in this NUREG

Entity	Specific Web Site Address	Top-Level Web Site Address	Comments
National Association of Insurance Commissioners (NAIC)	<http://www.naic.org/cis/>	<http://www.naic.org>	From the NAIC Web site > Consumer Information Source (CIS) > Company Information
Federal Deposit Insurance Corporation's (FDIC) Institution Directory	<http://www2.fdic.gov/idasp/>	<http://www.fdic.gov>	From the FDIC Web site > Analysts > Institution Directory
U.S. Department of the Treasury's Financial Management Service (FMS)	<http://www.fms.treas.gov/c570/index.html>	<http://www.fms.treas.gov>	From the FMS Web site > Surety Bonds
Federal Financial Institutions Examination Council's (FFIEC) Trusts Institutions Search	<http://www.fdic.gov/bank/individual/trust/>	<http://www.fdic.gov>	From the FDIC Web site > Analysts > Trust Institutions Data

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PART III: BANKRUPTCY, BANKRUPTCY REVIEW TEAM, AND DRAWING ON FINANCIAL ASSURANCE INSTRUMENTS

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5 BANKRUPTCY OVERVIEW

OVERVIEW

NRC regulations at 10 CFR 30.34, 40.41, and 70.32 require a licensee to notify NRC of the filing of a petition for bankruptcy. Chapters 5 and 6 of this volume contain guidance for licensees, and in some cases, license applicants, to use in preparing this notification to NRC. Chapters 5 and 6 do not supersede NUREG-1556, Volume 15, "Consolidated Guidance About Materials Licenses; Guidance About Changes of Control and About Bankruptcy Involving Byproduct, Source, or Special Nuclear Material Licenses," which contains detailed information about the specific requirements for bankruptcy notifications.

Persons who are in the process of applying for an NRC license and who do not already hold another NRC license are not subject to NRC regulations with regard to bankruptcy. However, applicants must advise NRC of any change of control or bankruptcy that results in changes to the information being reviewed by NRC in the application review process that would impact the basis on which NRC would eventually issue the license.

SCOPE

The scope of Chapters 5 and 6 of this volume is limited to an introduction of bankruptcy requirements as they pertain to financial assurance, the function of the Bankruptcy Review Team (BRT), and the basic procedures for drawing on financial assurance mechanisms.

5.1 BANKRUPTCY

Licensees must notify the appropriate NRC Regional Administrator, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy by or against the following:

- a licensee,
- an entity controlling the licensee,
- an entity listing the license or licensee as property of the estate, or
- an affiliate of the licensee.

This notification must identify the bankruptcy court in which the petition was filed and the date of filing.

In addition, a parent company providing financial assurance for decommissioning to a licensee through a parent company guarantee and a licensee providing financial assurance for decommissioning through a self-guarantee must provide in their guarantee that in case of financial distress (i.e., bankruptcy or insolvency), the guarantor will notify the Commission and agree that the Commission may declare the financial assurance immediately due.

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A licensee's financial condition could affect its ability to control licensed material. Therefore, NRC must be notified so it can assure that appropriate measures to protect the public health and safety have been or will be taken.

Special Note: **Licensees who have filed for bankruptcy remain responsible for all regulatory requirements until such time as the license is terminated or transferred to another entity by NRC.**

NRC may share pertinent information with other involved entities (e.g., trustees, Agreement States) so that health and safety issues can be resolved before bankruptcy actions are completed.

BANKRUPTCY TYPES

There are different types of bankruptcies described in title 11 of the U.S. Code (U.S.C.). The following discussion outlines the bankruptcy types that may involve NRC:

- Chapter 7 is used primarily by individuals and by businesses who wish to free themselves from debt simply and inexpensively. The debtor may enter Chapter 7 bankruptcy voluntarily or be forced to enter it involuntarily by creditors. The creditors of a debtor, as well as the debtor, have the right under Chapter 11 to convert to Chapter 7.
- Chapter 11 is generally used to reorganize a business and allows the debtor to continue its business operations by a plan of reorganization in the hopes it can be returned to a viable state. As with Chapter 7, the debtor may enter Chapter 11 bankruptcy either voluntarily or involuntarily.

In addition to the notification described above, licensees are also requested to provide the information described in Appendix G of NUREG-1556, Volume 15.

All licensee submittals will be available for review by the general public in NRC's Public Document Rooms. If it is necessary to submit proprietary information, follow the procedure in 10 CFR 2.790. Failure to follow this procedure could result in disclosure of the proprietary information to the public or substantial delays in processing the application. Employee personal information, i.e., home address, home telephone number, Social Security number, date of birth, and radiation dose information, should not be submitted unless specifically requested by NRC.

Notes:

- **The requirements in these regulations apply to a bankruptcy proceeding for or against the licensee itself, an entity controlling the licensee, an entity listing the licensee as a property of the estate, or an affiliate of the licensee. For example, Company A owns Company B, and Company B is an NRC licensee. Company A files to reorganize under Chapter 11 of the bankruptcy law. Company B must notify NRC immediately after such a filing.**
- **Licensees (or entities controlling a licensee, or affiliates of the licensee) may contact the appropriate Regional or Headquarters office for further information or guidance.**

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5.2 BANKRUPTCY REVIEW TEAM

NRC will establish a BRT to review and act on bankruptcy notifications. The BRT brings together the various NRC offices and is typically composed of members of the relevant licensing office staff, OGC, the Office of the Controller, the Office of Enforcement, the Division of Materials Safety and State Agreements, and the Division of Waste Management and Environmental Protection (DWMEP). Where one of the licensee's locations affected by the bankruptcy is located within an Agreement State, the BRT shall establish a dialogue for providing the Agreement State with information concerning NRC's response to the bankruptcy filing.

NRC procedures for BRT review of bankruptcy actions are described in detail in Appendix H of NUREG-1556, Volume 15. These procedures ensure that bankruptcy cases are managed in a fully coordinated manner with all involved NRC staff.

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6 PROCEDURES FOR DRAWING ON FINANCIAL ASSURANCE INSTRUMENTS

The following discussion outlines the procedures used to draw money from financial instruments. Detailed specific information concerning procedures for drawing funds from financial instruments can be found in Appendix I of NUREG-1556, Volume 15, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Changes of Control and About Bankruptcy Involving Byproduct, Source, or Special Nuclear Material Licenses."

Drawing on funds means transferring funds from a surety method, insurance, or other guarantee method into a trust fund for later use in decommissioning. These funding methods promise to provide funds when demanded. Financial instruments that may be used for these methods include letters of credit, surety or bonds, parent company guarantees, or self-guarantees. Each of these funding methods require a standby trust to directly receive the funds drawn from the instrument.

Certain types of financial instruments that are deposits of funds rather than the promise to pay funds are not drawn upon.

Drawing funds from a financial instrument may occur as a consequence of bankruptcy. If a BRT has been established, it should discuss the need for, and timing of, drawing funds.

However, bankruptcy is not required to enable NRC to draw funds. For example, if a licensee does not fulfill its obligation to decommission a site or facility, NRC could draw funds for placement in a trust. A BRT is not necessary for such cases, although coordination within NRC staff (including a dialogue with an Agreement State(s), if applicable) is needed to evaluate and approve drawing funds from financial instruments.

6.1 LETTER OF CREDIT

The licensing office will, in consultation with OGC, the Office of the Chief Financial Officer (OCFO), and DWMEP, contact the bank which issued the letter of credit to determine the specific bank procedures for drawing on the instrument. In these discussions, the following details should be resolved:

- where the transaction is to take place,
- whether the transaction needs to take place in person,
- what documents need to be presented (e.g., if the originals are needed),
- if there are deadlines on when the instrument can be drawn,
- if there are deadlines before which the instrument can not be drawn, and
- the form of the sight draft (a bill of exchange or draft payable when presented).

Arrangements for direct transfer of the funds to the standby trust must be made so that NRC does not directly acquire funds. NRC staff must not accept funds (even if instruments are made out to the trustee), and NRC staff must never allow the bank to make any instrument payable directly to NRC or the licensee.

6.2 SURETY BOND

Licensing office staff, in consultation with OGC, OCFO, and DWMEP, will contact the company issuing the surety bond to determine what specific procedures need to be followed to draw on the instrument. In these discussions, the following details should be resolved:

- where the transaction is to take place,
- whether the transaction needs to take place in person,
- what documents need to be presented, and
- what form of the notification by NRC is desired.

Arrangements for direct transfer of the funds to the standby trust must be made so that NRC does not directly acquire funds. NRC staff must not accept funds (even if instruments are made out to the trustee), and NRC staff must never allow the bank to make any instrument payable directly to NRC or the licensee.

6.3 PARENT COMPANY GUARANTEE

Licensing office staff, in consultation with OGC, OCFO, and DWMEP, will examine the provisions of the parent company guarantee and prepare a notification directing the parent company to deposit funds into a standby trust. Arrangements for direct transfer of the funds to the standby trust must be made so that NRC does not directly acquire funds. NRC staff must not accept funds, even if instruments are made out to the trustee. NRC staff must never allow the parent company to make any instrument payable directly to NRC. Payments by the guarantor must be made to a standby trust fund established at the same time that the guarantee is created.

6.4 SELF-GUARANTEE

Licensing office staff, in consultation with OGC, OCFO, and DWMEP, will examine the provisions of the self-guarantee and prepare a notification directing the licensee to deposit funds into the standby trust. Arrangements for direct transfer of the funds to the standby trust must be made so that NRC does not directly acquire funds. NRC staff must not accept funds, even if instruments are made out to the trustee. NRC staff must never allow the licensee to make any instrument payable directly to NRC. Payments by the guarantor must be made to a standby trust fund established at the same time that the guarantee is created.

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7 PROCEDURE FOR APPROVING DISBURSEMENTS FROM DECOMMISSIONING FUNDS

The standard contract language for decommissioning funds includes a provision for NRC's approval of disbursements greater than 10 percent of the amount held in trust or in escrow. When a licensee submits a request for withdrawal of greater than 10 percent of the funds, NRC staff will verify the following items:

- the facility is identified by the licensee and is in decommissioning status;
- if a DP is required, the licensee has an approved DP;
- if a DP is not required, the licensee has a schedule for decommissioning activities;
- the licensee identifies the activities for which the funds will be used;
- the funds withdrawn will be used for decommissioning activities of the facility for which the instrument was established;
- the licensee has provided a revised estimate of costs for the decommissioning activities that will remain after the withdrawn funds are spent; and
- the balance of the funds remaining in the trust or in escrow will be sufficient to cover the estimated costs for the remaining decommissioning activities.

Disbursements of less than 10 percent of the amount held in trust require a 30-day notice to NRC but do not require NRC's approval. However, all withdrawals require the licensee to certify to the Trustee that it is in decommissioning status.

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8 RETURNING, CANCELING, OR REDUCING FINANCIAL ASSURANCE INSTRUMENTS

When licensees replace financial instruments, the superseded instruments should be canceled and returned to the licensee. Likewise, when licenses are terminated, or licenses fall below the possession limit thresholds requiring financial assurance, the instruments should be canceled and returned to the licensee. As an alternative, at the request of the licensee, the superseded or canceled financial instrument may be sent directly to the issuer.

Note that financial instruments are amended or revised from time to time. An amendment or revision to an existing instrument generally does not require cancellation and return of the earlier versions to the licensee.

The regulations of Parts 30, 40, 70, and 72 provide no method to credit work completed during decommissioning against the amount of financial assurance provided. Therefore, to reduce the amount of financial assurance, the licensee must either amend its license to reduce its possession limits, amend its decommissioning cost estimate to reflect the actual cost remaining to complete decommissioning, or terminate its license.

Where the licensee provides financial assurance for a prescribed amount, based on its license possession limits, the financial assurance must be maintained in accordance with the license possession limits until the license is terminated. In this case, the financial assurance instrument may not be returned until after the license is terminated. The amount of financial assurance may not be reduced unless the license is amended to reduce the possession limits to permit either (1) use of a lower prescribed amount of financial assurance or (2) elimination of the financial assurance requirement. However, the licensee has the option to provide financial assurance using a DFP, with the amount based on a site-specific cost estimate. If the licensee exercises that option, it may reduce or cancel its financial assurance as described below.

Where the licensee provides financial assurance using a DFP based on a site-specific decommissioning cost estimate, the amount of financial assurance must cover the amount of the last approved cost estimate. Therefore, the licensee can reduce its financial assurance by submitting a revised DFP and receiving NRC approval. The licensee may not reduce its decommissioning cost estimate simply by subtracting the cost of work completed from the last approved cost estimate. In order to reduce the amount of financial assurance provided, the licensee must submit a new cost estimate, acceptable to the NRC, which justifies a lower amount based on the cost of work remaining to be done. If the licensee has completed all decommissioning activities and surveys, it may submit a cost estimate of zero, which will permit cancellation of its financial assurance instruments when the cost estimate is accepted by the NRC.

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Appendix A

Standard Format and Content of Financial Assurance Mechanisms for Decommissioning

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The information in this appendix is taken from the Standard Review Plan (SRP) (NUREG-1727). The SRP was developed specifically for reviewing decommissioning plans (DPs) written to comply with the License Termination Rule (LTR). There has been some editing to remove redundancy and use consistent terminology in this document, but the essential information is the same.

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A.1 Introduction

Overview

Financial assurance requirements help ensure that adequate funds will be available to pay for certain costs (e.g., decommissioning) in a timely manner. Financial assurance is achieved through the use of financial instruments. Some financial instruments provide a special account into which the licensee may essentially prepay the applicable costs. Other financial instruments guarantee funding by a suitably qualified third party, thereby providing "defense in depth" in the event the licensee is unable or unwilling to pay these costs when they arise. Financial assurance for decommissioning must be obtained prior to the commencement of licensed activities or receipt of licensed material, and it must be maintained until termination of the license. If the license is being terminated under restricted conditions, then financial assurance for site control and maintenance must be obtained prior to license termination. The amount of financial assurance obtained is often based on a site-specific cost estimate and must be increased if the cost estimate increases. Under NRC regulations, a number of different types of financial instruments may be used to demonstrate financial assurance, including trusts, letters of credit, surety bonds, and guarantees.

Scope

The purpose of this appendix is to provide guidance to NRC licensees and license applicants on how to demonstrate financial assurance for decommissioning and, if applicable, for site control and maintenance following license termination. The appendix also establishes a standard format for presenting the information to NRC that will (1) aid the licensee or license applicant in ensuring that the information is complete, (2) help ensure that applicable requirements in 10 CFR Parts 30, 40, 70, and 72 have been met, and (3) help achieve the intent of the regulations, which is to ensure that the decommissioning of all licensed facilities will be accomplished in a safe and timely manner and that licensees will provide adequate funds to cover all costs associated with decommissioning and, if applicable, with site control and maintenance.

This appendix applies only to licensees and license applicants covered under the following parts of 10 CFR:

- *Part 30—Byproduct Material*. Financial assurance requirements can be found in 10 CFR 30.35 and 30.36.
- *Part 40—Source Material (except uranium recovery facilities)*. Financial assurance requirements can be found in 10 CFR 40.36 and 40.42.
- *Part 70—Special Nuclear Material*. Financial assurance requirements can be found in 10 CFR 70.25 and 70.38.
- *Part 72—Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste.* Financial assurance requirements can be found in 10 CFR 72.30 and 72.54.
- *Part 20 (Subpart E)—License Termination*. Financial assurance requirements can be found in 10 CFR 20.1403.

Decommissioning financial assurance requirements for licensees not within the scope of this document are covered by other guidance documents. Guidance on uranium recovery facilities under Criteria 9 and 10 of Appendix A to 10 CFR Part 40 is also provided in "Technical Position on Financial Assurances for Reclamation, Decommissioning, and Long-Term Surveillance and Control of Uranium Recovery Facilities" (October 1988). Information on low-level waste disposal facilities under 10 CFR Part 61 is provided in Revision 1 of NUREG-1199, "Standard Format and Content of a License Application for a Low-Level Radioactive Waste Disposal Facility" (January 1988), and Revision 3 of NUREG-1200, "Standard Review Plan for the Review of a License Application for a Low-Level Radioactive Waste Disposal Facility" (March 1994).

The information collections contained in this appendix are covered by the requirements of 10 CFR Parts 30, 40, 70, and 72, which were approved by the Office of Management and Budget, approval numbers 3150-0017, 3150-0020, 3150-0009, and 3150-0132, respectively. NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

A.1.1 How to Use this Appendix

This appendix is organized around the various components of a financial assurance demonstration (e.g., the cost estimate, the financial instrument). Each component of a financial assurance demonstration is addressed briefly in this introduction and then is addressed again in greater detail in its own section. Each subsequent section provides narrative guidance on a particular component and contains one or more checklists to help guide the reader. By completing the tasks on the checklists, a licensee or applicant can be sure that its financial assurance demonstration is complete and likely to be acceptable to NRC.

Licensees and applicants should read this Section A.1 in its entirety. It includes a "master" checklist that directs the reader to other relevant sections and checklists in this appendix. To prepare a financial assurance demonstration that is likely to be acceptable to NRC, a licensee or applicant simply should complete the following four steps:

1. Complete Checklist 1 (the master checklist).
2. Complete applicable checklists called for by Checklist 1.
3. Prepare any documentation called for in the completed checklists.
4. Submit the completed checklists and accompanying documentation to NRC for review and approval

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Checklist 1 Master Checklist for Decommissioning Financial Assurance

Name of Licensee/Applicant_____

Mailing Address_____

Facility Address_____

License Number(s)_____

Date of Submission_____

Applicable Parts of 10 CFR (check all that apply): ☐ Part 30 ☐ Part 40 ☐ Part 70 ☐ Part 72

Type of Submission:
☐ Certification of Financial Assurance → attach Checklist 2
☐ Decommissioning Funding Plan → attach Checklist 3
☐ Decommissioning Plan → attach Checklist 18

Type of Mechanism:

☐ Prepayment
  ☐ Trust → attach Checklist 4-A

☐ Surety, Insurance, or Other Guarantee Method
  ☐ Surety Bond → attach Checklist 5-A
  ☐ Letter of Credit → attach Checklist 6-A
  ☐ Insurance → attach Checklist 7-A
  ☐ Parent Company Guarantee → attach Checklist 8-A
  ☐ Self-Guarantee → attach Checklist 9-A

☐ External Sinking Fund → attach Checklist 10

☐ Statement of Intent → attach Checklist 11

☐ Special Arrangement with a Government Entity → attach Checklist 12

To help licensees and applicants make the initial decisions called for in Checklist 1, this section discusses each of the three major decision points:

- Confirmation that financial assurance is required (see Section A.1.2)
- Use of a Certification of Financial Assurance or a Decommissioning Funding Plan (see Section A.1.3)
- Selection of a financial instrument (see Section A.1.4)

Finally, the section also explains applicable recordkeeping requirements (see Section A.1.5) and provides guidance for licensees who wish to cancel, replace, or transfer their financial assurance mechanisms (see Section A.1.6).

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Note that throughout the remainder of this appendix, the term "licensee" refers to both licensees and license applicants. This appendix also uses the terms "financial instrument," "financial mechanism," and "financial assurance mechanism" interchangeably.

A.1.2 When Financial Assurance is Required

This section provides guidance on when a licensee must demonstrate financial assurance for a particular license. Section A.1.2.1 below discusses financial assurance requirements for *decommissioning*, which apply at the time of license application or renewal and at the end of licensed operations. Section A.1.2.2 below discusses financial assurance requirements for *site control and maintenance*, which are triggered if the license is being terminated under restricted conditions.

A.1.2.1 Financial Assurance for Decommissioning

NRC's financial assurance requirements for decommissioning apply only to licensees authorized to possess or use certain quantities and types of licensed materials. The minimum possession or use thresholds that trigger the requirements vary, depending on the type of license and the types and quantities of materials authorized under the particular license. Licensees authorized to possess only a single isotope may use the table in Attachment 1 to this appendix to determine whether financial assurance is required for a given activity level. Any license that authorizes the possession or use of types or quantities of materials exceeding these thresholds is subject to NRC's decommissioning financial assurance requirements. Note that the relevant quantities and types of materials are those authorized under a particular license, even if a licensee does not currently or usually possess or use these same quantities and types of materials.

Type of License	Minimum License Threshold Requiring Financial Assurance
PART 30	*Unsealed byproduct material with a half-life greater than 120 days* in amounts greater than 10^3 times the applicable quantities of Appendix B to Part 30 (reproduced as Attachment 2 to this appendix) or, for a combination of isotopes, if R divided by 10^4 is greater than 1 when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to Part 30 ***or*** *Sealed sources or plated foils with a half-life greater than 120 days* in amounts greater than 10^{10} times the applicable quantities of Appendix B to Part 30 (reproduced as Attachment 2 to this appendix) or, for a combination of isotopes, if R divided by 10^{10} is greater than 1 when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to Part 30
PART 40	*Source material in a readily dispersible form* exceeding 10 millicuries (mCi)

Type of License	Minimum License Threshold Requiring Financial Assurance
PART 70	*Unsealed special nuclear material* in amounts greater than 10^3 times the applicable quantities of Appendix B to Part 30 (reproduced as Attachment 2 to this appendix) or, for a combination of isotopes, if R divided by 10^3 is greater than 1 where R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to Part 30
PART 72	*Any amount of spent fuel or high-level radioactive waste*

Licensees who exceed the minimum thresholds outlined above are required to demonstrate financial assurance for decommissioning that is acceptable to NRC until decommissioning has been completed and the license has been terminated. License applicants must have financial assurance in place prior to the receipt of licensed materials.

A.1.2.2 Financial Assurance for Site Control and Maintenance (License Termination Under Restricted Conditions)

If the license is being terminated under restricted conditions pursuant to 10 CFR 20.1403, a licensee must provide financial assurance for site control and maintenance following license termination. This requirement applies to all licensees who request license termination under restricted conditions, regardless of whether decommissioning financial assurance is required. This assurance must be in place before the license is terminated, and must be sufficient to enable an independent third party to assume and carry out responsibilities for any necessary control and maintenance of the site.

A.1.3 Prescribed Amount or Decommissioning Funding Plan

This section applies only to financial assurance demonstrations for decommissioning prepared as part of license applications or renewals. Licensees preparing or updating financial assurance demonstrations as part of DPs should skip this section, and should review Section A.13.

If financial assurance is required for a particular license, a licensee must decide whether to provide a prescribed amount of financial assurance or a decommissioning funding plan (DFP), the only two options for demonstrating financial assurance.

PRESCRIBED AMOUNT

Where the licensee has authorized possession limits within certain bounds established by the regulations, and the licensee's facility does not have significant subsurface residual radioactivity, it may provide financial assurance based on one or more of the prescribed amounts specified by 10 CFR 30.35(d), 40.36(b), or 70.25(d). (As of December 2, 2003, the regulations provide for three prescribed amounts of financial assurance—$113,000, $225,000, and $1,125,000—however, the amounts may be revised from time to time and the regulations must be consulted

to determine the currently applicable prescribed amounts when the licensee's financial assurance is reviewed.)

DFP A DFP is a financial assurance demonstration that is based on a site-specific cost estimate for decommissioning the licensed facility. Any licensee may use a DFP, but certain licensees *must* use a DFP, as discussed below. The DFP must include a certification of financial assurance to be acceptable. The amount of the facility-specific cost estimate is the required level of financial assurance coverage for a licensee who uses a DFP.

Licensees may be *required* to prepare a DFP rather than a certification depending on the type of license, the types and quantities of materials authorized under the particular license, and the presence of significant residual radioactivity on their facility. A licensee authorized possession limits within the bounds established by the regulations for use of a prescribed amount must use a DFP if there is a reasonable basis to believe the licensee has significant residual radioactivity in the facility and the environment, including the subsurface, on site. Any license authorizing the possession or use of types or quantities of materials exceeding the following thresholds must use a DFP. Licensees who are authorized to possess only a single isotope may use the table in Attachment 1 to this appendix to determine whether a DFP is required for a given activity level. Note that the relevant quantities and types of materials are those authorized under a particular license, even if a licensee does not currently or usually possess or use these same quantities and types of materials. Licensees whose possession limits are stated in general terms (e.g., up to 1 curie (Ci) of any nuclide having an atomic number from 1 to 83) should submit a DFP or commit to limiting material quantities below the applicable financial assurance thresholds. In addition, licensees authorized to possess an unlimited quantity of material must submit a DFP. During operations, residual radioactivity that would be significant for decommissioning planning would be a quantity of radioactive material that would later require remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402.

Type of License	Minimum License Threshold Requiring Financial Assurance
PART 30	*Unsealed byproduct material with a half-life greater than 120 days* in amounts greater than 10^5 times the applicable quantities of Appendix B to Part 30 (reproduced as Attachment 2 to this appendix) or, for a combination of isotopes, if R divided by 10^5 is greater than 1 when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to Part 30
PART 40	*Source material in a readily dispersible form* exceeding 100 mCi
PART 70	*Unsealed special nuclear material* in amounts greater than 10^5 times the applicable quantities of Appendix B to Part 30 (reproduced as Attachment 2 to this appendix) or, for a combination of isotopes, if R divided by 10^5 is greater than 1 where R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to Part 30

Type of License	Minimum License Threshold Requiring Financial Assurance
PART 72	*Any amount of spent fuel or high-level radioactive waste*

Where the licensee is authorized to possess more than one radionuclide, the unity rule is applied to all radionuclides with a half life of greater than 120 days to determine if financial assurance is required.

Licensees who do *not* exceed the thresholds outlined above may use *either* a prescribed amount or a DFP. Such licensees may wish to elect use of a DFP if, for example, they wish to obtain the optimal amount of financial assurance, or because use of a site-specific cost estimate may result in a lower financial assurance coverage requirement than would use of a prescribed amount (as could happen if a single facility holds multiple licenses, each of which triggers its own prescribed amount).

- Licensees who elect to use a prescribed amount of financial assurance should refer to Section A.2 of this appendix for applicable guidance. Complete Checklist 2 (in Section A.2) if using a certification.
- Licensees who use DFPs should refer to Section A.3 of this appendix for applicable guidance. Complete Checklist 3 (in Section A.3) if using a DFP.

A.1.4 Selection of Financial Instrument

Another major decision that a licensee must make is to identify the type of financial instrument it will use to demonstrate financial assurance. The choice of financial instrument typically depends on a number of factors, including the availability of the instrument to the licensee (i.e., whether or not the licensee is capable of obtaining it), the time and difficulty associated with establishing the instrument, the cost of the instrument, and the expected amount of time remaining before decommissioning. Because these factors can differ for different licensees, each licensee will have to identify the financial instrument that best meets its particular needs.

NRC regulations specify 8 allowable types of financial instruments that fall into 1 of 4 "methods."

A.1.4.1 Method 1: Prepayment

Under *prepayment*, the licensee provides advance decommissioning funding in full (i.e., in the applicable prescribed amount or in the amount of the facility-specific cost estimate) using an account segregated from licensee assets and outside the licensee's administrative control. Licensees who use prepayment mechanisms generally will not need to provide additional funds at the time of decommissioning unless decommissioning costs exceed the amount of financial assurance provided. Prior to decommissioning, the funds placed in prepayment instruments can be expected to generate earnings. These earnings are payable to the licensee as long as adequate funds remain in the financial mechanism. Upon completion of decommissioning, any funds remaining in the prepayment mechanism are returned to the licensee. Prepayment instruments include the following:

TRUST

A **trust** is analogous to a special bank account that is administered by a "trustee." Trusts can be readily established using an appropriately qualified financial institution as the trustee. Trustee fees are typically taken from the earnings on the trust.

— Licensees who elect to use a trust fund should refer to Section A.4 for applicable guidance.

— Licensees who use a trust fund should complete Checklist 4-A (in Section A.4).

A.1.4.2 Method 2: Surety, Insurance, or Guarantee

Under the surety, insurance, or guarantee method, an entity with adequate financial strength (e.g., bank, insurer or other financial institution) guarantees that the required amount of funds will be available whenever needed. Unlike prepayment, this method does *not* require the full amount of decommissioning funds to be set aside by the licensee in advance. Instead, the licensee typically pays an annual fee to the provider of the surety, insurance, or guarantee. Specific surety, insurance, or guarantee instruments include the following:

SURETY BOND

A **surety bond** is a guarantee by a company that it will fund decommissioning if the licensee fails to do so. Licensees must pay an annual fee to the issuing company to provide the bond and may have to provide substantial collateral, depending on the licensee's financial condition. Surety bonds must be accompanied by a standby trust.

— Licensees who elect to use a surety bond should refer to Section A.5 for applicable guidance.

— Licensees who use a surety bond should complete Checklist 5-A (in Section A.5).

LETTER OF CREDIT

A letter of credit is a formalized line of credit extended by a bank on behalf of a licensee. The credit may be used only to fund decommissioning. As with a surety bond, licensees who use a letter of credit must pay an annual fee to the bank and may have to provide substantial collateral depending on the licensee's financial condition. Letters of credit must be accompanied by a standby trust.

— Licensees who elect to use a letter of credit should refer to Section A.6 for applicable guidance.

— Licensees who use a letter of credit should complete Checklist 6-A (in Section A.6).

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INSURANCE

An **insurance policy** is a guarantee by an insurance company that it will fund decommissioning activities, whenever needed, if a licensee does not do so. Insurance must be accompanied by a standby trust.

— Licensees who elect to use insurance should refer to Section A.7 for applicable guidance.

— Licensees who use insurance should complete Checklist 7-A (in Section A.7).

PARENT COMPANY GUARANTEE

A **parent company guarantee** is a guarantee from a licensee's corporate parent that it will fund or carry out decommissioning activities if the licensee fails to do so. The corporate parent must pass a financial test to demonstrate that it has adequate financial strength to provide the guarantee. Because of its very low cost, the parent company guarantee is usually the financial instrument of choice for licensees with corporate parents willing and able to provide such a guarantee for decommissioning.

— Licensees who elect to use a parent company guarantee should refer to Section A.8 for applicable guidance.

— Licensees who use a parent company guarantee should complete Checklist 8-A (in Section A.8).

SELF-GUARANTEE

A **self-guarantee** is a guarantee by the licensee itself that it will fund and carry out decommissioning activities. The licensee must pass a financial test to demonstrate that it has adequate financial strength to provide the guarantee. Self-guarantees may not be used by licensees who have a corporate parent. Because of its very low cost, the self-guarantee is usually the financial instrument of choice to assure decommissioning for licensees who are able to provide such a guarantee.

— Licensees who elect to use a self-guarantee should refer to Section A.9 for applicable guidance.

— Licensees who use a self-guarantee should complete Checklist 9-A (in Section A.9).

A.1.4.3 Method 3: External Sinking Fund

An **external sinking fund** allows a licensee to *gradually* prepay for decommissioning by combining the use of a partially funded prepayment instrument (i.e., a trust fund) with a surety bond, letter of credit, or insurance covering the unfunded balance. As the licensee gradually funds the prepayment instrument over time, the licensee is allowed to reduce by a corresponding amount the coverage provided by the surety bond, letter of credit, or insurance.

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- Licensees who elect to use an external sinking fund should refer to Section A.10 for applicable guidance.
- Licensees who use an external sinking fund should complete Checklist 10 (in Section A.10).

A.1.4.4 Method 4: Statement of Intent

A **statement of intent** is a commitment by a Federal, State, or local government licensee to request and obtain decommissioning funds from its funding body when necessary. Because of its very low cost, the statement of intent is usually the financial instrument of choice to assure decommissioning for government licensees. This method (and instrument) is available only to licensees who are government entities.

- Licensees who elect to use a statement of intent should refer to Section A.11 for applicable guidance.
- Licensees who use a statement of intent should complete Checklist 11-A (in Section A.11).

A.1.4.5 Standby Trust Funds

As noted earlier, funds drawn from a surety bond, letter of credit, parent company guarantee, self guarantee, or insurance policy must be placed directly into a **standby trust fund** if the licensee fails to conduct decommissioning as required. A standby trust fund is simply a trust fund that is not yet funded but is otherwise ready to accept monies in the event they are received from a particular source. Funds in the standby trust would then be available to pay the costs of decommissioning, just as they would with an ordinary trust fund. Standby trusts are necessary because, if the funds from surety or insurance mechanisms were paid directly to NRC rather than to a standby trust fund, NRC would be required to deposit the funds in the U.S. Treasury as general revenue. Consequently, the funds would not be available to pay for decommissioning costs.

- Licensees who elect to use a standby trust fund should refer to Section A.17 for applicable guidance.
- Licensees who use a standby trust fund should complete Checklist 17-A (in Section A.17).

A.1.4.6 Special Arrangements with a Government Entity

In cases where the license is being terminated under restricted conditions, licensees may provide financial assurance through a special arrangement deemed acceptable by a governmental entity when the governmental entity assumes custody and ownership of a site. This mechanism may only be used in a financial assurance demonstration that is submitted at the end of licensed operations.

- Licensees who elect to use a special arrangement with a government entity should refer to Section A.12.2.2 for applicable guidance.

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- Licensees who use a special arrangement with a government entity should complete Checklist 12-B (in Section A.12).

A.1.5 Recordkeeping

The recordkeeping requirements for licensees are in 10 CFR 30.35(g), 40.36(f), 70.25(g), and 72.30(f). At a minimum, licensees must keep records of the following:

- Spills or other unusual occurrences if contamination remains after any cleanup procedure or if contaminants may have spread to inaccessible areas. These records must include information on nuclides, quantities, forms, and concentrations.
- As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used or stored.
- Records of the cost estimate performed for the DFP or of the amount certified for decommissioning, as well as records of the funding methods used for assuring funds.
- A copy of the financial assurance mechanism and other supporting documentation.

Timely notification should be given to NRC in the following situations:

- Any proposed changes, revisions, and adjustments to the underlying cost estimates and to the financial mechanisms, including a change from one mechanism to another.
- Commencement of bankruptcy action involving the licensee. Written notification of commencement of bankruptcy proceedings is to be submitted, as required by 10 CFR 30.34(h), 40.41(f), 70.32(a)(9), and 72.44(b)(6). For additional information concerning bankruptcy, licensees may refer to Chapters 5 and 6 of NUREG-1556, Volume 15, "Consolidated Guidance About Materials Licenses: Guidance About Changes of Control and About Bankruptcy Involving Byproduct, Source, or Special Nuclear Material Licenses," November 2000.
- Reports that certify completion of the activities for which financial assurance is provided must be submitted before the financial assurance mechanism may be canceled.

A.1.6 Canceling, Replacing, or Transferring Financial Instruments

The financial assurance mechanisms outlined in this appendix are designed so that licensees may not cancel them without NRC's approval, even if a replacement instrument is being established. Licensees who wish to cancel their existing financial mechanisms must first submit a replacement to NRC for review and approval or notify NRC that decommissioning has been completed. If a replacement mechanism is provided to NRC for review, the current mechanism will *not* be canceled or released before NRC's review and approval of the replacement mechanism. Licensees should provide NRC with adequate time to review proposed replacement mechanisms. Upon NRC's approval of the replacement mechanism (or termination of the license if decommissioning has been completed), the applicable NRC Deputy Division Director will stamp the current mechanism as "canceled," sign it, and release it to the licensee.

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Additional detail about returning, canceling, or reducing financial assurance instruments is provided in Section 8 of this volume.

If the license holder is expected to change as a result of a corporate acquisition or divestiture, the licensee must obtain NRC's approval before an existing financial instrument may be transferred or released. If the new license holder intends to establish a new financial instrument to replace the existing one, NRC must approve the replacement before NRC will release the existing mechanism. NRC recommends that the licensee communicate with NRC staff concerning any replacement instrument well in advance (at least 60 days) of the scheduled change in licensee or in corporate ownership.

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A.2 Certification of Financial Assurance

All licensees required to provide financial assurance under 10 CFR Parts 30, 40, 70, and 72 must submit a Certification of Financial Assurance. The following sections describe the use of the Certification of Financial Assurance when using a prescribed amount of financial assurance or when using a DFP. A Model Certification of Financial Assurance is presented to illustrate a format acceptable to the NRC.

A.2.1 Certification of Financial Assurance Using a Prescribed Amount

For licensees that are not required to submit a DFP, the regulations prescribe three levels of financial assurance—$113,000, $225,000, and $1,125,000. However, the amounts may be revised from time to time, and the regulations must be consulted to determine the currently applicable prescribed amounts when the licensee's financial assurance is reviewed. The dollar amounts shown in this guidance document are for illustrative purposes and must be revised as necessary to meet regulatory requirements. A combination of these amounts is required for licensees authorized to possess more than one type of radioactive material. For example, a licensee authorized to possess sealed sources containing byproduct material ($113,000) and 20 mCi of source material in readily dispersible form ($225,000) would be required to submit financial assurance for the sum of the prescribed amounts, or $338,000. The prescribed amount specified in the regulations becomes the required level of financial assurance coverage. Licensees who use prescribed amount must undertake the following actions, as summarized in Checklist 2.

- Determine the appropriate prescribed amount (see Section A.2.1)
- Prepare a certification of financial assurance (see Section A.2.2)
- Submit the required documentation (see Section A.2.3)

Licensees using prescribed amounts eventually may have to adjust their financial assurance coverage levels (and update their financial instruments) for one of three reasons:

- NRC adjusts the prescribed amount specified in the regulations.
- The licensee submits a DFP containing a site-specific cost estimate instead of using a prescribed amount.
- The licensee prepares a DP with a site-specific cost estimate. Certain licensees who notify NRC that they will terminate activities under their licenses and decommission their facilities must submit DPs (not the same as DFPs). The DP must contain "an updated detailed cost estimate for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning" as required in 10 CFR 30.36(g)(4)(v), 40.42(g)(4)(v), 70.38(g)(4)(v), and 72.54(g)(5).

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Also, regardless of a particular licensee's eligibility to use a prescribed amount, any licensee may elect instead to use a DFP based on a site-specific cost estimate to determine the required level of financial assurance coverage. Licensees may wish to use a DFP if, for example, they wish to obtain the optimal amount of financial assurance, or because use of prescribed amounts may overstate a facility's decommissioning costs. Guidance on preparing DFPs is presented in Section A.3 of this appendix.

Licensees may be eligible to use a particular prescribed amount depending on the type of license and the types and quantities of materials authorized under the particular license, as summarized below. Licensees authorized to possess only a single isotope may use the table in Attachment 1 to this appendix to determine the appropriate certification amount for a given activity level. Note that the relevant quantities and types of materials are those *authorized* under a particular license, even if a licensee does not currently or usually possess or use these same quantities and types of materials. The following discussion of applicable prescribed amounts is organized into three parts corresponding to the three general license types:

- Part 30—Byproduct Material
- Part 40—Source Material
- Part 70—Special Nuclear Material

Only radionuclides with a half life of greater than 120 days are included in the determination of financial assurance requirements.

Checklist 2 Certifications of Financial Assurance Using a Prescribed Amount

License Number(s):_____

Applicable Parts of 10 CFR (check all that apply): ☐ Part 30 ☐ Part 40 ☐ Part 70

☐ Determine the appropriate prescribed amount(s) (see Section A.2.1)

- Amount required under Part 30 for sealed sources:_____
- Amount required under Part 30 for unsealed sources:_____
- Amount required under Part 40:_____
- Amount required under Part 70:_____
- *Total of all prescribed amounts for all licenses*:_____

☐ Prepare certification statement (see Section A.2.2)

☐ Include the necessary documentation (see Section A.2.3):

- ☐ Certification statement (see Section A.2.4)
- ☐ Financial instrument and supporting documentation

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A.2.1.1 Part 30 Prescribed Amounts

Part 30 prescribes three levels of financial assurance. ***Check 10 CFR 30.35(d) to determine current specification for prescribed amount.*** The following apply to the use of prescribed amounts by Part 30 licensees.

- **The lowest level *prescribed amount of $113,000 applies*** to Part 30 licensees who are authorized to possess or use sealed sources or plated foils with a half-life greater than 120 days
  - in amounts greater than 10^{10} times the applicable quantities of Appendix B to 10 CFR Part 30 (reproduced as Attachment A.2 to this appendix) or
  - for a *combination* of isotopes, if R divided by 10^{10} is greater than 1 (when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to 10 CFR Part 30).
- **The middle level *prescribed amount of $225,000 applies*** to Part 30 licensees who are authorized to possess or use unsealed byproduct material with a half-life greater than 120 days
  - in amounts greater than 10^3 but less than or equal to 10^4 times the applicable quantities of Appendix B to 10 CFR Part 30 or
  - for a *combination* of isotopes, if R divided by 10^3 is greater than 1 but if R divided by 10^4 is less than or equal to 1 (when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to 10 CFR Part 30).
- **The highest level *prescribed amount of $1,125,000 applies*** to Part 30 licensees who are authorized to possess or use unsealed byproduct material with a half-life greater than 120 days in amounts exceeding the limit applicable to the $225,000 prescribed amount, as stated above, but
  - in amounts greater than 10^4 but less than or equal to 10^5 times the applicable quantities of Appendix B to 10 CFR Part 30 or
  - for a *combination* of isotopes, if R divided by 10^4 is greater than 1 but if R divided by 10^5 is less than or equal to 1 (when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to 10 CFR Part 30).
- ***A prescribed amount may not be used*** for a Part 30 license authorizing the possession or use of byproduct material in amounts exceeding the limit applicable to the highest level prescribed amount ($1,125,000), as stated above. These licensees must prepare DFPs, as discussed in Section A.3.
- ***No financial assurance is required*** for a Part 30 licensee who is authorized to possess or use (1) unsealed byproduct material with a half-life greater than 120 days in amounts less than or equal to 10^3 times the applicable quantities of Appendix B to 10 CFR Part 30 (reproduced as Attachment 2 to this appendix) or, for a combination of isotopes, if R divided by 10^3 is less than or equal to 1 when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to Part 30, ***or*** (2) sealed sources or plated foils in amounts less than or equal to 10^{10} times the applicable quantities of Appendix B to 10 CFR

Part 30 or, for a combination of isotopes, if R divided by 10^{10} is less than or equal to 1 when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to Part 30. No financial assurance is required for licensees possessing only byproduct material with a half-life of 120 days or less.

A.2.1.2 Part 40 Prescribed Amounts

Part 40 prescribes one level of financial assurance. ***Check 10 CFR 40.36(d) to determine current specification for prescribed amount.*** The following apply to the use of prescribed amounts by Part 40 licensees:

- ***A prescribed amount of $225,000*** applies to a Part 40 licensee who is authorized to possess or use source material in a readily dispersible form in amounts greater than 10 mCi but less than or equal to 100 mCi.
- ***A prescribed amount may not be used*** for Part 40 licensees authorized to possess or use source material in a readily dispersible form in amounts greater than 100 mCi. These licensees must prepare DFPs, as discussed in Section A.3.
- ***No financial assurance is required*** for Part 40 licensees who are authorized to possess or use source material in a readily dispersible form in amounts less than or equal to 10 mCi. No financial assurance is required for licensees possessing only source material that is not in a readily dispersible form.

A.2.1.3 Part 70 Prescribed Amounts

Part 70 prescribes two levels of financial assurance. The following apply to the use of prescribed amounts by Part 70 licensees. ***Check 10 CFR 70.25(d) to determine current specification for prescribed amount.***

- **The middle level *prescribed amount of $225,000*** applies to a Part 70 licensee who is authorized to possess or use unsealed special nuclear material
  - in amounts greater than 10^3 but less than or equal to 10^4 times the applicable quantities of Appendix B to Part 30 (reproduced above) or
  - for a *combination* of isotopes, if R divided by 10^3 is greater than 1 but if R divided by 10^4 is less than or equal to 1 (when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to 10 CFR Part 30).
- **The highest level *prescribed amount of $1,125,000*** applies to a Part 70 licensee who is authorized to possess or use unsealed special nuclear material in amounts exceeding the limit applicable to the $225,000 prescribed amount, as stated above, but
  - in amounts greater than 10^4 but less than or equal to 10^5 times the applicable quantities of Appendix B to 10 CFR Part 30, or
  - for a *combination* of isotopes, if R divided by 10^4 is greater than 1 but if R divided by 10^5 is less than or equal to 1 (when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to 10 CFR Part 30).

- ***A prescribed amount may not be used*** for a Part 70 license authorizing the possession or use of unsealed special nuclear material in amounts exceeding the limit applicable to the highest level prescribed amount ($1,125,000), as stated above. These licensees must prepare DFPs, as discussed in Section A.3.
- ***No financial assurance is required*** for a Part 70 license authorizing the possession or use of unsealed special nuclear material in amounts less than or equal to 10^3 times the applicable quantities of Appendix B to 10 CFR Part 30 or, for a combination of isotopes, if R divided by 10^3 is less than or equal to 1 when R is defined as the sum of the ratios of the quantity of each isotope to the applicable value in Appendix B to 10 CFR Part 30. No financial assurance is required for licensees possessing only special nuclear material in sealed form.

A.2.2 Preparing the Certification of Financial Assurance

All licensees who are required to provide financial assurance must prepare a certification of financial assurance. In the certification of financial assurance, the licensee certifies that it has obtained financial assurance in the appropriate amount and provides the details needed to verify that the amount is accurate under NRC regulations. As discussed above, these details include the license type and the types and amounts of materials authorized by the license.

The model wording for certifications of financial assurance presented in Section A.2.4 is acceptable to NRC staff. Although other wording may also be satisfactory, all certifications of financial assurance should clearly identify the licensee, the license number, the type of license (e.g., Part 30), the types and amounts of materials authorized by the license (including specific isotopes where applicable), the appropriate amount of financial assurance, and a certification that the information presented in the statement is accurate.

A.2.3 Submitting the Required Documentation

Under NRC's financial assurance regulations, 10 CFR 30.35(b)(2), 40.36(b)(2), and 70.25(b)(2), licensees who use prescribed amounts of financial assurance must submit the following to NRC:

- The certification of financial assurance (regulatory guidance is provided in Section A.2.2); and
- An *originally signed duplicate* of the financial instruments obtained to provide financial assurance for decommissioning. This appendix describes the allowable financial instruments first in general terms, in Section A.1, and then in detail beginning in Section A.4. Licensees should refer to these other sections to ensure that their financial assurance instruments and supporting documentation will be acceptable to NRC. Part 72 licensees are not required to submit originals of the financial assurance documents. However, if certain information in the financial instrument (licensee's name, license number, and docket number; and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee) changes, the licensee must, within 30 days, submit financial instruments reflecting such changes.

In addition to submitting these materials, licensees must maintain records of the amount of financial assurance certified for decommissioning and the funding methods used for assuring funds (e.g., a copy of the financial instruments and all supporting documentation).

A.2.4 Model Certification of Financial Assurance

CERTIFICATION OF FINANCIAL ASSURANCE

Principal: [*Legal names and business address of licensee*]
NRC license number, name and address of the facility

Issued to: U.S. Nuclear Regulatory Commission

I certify that [*insert name of licensee*] is licensed to possess the following types of [*insert all that apply: "sealed sources or plated foils with a half-life greater than 120 days licensed under 10 CFR Part 30," "unsealed byproduct material with a half-life greater than 120 days licensed under 10 CFR Part 30," "source material in a readily dispersible form licensed under 10 CFR Part 40," "unsealed special nuclear material licensed under 10 CFR Part 70" and "spent nuclear fuel, high-level radioactive waste, and reactor-related greater than Class C waste licensed under 10 CFR Part 72"*] in the following amounts:

Type of Material	Amount of Material
[*List materials and quantities of materials noted above. For* ***byproduct materials*** *and* ***special nuclear materials****, list separately the type and amount of* ***each isotope*** *authorized by the license.*]	

I also certify that financial assurance in the amount of [*insert the total of all prescribed amounts calculated from Checklist 2, or the amount of the site-specific cost estimate, in US dollars*] has been obtained for the purpose of decommissioning as prescribed by 10 CFR Part [*insert 30, 40, 70 or 72*].

[*this paragraph needed* ***for a Part 72 licensee (72.30(e)(5)) only*** *that qualifies to use an external sinking fund that is not coupled with another form of financial assurance*] I also certify that [*insert name of licensee*] is qualified to use the assurance method of 10 CFR Part 72.30(e)(5) or 10 CFR 50.75 (e)(1)(ii), and [*insert name of licensee*] either (1) recovers the total cost of decommissioning through rates established by "cost of service" or similar ratemaking regulation or (2) has a source of revenues for its external sinking fund that is a "non-bypassable charge," the total amount of which will provide funds needed for decommissioning. As of [*insert date*], $[*insert dollar amount*] has been collected for decommissioning. Therefore, $[*insert dollar amount*] remains to be collected for decommissioning. The remaining funds needed for decommissioning will be collected [*insert frequency, i.e., monthly, semi-annually, annually*] over the next [*insert time period*] in the amount of $[*insert dollar amount*].

[*this paragraph needed* ***for Part 72 licensees (72.30(e)) only***] Contact information for this certification of financial assurance by [*insert name of licensee*] is the following: [*insert the*

following: licensee name, license number, and docket number; and the name, address, contact person, and phone number of the issuer or guarantor and of the trustee].

[*Signatures and titles of officials of institution*]
[*Corporate seal*]
[*Date*]

A.2.5 Certification of Financial Assurance Using a DFP

A Certification of Financial Assurance must be included with the DFP. The format illustrated in Section A.2.4 should be used. The amount certified must cover the full amount of the cost estimate submitted in the DFP.

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A.3 Decommissioning Funding Plans

A decommissioning funding plan (DFP) is a financial assurance demonstration that is based on a *site-specific cost estimate* for decommissioning the facility. The amount of the facility-specific cost estimate becomes the minimum required level of financial assurance coverage. Any licensee may use a DFP, but certain licensees *must* use a DFP, as discussed in Section A.1. Licensees who use DFPs must undertake the following actions, as summarized in Checklist 3.

- Prepare a site-specific decommissioning cost estimate (see Section A.3.1).
- Determine the means that will be used to adjust the cost estimate and associated funding levels periodically over the life of the facility (see Section A.3.2).
- Submit the required documentation (see Section A.3.3).

Checklist 3 Decommissioning Funding Plans

License Number(s):_____

Applicable Parts of 10 CFR (check all that apply): ☐ Part 30 ☐ Part 40 ☐ Part 70 ☐ Part 72

☐ Prepare a detailed, site-specific cost estimate (see Section A.3.1).

☐ Determine the means that will be used to adjust the site-specific cost estimate and associated funding levels periodically over the life of the facility (see Section A.3.2).

☐ Include the necessary documentation (see Section A.3.3).

☐ Include a detailed, site-specific cost estimate that includes the following (see Section A.3.4):

- ☐ Detailed facility description.
- ☐ Description of the means that will be used to adjust the site-specific cost estimate and associated funding level.
- ☐ A certification that financial assurance for decommissioning has been provided in the amount of the decommissioning cost estimate.

☐ Include a financial instrument and supporting documentation.

A.3.1 Preparing the Site-Specific Cost Estimate

In evaluating decommissioning cost estimates, NRC considers the following factors:

- the completeness of the estimate (i.e., scope),
- the level of detail presented, and
- the reasonableness of the estimate (i.e., the accuracy and magnitude of estimated costs).

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For updates or revisions to a cost estimate, the NRC will also evaluate the following:

- the adequacy of the historical site assessment (HSA), and
- the adequacy of the characterization survey.

These factors are discussed briefly below. Sections A.3.1.1–A.3.1.3 outline or describe the three basic parts of a cost estimate: the facility description, the estimated decommissioning costs, and key assumptions. Section A.3 concludes with a series of cost estimating tables that can assist licensees in preparing decommissioning cost estimates that are likely to be acceptable to NRC.

The site-specific cost estimate required for a DFP should represent the licensee's best approximation of all direct and indirect costs of decommissioning its facilities under routine facility conditions. The assumption that routine facility conditions will prevail at the time of decommissioning implies that the cost estimate need not consider a worst-case decommissioning scenario. Similarly, however, the estimate should not be based on a scenario that is more optimistic than would be consistent with routine facility conditions. By way of example, NRC believes it reasonable for decommissioning cost estimates to assume the following:

- Inventories of materials and wastes at the time of decommissioning will be in amounts that are consistent with routine facility conditions over time. For example, if radioactive waste is continually generated but is not disposed until after a certain period of time (e.g., 3 months) has elapsed, then it is reasonable for the cost estimate to assume that, at the time of decommissioning, the facility will have an inventory of waste equal to that typically on site just prior to routine disposal (i.e., a 3-month inventory).
- Decommissioning activities take place immediately on cessation of operations without multiyear storage-for-decay periods.
- Decommissioning will meet the criteria for unrestricted release, unless a successful demonstration has been made that the provisions of §20.1403, "Criteria for license termination under restricted conditions," can be met.
- Work will be performed by an independent third-party contractor.

Decommissioning activities do not need to include removal or disposal of nonradioactive structures and materials beyond that necessary to terminate the NRC license.

A decommissioning cost estimate should contain a substantial level of detail, consistent with the guidance presented in this section, to allow NRC to fully evaluate the adequacy of the estimate. A series of cost estimating tables are provided at the end of this section to assist licensees in preparing decommissioning cost estimates that contain sufficient detail and are likely to be acceptable to NRC. *NRC staff recommends that licensees pattern their cost estimates after the cost estimating tables presented at the end of this section.*

The labor estimates, material costs, and other factors of the cost estimate should have a clear and reasonable basis. Licensees may wish to consider the use of NRC-provided cost information

such as that found in NUREG/CR-6477, "Revised Analyses of Decommissioning Reference Non-Fuel-Cycle Facilities" (July 1998), and other NRC cost estimating references. (Other documents that may help in calculating estimates for decommissioning costs are in the bibliography of this appendix.)

Complete decommissioning cost estimates contain three basic parts:

- a facility description, including subsurface
- the estimated decommissioning costs (including labor costs, nonlabor costs, and a contingency factor), and
- identification and justification of the key assumptions used in the decommissioning cost estimate.

These parts of cost estimates are discussed separately below and have been incorporated into the cost estimating tables at the end of Section A.3.

A.3.1.1 Facility Description

The facility description provides the basic context of the estimate. It should include both general and specific information, including the following:

- license number and type;
- specific quantities and types of materials authorized by the license (e.g., by specific isotope);
- general discussion of how licensed materials are used in the licensee's operations;
- description of facility buildings, rooms, and grounds, including the number and dimensions of areas (e.g., laboratories) that require decontamination;
- number and dimensions of facility components (e.g., fume hoods, glove boxes, laboratory benches, ductwork) that require decontamination;
- an estimate of the volume of contaminated material, including that in the subsurface, containing residual radioactivity that will require remediation to meet the criteria for license termination; and
- quantities of materials or waste accumulated prior to shipping or disposal (if applicable).

The facility description should also address any other characteristics of the facility that need to be understood to evaluate the estimated decommissioning costs.

A.3.1.2 Estimated Decommissioning Costs

The cost estimate must account for the costs of all phases of the decommissioning process. The estimate should itemize each of the major decommissioning tasks or activities and should distinguish between labor costs and nonlabor costs, as described in Sections A.3.1.2.1 and A.3.1.2.2. The estimate should also explicitly incorporate a contingency factor as discussed in

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Section A.3.1.2.3. Estimated costs should be based on reasonable and documented assumptions, and provide sufficient funds to allow an independent third party to assume responsibility for and carry out the decommissioning of the facility if the licensee is unable to do so.

A.3.1.2.1 Labor Costs

Labor costs associated with all decommissioning tasks and activities should include basic wages and benefits for staff of a third-party contractor performing decommissioning-related tasks, overhead costs, and contractor profit (sufficient to allow an independent third party to carry out the decommissioning project). The term "overhead" typically includes costs that are not directly traceable to any particular product produced or project conducted by the firm. Thus, overhead typically includes "period" costs such as insurance, utilities, rent, supplies, property taxes, depreciation, and the costs of any wages, salaries, and benefits incurred as a result of the corporation's officers and "support staff" (e.g., accounting staff, legal staff, janitorial staff, security staff). To spread such costs across multiple products or projects fairly, firms usually calculate an "indirect" overhead rate that is applied to all direct labor hours (i.e., on those labor hours that are directly associated with particular products or projects). Licensees should provide justification for the overhead rates assumed in the cost estimate. Labor costs should be broken out by major task or activity; example categories include the following:

- planning and preparation of the facility and site for decommissioning, including activities such as preparing a detailed DP, preparing other State or local documentation, developing work plans, performing staff training, procuring special equipment, and characterizing the radiological condition of the facility;
- decontamination or dismantling of radioactive facility components;
- restoration of contaminated areas on facility grounds, if necessary;
- a final radiation survey (including sampling); and
- site stabilization and long-term surveillance, if necessary.

The cost estimate should also describe the techniques and methods that will be used to decontaminate facility components because these decontamination methods will impact the amount of labor required. If any of the decommissioning tasks or activities listed above do not apply to a particular facility, the estimate should explain why this is the case.

A.3.1.2.2 Nonlabor Costs

Nonlabor costs also are likely to arise during decommissioning; these costs may include the following:

- packing materials,
- shipping costs (these could be classified as labor costs for some facilities),
- disposal costs,
- other equipment and supplies (e.g., personal protective equipment, brushes),

- laboratory costs (including transport of samples to a third-party laboratory, testing and analysis, etc.), and
- miscellaneous expenses (e.g., license fees, insurance, taxes, security).

A.3.1.2.3 Contingency Factor

Because of the uncertainty in contamination levels, waste disposal costs, and other costs associated with decommissioning, the cost estimate is required to apply an "adequate" contingency factor. In general, a contingency of 25 percent applied to the sum of all estimated decommissioning costs should be adequate, but in some cases a higher contingency may be appropriate. The 25 percent contingency factor provides reasonable assurance for *unforeseen* circumstances that could increase decommissioning costs, and should not be reduced or eliminated simply because foreseeable costs are low. Proposals to apply the contingency only to selected components of the cost estimate, or to apply a contingency lower than 25 percent, should be approved only in circumstances when a case-specific review has determined that there is an extremely low likelihood of unforeseen increases in the decommissioning costs (e.g., if the decommissioning costs are highly predictable and are established by binding contracts.)

NRC's recommendation for the use of a 25 percent contingency factor is consistent with the analysis and guidance contained in NUREG/CR-6477, which applies a 25 percent contingency factor to all estimated costs associated with decommissioning various reference facilities.

A.3.1.3 Key Assumptions

Key assumptions used in the decommissioning cost estimate must be identified and adequately justified. For example, claims of low levels of contamination should be supported by test results or by adequate discussion of how the licensed materials are used throughout the facility. Unusual items, such as disposal of radioactive materials at zero costs, should be supported by relevant information (e.g., disposal agreements, contracts, or other information). In general, justifications based on "past experience" are likely to be adequate only if the past experience is relevant; therefore, the cost estimate should compare comparable decommissionings with respect to facilities, materials, processes, management, regulatory requirements, and price levels. If cost models are used, the models should be described in enough detail to determine whether they are adequate and appropriate given the characteristics of the facility.

The cost estimate should clearly state that it does not take credit for any *salvage value* that might be realized from the sale of potential assets (e.g., recovered materials or decontaminated equipment) during or after decommissioning. If estimated credits are taken for salvage value but are not fully realized at the time of decommissioning, the cost estimate (as well as the financial assurance) may be significantly low. In some instances, NRC may approve credit for salvage value based on its review of explicit documentation provided by the licensee to justify the credit.

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A.3.2 Adjusting the Cost Estimate

Licensees who use DFPs must specify the means (i.e., the method and frequency) by which they will periodically adjust their cost estimates and associated funding levels over the life of their facilities. In general, cost estimates should be updated with the current prices of goods and services at least every 3 years or when the amounts or types of material at the facility change. Triennial adjustments should be made to account for inflation, for other changes in the prices of goods and services (e.g., disposal cost increases), for changes in facility conditions or operations, and for changes in expected decommissioning procedures.

Experience with decommissioning sites indicates that certain operational events can affect the decommissioning cost estimate. The types of events that must be evaluated in the triennial adjustment for their effect on the decommissioning cost estimate include the following:

- Leaks and spills—Facilities with fluid processes may have unplanned and uncontrolled leaks or spills. Occasionally leaks or spills will exceed the confinement capability of the facility or occur in an unconfined area and migrate into the environment. Once in the environment, the contaminants may spread through the subsurface, resulting in a potentially large volume of residual radioactivity in the subsurface that will require remediation before license termination. When such residual radioactivity is identified, the cost of remediating it must be included in the decommissioning cost estimate.
- Licensees should be alert for opportunities to reduce their decommissioning costs through voluntary activities to address leaks and spills. Two activities can be undertaken by licensees to limit the amount of financial assurance that will be required. First, by evaluating their processes that handle large volumes of fluids, installing process instrumentation sufficiently sensitive to detect small system losses, placing moisture monitors in areas not readily available for visual inspection, utilizing other leak detection systems, reengineering systems to eliminate hard to monitor features or components, and installing sumps and berms, licensees can reduce the possibility of experiencing subsurface residual radioactivity and minimize remediation costs (see Regulatory Guide 4.21, NRC 2008). Second, by remediating spills and leaks promptly after their detection and quickly removing any residual radioactivity before it spreads, the amount of remediation will be decreased. Licensees will be able to avoid increasing their cost estimates to cover the costs that they would incur if they waited until the time of decommissioning to remediate the residual radioactivity. Prompt cleanup of spills and leaks during operations must meet occupational and public dose limits, but does not necessarily have to reduce residual radioactivity to meet the radiological criteria for license termination. The amount of prompt material cleanup may be selected by an analysis of present versus future remediation costs, in order to reduce decommissioning costs. However, the amount of radioactive material, if any, remaining after cleanup efforts have been completed must be evaluated to determine whether the amount of financial assurance for decommissioning needs to be increased.
- Newly detected soil or groundwater contamination—If new locations of soil or groundwater contamination are identified during site characterization prior to decommissioning or during decommissioning, the materials present must be identified and the cost of cleanup must be included in the cost estimate.

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- Increased waste inventory—The decommissioning cost estimate should include an estimate of waste remaining on site that will need dispositioning when the site is decommissioned. When the cost exceeds the amount provided in the previous estimate, an adjustment must be made to account for the costs.
- Increased disposal costs—The cost estimate must include up-to-date disposal costs.
- Facility modifications—Modifications to the facility must be evaluated for their effects on decommissioning costs and the estimate adjusted appropriately.
- Changes in authorized possession limits—Changes in authorized possession limits may result in increasing the cost of decommissioning due to larger expected inventories of waste material, extensions to the area of contaminated surfaces, or additional volume of contaminated material that must be disposed of during decommissioning.
- Actual remediation costs that exceed the decommissioning cost estimate—During decommissioning the actual expenditures should be tracked and compared in detail with the decommissioning cost estimate. The reasons why actual costs may be exceeding the estimated costs should be identified and evaluated. Both the cost estimate and the level of available funding should be increased in a timely manner.
- Onsite disposal—Onsite disposals must be evaluated to determine if they must be remediated to meet decommissioning criteria. If remediation will be required, then the cost must be included in the decommissioning cost estimate.
- Use of a settling pond—Settling pond remediation must be included in the decommissioning cost estimate. The cost should include reasonable estimates of pond leakage.

A.3.3 Submitting the Required Documentation

Under NRC's financial assurance regulations (10 CFR 30.35(e), 40.36(d), 70.25(e), and 72.30(b), licensees who use DFPs must submit the following to NRC:

- a detailed site-specific cost estimate for decommissioning (regulatory guidance is provided in Section A.3.1),
- a description of the means that will be used to adjust the site-specific cost estimate and associated funding levels periodically over the life of the facility (regulatory guidance is provided in Section A.3.2),
- a certification of financial assurance by the licensee that financial assurance for decommissioning has been provided in the amount of the decommissioning cost estimate, and
- an *originally signed duplicate* of the financial instruments that provide financial assurance for decommissioning. Part 72 licensees are not required to submit originals of the financial assurance documents. However, if certain information in the financial instrument (licensee's name, license number, and docket number; and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee) changes, the licensee must, within 30 days, submit financial instruments reflecting such changes.

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This appendix describes the allowable financial instruments in general terms in Section A.1, and then in detail beginning in Section A.4. Licensees should refer to these sections to ensure that their financial assurance instruments and supporting documentation will be acceptable to NRC.

In addition to submitting these materials to NRC, licensees must maintain records of these materials in their files. Licensees must adjust the cost estimate and submit the adjusted DFP to the NRC every three years.

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A.3.4 Facility Description Summary

NRC license numbers and types (i.e., Part 30, 40, 70, and 72)
Types and quantities of materials authorized under the licenses listed above.
Description of how licensed materials are used. (Use additional sheets as necessary.)
Description of facility, including buildings, rooms, grounds, and description of where particular types of materials are used. (Use additional sheets as necessary)
Quantities of materials or waste accumulated before shipping or disposal. (Use additional sheets as necessary)
Volume of contaminated material, including that in the subsurface, containing residual radioactivity that will require remediation.

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A.3.5 Number and Dimensions of Facility Components

Use this table to summarize relevant features of the facility. Copy and complete the table as necessary for each room, laboratory, or area. Rooms, laboratories, or areas with similar levels of contamination may be consolidated in one table.

Name of room, laboratory, or area: _____

Level of Contamination: _____

Component	Number of Components	Dimensions of Component (specify units)	Total Dimensions (specify units)
Glove Boxes			
Fume Hoods			
Lab Benches			
Sinks			
Drains			
Floors			
Walls			
Ceilings			
Ventilation/Ductwork			
Hot Cells			
Equipment/Materials			
Soil Plots			
Storage Tanks			
Storage Areas			
Radwaste Areas			
Scrap Recovery Areas			
Maintenance Shop			
Equipment Decontamination Areas			
Utilities/Piping			
Other (specify)			

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A.3.6 Planning and Preparation (Work Days)

Estimate the number of work days, by specific labor category, that will be required to complete planning and preparation activities. Include all appropriate labor categories, including Supervisor, Foreman, Craftsman, Technician, Health Physicist, Laborer, Clerical, and others as needed.

Activity	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category
Preparation of Documentation for Regulatory Agencies						
Submittal of Decommissioning Plan to NRC when required by 10 CFR 30.36(g)(1), 40.42(g)(1), 70.38(g)(1), or 72.54(g).						
Development of Work Plans						
Procurement of Special Equipment						
Staff Training						
Characterization of Radiological Condition of the Facility (including sampling, soil and tailings analysis, or groundwater analysis, if applicable)						
Administrative fees (such as procurement fees for third party contractor, legal fees, local permits, utilities, financial assurance fees, and NRC staff review of these items)						
Other (specify)						
TOTALS						

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A.3.7 Decontamination or Dismantling of Radioactive Facility Components (Work Days)

Estimate the number of workdays, by specific labor category, which will be required to complete decontamination and/or dismantling activities for each facility component. Copy and complete this table as necessary for each room, laboratory, or area. Rooms, laboratories, or areas with similar levels of contamination may be consolidated in one table.

Name of room, laboratory, or area: _____

Level of Contamination: _____

Component	Decon. Method	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category
Glove Boxes							
Fume Hoods							
Lab Benches							
Sinks							
Drains							
Floors							
Walls							
Ceilings							
Ventilation/ Ductwork							
Hot Cells							
Equipment/ Materials							
Soil Plots							
Storage Tanks							
Storage Areas							
Radwaste Areas							
Scrap Recovery Areas							
Maintenance Shop							
Equipment Decontamination Areas							
Other (specify)							
TOTALS							

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A.3.8 Restoration of Contaminated Areas on Facility Grounds (Work Days)

Estimate the number of work days, by specific labor category, which will be required to restore contaminated areas on facility grounds.

Activity	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category
Backfill and Restore Site						
TOTALS						

A.3.9 Final Radiation Survey (Work Days)

Estimate the number of work days, by specific labor category, which will be required to conduct a final radiation survey.

Activity	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category
TOTALS						

A.3.10 Site Stabilization and Long-term Surveillance (Work Days)

Estimate the number of work days, by specific labor category, which will be required to complete site stabilization and long-term surveillance activities.

Activity	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category
TOTALS						

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A.3.11 Total Work Days by Labor Category

Enter the total work days estimated for each specific labor category from the applicable table above (i.e., from the bottom rows of Tables A.3.6 through A.3.10).

Task	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category
Planning and Preparation (TOTALS from Table A.3.6)						
Decontamination and/or Dismantling of Radioactive Facility Components (Sum of TOTALS from all copies of Table A.3.7)						
Packaging, Shipping, and Disposal of Radioactive Wastes						
Restoration of Contaminated Areas on Facility Grounds (TOTALS from Table A.3.8)						
Final Radiation Survey (TOTALS from Table A.3.9)						
Site Stabilization and Long-Term Surveillance (TOTALS from Table A.3.10)						

A.3.12 Worker Unit Cost Schedule

Estimate labor costs (including salary, fringe benefits, and corporate overhead). Include all appropriate labor categories, including Supervisor, Foreman, Craftsman, Technician, Health Physicist, Laborer, Clerical, and others as needed.

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Labor Cost Component	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category
Salary & Fringe ($/year)						
Overhead Rate (%)						
Total Cost Per Year						
Total Cost Per Work Day*						
Note: * Based on _____ work days per year (e.g., 260 days).						

A.3.13 Total Labor Costs by Major Decommissioning Task

Multiply the estimated work days for each specific labor category (from Table A.3.11) by the total cost per work day for the corresponding labor category (from Table A.3.12), and enter the results in the table below. Then, add across all labor categories to determine the total labor costs for each major decommissioning task.

Task	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category	Total Labor Cost
Planning and Preparation							
Decontamination or Dismantling of Radioactive Facility Components							
Packaging, Shipping, and Disposal of Radioactive Wastes*							
Restoration of Contaminated Areas on Facility Grounds							
Final Radiation Survey							
Site Stabilization and Long-Term Surveillance							

*If labor costs are included in packaging, shipping, and disposal costs listed in Tables A.3.14(a)-(c), add a note to the decommissioning cost estimate that labor was included in those costs.

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A.3.14 Packaging, Shipping, and Disposal of Radioactive Wastes (Excluding Labor Costs)

If labor is included in these costs, add a note to the cost estimate that these costs include labor.

(a) Packing Material Costs

Estimate the types and volumes of waste expected to be generated, along with the number and types of containers required for packaging the waste. Multiply the number of containers required by the unit cost per container.

Waste Type	Volume (m^3)	Number of Containers	Type of Container	Unit Cost of Container	Total Packaging Costs
TOTAL			-	-	

(b) Shipping Costs

Estimate the number of truckloads of waste to be shipped. Multiply shipping costs per mile (including truckload costs, surcharges, and overweight charges) by the total distance shipped.

Waste Type	Number of Truckloads	Unit Cost ($/mile/ truck-load)	Surcharges ($/mile)	Overweight Charges ($/mile)	Distance Shipped (miles)	Total Shipping Costs
TOTAL		-	-	-	-	

(c) Waste Disposal Costs

Estimate the volume of waste to be disposed. Multiply the volume of waste disposed by the unit disposal cost (including any volume-based surcharges). Add any surcharges that are based on the number of containers of waste.

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Waste Type	Disposal Volume (m^3)	Unit Cost ($/$m^3$)	Surcharges ($/$m^3$ or $/container)	Total Disposal Costs
TOTAL			-	

A.3.15 Equipment/Supply Costs (Excluding Containers)

Estimate the quantity of equipment and supplies required for decommissioning and multiply that quantity by the appropriate unit costs.

Equipment/Supplies	Quantity	Unit Cost	Total Equipment/ Supply Cost
TOTAL	-	-	

A.3.16 Laboratory Costs

If applicable, estimate costs for analyses to be performed by an independent third-party laboratory.

Activity	Total Cost
Sampling	
Transport of samples	
Testing and analysis	
Other (specify)	
TOTAL	

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A.3.17 Miscellaneous Costs

Estimate any other applicable costs.

Cost Item	**Total Cost**
License Fees	
Insurance	
Taxes	
Other (specify)	
TOTAL	

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A.3.18 Total Decommissioning Costs

Enter the total costs reported in Tables A.3.13, A.3.14(a)–(c), A.3.15, A.3.16, and A.3.17 into the appropriate cells below, and add them to obtain a subtotal. Add to the subtotal a contingency allowance in the amount of 25 percent of the subtotal to obtain the total decommissioning cost estimate. Also, calculate for each task/component the percentage it represents of the subtotal.

Task/Component	**Cost**	**Percentage**
Planning and Preparation (From Table A.3.13)		
Decontamination and/or Dismantling of Radioactive Facility Components (From Table A.3.13)		
Restoration of Contaminated Areas on Facility Grounds (From Table A.3.13)		
Final Radiation Survey (From Table A.3.13)		
Site Stabilization and Long-Term Surveillance (From Table A.3.13)		
Packing Material Costs (TOTAL from Table A.3.14(a))		
Shipping Costs (TOTAL from Table A.3.14(b))		
Waste Disposal Costs (TOTAL from Table A.3.14(c))		
Equipment/Supply Costs (TOTAL from Table A.3.15)		
Laboratory Costs (TOTAL from Table A.3.16)		
Miscellaneous Costs (TOTAL from Table A.3.17)		
Contractor Overhead and Profit		
SUBTOTAL		100%
25% Contingency		
TOTAL DECOMMISSIONING COST ESTIMATE		

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A.4 Trust Funds

A *trust fund* functions much like a savings account except that (1) monies are legally segregated for a specific purpose and (2) the funds are administered by someone with a fiduciary responsibility to keep or use the property in the fund for the benefit of the beneficiary. A decommissioning trust is governed by an irrevocable, three-party written agreement in which the licensee (called the *grantor* or, less frequently, the trustor or settlor) transfers an amount of cash, securities, or other liquid assets at least equal to the cost of decommissioning to a *trustee*, such as a bank. The trustee manages the fund according to the terms of the written agreement for the benefit of the *beneficiary*. Although the NRC is indicated as the beneficiary, the agency does not receive funds from the trust. NRC can direct the trustee to pay funds to the licensee, who in turn carries out decommissioning. If the licensee is unable or unwilling to perform decommissioning, the NRC can direct the trustee to pay funds to a third-party contractor, who will perform the work. The NRC cannot under 31 U.S.C. 3302(b), receive funds directly.

The remainder of this section discusses the primary criteria that determine whether particular trust fund submissions will be acceptable to NRC.

- Section A.4.1 describes qualifications required of the trustee.
- Section A.4.2 addresses funding and the adequacy of coverage.
- Section A.4.3 discusses the documentation that supports a trust fund.
- Section A.4.4 presents a model trust fund submission that NRC has found to be acceptable.

This section also contains two checklists designed to assist licensees in preparing acceptable decommissioning trusts. Checklist 4-A summarizes the primary criteria used by NRC to evaluate trust funds. Checklist 4-B (which should be used only by licensees who revise or do not use the model wording for trust agreements) presents terms and conditions that are recommended for trust agreements.

A.4.1 Qualifications of the Trustee

The regulations on financial assurance for decommissioning (10 CFR 30.35(f)(2)(ii), 40.36(e)(2)(ii), and 70.25(f)(2)(ii)) require that the trustee be acceptable to NRC. Acceptable trustees include appropriate Federal or State government agencies and financial institutions that have the authority to act as trustees and whose trust operations are regulated and examined by a Federal or State agency. Trust operations are regulated separately from other banking operations, and it is very common for a regulated bank not to have the authority to act as a trustee. In addition, NRC's requirement for trustees is not usually met by individuals who are not acting as a representative of a financial institution.

- The word "National" in the title of a financial institution signals that the institution is *Federally regulated*, as do the words "National Association" or the initials "N.A." following its title. To determine whether such a financial institution qualifies as an acceptable trustee, licensees should access the Federal Financial Institutions Examination Council's (FFIEC) Trusts Institutions Search database on the World Wide Web at

<http://www.fdic.gov/bank/individual/trust/>, and look to see that the bank branch has full trust powers.

Alternatively, licensees may contact the appropriate district office of the Office of the Comptroller of the Currency (OCC) and confirm that the institution (1) is Federally regulated ***and*** (2) has Federally regulated trust operations. (The OCC's home page on the World Wide Web is located at <http://www.occ.treas.gov>.) The six district offices of the OCC, along with the States and territories under their jurisdiction, are:

- Northeastern District Office (Telephone: (212) 819-9860)—CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, District of Columbia, Puerto Rico, and Virgin Islands.
- Southeastern District Office (Telephone: (404) 659-8855)—AL, FL, GA, MS, NC, SC, TN, VA, and WV.
- Central District Office (Telephone: (312) 360-8800)—IL, IN, KY, MI, OH, and WI.
- Midwestern District Office (Telephone: (816) 556-1800)—IA, KS, MN, MO, NE, ND, and SD.
- Southwestern District Office (Telephone: (214) 720-0656)—AR, LA, OK, and TX.
- Western District Office (Telephone: (415) 545-5900)—AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY, and Guam.

- The word "State" in the title of a financial institution signals that the institution is *State regulated*. U.S. branches of foreign banks are usually regulated by the State in which they are located. To determine whether a State-regulated financial institution qualifies as an acceptable trustee, licensees should access the FFIEC's Trusts Institutions Search database on the World Wide Web at <http://www.fdic.gov/bank/individual/trust/>, and look to see that the bank branch has full trust powers.

  Alternatively, licensees may contact the applicable State banking authority and confirm that the institution (1) is State regulated, ***and*** (2) has State-regulated trust operations.

- The titles of some financial institutions do not suggest that they are either Federally regulated or State regulated. In many such cases (but not all), these institutions are State regulated, as are many domestic branches of foreign banks.

The licensee may need or choose to replace the current trustee with a new trustee. To be acceptable to NRC, any successor trustee must meet the same standard as the original trustee (i.e., must be an appropriate Federal or State government agency or an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency). To ensure that the change in trustee does not negatively impact the trust, the licensee should replace the trustee only after sufficient notification (i.e., 90 days or more) has been provided to both NRC and the current trustee.

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Checklist 4-A Trust Funds

☐ Documentation is complete when the following are included:

- ☐ 1. trust agreement (originally signed duplicate),
- ☐ 2. Schedule A,
- ☐ 3. Schedule B,
- ☐ 4. Schedule C,
- ☐ 5. specimen certificate of events,
- ☐ 6. specimen certificate of resolution,
- ☐ 7. letter of acknowledgment,
- ☐ 8. receipt or statement from the trustee showing the trust's current market value, and
- ☐ 9. Checklist 4-B (if model trust wording is modified or not used).

☐ The trustee is qualified when the following conditions are met:

- ☐ The financial institution is regulated by a Federal or State agency.
- ☐ The financial institution has authority to act as a trustee and has trust operations that are regulated and examined by a Federal or State agency.

☐ The trust's current market value equals or exceeds the required coverage level.

A.4.2 Level of Coverage

A trust must at all times contain sufficient assets, valued at their *current market value*, to complete decommissioning activities. Therefore, at the time the trust is established, the trust must be fully funded, with a market value at least as great as the licensee's current decommissioning cost estimate or prescribed amount. The exception to this rule is a trust fund that is being combined with another financial mechanism. For a combination of mechanisms, the *sum* of the coverage provided by the mechanisms must be at least equal to the required coverage level. When submitting a trust to NRC, a licensee should also submit documentation verifying the amount in the trust (e.g., a receipt from the trustee or a fund balance statement). If the licensee's prescribed amount or estimated decommissioning cost increases to a level above the amount assured by the trust fund, the licensee must either (1) revise the trust to assure the higher amount or (2) obtain another financial assurance mechanism to make up the difference between the new coverage level and the amount of the trust.

In addition to being adequately funded, a trust agreement should allow the trustee access to the full level of coverage as appropriate to complete decommissioning activities. For example, in the model wording for a trust agreement, the trustee is authorized to make decommissioning payments only up to the amount listed in Schedule A to the trust agreement. If the amount listed in Schedule A is not at least as great as the NRC-approved cost estimate or prescribed amount, the trustee may not be able to make sufficient payments to complete decommissioning, even if there are sufficient monies in the trust.

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A.4.3 Recommended Documentation

The terms and conditions of a trust are governed by a written trust agreement. The wording of a trust agreement may vary, but Section A.4.4 of this appendix is a model trust agreement that would meet NRC's requirements and is recommended by NRC. Other documentation must also be submitted with a trust agreement. Supporting documentation may differ for licensees who submit trusts that differ from the recommended model. As summarized in Checklist 4-A, the following documentation is to be submitted with the trust agreement:

- The *trust agreement* (along with any amendments) is the written document that specifies the terms and conditions of the trust. The wording contained in the model trust presented in Section A.4.4 is acceptable to NRC. Licensees who use other wording should refer to Checklist 4-B to ensure that the alternative wording contains all the necessary terms and conditions.
- *Schedule A* (Section A.4.5) identifies the name and address of the licensee, the NRC license numbers covered by the trust, the addresses of the licensed activity, the amount of regulatory assurances demonstrated by the trust agreement, and the date on which these amounts were last adjusted and approved by NRC.
- *Schedule B* (Section A.4.5) lists the property (i.e., cash, securities, or other liquid assets) used to establish the initial trust fund.
- *Schedule C* (Section A.4.5) specifies the compensation to be paid by the licensee to the trustee for its services.
- The *specimen certificate of events* (Section A.4.6) and the *specimen certificate of resolution* (Section A.4.7) provide the format for instructing the trustee to release monies from the trust in order to fund decommissioning activities at the licensee's facility. When submitted as part of a financial assurance package, the specimen certificates should be unexecuted drafts. (Actual authorization to release funds from the trust is accomplished when completed and notarized versions of these certificates are signed by the secretary of the licensee and presented to the trustee.)
- The notarized *letter of acknowledgment* (Section A.4.8) verifies the execution of the trust agreement and certifies the trustee's signature and authority to enter into the agreement.

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Checklist 4-B Terms and Conditions Needed in Decommissioning Trust Agreements

Use this checklist only if deviating from the wording recommended in Section A.4.4.

☐ Execution date of trust includes the following:

- ☐ Purpose of trust ("whereas" clauses).
- ☐ Statement of licensee's regulatory obligations as reason for the trust fund.
- ☐ Grantor or grantors (introductory paragraph).
- ☐ Trustee or trustees (introductory paragraph) includes the following:
  - ☐ 1. names and addresses, and
  - ☐ 2. bank or corporate trustee.

☐ Identification of facilities (name, address, and license number) and cost estimates or prescribed amounts (Section A.2 and Schedule A).

- ☐ Words of transfer, conveyance, and delivery in trust (Section A.3).
- ☐ Description of trust property (Section A.4 and Schedule B) includes the following:
  - ☐ 1. cash,
  - ☐ 2. securities, and
  - ☐ 3. other liquid assets.
- ☐ Additions to trust (Section A.4).
- ☐ Distribution of trust principal (Section A.5) includes the following:
  - ☐ 1. disbursement to licensee upon proper certification;
  - ☐ 2. payment for activities at NRC's direction in writing;
  - ☐ 3. refund to grantor at NRC's written specification upon completion of decommissioning; and
  - ☐ 4. maximum withdrawal of funds at one time for a particular license is limited to 10 percent of the remaining funds available for that license unless NRC written approval is attached.
- ☐ Trust management (Sections A.6–A.8) includes the following:
  - ☐ 1. discretionary powers,
  - ☐ 2. fiduciary duty,
  - ☐ 3. commingling and investment,
  - ☐ 4. sale or exchange of trust property,
  - ☐ 5. scope of investments,
  - ☐ 6. express powers of trustee,
  - ☐ 7. borrowing money and encumbering trust assets,
  - ☐ 8. insurance (optional),

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Checklist 4-B Terms and Conditions Needed in Decommissioning Trust Agreements (continued)

- ☐ 9. operation of business (optional), and
- ☐ 10. compromise of claims (optional).

☐ Taxes and expenses (Section A.9).

☐ Annual valuation (Section A.10).

☐ Advice of counsel (Section A.11).

☐ Authority, compensation, and tenure of trustees (Sections A.12–A.14) includes the following:

- ☐ 1. trustee compensation (Schedule C),
- ☐ 2. successor trustee, and
- ☐ 3. instructions to trustee.

☐ Amendment of agreement (Section A.15).

☐ Irrevocability and termination (Section A.16).

☐ Immunity and indemnification (Section A.17).

☐ Law to govern construction and operation of trust (Section A.18).

☐ Interpretation and severability (Section A.19).

☐ Signatures and titles.

☐ Acknowledgments, seals, or attestations, if necessary or desired (witness by notary public).

☐ Acceptance of trust by trustee or trustees (acknowledgment).

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A.4.4 Model Trust Fund Agreement

TRUST AGREEMENT

TRUST AGREEMENT, the Agreement entered into as of [*insert date*] by and between [*insert name of licensee*], [*insert license number, docket number, and address*], a [*insert name of State*] [*insert "corporation," "partnership," or "proprietorship"*], herein referred to as the "Grantor," and [*insert name and address of a trustee acceptable to NRC*], the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in title 10, Chapter I of the *Code of Federal Regulations*, Part [*insert 30, 40, or 70*]. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a materials license issued pursuant to 10 CFR Part [*insert 30, 40, or 70*] provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a trust fund to provide [*insert "all" or "part"*] of such financial assurance for the facilities identified herein;

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee;

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the NRC licensee who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the trustee who enters into this Agreement and any successor trustee.

Section 2. Costs of Decommissioning. This Agreement pertains to the costs of decommissioning the materials and activities identified in License Number [*insert license number*] issued pursuant to 10 CFR Part [*insert 30, 40, or 70*], as shown in Schedule A.

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund (the Fund) for the benefit of NRC. The Grantor and the Trustee intend that no third party shall have access to the Fund except as provided herein.

Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be

held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

(a) A certificate duly executed by the Secretary of the Grantor attesting to the occurrence of the events, and in the form set forth in the attached Specimen Certificate of Events, and

(b) A certificate attesting to the following conditions:

  (1) that decommissioning is proceeding pursuant to an NRC-approved plan;

  (2) that the funds withdrawn will be expended for activities undertaken pursuant to that plan; and

  (3) that NRC has been given 30 days prior notice of [*insert name of licensee*]'s intent to withdraw funds from the trust fund.

No withdrawal from the Fund for a particular license can exceed 10 percent of the remaining funds available for that license unless NRC written approval is attached.

In addition, the Trustee shall make payments from the Fund as NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by NRC from the Fund for expenditures for required activities in such amounts as NRC shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims, except that:

(a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal government, and in obligations of the Federal government such as GNMA, FNMA, and FHLM bonds and certificates or State and

Municipal bonds rated BBB or higher by Standard & Poor's or Baa or higher by Moody's Investment Services; and

(c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment advice is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and NRC or to reinvest in securities at the direction of the Grantor;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

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Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. After payment has been made into this trust fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the trust fund, furnish to the Grantor and to NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and NRC shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C.)

Section 13. Successor Trustee. Upon 90 days notice to NRC and the Grantor, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee, the successor accepts the appointment, the successor is ready to assume its duties as trustee, and NRC has agreed, in writing, that the successor is an appropriate Federal or State government agency or an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency. The successor Trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. When the resignation or replacement is effective, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust, in a writing sent to the Grantor, NRC, and the present Trustee, by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this Agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and

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instructions. If NRC issues orders, requests, or instructions to the Trustee these shall be in writing, signed by NRC or its designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or NRC hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or NRC, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and NRC, or by the Trustee and NRC if the Grantor ceases to exist. All amendments shall meet the relevant regulatory requirements of NRC.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and NRC, or by the Trustee and NRC if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the Grantor or NRC issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the State of [*insert name of State*].

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this Agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

[*Insert name of licensee (Grantor)*]
[*Signature of representative of Grantor*]
[*Title*]

ATTEST:

[*Title*] [*Seal*]

[*Insert name and address of Trustee*]
[*Signature of representative of Trustee*]
[*Title*]

ATTEST:
[*Title*] [*Seal*]

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A.4.5 Model Trust Agreement Schedules

Schedule A

This Agreement demonstrates financial assurance for the following cost estimates or prescribed amounts for the following licensed activities:

U.S. NUCLEAR REGULATORY COMMISSION LICENSE NUMBER(S)	NAME AND ADDRESS OF LICENSEE	ADDRESS OF LICENSED ACTIVITY	COST ESTIMATES FOR REGULATORY ASSURANCES DEMONSTRATED BY THIS AGREEMENT

The cost estimates listed here were last adjusted and approved by NRC on [*insert date*].

Schedule B

AMOUNT _____
AS EVIDENCED BY _____

Schedule C

[*Insert name, address, and phone number of Trustee.*]
Trustee's fees shall be $_____ per year.

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A.4.6 Model Specimen Certificate of Events

[*Insert name and address of trustee*]

Attention: Trust Division

Gentlemen:

In accordance with the terms of the Agreement with you dated ____, I, _____, Secretary of [*insert name of licensee*], hereby certify that the following events have occurred:

1. [*Insert name of licensee*] is required to commence the decommissioning of its facility located at [*insert location of facility*] (hereinafter called the decommissioning).

2. The plans and procedures for the commencement and conduct of the decommissioning have been approved by the United States Nuclear Regulatory Commission, or its successor, on _____ (copy of approval attached).

3. The Board of Directors of [*insert name of licensee*] has adopted the attached resolution authorizing the commencement of the decommissioning.

_____
Secretary of [*insert name of licensee*]

_____
Date

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A.4.7 Model Specimen Certificate of Resolution

I, _____, do hereby certify that I am Secretary of [*insert name of licensee*], a [*insert State of incorporation*] corporation, and that the resolution listed below was duly adopted at a meeting of this Corporation's Board of Directors on _____, 20___.

IN WITNESS WHEREOF, I have hereunto signed my name and affixed the seal of this Corporation this _____day of _____, 20___.

_____
Secretary

RESOLVED, that this Board of Directors hereby authorizes the President, or such other employee of the Company as he may designate, to commence decommissioning activities at [*insert name of facility*] in accordance with the terms and conditions described to this Board of Directors at this meeting and with such other terms and conditions as the President shall approve with and upon the advice of Counsel.

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A.4.8 Model Letter of Acknowledgment

STATE OF _____

To Wit: _____

CITY OF _____

On this _____day of _____, before me, a notary public in and for the city and State aforesaid, personally appeared _____, and she/he did depose and say that she/he is the [*insert title*] of _____ [*if applicable, insert ", national banking association" or ", State banking association"*], Trustee, which executed the above instrument; that she/he knows the seal of said association; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the association; and that she/he signed her/his name thereto by like order.

_____
[*Signature of notary public*]

My Commission Expires: _____
[*Date*]

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A.5 Surety Bonds

A *payment surety bond* (or *surety bond*) is a guarantee by a surety company (or surety) that it will fund decommissioning activities if the principal (i.e., the licensee) fails to do so. In issuing a surety bond, the surety company becomes "jointly and severally" liable for the guaranteed payment, meaning that the surety assumes the licensee's obligation to fund decommissioning as its own and can be sued jointly with the licensee for the obligation. Consequently, most surety bonds include an indemnification provision that requires the principal to reimburse the surety for costs incurred in satisfaction of the principal's obligations.

A surety bond used for decommissioning financial assurance must be open-ended or, if written for a specified term (such as 5 years), must be renewed automatically unless, 90 days or more prior to the renewal date, the surety notifies both NRC and the licensee of its intention not to renew. A surety bond must also provide that the full face amount of the bond be paid to the beneficiary automatically prior to expiration, without proof of forfeiture, if the licensee fails to provide a replacement mechanism acceptable to NRC within 30 days after receipt of notification of cancellation.

Funds drawn from a surety bond must be placed directly into a "standby trust fund" if the licensee fails to conduct decommissioning as required. A standby trust fund is simply a trust fund that is not yet funded but is otherwise ready to accept monies in the event they are received from a particular source (such as a surety bond). Funds in the standby trust would then be available to pay the costs of decommissioning, just as they would with an ordinary trust fund. (See Section A.12 for more information on standby trust funds.)

The remainder of this section discusses the primary criteria that determine whether particular surety bond submissions will be acceptable to NRC.

- Section A.5.1 describes qualifications required of the issuer (the surety company).
- Section A.5.2 addresses the adequacy of coverage.
- Section A.5.3 discusses the documentation that supports a surety bond.
- Section A.5.4 presents a model surety bond that NRC has found to be acceptable.

This section also contains two checklists that are designed to assist licensees who wish to use surety bonds. Checklist 5-A summarizes the primary criteria used by NRC to evaluate surety bonds. Checklist 5-B (which should be used only by licensees who revise or do not use the model wording for surety bonds) presents terms and conditions that are recommended for surety bonds.

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Checklist 5-A Surety Bonds

☐ Documentation is complete when the following are included:

- ☐ 1. surety bond (originally signed duplicate),
- ☐ 2. standby trust agreement and all supporting documentation (see Section A.12 and attach Checklist 12-A),
- ☐ 3. copy of broker/agent's power of attorney authorizing the broker/agent to issue bonds, and
- ☐ 4. Checklist 5-B (if model surety bond wording is modified or not used).

☐ The company issuing the surety bond is listed in the most recent edition of *Circular 570* for the State in which the bond was signed and has an underwriting limitation greater than or equal to the amount of the bond being used for decommissioning.

☐ The amount of the surety bond equals or exceeds the required coverage level.

A.5.1 Qualifications of the Issuer

To determine whether a company issuing the surety bond is qualified, licensees should consult the most recent edition of the U.S. Department of the Treasury's *Circular 570*, which is published annually on approximately July 1 and is updated periodically in the *Federal Register*. (*Circular 570* can also be found on the World Wide Web at <http://www.fms.treas.gov/c570/index.html>.) The company issuing the surety bond must be listed in *Circular 570* as qualified in the State where the surety bond was signed, and the company's underwriting limitation (also specified in *Circular 570*) must be at least as great as the level of coverage required for the license. A company issuing a surety can only exceed its underwriting limitation if it brings another qualified company into the agreement to share the risk. When acting together, none of the companies may exceed its individual underwriting limitation.

Also, as noted above, a surety bond must be payable to a standby trust fund. Information on the qualifications of trustees of standby trusts is provided in Section A.12.

A.5.2 Level of Coverage

A surety bond must be in an amount that is at least equal to the licensee's prescribed amount or estimated cost of decommissioning. The exception to this rule is a surety bond that is being combined with another financial mechanism. For a combination of mechanisms, the *sum* of the coverage provided by the mechanisms must be at least equal to the required coverage level. If the licensee's prescribed amount or estimated decommissioning cost increases to a level above the amount assured by the surety bond, the licensee must either (1) revise the surety bond to assure the higher amount or (2) obtain another financial assurance mechanism to make up the difference between the new coverage level and the amount of the surety bond.

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A.5.3 Recommended Documentation

As summarized in Checklist 5-A, licensees who wish to use surety bonds to provide financial assurance for decommissioning submit a copy of the surety bond and other documentation as discussed below. Supporting documentation may differ for licensees who submit surety bonds that differ from the recommended model.

The *surety bond* (along with any riders or amendments) signed by an authorized representative from the issuing company. The wording of a surety bond may vary, but Section A.5.4 of this appendix is a model surety bond that would meet NRC's requirements and is recommended by NRC. Licensees who wish to use other wording should refer to Checklist 5-B to be sure that the alternative wording contains all the necessary terms and conditions.

A *copy of the broker/agent's power of attorney* authorizing the broker/agent to issue bonds on behalf of the issuing company. The power of attorney ensures that the surety bond is enforceable.

A *standby trust fund* must be established to receive funds from the surety bond. The standby trust fund should satisfy the criteria described in Section A.12 and in Checklist 12-A of this appendix.

Checklist 5-B Terms and Conditions Needed in Decommissioning Surety Bonds

Use this checklist only if deviating from the wording recommended in Section A.5.4.

- ☐ Date of execution of bond and effective date.
- ☐ Name and address of licensee.
- ☐ Type of business organization and State of incorporation (if appropriate).
- ☐ NRC license number, identification of licensed facility(ies) (name and address), costs or required decommissioning activities.
- ☐ Identification of company issuing the surety(ies) includes the following:
  - ☐ 1. name,
  - ☐ 2. state of incorporation, and
  - ☐ 3. qualification in jurisdiction where facility covered by the surety bond is located.
- ☐ Designation of obligee (NRC).
- ☐ Recitation of consideration (fee paid for surety bond).
- ☐ Liability of company issuing the surety includes the following:
  - ☐ 1. penal sum,
  - ☐ 2. limitation of liability,
  - ☐ 3. condition(s) of liability, and
  - ☐ 4. statement of joint and several liability.

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Checklist 5-B Terms and Conditions Needed in Decommissioning Surety Bonds (continued)

☐ Statement of licensee's regulatory obligations as reason for bond.

☐ Scope and duration of bond includes the following:

- ☐ 1. restricted to single obligation,
- ☐ 2. continuing,
- ☐ 3. provisions for renewal, and
- ☐ 4. payable to a standby trust fund.

☐ Termination includes the following:

- ☐ 1. by company issuing the surety,
- ☐ 2. by principal, and
- ☐ 3. effective date of termination or revocation.

☐ The company issuing the surety must notify the licensee and NRC by certified mail at least 90 days prior to cancellation or nonrenewal.

☐ An automatic payment provision must be included that, if the licensee is unable to secure alternative financial assurance to replace the bond within 30 days of notification of cancellation, NRC may draw upon the bond prior to cancellation.

☐ Adjustment of penal sum.

☐ Severability provision.

☐ Liability limit of the bond.

☐ Date.

☐ Signatures.

☐ Premium

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A.5.4 Model Surety Bond

PAYMENT SURETY BOND

Date bond executed:_____

Effective date:_____

Principal: [*Insert legal name and business address of licensee*]

Type of organization: [*Insert "proprietorship," "partnership," or "corporation"*]

State of incorporation:_____ (if applicable)

NRC license number, docket number, name and address of facility, and amount for decommissioning activities guaranteed by this bond:_____

Surety: [*Insert name and business address*]

Type of organization: [*Insert "proprietorship," "partnership," or "corporation"*]

State of incorporation:_____ (if applicable)

Surety's qualification in jurisdiction where licensed facility is located.

Surety's bond number:_____

Total penal sum of bond: $_____

Know all persons by these presents, that we, the Principal and Surety hereto, are firmly bound to the U.S. Nuclear Regulatory Commission (hereinafter called NRC) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety; but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

WHEREAS, the U.S. Nuclear Regulatory Commission, an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in title 10, Chapter I of the *Code of Federal Regulations*, Part [*insert 30, 40, or 70*], applicable to the Principal, which require that a license holder or an applicant for a facility license provide financial assurance that funds will be available when needed for facility decommissioning;

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NOW, THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of decommissioning of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility;

Or, if the Principal shall fund the standby trust fund in such amount(s) after an order to begin facility decommissioning is issued by NRC or a U.S. District Court or other court of competent jurisdiction;

Or, if the Principal shall provide alternative financial assurance, and obtain NRC's written approval of such assurance, within 30 days after the date a notice of cancellation from the Surety is received by both the Principal and NRC, then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by NRC that the Principal has failed to perform as guaranteed by this bond, the Surety shall place funds in the amount guaranteed for the facility into the standby trust fund.

The liability of the Surety shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety hereunder exceed the amount of said penal sum.

The Surety may cancel the bond by sending notice of cancellation by certified mail to the Principal and to NRC provided, however, that cancellation shall not occur during the 90 days beginning on the date of receipt of the notice of cancellation by both the Principal and NRC, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to NRC and to the Surety 90 days prior to the proposed date of termination, provided, however, that no such notice shall become effective until the Surety receives written authorization for termination of the bond from NRC.

The Principal and Surety hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new amount, provided that the penal sum does not increase by more than 20 percent in any one year and no decrease in the penal sum takes place without the written permission of NRC.

If any part of this agreement is invalid, it shall not affect the remaining provisions that will remain valid and enforceable.

In Witness Whereof, the Principal and Surety have executed this financial guarantee bond and have affixed their seals on the date set forth above.

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The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety.

Principal

[*Signatures*]
[*Names*]
[*Titles*]
[*Corporate seal*]
Corporate Surety

[*Name and address*]

State of incorporation:_____

Liability limit: $_____

[*Signatures*]
[*Names and titles*]
[*Corporate seal*]

[*For every co-surety, provide signatures, names and titles, corporate seal, and other information in the same manner as for the Sureties above.*]

Bond Premium: $_____

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A.6 Letters of Credit

A *letter of credit* is a formalized, written line of credit extended by a bank on behalf of a licensee. The credit may be used only to fund decommissioning in the event the licensee does not conduct decommissioning on its own. A letter of credit used to provide financial assurance for decommissioning must be irrevocable, meaning that it may not be canceled prior to its expiration date. Also, the arrangement requires that the licensee repay (with interest) any funds drawn from the letter of credit.

A letter of credit used for decommissioning financial assurance must be open-ended or, if written for a specified term (such as 5 years), must be renewed automatically unless 90 days or more prior to the renewal date, the issuing bank notifies both NRC and the licensee of its intention not to renew. A letter of credit must also provide that the full face amount of the credit be paid to the beneficiary automatically prior to expiration, without proof of forfeiture, if the licensee fails to provide a replacement mechanism acceptable to NRC within 30 days after receipt of notification of cancellation.

Funds drawn from a letter of credit must be placed directly into a "standby trust fund" if the licensee fails to conduct decommissioning as required. A standby trust fund is simply a trust fund that is not yet funded but is otherwise ready to accept monies in the event they are received from a particular source (such as a letter of credit). Funds in the standby trust would then be available to pay the costs of decommissioning, just as they would with an ordinary trust fund. (See Section A.12 for more information on standby trust funds.)

The remainder of this section discusses the primary criteria that determine whether particular letter of credit submissions will be acceptable to NRC.

- Section A.6.1 describes qualifications required of the issuer.
- Section A.6.2 addresses the adequacy of coverage.
- Section A.6.3 discusses the documentation that supports a letter of credit.
- Section A.6.4 presents a model letter of credit that NRC has found to be acceptable.

This section also contains two checklists that are designed to assist licensees who wish to use letters of credit. Checklist 6-A summarizes the primary criteria used by NRC to evaluate letters of credit. Checklist 6-B (which should be used only by licensees who revise or do not use the model wording for letters of credit) presents terms and conditions that are recommended for letters of credit.

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Checklist 6-A Letters of Credit

☐ Documentation is complete when the following are included:

☐ 1. letter of credit (originally signed duplicate) contains contact information for financial institution and NRC license and docket numbers,

☐ 2. standby trust agreement and all supporting documentation (see Section A.12 and attach Checklist 12-A), and

☐ 3. Checklist 6-B (if model letter of credit wording is modified or not used).

☐ The financial institution is regulated by a Federal or State agency.

☐ The amount of the letter of credit equals or exceeds the required coverage level.

A.6.1 Qualifications of the Issuer

A bank issuing a letter of credit to a licensee should be a financial institution whose operations are regulated and examined by a Federal or State agency.

- The word "National" in the title of a financial institution signals that the institution is *Federally regulated*, as do the words "National Association" or the initials "N.A." following its title. To determine whether such a financial institution qualifies as an acceptable issuer of a letter of credit, licensees should access the Federal Deposit Insurance Corporation's (FDIC) Institution Directory on the World Wide Web at <http://www2.fdic.gov/idasp/>.

  Alternatively, licensees may contact the appropriate district office of the Office of the Comptroller of the Currency (OCC) and confirm that the institution is Federally regulated. (The OCC's home page on the World Wide Web is located at <http://www.occ.treas.gov>.) The six district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:

  - Northeastern District Office (Telephone: (212) 819-9860)—CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, District of Columbia, Puerto Rico, and Virgin Islands.
  - Southeastern District Office (Telephone: (404) 659-8855)—AL, FL, GA, MS, NC, SC, TN, VA, and WV.
  - Central District Office (Telephone: (312) 360-8800)—IL, IN, KY, MI, OH, and WI.
  - Midwestern District Office (Telephone: (816) 556-1800)—IA, KS, MN, MO, NE, ND, and SD.
  - Southwestern District Office (Telephone: (214) 720-0656)—AR, LA, OK, and TX.
  - Western District Office (Telephone: (415) 545-5900)—AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY, and Guam.

- The word "State" in the title of a financial institution signals that the institution is *State regulated*. U.S. branches of foreign banks are usually regulated by the State in which they

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are located. To determine whether a State-regulated financial institution qualifies as an acceptable issuer of a letter of credit, licensees should access the FDIC's Institution Directory on the World Wide Web at <http://www2.fdic.gov/idasp/>. Alternatively, licensees may contact the applicable State banking authority and confirm that the institution is State regulated.

- The titles of some financial institutions do not suggest that they are either Federally regulated or State regulated. In many such cases (but not all), these institutions are State regulated, as are many domestic branches of foreign banks.
- Also, as noted above, a letter of credit must be payable to a standby trust fund. Information on the qualifications of trustees of standby trusts is provided in Section A.12.

A.6.2 Level of Coverage

A letter of credit must be in an amount that is at least equal to the licensee's prescribed amount or estimated cost of decommissioning. The exception to this rule is a letter of credit that is being combined with another financial mechanism. For a combination of mechanisms, the *sum* of the coverage provided by the mechanisms must be at least equal to the required coverage level. If the licensee's prescribed amount or estimated decommissioning cost increases to a level above the amount assured by the letter of credit, the licensee must either (1) revise the letter of credit to assure the higher amount or (2) obtain another financial assurance mechanism to make up the difference between the new coverage level and the amount of the letter of credit.

A.6.3 Recommended Documentation

Licensees who use letters of credit to provide financial assurance for decommissioning must submit a copy of the letter of credit and other documentation as discussed below and summarized in Checklist 6-A. Supporting documentation may differ for licensees who submit letters of credit that differ from the recommended model.

The *letter of credit* (along with any amendments) signed by an authorized representative from the issuing bank. The wording of a letter of credit may vary, but Section A.6.4 of this appendix is a model letter of credit that would meet NRC's requirements and is recommended by NRC. Licensees who use other wording should refer to Checklist 6-B to be sure that their wording contains all the necessary terms and conditions.

A *standby trust fund* must be established to receive funds from the letter of credit. The standby trust fund should satisfy the criteria described in Section A.12 and in Checklist 12-A of this appendix.

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Checklist 6-B Terms and Conditions Needed in Decommissioning Letters of Credit

Use this checklist only if deviating from the wording recommended in Section A.6.4.

☐ The instrument must be entitled an "irrevocable letter of credit."

☐ The name of the issuing financial institution must be identified on the letter of credit.

☐ The letter should be limited in amount.

☐ The letter of credit must contain a specified expiration date or be written for a definite term.

☐ The issuer's obligation to pay should arise only upon presentation of a draft or other documents specified in the letter of credit.

☐ The letter of credit must be automatically renewed at each expiration date unless notification by certified mail is received by NRC and the licensee at least 90 days prior to nonrenewal.

☐ An automatic payment provision must be included that if the licensee is unable to secure alternative financial assurance to replace the letter of credit within 30 days of notification of cancellation, NRC may draw upon the letter of credit prior to cancellation.

☐ Statement of licensee's regulatory obligations as reason for the letter of credit.

☐ The letter of credit must be payable to a standby trust.

☐ Notice of insolvency or violation of banking requirements.

☐ The bank must not be called upon to determine a question of fact or law at issue between the licensee and NRC.

☐ The licensee should have an unqualified obligation to reimburse the issuer for payments made under the letter of credit.

☐ Signature and title of officials of issuing institution (signature block).

☐ Date (signature block).

☐ Standards under which the letter of credit may be interpreted (i.e., *Uniform Customs and Practice for Documentary Credits* or Uniform Commercial Code).

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A.6.4 Model Letter of Credit

IRREVOCABLE STANDBY LETTER OF CREDIT NO. [*INSERT NUMBER*]

This Credit Expires [*insert date*]

Issued To: U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No. _____ in your favor, at the request and for the account of [*insert name, address, and NRC license and docket numbers of licensee*] up to the aggregate amount of [*insert dollar amount in words*], U.S. dollars $_____, available upon presentation of:

(1) your sight draft, bearing reference to this Letter of Credit No. _____, and

(2) your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the U.S. Nuclear Regulatory Commission."

This letter of credit is issued in accordance with regulations issued under the authority of the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974. NRC has promulgated regulations in title 10, Chapter I of the *Code of Federal Regulations*, Part [*insert 30, 40, or 70*], which require that a holder of, or an applicant for, a materials license issued under 10 CFR Part [*insert 30, 40, or 70*] provide assurance that funds will be available when needed for decommissioning.

This letter of credit is effective as of [*insert date*] and shall expire on [*insert date at least 1 year later*], but such expiration date shall be automatically extended for a period of [*insert time period of at least 1 year*] on [*insert date*] and on each successive expiration date, unless, at least 90 days before the current expiration date, we notify both you and [*insert name of licensee*], by certified mail, as shown on the signed return receipts. If [*insert name of licensee*] is unable to secure alternative financial assurance to replace this letter of credit within 30 days of notification of cancellation, NRC may draw upon the full value of this letter of credit prior to cancellation. The bank shall give immediate notice to the applicant and NRC of any notice received or action filed alleging (1) the insolvency or bankruptcy of the financial institution or (2) any violation of regulatory requirements that could result in suspension or revocation of the bank's charter or license to do business. The financial institution also shall give immediate notice if the bank, for any reason, becomes unable to fulfill its obligation under the letter of credit.

Whenever this letter of credit is drawn on, under and in compliance with the terms of this letter of credit, we shall duly honor such draft upon its presentation to us within 30 days, and we shall deposit the amount of the draft directly into the standby trust fund of [*insert name of licensee*] in accordance with your instructions.

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Each draft must bear on its face the clause: "Drawn under Letter of Credit No. _____, dated _____, and the total of this draft and all other drafts previously drawn under this letter of credit does not exceed [*insert amount of letter of credit*]."

[*Signature(s) and title(s) of official(s) of issuing institution*]
[*Name, address, and phone number of issuing institution*]
[*Date*]

This credit is subject to [*insert "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"*].

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A.7 Insurance Policies

A decommissioning *insurance policy* is a guarantee by an insurance company to fund decommissioning. An insurance policy used for decommissioning financial assurance must be open-ended or, if written for a specified term (such as 5 years), must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies both NRC and the licensee of its intention not to renew. An insurance policy must also provide that the full face amount of the policy be paid to the beneficiary automatically prior to expiration, without proof of forfeiture, if the licensee fails to provide a replacement mechanism acceptable to NRC within 30 days after receipt of notification of cancellation.

Funds drawn from an insurance policy must be placed directly into a "standby trust fund" if the licensee fails to conduct decommissioning as required. A standby trust fund is simply a trust fund that is not yet funded but is otherwise ready to accept monies in the event they are received from a particular source (such as an insurance policy). Funds in the standby trust would then be available to pay the costs of decommissioning, just as they would with an ordinary trust fund. (See Section A.12 for more information on standby trust funds.)

The remainder of this section discusses the primary criteria that determine whether particular insurance policy submissions will be acceptable to NRC.

- Section A.7.1 describes qualifications required of the issuer (the insurance company).
- Section A.7.2 addresses the adequacy of coverage.
- Section A.7.3 discusses the documentation that supports an insurance policy.

This section also contains two checklists designed to assist licensees in preparing acceptable insurance policies. Checklist 7-A summarizes the primary criteria used by NRC to evaluate insurance policies. Checklist 7-B presents terms and conditions that are recommended for insurance policies. NRC has not yet developed model insurance policy wording that is acceptable to insurers and to NRC.

Checklist 7-A Insurance Policies

☐ Documentation is complete when the following are included:

- ☐ 1. insurance policy (originally signed duplicate),
- ☐ 2. standby trust agreement and all supporting documentation (see Section A.12 and attach Checklist 12-A), and
- ☐ 3. Checklist 7-B.

☐ The insurance company is licensed by State regulatory authorities to transact business as an insurer in one or more U.S. States.

☐ The amount of the insurance policy equals or exceeds the required coverage level.

A.7.1 Qualifications of the Issuer

An insurance company that issues a policy to provide financial assurance for decommissioning must be licensed by State regulatory authorities to transact business as an insurer in one or more U.S. States. This standard prevents licensees from using policies issued by insurers that are not subject to oversight by at least one U.S. State regulatory authority. Insurance policies issued by "captive" insurers (insurers owned by at least one of the parties for which they provide coverage) may not be used by licensees to provide financial assurance for decommissioning. Captive insurers (1) are less strictly regulated than commercial insurers, (2) may not be monitored closely after their operations have been approved, and (3) usually do not have access to guarantee funds that pay claims in the event the insurer is not able to do so.

To determine whether a particular insurer is qualified, licensees should contact the State insurance commission for the State in which the insurer is located, or the National Association of Insurance Commissioners (NAIC) at (816) 842-3600 or <http://www.naic.org/cis/>, and confirm that the insurer is licensed by a State regulatory authority to transact business as an insurer in one or more U.S. States.

Also, as noted above, an insurance policy must be payable to a standby trust fund. Information on the qualifications of trustees of standby trusts is provided in Section A.12.

A.7.2 Level of Coverage

An insurance policy used as a decommissioning financial assurance mechanism must provide coverage that is at least equal to the licensee's prescribed amount or estimated cost of decommissioning. The exception to this rule is an insurance policy that is being combined with another financial mechanism. For a combination of mechanisms, the *sum* of the coverage provided by the mechanisms must be at least equal to the required coverage level. Note that an annuity policy that would gradually increase coverage over time to equal decommissioning costs would *not* be acceptable (unless accompanied by some other financial assurance mechanism to make up any shortfall). If the licensee's prescribed amount or estimated decommissioning cost increases to a level above the amount assured by the insurance policy, the licensee must either (1) revise the insurance policy to assure the higher amount or (2) obtain another financial assurance mechanism to make up the difference between the new coverage level and the amount of the insurance policy.

A.7.3 Recommended Documentation

Licensees who use insurance policies to provide financial assurance for decommissioning must submit a copy of the insurance policy and other documentation as discussed below and summarized in Checklist 7-A.

- A copy of the *insurance policy* (along with any endorsements or amendments) signed by an authorized representative from the insurance company. Licensees should refer to Checklist 7-B to be sure that the insurance policy contains all the necessary terms and conditions.

Licensees should also maintain in their records any *certificates of insurance* signed by individuals authorized to act for the licensee and the insurer. Certificates of insurance can be helpful in clarifying any ambiguities that may exist in the insurance policy.

- A *standby trust fund* must be established to receive funds from the insurance policy. The standby trust fund should satisfy the criteria described in Section A.12 and in Checklist 12-A of this appendix.

Checklist 7-B Terms and Conditions Needed in Decommissioning Insurance Policies

☐ Name and address of licensee.

☐ NRC license number; docket number; name and address of facility.

☐ Name and address of insurer.

☐ Amount of insurance policy (limit of liability).

☐ Premium.

☐ Effective date of policy.

☐ Expiration date of policy.

☐ Statement of licensee's regulatory obligations as reason for policy.

☐ The insurance policy must be either open-ended or renewed automatically.

☐ The insurer issuing the mechanism must notify the licensee and NRC by certified mail at least 90 days prior to cancellation or nonrenewal.

☐ An automatic payment provision must be included that, if the licensee is unable to secure alternative financial assurance to replace the policy within 30 days of notification of cancellation, NRC may draw upon the policy prior to cancellation.

☐ The insurance policy must be payable to a standby trust.

☐ Signatures.

☐ Date.

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A.8 Parent Company Guarantees

A *parent company guarantee* is a guarantee from a licensee's parent company that it will fund decommissioning activities if the licensee fails to do so. The parent company must annually pass (within 90 days after the close of each succeeding fiscal year) one of two financial tests specified in Appendix A to 10 CFR Part 30 to demonstrate that it has adequate financial strength to provide the guarantee. The financial tests specified in Appendix A to 10 CFR Part 30 also apply to licensees regulated under 10 CFR Parts 40, 70, and 72. The financial test alternatives (see below) consider accounting ratios, net worth, assets, and bond rating data relative to fixed criteria. Also, the parent company's financial statements must have been prepared in accordance with generally accepted accounting principles applicable to the United States, and an independent certified public accountant must have verified the accuracy of the financial test data relative to the audited financial statements.

A parent company guarantee must remain in force unless the parent company sends notice of cancellation by certified mail to both NRC and the licensee at least 120 days in advance (as evidenced by the return receipts). However, a parent company guarantee may be used only as long as the parent company meets the financial test criteria. If the parent company no longer passes the financial test, it must provide alternative financial assurance if the licensee does not do so.

If the guarantee is drawn upon because the licensee fails to carry out decommissioning, the parent company must fund decommissioning activities. Funds drawn from a parent company guarantee should be placed directly into a "standby trust fund." A standby trust fund is simply a trust fund that is not yet funded but is otherwise ready to accept monies in the event they are received from a particular source (such as a parent company guarantee). Funds in the standby trust would then be available to pay the costs of decommissioning, just as they would with an ordinary trust fund. (See Section A.12 for more information on standby trust funds.)

The remainder of this section discusses the primary criteria that determine whether particular parent company guarantee submissions will be acceptable to NRC.

- Section A.8.1 describes qualifications required of the parent company guarantor.
- Section A.8.2 addresses the adequacy of coverage.
- Section A.8.3 discusses the documentation that supports a parent company guarantee.
- Section A.8.4 presents a model parent company guarantee that NRC has found to be acceptable.

This section also contains two checklists designed to assist licensees in preparing acceptable parent company guarantees. Checklist 8-A summarizes the primary criteria used by NRC to evaluate parent company guarantees. Checklist 8-B (which should be used only by licensees who revise or do not use the model wording for parent company guarantees) presents terms and conditions that are recommended for parent company guarantees.

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Checklist 8-A Parent Company Guarantees

☐ Documentation is complete when the following are included:

- ☐ 1. parent company guarantee agreement (originally signed duplicate),
- ☐ 2. letter from chief executive officer of licensee,
- ☐ 3. letter from chief financial officer of parent company, including parent company guarantee financial test (Financial Test I or II),
- ☐ 4. auditor's special report confirming the chief financial officer (CFO) letter and reconciling amounts in the CFO letter with parent company's financial statements,
- ☐ 5. parent company's audited financial statements for the most recent fiscal year, including the auditor's opinion on the financial statements,
- ☐ 6. standby trust agreement and all supporting documentation (see Section A.12 and attach Checklist 12-A), and
- ☐ 7. checklist 8-B (if model parent company guarantee wording is modified or not used).

☐ The parent company has majority control of the licensee (if not, details on the parent-subsidiary relationship have been submitted to NRC for review).

☐ The amount of the parent company guarantee equals or exceeds the required coverage level.

A.8.1 Qualifications of the Parent Company Guarantor

A parent company guarantee must be provided by the parent company of the licensee. Normally, the parent company must have majority control of the licensee (although NRC may consider exceptions to this rule on a case-by-case basis). To qualify to provide the guarantee, the parent company must meet one of the two financial tests specified in Appendix A to 10 CFR Part 30. These two financial tests, shown below, differ in that one includes a bond rating criterion while the other does not. Parent companies without an actual bond rating may still use the bond rating alternative of the financial test by obtaining a so-called "indicative" bond rating from either Standard & Poor's or Moody's. Indicative bond ratings, which are available for a fee, are for information only and are provided as an indication of what a rating would be if the firm were to issue debt. A parent company seeking to use an indicative bond rating should submit the rating and name of the rating service as part of the financial test demonstration. In this case, however, the company would not be able to provide NRC with information on the dates of issuance and maturity of the bond, nor would it be able to certify that the rating pertained to its "most recent bond issuance." Rather, the parent company would explain that the rating is an indicative rating. The parent company would also update the indicative rating every year as it repeats the passage of the financial test.

For purposes of the financial test, bond ratings must apply to outstanding, rated bonds that are not secured by insurance, a letter of credit, or other collateral or guarantee. The bonds must also have been issued *directly* by the parent company, rather than by any other entity.

As noted above, a parent company guarantee should be payable to a standby trust fund. Information on the qualifications of trustees of standby trusts is provided in Section A.12.

Financial Test I

The parent company must have the following:

(i) Two of the following three ratios: A ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(ii) Net working capital and tangible net worth each at least six times the amount of decommissioning funds being assured by the parent company guarantee for the total of all nuclear facilities or parts thereof (or prescribed amount, if certification is used); and

(iii) Tangible net worth of at least $21 million; and

(iv) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the current decommissioning cost estimates (or prescribed amount, if applicable).

Financial Test II

The parent company must have the following:

(i) A current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, A, or BBB (including adjustments of + and -) as issued by Standard & Poor's, or Aaa, Aa, A, or Baa (including adjustments of 1, 2, or 3) as issued by Moody's; and

(ii) Net worth at least six times the amount of decommissioning funds being assured by the parent company guarantee for the total of all nuclear facilities or parts thereof (or prescribed amount, if certification is used); and

(iii) Tangible net worth of at least $21 million; and

(iv) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the current decommissioning cost estimates (or prescribed amount, if applicable).

A.8.2 Level of Coverage

A parent company guarantee must be in an amount that is at least equal to the licensee's prescribed amount or estimated cost of decommissioning, or, if a sinking fund is used in combination with the parent company guarantee, the amount of the difference between the amount of the sinking fund and the prescribed amount or estimated cost of decommissioning. If the licensee's prescribed amount or estimated decommissioning cost increases to a level above the amount assured by the parent company guarantee (or the sum of the sinking fund and parent company guarantee), the licensee must revise the guarantee to assure the higher amount (or must

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replace the guarantee with a different financial assurance mechanism that is in the amount of the new coverage level).

A.8.3 Recommended Documentation

The terms and conditions of a parent company guarantee are governed by a written guarantee agreement. The wording of a parent company guarantee agreement may vary, but Section A.8.10 of this appendix is a model parent company guarantee agreement that would meet NRC's requirements and is recommended by NRC. Other documentation that is to be submitted with a parent company guarantee includes the following and is summarized in Checklist 8-A. Supporting documentation may differ for licensees who submit parent company guarantees that differ from the recommended model.

The *guarantee agreement* is the written document that specifies the terms and conditions of the parent company guarantee. The wording in the model guarantee presented in Section A.8.10 is acceptable to NRC. Licensees who use other wording should refer to Checklist 8-B to be sure that the alternative wording contains all the necessary terms and conditions.

The *chief executive officer (CEO) letter* (Section A.8.4) is a letter from the ***CEO of the licensee*** that (1) certifies that the licensee is a going concern, (2) identifies the amount of the licensee's tangible net worth, (3) specifies whether the licensee is required to file a Form 10-K with the U.S. Securities and Exchange Commission, and (4) states the date on which the licensee's fiscal year ends.

The *chief financial officer (CFO) letter* (Section A.8.5) is a letter from the ***CFO of the parent company*** that (1) identifies the names, addresses, license numbers, and estimated decommissioning costs of the facilities covered by the guarantee and (2) demonstrates the parent company's ability to pass either of the two financial tests specified in Appendix A to 10 CFR Part 30. The parent company must pass the financial test for ***all*** costs covered by a financial test. These include costs covered by (1) the parent company guarantee, (2) other NRC or Agreement State parent company guarantees or self-guarantees, and (3) parent company guarantees, self-guarantees, or financial tests of other Federal or State agencies (e.g., EPA).

The *auditor's special report* (Section A.8.8) is a report from the parent company's independent certified public accountant that compares the data used by the parent company in the financial test demonstration with the amounts in its annual financial statements, evaluates the parent company's off-balance sheet transactions, and provides an opinion on whether those transactions could materially adversely affect the parent company's ability to pay for decommissioning costs. The auditor's report must also verify that a bond rating, if used to demonstrate passage of the financial test, meets the requirements specified in the rule. If needed, this report may also include a *schedule attachment* (Section A.8.9) reconciling the financial test numbers with amounts in the parent company's financial statements.

A copy of the parent company's *audited financial statements* for the most recent completed fiscal year. These financial statements should include the independent certified public accountant's opinion on the statements.

Evidence that the parent company has majority control of the licensee. Such evidence can include incorporation agreements (i.e., copies of submissions to the appropriate State Corporation Commission), Schedule 22 from the parent company's SEC Form 10-K, or a certified corporate resolution that the licensee and the parent company guarantor are separate and distinct corporate entities and that the parent company controls a majority of the voting stock of the subsidiary. If the parent company does not have majority control of the licensee's voting stock, the licensee should provide details on the parent-subsidiary relationship to NRC for review.

A *standby trust fund* must be used with parent company guarantees. The standby trust fund should be ready to receive funds from the guarantee. The standby trust fund that satisfies the criteria described in Section A.12 and in Checklist 12-A of this appendix must be established before the parent company guarantee agreement is submitted.

Checklist 8-B Terms and Conditions Needed in Parent Company Guarantees

Use this checklist only if deviating from the wording recommended in Section A.8.10.

- ☐ Name and address of guarantor.
- ☐ Name and address of licensee.
- ☐ Name and address of regulatory agency.
- ☐ The following five recitals are included:
  - ☐ 1. the authority of the guarantor to enter into the guarantee;
  - ☐ 2. the licensee's regulatory obligations as reason for the parent guarantee;
  - ☐ 3. the names, addresses, and license numbers of the facilities for which the guarantee provides financial assurance and the amounts guaranteed for decommissioning activities;
  - ☐ 4. financial test I or II used by guarantor to demonstrate financial strength; and
  - ☐ 5. the guarantor's authority to provide the guarantee, such as ownership of the licensee as evidenced by majority control of the voting stock of the licensee.
- ☐ Description of the primary obligation (required activities).
- ☐ Unequivocal statement of guarantee includes the following:
  - ☐ 1. recitation of the consideration for the guarantee; and
  - ☐ 2. liability of the guarantor:
    - ☐ a. limitation of liability,
    - ☐ b. conditions of liability, and
    - ☐ c. effect on liability of a change in the status of the licensee.

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Checklist 8-B Terms and Conditions Needed in Parent Company Guarantees (continued)

- ☐ Statement that guarantor remains bound despite amendment or modification of license, reduction or extension of time of performance of required activities, or any other modification or alteration of an obligation of the licensee.
- ☐ Notice requirements.
- ☐ Discharge of the guarantor (release of obligations).
- ☐ Termination and revocation:
  - ☐ 1. termination on occurrence of contingency;
  - ☐ 2. voluntary revocation by guarantor; and
  - ☐ 3. effective date of termination or revocation.
- ☐ Guarantor's agreement to be subject to Commission orders.
- ☐ Guarantor's agreement to Commission's remedies in case of financial distress, i.e., bankruptcy or insolvency events.
- ☐ Guarantor's agreement to notify in case of financial distress, i.e., bankruptcy or insolvency events.
- ☐ Date.
- ☐ Signatures.
  - ☐ 1. Authorized signature for the guarantor.
  - ☐ 2. Authorized signature for licensee.
- ☐ Signature of witness or notary (signature block).

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A.8.4 Model Chief Executive Officer (CEO) Letter

[*Address to U.S. Nuclear Regulatory Commission*]

I am the chief executive officer of [*insert name and address of licensee*], a [*insert "proprietorship," "partnership," or "corporation"*]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in 10 CFR Part [*insert 30, 40, 70, or 72*].

I hereby certify that [*insert name of licensee*] is currently a going concern, and that it possesses positive tangible net worth in the amount of [*insert amount*].

This firm [*insert "is required" or "is not required"*] to file a Form 10-K with the U.S. Securities and Exchange Commission for the latest fiscal year. This fiscal year of this firm ends on [*insert month and day*].

I hereby certify that the content of this letter is true and correct to the best of my knowledge.

[*Signature*]
[*Name*]
[*Title*]
[*Date*]

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A.8.5 Model Chief Financial Officer (CFO) Letter

[*Address to U.S. Nuclear Regulatory Commission*]

I am the chief financial officer of [*insert name and address of parent guarantor*], a [*insert "proprietorship," "partnership," or "corporation"*]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in 10 CFR Part [*insert 30, 40, 70, or 72*].

[*Complete the following paragraph regarding facility(ies) and associated cost estimates or certified amounts. For each facility, include its license number, name, address, and current cost estimates or certified amounts for the specified activities.*]

This firm guarantees, through the parent company guarantee submitted to demonstrate compliance under 10 CFR Part [*insert 30, 40, 70, or 72*], the decommissioning of the following facilities owned or operated by subsidiaries of this firm. The current cost estimates or certified amounts for decommissioning, so guaranteed, are shown for each facility:

Name of Facility	License Number	Location of Facility	Certified Amounts or Current Cost Estimates

This firm [*insert "is required" or " is not required"*] to file a Form 10-K with the U.S. Securities and Exchange Commission for the latest fiscal year.

This fiscal year of this firm ends on [*insert month and day*]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements and footnotes for the latest completed fiscal year, ended [*insert date*]. A copy of this firm's most recent financial statements is enclosed.

[*Insert completed Financial Test I or II of the parent company.*]

I hereby certify that the content of this letter is true and correct to the best of my knowledge.

[*Signature*]
[*Name*]
[*Title*]
[*Date*]

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A.8.6 Model Parent Company Guarantee Financial Test I

1. Current decommissioning cost estimates or certified amounts

   a. Decommissioning amounts covered by this parent company guarantee $_____

   b. All decommissioning amounts covered by other NRC or Agreement State parent company guarantees or self-guarantee $_____

   c. All amounts covered by parent company guarantees, self-guarantees, or financial tests of other Federal or State agencies (e.g., EPA) $_____

TOTAL $_____

*2. Total liabilities (if any portion of the cost estimates for decommissioning is included in total liabilities on your firm's financial statements, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4) $_____

*3. Tangible net worth** $_____

*4. Net worth*** $_____

*5. Current assets $_____

*6. Current liabilities $_____

*7. Net working capital (line 5 minus line 6) $_____

*8. The sum of net income plus depreciation, depletion, and amortization $_____

*9. Total assets in United States (required only if less than 90 percent of firm's assets are located in the United States) $_____

	Yes	No
10. Is line 3 at least $21 million?	____	____
11. Is line 3 at least 6 times line 1?	____	____
12. Is line 7 at least 6 times line 1?	____	____
13. Are at least 90 percent of firms' assets located in the United States? If not, complete line	____	____
14. Is line 9 at least 6 times line 1?	____	____

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Guarantor must meet two of the following three ratios:

15. Is line 2 divided by line 4 less than 2.0? ___ ___

16. Is line 8 divided by line 2 greater than 0.1? ___ ___

17. Is line 5 divided by line 6 greater than 1.5? ___ ___

Notes:

* Denotes figures derived from financial statements.

** Tangible net worth is defined as net worth, excluding goodwill, patents, trademarks, copyrights, and the net book value of the nuclear facility and site.

*** Excluding the net book value of the nuclear facility and site.

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A.8.7 Model Parent Company Guarantee Financial Test II

1. Current decommissioning cost estimates or certified amounts

   a. Decommissioning amounts covered by this parent company guarantee $_____

   b. All decommissioning amounts covered by other NRC or Agreement State parent company guarantees or self-guarantees $_____

   c. All amounts covered by parent company guarantees, self-guarantees, or financial tests of other Federal or State agencies (e.g., EPA) $_____

TOTAL $_____

2. Current bond rating of most recent uninsured, uncollateralized and unencumbered issuance of this firm

   Rating _____

   Name of rating service _____

3. Date of issuance of bond _____

4. Date of maturity of bond _____

*5. Tangible net worth** (if any portion of estimates for decommissioning is included in total liabilities on your firm's financial statements, you may add the amount of that portion to this line) $_____

*6. Total assets in United States (required only if less than 90 percent of firm's assets are located in the United States) $_____

	Yes	No
7. Is line 5 at least $21 million?	____	____
8. Is line 5 at least 6 times line 1?	____	____
9. Are at least 90 percent of firm's assets located in the United States? If not, complete line 10.	____	____
10. Is line 6 at least 6 times line 1?	____	____

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11. Is the current rating, specified on line 2, for its most recent uninsured, uncollateralized, and unencumbered bond issuance AAA, AA, A, or BBB (including adjustments of + and -) as issued by Standard & Poor's, or Aaa, Aa, A, or Baa (including adjustments of 1, 2, or 3) as issued by Moody's; ___ ___

Notes:

* Denotes figures derived from financial statements.

** Tangible net worth is defined as net worth excluding goodwill, patents, trademarks, copyrights, and the net book value of the nuclear facility and site.

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A.8.8 Model Auditor's Special Report

CONFIRMATION OF CHIEF FINANCIAL OFFICER'S LETTER

We have examined the financial statements of [*insert name of parent guarantor*] for the year ended [*insert date*], and have issued our report thereon dated [*insert date*]. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary.

[*Insert name of parent guarantor*] has prepared documents to demonstrate its financial responsibility under NRC's financial assurance regulations, 10 CFR Part [*insert 30, 40, 70, or 72*]. This letter is furnished to assist the licensee [*insert name and NRC license number*] in complying with these regulations and should not be used for other purposes.

The attached schedule reconciles the specified information furnished in the chief financial officer's (CFO's) letter in response to the regulations with the company's financial statements. In connection therewith, we have

1. Confirmed that the amounts in the column "Per Financial Statements" agree with amounts contained in the company's financial statements for the year ended [*insert date*];

2. Confirmed that the amounts in the column "Per CFO's Letter" agree with the letter prepared in response to NRC's request;

3. Confirmed that the amounts, if any, in the column "Reconciling Items" are adequately explained in the attached schedule, that each reconciling item represents an appropriate adjustment to the financial data, and that the amount of each reconciling item is accurate; and

4. Recomputed the totals and percentages.

   Because the procedures in 1–4 above do not constitute a full examination made in accordance with generally accepted auditing standards, we do not express an opinion on the manner in which the amounts were derived in the items referred to above. In connection with the procedures referred to above, no matters came to our attention that cause us to believe that the chief financial officer's letter and supporting information should be adjusted.

We have evaluated the off-balance sheet transactions [*insert name of parent guarantor*] and it is our opinion that these transactions [could] [could not] materially adversely affect the ability of *[insert name of parent guarantor*] to pay decommissioning costs.

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We [have] [have not] confirmed that the bond rating, if used to demonstrate passage of the financial test, conforms to the description furnished in the CFO's letter in response to the regulations.

_____
Signature

_____
Date

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A.8.9 Model Schedule Reconciling Amounts Contained in Chief Financial Officer's Letter with Amounts in Financial Statements

XYZ COMPANY
YEAR ENDED DECEMBER 31, 20XX

Per Line Number in CFO's Letter		Per Financial Statements	Reconciling Items	CFO's Letter
6	Total current liabilities	X		
	Long-term debt	X		
	Deferred income taxes	X		
		XXX		
	Accrued decommissioning costs included in current liabilities		X	
	Total liabilities (less accrued decommissioning costs)			X
4	Net worth	XX		
	Less: Cost in excess of value of tangible assets acquired	X		
		X		
	Accrued decommissioning costs included in current liabilities		X	
	Tangible net worth (plus decommissioning costs)			X

Note:

(Balance of schedule is not illustrated.)
This illustrates the form of schedule that is contemplated. Details and reconciling items will differ in specific situations.

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A.8.10 Model Parent Company Guarantee Agreement

PARENT COMPANY GUARANTEE

Guarantee made this [*insert date*] by [*insert name of guaranteeing entity*], a [*insert "proprietorship," "partnership," or "corporation"*] organized under the laws of the State of [*insert name of State*], herein referred to as "guarantor," to the U.S. Nuclear Regulatory Commission (NRC), beneficiary, on behalf of our subsidiary [*insert name of licensee*], of [*insert business address*].

Recitals

1. The guarantor has full authority and capacity to enter into this guarantee [*if the guarantor is a corporation, insert the following: "under its bylaws, articles of incorporation, and the laws of the State of [insert guarantor's State of incorporation], its State of incorporation."*] [*If the guarantor has a Board of Directors, insert the following: "Guarantor has approval from its Board of Directors to enter into this guarantee."*]
2. This guarantee is being issued so that [the licensee] will be in compliance with regulations issued by NRC, an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974. NRC has promulgated regulations in title 10, Chapter I of the *Code of Federal Regulations*, Part [*insert 30, 40, 70, or 72*] which require that a holder of, or an applicant for, a materials license issued pursuant to 10 CFR Part [*insert 30, 40, 70, or 72*] provide assurance that funds will be available when needed for required decommissioning activities.
3. The guarantee is issued to provide financial assurance for decommissioning activities for [*identify name and address of licensed facility(ies) and corresponding NRC license number(s)*] as required by 10 CFR Part [*insert 30, 40, 70, or 72*]. The decommissioning costs for these activities are as follows: [*insert amount of decommissioning costs guaranteed for each identified facility*].
4. The guarantor meets or exceeds the following financial test criteria [*insert statement indicating which financial test is being used*] and agrees to comply with all notification requirements as specified in 10 CFR Part [*insert 30, 40, 70, or 72*] and Appendix A to 10 CFR Part 30.

The guarantor meets one of the following two financial tests:

(a)(i) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(a)(ii) Net working capital and tangible net worth each at least six times the costs covered by financial tests; and

(a)(iii) Tangible net worth of at least $21 million; and

(a)(iv) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the costs covered by financial tests.

OR

(b)(i) A current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, A, or BBB (including adjustment of + or -) as issued by Standard & Poor's, or Aaa, Aa, A or Baa (including adjustment of 1, 2, or 3) as issued by Moody's; and

(b)(ii) Tangible net worth at least six times the costs covered by financial tests; and

(b)(iii) Tangible net worth of at least $21 million; and

(b)(iv) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the costs covered by financial tests.

5. The guarantor has majority control of the voting stock for the following licensees covered by this guarantee: [*List for each licensee: name, address, the facilities owned or operated by each licensee, and the corresponding license numbers.*]

6. Decommissioning activities as used below refer to the activities required by 10 CFR Part [*insert 30, 40, 70, or 72*] for decommissioning of the facilities identified above.

7. For value received from [*insert name of licensee*], and pursuant to the guarantor's authority to enter into this guarantee, the guarantor guarantees to NRC that if the licensee fails to perform the required decommissioning activities, as required by License No. [*insert license number*], the guarantor shall pay into the standby trust fund the amount of the current cost estimates for these activities.

8. The guarantor agrees to submit revised financial statements, financial test data, and an auditor's special report and reconciling schedule annually within 90 days of the close of the parent guarantor's fiscal year.

9. The guarantor and the licensee agree that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, the guarantor and the licensee shall send within 90 days of the end of the fiscal year, by certified mail, notice to NRC. If the licensee fails to provide alternative financial assurance as specified in 10 CFR Part [*insert 30, 40, 70, or 72*], and obtain written approval of such assurance from the NRC within 120 days after the end of the fiscal year, the guarantor shall establish such financial assurance in the name of [*insert name of licensee*] or make full payment under the guarantee to the standby trust.

10. Independent of any notification under paragraph 9 above, if the NRC determines for any reason that the guarantor no longer meets the financial test criteria or that it is disallowed from continuing as a guarantor for the facility under License No. [insert license number], the guarantor agrees that within 30 days after being notified by the NRC of such determination, an alternative financial assurance mechanism as specified in 10 CFR Part 30, 40, 70, or 72 as applicable, shall be established by the guarantor in the name of [licensee] unless [licensee] has done so.

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11. The guarantor also agrees to notify the NRC promptly if the ownership of the licensee or the parent firm is transferred and to maintain this guarantee until the new parent firm or the licensee provides alternative financial assurance acceptable to the NRC.

12. The guarantor agrees that if it determines, at any time other than as described in Recital 9, that it no longer meets the financial test criteria or it is disallowed from continuing as a guarantor, it shall establish alternative financial assurance as specified in 10 CFR Part 30, 40, 70, or 72, as applicable, within 30 days, in the name of [*insert name of licensee*] unless [*insert name of licensee*] has done so.

13. The guarantor as well as its successors and assigns agree to remain bound jointly and severally under this guarantee notwithstanding any or all of the following: amendment or modification of license or NRC-approved decommissioning funding plan for that facility, the extension or reduction of the time of performance of required activities, or any other modification or alteration of an obligation of the licensee pursuant to 10 CFR Part [*insert 30, 40, 70, or 72*].

14. The guarantor agrees that all bound parties shall be jointly and severally liable for all litigation costs incurred by the NRC, in any successful effort to enforce the agreement against the guarantor.

15. The guarantor agrees to remain bound under this guarantee for as long as [*insert name of licensee*] must comply with the applicable financial assurance requirements of 10 CFR Part [*insert 30, 40, 70, or 72*], for the previously listed facilities, except that the guarantor may cancel this guarantee by sending notice by certified mail to NRC and to [*insert name of licensee*], such cancellation to become effective no earlier than 120 days after receipt of such notice by both NRC and [*insert name of licensee*] as evidenced by the return receipts.

16. The guarantor agrees that if [*insert name of licensee*] fails to provide alternative financial assurance as specified in 10 CFR Part [*insert 30, 40, or 70*], as applicable, and obtain written approval of such assurance from NRC within 90 days after a notice of cancellation by the guarantor is received by both NRC and [*insert name of licensee*] from the guarantor, the guarantor shall provide such alternative financial assurance in the name of [*insert name of licensee*] or make full payment under the guarantee.

17. The guarantor agrees that it is subject to Commission orders to make payments under the guarantee agreement.

18. The guarantor agrees that if the guarantor admits in writing its inability to pay its debts generally, or makes a general assignment for the benefit of creditors, or any proceeding is instituted by or against the guarantor seeking to adjudicate it as bankrupt or insolvent, or seeking dissolution, liquidation, winding-up, reorganization, arrangement, adjustment, protection, relief or composition of it or its debts under any law relating to bankruptcy, insolvency, or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian, or other similar official for the guarantor or for any substantial part of its property, or the guarantor takes any action to authorize or effect any of the actions stated in this paragraph, then the Commission may:

    (a) Declare that the financial assurance guaranteed by the parent company guarantee agreement is immediately due and payable to the standby trust set up to protect the

public health and safety and the environment, without diligence, presentment, demand, protect or any other notice of any kind, all of which are expressly waived by guarantor; and

(b) Exercise any and all of its other rights under applicable law.

19. The guarantor agrees to notify the NRC, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of title 11 (Bankruptcy) of the United States Code (U.S.C.), or the occurrence of any other event listed in paragraph 17 of this guarantee and by or against the guarantor; the licensee; an entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensees as property of the estate; or an affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee. This notification must include: a description of the event, including major creditors, the amounts involved, and the actions taken to assure that the amount of funds guaranteed by the parent company guarantee for decommissioning will be transferred to the standby trust as soon as possible; if a petition of bankruptcy was filed, the identity of the bankruptcy court in which the petition for bankruptcy was filed; and the date of filing of any petitions.

20. The guarantor expressly waives notice of acceptance of this guarantee by NRC or by [*insert name of licensee*]. The guarantor also expressly waives notice of amendments or modifications of the decommissioning requirements and of amendments or modifications of the license.

21. If the guarantor files financial reports with the U.S. Securities and Exchange Commission, then it shall promptly submit them to NRC during each year in which this guarantee is in effect.

I hereby certify that this guarantee is true and correct to the best of my knowledge.

Effective date: _____

[*Name of guarantor*]
[*Authorized signature for guarantor*]
[*Name of person signing*]
[*Title of person signing*]

[*Name of licensee*]
[*Authorized signature for licensee*]
[*Name of person signing*]
[*Title of person signing*]

Signature of witness or notary: _____

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A.9 Self-Guarantees

A *self-guarantee* is a guarantee by a licensee itself that it will fund and carry out decommissioning activities. The licensee must annually pass (within 90 days after the close of each succeeding fiscal year) the applicable financial test specified in Appendix C, D, or E to 10 CFR Part 30 to demonstrate that it has adequate financial strength to provide the guarantee. The financial tests specified in Appendices C, D, and E to 10 CFR Part 30 also apply to licensees regulated under 10 CFR Parts 40, 70, and 72. The financial test alternatives consider accounting ratios, net worth, assets, operating revenues, and bond rating data relative to fixed criteria. Also, the licensee's financial statements must have been prepared in accordance with generally accepted accounting principles applicable to the United States, and an independent certified public accountant must have verified the accuracy of the financial test data relative to the audited financial statements. A self-guarantee may not be used in combination with other financial assurance mechanisms except a sinking fund, and may not be used in cases where a licensee has a parent company holding majority control of its voting stock.

NRC's regulations for self-guarantees apply to three general categories of licensees:

- *Commercial companies that issue bonds.* Self-guarantees by these licensees are regulated under Appendix C to 10 CFR Part 30.
- *Commercial companies that do not issue bonds*. Self-guarantees by these licensees are regulated under Appendix D to 10 CFR Part 30.
- *Nonprofit colleges, universities, and hospitals*. Self-guarantees by these licensees are regulated under Appendix E to 10 CFR Part 30.

A self-guarantee must remain in force unless the licensee sends notice of cancellation by certified mail to NRC. For a commercial licensee who issues bonds, this notice must be sent at least 120 days in advance (as evidenced by the return receipts). For a commercial licensee who does not issue bonds or a nonprofit college, university, or hospital, the guarantee may not be canceled until an alternative financial assurance mechanism is in place. However, in all cases, a self-guarantee may be used only as long as the licensee meets the financial test criteria. If the licensee no longer passes the financial test, it must provide alternative financial assurance.

Finally, the licensee must provide a written guarantee stating that it will fund and carry out the required decommissioning activities or, upon issuance of an order by NRC, will set up and fund a trust in the amount of the current decommissioning cost estimates or certified amounts.

The remainder of this section discusses the primary criteria that determine whether particular self-guarantee submissions will be acceptable to NRC.

- Section A.9.1 describes qualifications required of the self-guarantor.
- Section A.9.2 addresses the adequacy of coverage.
- Section A.9.3 discusses the documentation that supports a self-guarantee.
- Section A.9.4 presents a model self-guarantee that NRC has found to be acceptable.

This section also contains two checklists designed to assist licensees in preparing acceptable self-guarantees. Checklist 9-A summarizes the primary criteria used by NRC to evaluate self-guarantees. Checklist 9-B (which should be used only by licensees who revise or do not use the model wording for self-guarantees) presents terms and conditions that are recommended for self-guarantees.

Checklist 9-A Self-Guarantees

☐ Documentation is complete when the following are included:

- ☐ 1. self-guarantee agreement (originally signed duplicate),
- ☐ 2. letter from chief executive officer or chief financial officer of licensee, including applicable self-guarantee financial test,
- ☐ 3. auditor's special report confirming CEO or CFO letter and reconciling amounts in the CEO or CFO letter with licensee's financial statements,
- ☐ 4. licensee's audited financial statements for the most recent fiscal year, including the auditor's opinion on the financial statements, and
- ☐ 5. Checklist 9-B (if model self-guarantee wording is modified or not used)

☐ The licensee does not have a parent company holding majority control of its voting stock.

☐ The amount of the self-guarantee equals or exceeds: A) the required coverage level, or B) the difference between a sinking fund and the required coverage level, if the self-guarantee is being combined with a sinking fund.

A.9.1 Qualifications of the Self-Guarantor

As noted above, a licensee using a self-guarantee to provide financial assurance for decommissioning must *not* have a parent company holding majority control of its voting stock (see 10 CFR 30.35(f)(2), 40.36(e)(2), 70.25(f)(2), and 72.30(e)(2)). To qualify to provide the guarantee, the licensee also must meet the applicable financial test specified in Appendix C, D or E to 10 CFR Part 30 (shown in the boxes below).

- The financial test specified in Appendix C pertains to commercial companies that issue bonds.
- The financial test specified in Appendix D pertains to commercial companies that do not issue bonds.
- The financial tests specified in Appendix E pertain to nonprofit colleges, universities, and hospitals.

Licensees without an actual bond rating may still use the financial tests involving bond ratings by obtaining a so-called "indicative" bond rating from either Standard & Poor's or Moody's.

Indicative bond ratings, which are available for a fee, are for information only and are provided as an indication of what a rating would be if the firm were to issue debt. A licensee seeking to use an indicative bond rating should submit the rating and name of the rating service as part of the financial test demonstration. In this case, however, the licensee would not be able to provide NRC with information on the dates of issuance and maturity of the bond, nor would it be able to certify that the rating pertained to its "most recent bond issuance." Rather, the licensee would need to explain that the rating is an indicative rating. The licensee would also need to update the indicative rating every year as it repeats the passage of the financial test.

For purposes of the financial tests, bond ratings must apply to outstanding, rated bonds that are not secured by insurance, a letter of credit, or other collateral or guarantee, and that have been issued *directly* by the licensee, rather than by any other entity (e.g., an educational authority). In addition, ratings on revenue bonds may not be used in the financial test. The scope of revenue bond ratings is typically quite limited in that the rating considers only the adequacy of specific revenue sources pledged to repay the bonds. Revenue bonds frequently require that the pledged revenue be used to repay the bonded debt before paying other operating expenses and, therefore, do not meet NRC's regulatory requirement that the bonds be "uninsured, uncollateralized, and unencumbered." If the revenue sources are clearly adequate to repay the bonds, the revenue bond rating may be high, even if the issuer's revenue is clearly not adequate to pay other operating expenses. Thus, unlike bonds that pledge an entity's full faith and credit, ratings on revenue bonds do not reflect the overall financial condition of the issuer, as intended by NRC's self-guarantee regulations.

Financial Test for Commercial Companies that Issue Bonds

The licensee must have the following:

(i) Tangible net worth calculated to exclude the net book value of the nuclear facility and site, and any intangible assets of at least $21 million and net worth at least 10 times the amount of decommissioning funds being assured (or prescribed amount if a certification is used) for all decommissioning activities for which the company is responsible as a self-guaranteeing licensee and as a parent-guarantor for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used);

(ii) Assets located in the United States amounting to at least 90 percent of total assets or at least 10 times the current decommissioning cost estimates (or prescribed amount if a certification is used) for all decommissioning activities for which the company is responsible as a self-guaranteeing licensee and as a parent-guarantor for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used); and

(iii) A current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A (including adjustments of + and -) as issued by Standard & Poor's, or Aaa, Aa, or A (including adjustments of 1, 2, or 3) as issued by Moody's.

(Note that in order to pass the financial test, a commercial licensee who issues bonds also must have at least one class of equity securities registered under the Securities Exchange Act of 1934.)

Financial Test for Commercial Companies that Do Not Issue Bonds

The licensee must have the following:

(i) Tangible net worth greater than $21 million and at least 10 times the amount of decommissioning funds being assured (or prescribed amount if a certification is used), whichever is greater, for all decommissioning activities for which the company is responsible as a self-guaranteeing licensee and as a parent-guarantor for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used);

(ii) Assets located in the United States amounting to at least 90 percent of total assets or at least 10 times the amount of funds being assured (or prescribed amount if a certification is used) for all decommissioning activities for which the company is responsible as a self-guaranteeing licensee and as a parent-guarantor for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used); and

(iii) A ratio of cash flow divided by total liabilities greater than 0.15 and a ratio of total liabilities divided by net worth less than 1.5.

(Note that cash flow equals the sum of net income plus depreciation, depletion, and amortization.)

Financial Test for Nonprofit Colleges and Universities that Issue Bonds

The licensee must have a current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A (including adjustments of + and -) as issued by Standard & Poor's, or Aaa, Aa, or A (including adjustments of 1, 2, or 3) as issued by Moody's.

(Note that an "uninsured, uncollateralized, and unencumbered" bond issuance is one that is backed only by the issuer's full faith and credit. Such issuances are not guaranteed by a bond insurance company or backed by collateral, a letter of credit, claims on a specific revenue source, or any other property or credit.)

Financial Test for Nonprofit Colleges and Universities that Do Not Issue Bonds

The licensee must have unrestricted endowment consisting of assets located in the United States of at least $50 million, or at least 30 times the current decommissioning cost estimates (or prescribed amount if a certification is used), whichever is greater, for all decommissioning activities for which the college or university is responsible as a self-guaranteeing licensee for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used).

Financial Test for Nonprofit Hospitals that Issue Bonds

The licensee must have a current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A (including adjustments of + and -) as issued by Standard & Poor's, or Aaa, Aa, or A (including adjustments of 1, 2, or 3) as issued by Moody's.

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(Note that an "uninsured, uncollateralized, and unencumbered" bond issuance is one that is backed only by the issuer's full faith and credit. Such issuances are not guaranteed by a bond insurance company or backed by collateral, a letter of credit, claims on a specific revenue source, or any other property or credit.)

Financial Test for Nonprofit Hospitals that Do Not Issue Bonds

The licensee must have the following:

(i) (Total revenues less total expenditures) divided by total revenues must be equal to or greater than 0.04; and

(ii) Long-term debt divided by net fixed assets must be less than or equal to 0.67; and

(iii) (Current assets and depreciation fund) divided by current liabilities must be greater than or equal to 2.55; and

(iv) Operating revenues must be at least 100 times the current decommissioning cost estimates (or prescribed amount if a certification is used) for all decommissioning activities for which the hospital is responsible as a self-guaranteeing licensee.

A.9.2 Level of Coverage

A self-guarantee must be in an amount that is at least equal to the licensee's prescribed amount or estimated cost of decommissioning, which includes an adequate contingency. If the licensee's prescribed amount or estimated decommissioning cost increases to a level above the amount assured by the self-guarantee, the licensee must revise the guarantee to assure the higher amount (or must replace the guarantee with a different financial assurance mechanism that is in the amount of the new coverage level). If the self-guarantee is being combined with a sinking fund, the licensee must: 1) increase the amount of the guarantee, 2) increase the sinking fund balance or 3) a combination of both 1 and 2 in order that the level of coverage is at least equal to the licensee's new prescribed amount or new estimated cost of decommissioning.

A.9.3 Recommended Documentation

The terms and conditions of a self-guarantee are governed by a written guarantee agreement. The wording of a self-guarantee agreement may vary, but Section A.9.13 of this appendix is a model self-guarantee agreement that would meet NRC's requirements and is recommended by NRC. Other documentation that is to be submitted with a self-guarantee includes the following and is summarized in Checklist 9-A. Supporting documentation may differ for licensees who submit self-guarantees that differ from the recommended model.

- The *guarantee agreement* is the written document that specifies the terms and conditions of the self-guarantee. The wording contained in the model guarantee presented in Section A.9.13 is acceptable to NRC. Licensees who use other wording should refer to Checklist 9-B to be sure that the alternative wording contains all the necessary terms and conditions.

- The *chief executive officer (CEO) or chief financial officer (CFO) letter* (Section A.9.4) is a letter from either the CEO or CFO of the licensee that (1) identifies the names, addresses, license numbers, and estimated decommissioning costs of the facilities covered by the guarantee, (2) certifies that the licensee is a going concern, (3) identifies the amount of the licensee's tangible net worth, (4) specifies whether the licensee is required to file a Form 10-K with the U.S. Securities and Exchange Commission, (5) lists the date on which the licensee's fiscal year ends, and (6) demonstrates the licensee's ability to pass the applicable financial test specified in Appendix C, D, or E to 10 CFR Part 30. The licensee must pass the financial test for ***all*** costs covered by a financial test. These include costs covered by (1) the self-guarantee, (2) other NRC or Agreement State parent company guarantees or self-guarantees, and (3) parent company guarantees, self-guarantees, or financial tests of other Federal or State agencies (e.g., EPA).
- The *auditor's special report* (Section A.9.11) is a report from the licensee's independent certified public accountant that compares the data used by the licensee in the financial test demonstration with the amounts in its annual financial statements. If needed, this report may also include a *schedule attachment* (Section A.9.12) reconciling the financial test numbers with amounts in the licensee's financial statements.
- A copy of the licensee's *audited financial statements* for the most recently completed fiscal year. These financial statements should include the independent certified public accountant's opinion on the statements.

Checklist 9-B Terms and Conditions Needed in Self-Guarantees

Use this checklist only if deviating from the wording recommended in Section A.9.13.

☐ Name and address of self-guarantor (licensee).

☐ Name and address of regulatory agency.

☐ The following four recitals are included:

  ☐ 1. the authority of the self-guarantor to enter into the guarantee;

  ☐ 2. a statement of the licensee's regulatory obligations as reason for the self-guarantee;

  ☐ 3. identification of the facility(ies) (name, address, and license number) for which the guarantee provides financial assurance and the amounts guaranteed for decommissioning activities; and

  ☐ 4. identification of financial test used by self-guarantor to demonstrate financial strength.

☐ Description of the primary obligation (required activities).

☐ Unequivocal statement of guarantee to include the following:

  ☐ 1. condition(s) of liability, and
  ☐ 2. effect on liability of a change in the status of the licensee.

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Checklist 9-B Terms and Conditions Needed in Self-Guarantees (continued)

- ☐ Statement that self-guarantor remains bound despite amendment or modification of license, reduction or extension of time of performance of required activities, or any other modification or alteration of an obligation of the licensee.
- ☐ Notice requirements.
- ☐ Discharge of the self-guarantor (release of obligations).
- ☐ Termination and revocation to include the following:
  - ☐ 1. termination on occurrence of contingency,
  - ☐ 2. voluntary revocation by self-guarantor, and
  - ☐ 3. effective date of termination or revocation.
- ☐ Self-guarantor's agreement to be subject to Commission orders.
- ☐ Self-guarantor's agreement to Commission's remedies in case of financial distress, i.e., bankruptcy or insolvency events.
- ☐ Self-guarantor's agreement to notify in case of financial distress, i.e., bankruptcy or insolvency events.
- ☐ Date.
- ☐ Signatures.
- ☐ Signature of witness or notary (signature block).

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A.9.4 Model Chief Executive Officer (CEO) or Chief Financial Officer (CFO) Letter

[*Address to U.S. Nuclear Regulatory Commission*]

I am the [*insert "chief executive officer" or "chief financial officer"*] of [*insert name and address of licensee*], a [*insert "proprietorship," "partnership," "corporation," "nonprofit college," "nonprofit university," or "nonprofit hospital"*]. This letter is in support of this firm's use of the self-guarantee financial test to demonstrate financial assurance, as specified in 10 CFR Part [*insert 30, 40, 70, or 72*]. This firm has no parent company holding majority control of its voting stock.

[*Complete the following paragraph regarding facilities and associated cost estimates or certified amounts. For each facility, include its license number, name, address, and current cost estimates or certified amounts for the specified activities.*]

This firm guarantees, through the self-guarantee submitted to demonstrate compliance under 10 CFR Part [*insert 30, 40, 70, or 72*], the decommissioning of the following facilities owned or operated by this firm. The current cost estimates or certified amounts for decommissioning, so guaranteed, are shown for each facility:

Name of Facility	License Number	Location of Facility	Certified Amounts or Current Cost Estimates

I hereby certify that [*insert name of licensee*] is currently a going concern, and that it possesses positive tangible net worth in the amount of [*insert amount*].

This fiscal year of this firm ends on [*insert month and day*]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements and footnotes for the latest completed fiscal year, ended [*insert date*]. A copy of this firm's most recent financial statements is enclosed.

This firm [*insert "is required" or " is not required"*] to file a Form 10-K with the U.S. Securities and Exchange Commission for the latest fiscal year. [*If the licensee is a commercial company that issues bonds, insert the following: "This firm has at least one class of equity securities registered under the Securities Exchange Act of 1934."*]

This firm satisfies the following self-guarantee test:

[*Insert completed demonstration of the applicable self-guarantee financial test.*]

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I hereby certify that the content of this letter is true and correct to the best of my knowledge.

[*Signature*]
[*Name*]
[*Title*]
[*Date*]

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A.9.5 Model Self-Guarantee Financial Test for Commercial Companies that Issue Bonds (10 CFR Part 30, Appendix C)

1. Current decommissioning cost estimates or certified amounts

   a. Decommissioning amounts covered by this self-guarantee $_____

   b. All decommissioning amounts covered by other NRC or Agreement State parent company guarantees or self-guarantees $_____

   c. All amounts covered by parent company guarantees, self-guarantees, or financial tests of other Federal or State agencies (e.g., EPA) $_____

TOTAL $_____

2. Current bond rating of most recent uninsured, uncollateralized, and unencumbered issuance of this firm

   Rating _____

   Name of rating service _____

3. Date of issuance of bond _____

4. Date of maturity of bond _____

*5. Tangible net worth** (if any portion of estimates for decommissioning is included in total liabilities on your firm's financial statements, you may add the amount of that portion to this line) $_____

*6. Total assets in United States (required only if less than 90 percent of firm's assets are located in the United States) $_____

	Yes	No
7. Is line 5 at least 10 times line 1?	___	___
8. Are at least 90 percent of firm's assets located in the United States? If not, complete line 9.	___	___
9. Is line 6 at least 10 times line 1?	___	___
10. Is the rating specified on line 2 AAA, AA, or A (including adjustments of + and -) as issued by Standard and Poor's or Aaa, Aa, or A (including adjustments of 1, 2, or 3) as issued by Moody's?	___	___

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11. Does the licensee have at least one class of equity securities registered under the Securities Exchange Act of 1934? ___ ___

_____

Notes:

* Denotes figures derived from financial statements.

** Tangible net worth is defined as net worth minus intangible assets (goodwill, patents, trademarks, and copyrights) and excluding the net book value of the nuclear facility and site.

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A.9.6 Model Self-Guarantee Financial Test for Nonprofit Colleges and Universities that Issue Bonds (10 CFR Part 30, Appendix E)

1. Current bond rating of most recent uninsured, uncollateralized, and unencumbered issuance of this institution

   Rating _____

   Name of rating service _____

2. Date of issuance of bond _____

3. Date of maturity of bond _____

	Yes	No
4. Is the current rating specified on line 1 AAA, AA, or A (including adjustments of + and -) (if issued by Standard & Poor's) or Aaa, Aa, or A (including adjustments of 1, 2, or 3) (if issued by Moody's)?	___	___

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A.9.7 Model Self-Guarantee Financial Test For Nonprofit Colleges and Universities that Do Not Issue Bonds (10 CFR Part 30, Appendix E)

1. Current decommissioning cost estimates or certified amounts

   a. Decommissioning amounts covered by this self-guarantee $_____

   b. All decommissioning amounts covered by other NRC or Agreement State self-guarantees $_____

   c. All amounts covered by self-guarantees or financial tests of other Federal or State agencies (e.g., EPA) $_____

TOTAL $_____

*2. Total assets in United States in unrestricted endowment $_____

	Yes	No
3. Is line 2 at least $50 million, or at least 30 times line 1, whichever is greater?	___	___

Note:

* Denotes figures derived from financial statements.

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A.9.8 Model Self-Guarantee Financial Test for Nonprofit Hospitals that Issue Bonds (10 CFR Part 30, Appendix E)

1. Current bond rating of most recent uninsured, uncollateralized, and unencumbered issuance of this institution

   Rating _____

   Name of rating service _____

2. Date of issuance of bond _____

3. Date of maturity of bond _____

	Yes	No
4. Is the current rating specified on line 1 AAA, AA, or A (including adjustments of + and -) (if issued by Standard & Poor's) or Aaa, Aa, or A (including adjustments of 1, 2, or 3) (if issued by Moody's)?	___	___

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A.9.9 Model Self-Guarantee Financial Test for Nonprofit Hospitals that Do Not Issue Bonds (10 CFR Part 30, Appendix E)

1. Current decommissioning cost estimates or certified amounts

   a. Decommissioning amounts covered by this self-guarantee $_____

   b. All decommissioning amounts covered by other NRC or Agreement State self-guarantees $_____

   c. All amounts covered by self-guarantees or financial tests of other Federal or State agencies (e.g., EPA) $_____

TOTAL $_____

*2. Total revenues $_____

*3. Operating revenues $_____

*4. Total expenditures $_____

*5. Long-term debt $_____

*6. Net fixed assets $_____

*7. Current assets $_____

*8. Depreciation fund $_____

*9. Current liabilities $_____

	Yes	No
10. Is line 3 at least 100 times line 1?	____	____

Guarantor must meet each of the following ratios:

11. Is (line 2 minus line 4) divided by line 2 at least 0.04?	____	____
12. Is line 5 divided by line 6 less than or equal to 0.67?	____	____
13. Is (line 7 plus line 8) divided by line 9 at least 2.55?	____	____

Note:

* Denotes figures derived from financial statements.

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A.9.10 Model Auditor's Special Report

CONFIRMATION OF LETTER FROM

[*Insert "CHIEF EXECUTIVE OFFICER" or "CHIEF FINANCIAL OFFICER"*]

We have examined the financial statements of [*insert name of self-guarantor*] for the year ended [*insert date*], and have issued our report thereon dated [*insert date*]. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary.

[*Insert name of self-guarantor*] has prepared documents to demonstrate its financial responsibility under NRC's financial assurance regulations, 10 CFR Part [*insert 30, 40, 70, or 72*]. This letter is furnished to assist the licensee [*insert name and NRC license number*] in complying with these regulations and should not be used for other purposes.

The attached schedule reconciles the specified information furnished in the [*insert "chief executive officer's (CEO's)" or "chief financial officer's (CFO's)"*] letter in response to the regulations with the [*insert "company's" or "institution's"*] financial statements. In connection therewith, we have

1. Confirmed that the amounts in the column "Per Financial Statements" agree with amounts contained in the [*insert "company's" or "institution's"*] financial statements for the year ended [*insert date*];

2. Confirmed that the amounts in the column "Per [*insert "CEO's" or "CFO's"*] Letter" agree with the letter prepared in response to NRC's request;

3. Confirmed that the amounts, if any, in the column "Reconciling Items" are adequately explained in the attached schedule, that each reconciling item represents an appropriate adjustment to the financial data, and that the amount of each reconciling item is accurate; and

4. Recomputed the totals and percentages.

Because the procedures in 1–4 above do not constitute a full examination made in accordance with generally accepted auditing standards, we do not express an opinion on the manner in which the amounts were derived in the items referred to above. In connection with the procedures referred to above, no matters came to our attention that cause us to believe that the [*insert "CEO's" or "CFO's"*] letter and supporting information should be adjusted.

We have evaluated the off-balance sheet transactions [*insert name of self-guarantor*] and it is our opinion that these transactions [could] [could not] materially adversely affect the ability of *[insert name of self-guarantor*] to pay decommissioning costs.

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We [have] [have not] confirmed that the bond rating, if used to demonstrate passage of the financial test, conforms to the description furnished in the CFO's letter in response to the regulations.

_____
Signature

_____
Date

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A.9.11 Model Schedule Reconciling Amounts Contained in Chief Executive Officer's or Chief Financial Officer's Letter with Amounts in Financial Statements

XYZ COMPANY
YEAR ENDED DECEMBER 31, 20XX

Per Line Number in CFO's Letter		Per Financial Statements	Reconciling Items	CFO's Letter
	Net worth	XX		
	Less: Cost in excess of value of tangible assets acquired	X		
		X		
	Accrued decommissioning costs included in current liabilities		X	
5	Tangible net worth (plus decommissioning costs)			X

Note:

(Balance of schedule is not illustrated.)
This illustrates the form of schedule that is contemplated. Details and reconciling items will differ in specific situations.

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A.9.12 Model Self-Guarantee Agreement

SELF-GUARANTEE

Guarantee made this [*insert date*] by [*insert name of self-guaranteeing entity*], a [*insert "proprietorship," "partnership," "corporation," "nonprofit college," "nonprofit university," or "nonprofit hospital"*] organized under the laws of the State of [*insert name of State*], herein referred to as "guarantor," to the U.S. Nuclear Regulatory Commission (NRC), beneficiary, on behalf of ourselves as licensee.

Recitals

1. The guarantor has full authority and capacity to enter into this self-guarantee [*if the guarantor is a corporation, insert the following: "under its bylaws, articles of incorporation, and the laws of the State of [insert guarantor's State of incorporation], its State of incorporation."*] [*If the guarantor has a Board of Directors, insert the following: "Guarantor has approval from its Board of Directors to enter into this self-guarantee."*]
2. This self-guarantee is being issued to comply with regulations issued by NRC, an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974. NRC has promulgated regulations in title 10, Chapter I of the *Code of Federal Regulations*, Part [*insert 30, 40, 70, or 72*], which require that a holder of, or an applicant for, a materials license issued pursuant to 10 CFR Part [*insert 30, 40, 70, or 72*] provide assurance that funds will be available when needed for required decommissioning activities.
3. The self-guarantee is issued to provide financial assurance for decommissioning activities for [*identify name and address of licensed facilities and corresponding NRC license numbers*] as required by 10 CFR Part [*insert 30, 40, 70, or 72*]. The decommissioning costs for these activities are as follows: [*insert amount of decommissioning costs guaranteed for each identified facility*].
4. The guarantor meets or exceeds the following financial test criteria [*insert statement indicating which financial test is being used*] and agrees to comply with all notification requirements as specified in 10 CFR Part [*insert 30, 40, 70, or 72*] and Appendix [*insert C, D, or E*] to 10 CFR Part 30.

The guarantor meets the following self-guarantee test:

[*If the guarantor is a commercial company that issues bonds, insert the following test.*]

(a) Tangible net worth at least 10 times the current decommissioning cost estimates (or prescribed amount if a certification is used) for all decommissioning activities for which the company is responsible as a self-guaranteeing licensee and as a parent-guarantor for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used); and

(b) Assets located in the United States amounting to at least 90 percent of total assets or at least 10 times the current decommissioning cost estimates (or prescribed amount if a

certification is used) for all decommissioning activities for which the company is responsible as a self-guaranteeing licensee and as a parent-guarantor; and

(c) At least one class of equity securities registered under the Securities Exchange Act of 1934; and

(d) A current rating for its most recent bond issuance of AAA, AA, or A (including adjustments of + and -) as issued by Standard & Poor's, or Aaa, Aa, or A (including adjustments of 1, 2, or 3) as issued by Moody's.

[*If the guarantor is a commercial company that does not issue bonds, insert the following test.*]

(a) Tangible net worth greater than $21 million and at least 10 times the current decommissioning cost estimates (or prescribed amount if a certification is used), whichever is greater, for all decommissioning activities for which the company is responsible as a self-guaranteeing licensee and as a parent-guarantor for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used); and

(b) Assets located in the United States amounting to at least 90 percent of total assets or at least 10 times the current decommissioning cost estimates (or prescribed amount if a certification is used) for all decommissioning activities for which the company is responsible as a self-guaranteeing licensee and as a parent-guarantor for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used); and

(c) A ratio of cash flow divided by total liabilities greater than 0.15 and a ratio of total liabilities divided by net worth less than 1.5.

[*If the guarantor is a nonprofit college or university that issues bonds, insert the following test.*]

(a) A current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A (including adjustments of + and -) as issued by Standard & Poor's, or Aaa, Aa, or A (including adjustments of 1, 2, or 3) as issued by Moody's.

[*If the guarantor is a nonprofit college or university that does not issue bonds, insert the following test.*]

(a) Unrestricted endowment consisting of assets located in the United States of at least $50 million, or at least 30 times the current decommissioning cost estimates (or prescribed amount if a certification is used), whichever is greater, for all decommissioning activities for which the college or university is responsible as a self-guaranteeing licensee.

[*If the guarantor is a nonprofit hospital that issues bonds, insert the following test.*]

(a) A current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A (including adjustments of + and -) as issued by

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Standard & Poor's, or Aaa, Aa, or A (including adjustments of 1, 2, or 3) as issued by Moody's.

[*If the guarantor is a nonprofit hospital that does not issue bonds, insert the following test.*]

(a) (Total revenues less total expenditures) divided by total revenues must be equal to or greater than 0.04; and

(b) Long-term debt divided by net fixed assets must be less than or equal to 0.67; and

(c) (Current assets and depreciation fund) divided by current liabilities must be greater than or equal to 2.55; and

(d) Operating revenues must be at least 100 times the current decommissioning cost estimates (or prescribed amount if a certification is used) for all decommissioning activities for which the hospital is responsible as a self-guaranteeing licensee.

5. The guarantor does not have a parent company holding majority control of its voting stock.

6. Decommissioning activities as used below refer to the activities required by 10 CFR Part [*insert 30, 40, 70, or 72*] for decommissioning of the facilities identified above.

7. Pursuant to the guarantor's authority to enter into this guarantee, the guarantor guarantees to NRC that the guarantor shall

   (a) carry out the required decommissioning activities, as required by License No. [*insert license number*] <u>or</u>

   (b) set up a standby trust fund acceptable to the NRC as specified in 10 CFR Part [insert 30, 40, 70, or 72] in the amount of the current cost estimates for these activities.

8. The guarantor agrees to submit revised financial statements, financial test data, and an auditor's special report and reconciling schedule annually within 90 days of the close of its fiscal year.

[*If the guarantor is a commercial company that issues bonds, insert the following language.*]

9. The guarantor agrees that if, at the end of any fiscal year before termination of this self-guarantee, it fails to meet the self-guarantee financial test criteria, it shall send, by certified mail, immediate notice to NRC that it intends to provide alternative financial assurance as specified in 10 CFR Part [*insert 30, 40, 70, or 72*]. Within 120 days of such notice, the guarantor shall establish such financial assurance.

[*If the guarantor is a commercial company that does not issue bonds or is a nonprofit college, university, or hospital, insert the following language.*]

10. The guarantor agrees that if, at the end of any fiscal year before termination of this self-guarantee, it fails to meet the self-guarantee financial test criteria, it shall send within 90 days of the end of the fiscal year, by certified mail, notice to NRC that it intends to provide alternative financial assurance as specified in 10 CFR Part [*insert 30, 40, 70, or 72*].

Within 120 days after the end of the fiscal year, the guarantor shall establish such financial assurance.

11. The guarantor also agrees to notify the NRC in writing in advance of any proposed change in or transfer of ownership of the licensed activity, and to maintain this guarantee until the new licensee provides alternative financial assurance acceptable to the beneficiary.

12. The guarantor agrees that if it determines, at any time other than as described in Recital 9, that it no longer meets the self-guarantee financial test criteria or it is disallowed from continuing as a self-guarantor, it shall establish alternative financial assurance as specified in 10 CFR Part 30, 40, 70, or 72, as applicable, within 30 days.

13. The guarantor, as well as its successors and assigns, agrees to remain bound jointly and severally under this guarantee notwithstanding any or all of the following: amendment or modification of the license or NRC-approved decommissioning funding plan for that facility, the extension or reduction of the time of performance of required activities, or any other modification or alteration of an obligation of the licensee pursuant to 10 CFR Part [*insert 30, 40, 70, or 72*].

14. The guarantor agrees that it shall be liable for all litigation costs incurred by the NRC in any successful effort to enforce the agreement against the guarantor. Such litigation costs shall not be deducted from or otherwise reduce the financial assurance provided by this guarantee.

15. The guarantor agrees to remain bound under this self-guarantee for as long as it, as licensee, must comply with the applicable financial assurance requirements of 10 CFR Part [*insert 30, 40, 70, or 72*], for the previously listed facilities, except that the guarantor may cancel this self-guarantee by sending notice by certified mail to NRC, such cancellation to become effective [*if the guarantor is a commercial company that issues bonds, insert "no earlier than 120 days after receipt of such notice by NRC, as evidenced by the return receipt"*] [*if the guarantor is a commercial company that does not issue bonds or is a nonprofit college, university, or hospital, insert "not before an alternative financial assurance mechanism has been put in place by the guarantor"*].

16. The guarantor agrees that if it, as licensee, fails to provide alternative financial assurance as specified in 10 CFR Part [*insert 30, 40, or 70*], as applicable, and obtain written approval of such assurance from NRC within 90 days after a notice of cancellation by the guarantor is received by NRC from the guarantor, the guarantor shall make full payment under the self-guarantee.

17. The guarantor expressly waives notice of acceptance of this self-guarantee by NRC. The guarantor also expressly waives notice of amendments or modifications of the decommissioning requirements.

18. If the guarantor files financial reports with the U.S. Securities and Exchange Commission, then it shall promptly submit them to its independent auditor and to NRC during each year in which this self-guarantee is in effect.

19. The guarantor agrees that if the guarantor admits in writing its inability to pay its debts generally, or makes a general assignment for the benefit of creditors, or any proceeding is instituted by or against the guarantor seeking to adjudicate it as bankrupt or insolvent, or seeking dissolution, liquidation, winding-up, reorganization, arrangement, adjustment,

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protection, relief or composition of it or its debts under any law relating to bankruptcy, insolvency, or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian, or other similar official for the guarantor or for any substantial part of its property, or the guarantor takes any action to authorize or effect any of the actions stated in this paragraph, then the Commission may:

(a) Declare that the financial assurance guaranteed by the guarantee agreement is immediately due and payable to the standby trust set up to protect the public health and safety and the environment, without diligence, presentment, demand, protect or any other notice of any kind, all of which are expressly waived by guarantor; and

(b) Exercise any and all of its other rights under applicable law.

20. The guarantor agrees to notify the NRC, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of title 11 (Bankruptcy) of the United States Code, or the occurrence of any other event listed in paragraph 17 of this guarantee and by or against the guarantor; the licensee; an entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensees as property of the estate; or an affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee. This notification must include: a description of the event, including major creditors, the amounts involved, and the actions taken to assure that the amount of funds guaranteed by the guarantee for decommissioning will be transferred to the standby trust as soon as possible; if a petition of bankruptcy was filed, the identity of the bankruptcy court in which the petition for bankruptcy was filed; and the date of filing of any petitions.

21. The guarantor expressly waives notice of acceptance of this guarantee by NRC or by [*insert name of licensee*]. The guarantor also expressly waives notice of amendments or modifications of the decommissioning requirements and of amendments or modifications of the license.

[*Insert the following recital only if the guarantor issues bonds*.]

22. The guarantor agrees that if, at any time before termination of this self-guarantee, its most recent bond issuance ceases to be rated in any category of ‘‘A-’’ and above by Standard and Poor’s or in any category of ‘‘A3’’ and above by Moody’s, the licensee will notify the Commission in writing within 20 days after publication of the change by the rating service

I hereby certify that this self-guarantee is true and correct to the best of my knowledge.

Effective date: _____

[*Name of self-guarantor*]
[*Authorized signature for self-guarantor*]
[*Name of person signing*]
[*Title of person signing*]

Signature of witness or notary: _____

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A.10 External Sinking Funds

An *external sinking fund* is a mechanism through which a licensee can gradually prepay for decommissioning by combining the use of a prepayment mechanism (trust fund is the only allowable form of prepayment) with a surety method (i.e., surety bond or letter of credit), parent company guarantee or self-guarantee, or insurance. As the value of the prepayment mechanism increases over time, the amount of coverage provided by the surety method, parent company guarantee or self-guarantee, or insurance can be reduced.

Exception: Part 72 licensees that qualify to use the assurance method of 10 CFR 72.30(e)(5) and either (1) recover, either directly or indirectly, the estimated total cost of decommissioning through rates established by "cost of service" or similar ratemaking regulation, or (2) have a source of revenues for its external sinking fund that is a "non-bypassable charge," the total amount of which will provide funds estimated to be needed for decommissioning, may use an external sinking fund without having to couple it with a surety method or insurance. For qualified licensees, a sinking fund that is not coupled with another financial assurance mechanism is acceptable if the amount accumulated in the fund, plus the amount authorized for recovery through rates or as a "non-bypassable charge," plus earnings consistent with 10 CFR 50.75(e)(1)(ii), covers the total estimated cost of decommissioning.

The remainder of this section discusses the primary criteria that determine whether particular external sinking fund submissions will be acceptable to NRC.

- Section A.10.1 describes qualifications required of the issuer.
- Section A.10.2 addresses funding and the adequacy of coverage.
- Section A.10.3 discusses the documentation that supports an external sinking fund.

This section also contains a checklist designed to assist licensees in preparing acceptable external sinking funds. Checklist 15 summarizes the primary criteria used by NRC to evaluate external sinking funds.

A.10.1 Qualifications of the Issuer

As noted above, an external sinking fund combines a prepayment mechanism with a surety method, parent company guarantee or self-guarantee, or insurance. These mechanisms may be provided by separate entities or, in some cases, by a single issuer. In all cases, however, issuers of both the prepayment mechanism and the surety method, parent company guarantee or self-guarantee, or insurance must meet appropriate qualifications. Information on the qualifications of issuers of prepayment mechanisms is provided in Sections A.4 through A.8 of this appendix. Information on the qualifications of issuers of surety methods or insurance is provided in Sections A.9 through A.12 of this appendix.

A.10.2 Level of Coverage

- An external sinking fund must be in an amount that, in total, is at least equal to the licensee's prescribed amount or estimated cost of decommissioning. **Exception:** Part 72 licensees that qualify to use the assurance method of 10 CFR 72.30(e)(5) and either (1) recover, either directly or indirectly, the estimated total cost of decommissioning through rates established by "cost of service" or similar ratemaking regulation, or (2) have a source of revenues for its external sinking fund that is a "non-bypassable charge," the total amount of which will provide funds estimated to be needed for decommissioning, may use an external sinking fund without having to couple it with a surety method or insurance. For qualified licensees, a sinking fund that is not coupled with another financial assurance mechanism is acceptable if the amount accumulated in the fund, plus the amount authorized for recovery through rates or as a "non-bypassable charge," plus earnings consistent with 10 CFR 50.75(e)(1)(ii), covers the total estimated cost of decommissioning. The prepayment mechanism may be funded initially in any amount. The surety method, parent company guarantee or self-guarantee, or insurance must then assure the difference between the prepaid amount and the prescribed amount or estimated cost of decommissioning. Subsequently, the licensee must make contributions at least annually to the prepayment mechanism, which increases in value. As the value of the prepayment mechanism increases over time, the amount of coverage provided by the surety method, parent company guarantee or self-guarantee, or insurance can be reduced. Assets held in the prepayment portion of an external sinking fund must be valued at their *current market value*. The total coverage provided by both mechanisms, however, must at all times be at least equal to the licensee's prescribed amount or estimated cost of decommissioning. If the licensee's prescribed amount or estimated decommissioning cost increases to a level above the amount assured by the external sinking fund, the licensee must revise either the prepayment mechanism or the surety, guarantee or insurance so that the combination of the two mechanisms assures the higher amount.

Checklist 10 External Sinking Funds

☐ Documentation is complete when both of the following are included:

☐ 1. prepayment mechanism (originally signed duplicate) and all supporting documentation (see Sections A.4 through A.8 and attach Checklists 4-A through 8, as applicable); and

☐ 2. surety method, parent company guarantee or self-guarantee, or insurance (originally signed duplicate) and all supporting documentation (see Sections A.9 through A.12 and attach Checklists 9-A through 12-A, as applicable).

☐ The total amount of the external sinking fund plus the surety, guarantee, or insurance equals or exceeds the required coverage level.

A.10.3 Recommended Documentation

Licensees who use external sinking funds to provide financial assurance for decommissioning must submit a copy of all documentation supporting the prepayment mechanism (see Section A.4.1) ***and*** the surety method or insurance (see Section A.4.2).

A.11 Statements of Intent

A *statement of intent* is a commitment by a Federal, State, or local government licensee to request and obtain decommissioning funds from its funding body when necessary. The purpose of a statement of intent is to ensure that, early in the life of their facilities, government licensees make their funding bodies aware of (1) decommissioning requirements and costs and (2) the eventual need for funding. A statement of intent should demonstrate that a government licensee can request special funding from its funding body when necessary. This is different from a guarantee or commitment of a licensee's own funds. Therefore, it is not satisfactory for a licensee to demonstrate that it is authorized to enter into contracts and guarantees committing its own funds, or to promise to allocate funds from its operating budget, from other general appropriations (either current or future), or from other internal resources. A statement of intent must include a site-specific decommissioning cost estimate or a certification of financial assurance.

Under the financial assurance regulations (10 CFR 30.35(f)(4), 40.36(e)(4), 70.25(f)(4), and 72.30(e)(4)), a statement of intent may only be used by a Federal, State, or local government *licensee*.

The remainder of this section discusses the primary criteria that determine whether a particular statement-of-intent submission will be acceptable to NRC.

- Section A.11.1 describes qualifications required of the issuer.
- Section A.11.2 addresses the adequacy of coverage.
- Section A.11.3 discusses the documentation that supports a statement of intent.
- Section A.11.4 presents a model statement of intent that NRC has found to be acceptable.

This section also contains two checklists designed to assist licensees in preparing acceptable statements of intent. Checklist 11-A summarizes the primary criteria used by NRC to evaluate statements of intent. Checklist 11-B (which should be used only by licensees who revise or do not use the wording in the model statements of intent) presents terms and conditions that are recommended for statements of intent.

A.11.1 Qualifications of the Issuer

Under NRC's decommissioning financial assurance regulations (10 CFR 30.35(f)(4), 40.36(e)(4), and 70.25(f)(4)), only Federal, State, or local government licensees may issue statements of intent to provide financial assurance for decommissioning. The signatory should be the head of the agency or designee.

In addition, the signatory of the statement of intent must have the authority to request funding for decommissioning from the governmental body that provides funding to the licensee. The signatory must be the head of the agency, department, or institution holding the license, or another person designated by the agency head to exercise the authority to commit the agency to requesting funds for decommissioning.

A.11.2 Level of Coverage

A statement of intent must be in an amount that is at least equal to the licensee's prescribed amount or estimated cost of decommissioning. The exception to this rule is a statement of intent that is being combined with another financial mechanism. For a combination of mechanisms, the *sum* of the coverage provided by the mechanisms must be at least equal to the required coverage level. If the licensee's certification amount or estimated decommissioning cost increases to a level above the amount assured by the statement of intent, the licensee must either (1) revise the statement of intent to assure the higher amount, or (2) obtain another financial assurance mechanism to make up the difference between the new coverage level and the amount of the statement of intent.

Checklist 11-A Statements of Intent

☐ Documentation is complete when the following are included:

- ☐ 1. statement of intent (originally signed duplicate),
- ☐ 2. documentation verifying that the signatory is authorized to represent the licensee in providing the statement of intent (signatory should be head of agency or designee), and
- ☐ 3. Checklist 11-B (if model statement of intent wording is modified or not used).

☐ The amount of the statement of intent equals or exceeds the required coverage level.

A.11.3 Recommended Documentation

Licensees who use statements of intent to provide financial assurance for decommissioning must submit a copy of the statement of intent and other documentation as discussed below and summarized in Checklist 11-A. Supporting documentation may differ for licensees who submit statements of intent that differ from the recommended model.

- The *statement of intent* signed by an authorized representative of the licensee. The wording of a statement of intent may vary, but Section A.11.4 of this appendix is a model statement of intent that is acceptable to and recommended by NRC. Licensees who use other wording should use Checklist 11-B to be sure that their wording contains all the necessary terms and conditions.
- Documentation verifying that the person signing the statement of intent is authorized to represent the licensee in the transaction (i.e., has the authority to request and obtain decommissioning funds from the appropriate funding body when necessary). The authority should originate in a statute authorizing the head of the agency, department, or institution to request funds. If the agency head designates another person within the agency to exercise that authority, the delegation of authority should be controlled by appropriate procedures issued by the agency, and documented in written form. Documentation to be submitted with

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the statement of intent should include a copy of the relevant portion of the statute granting authority. When the agency head designates another person to exercise the authority, documentation should include a copy of the agency procedure used to make the designation and a copy of the document used to record the designation of authority.

Checklist 11-B Terms and Conditions Needed in Decommissioning Statements of Intent

Use this checklist only if deviating from the wording recommended in Section A.11.4.

- ☐ Description of authority of government entity to make the statement of intent
- ☐ Identification of Federal, State, or local government licensee
- ☐ Description of facility(ies) (name, address, and license number) for which statement of intent provides financial assurance and corresponding costs of required activities
- ☐ Specification of the amount of funds being assured
- ☐ Statement that funds for required activities will be requested and obtained from the appropriate funding body when necessary
- ☐ Recitation of authority for signatory to sign the statement of intent
- ☐ Signatures
- ☐ Names and titles of signatories
- ☐ Date

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A.11.4 Model Statement of Intent

TO: U.S. Nuclear Regulatory Commission
Washington, DC 20555
[*or appropriate Regional address*]

STATEMENT OF INTENT

As [*insert title of signatory*] of [*insert name of licensee*], I exercise express authority and responsibility to request from [*insert name of appropriate governmental funding body*] funds for decommissioning activities associated with operations authorized by U.S. Nuclear Regulatory Commission Material License No. [*insert license number*]. This authority is established by [*insert name of documents governing control of funds*]. Within this authority, I intend to request that funds be made available when necessary in the amount of [*insert dollar amount*] to decommission [*insert facility names, addresses, and estimated costs of required activities or applicable prescribed amounts*]. I intend to request and obtain these funds sufficiently in advance of decommissioning to prevent delay of required activities.

A copy of [*insert name of documents*] is attached as evidence that I am authorized to represent [*insert name of licensee*] in this transaction.

[*Signature*]
[*Name*]
[*Title*]
[*Date*]

Attachment: As stated

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A.12 Standby Trust Funds

A *standby trust fund* is simply a trust fund that is not yet funded but is otherwise ready to accept monies in the event they are received from a particular source (such as a surety bond, letter of credit, or insurance). Once a standby trust is funded, the funds would then be available to pay the costs of decommissioning, just as they would with an ordinary trust fund. As in the case of an ordinary trust fund, monies in a standby trust fund are legally segregated for a specific purpose and are administered by a trustee with a fiduciary responsibility to keep or use the property in the fund for the benefit of the beneficiary.

Under NRC's decommissioning financial assurance regulations (10 CFR 30.35(f)(2)(ii), 40.36(e)(2)(ii), 70.25(f)(2)(ii)), and 72.30(e)(2)(ii) a standby trust agreement must be established to receive funds from a surety method (i.e., surety bond or letter of credit) or insurance. If the funds from these mechanisms were paid directly to NRC rather than to a standby trust fund, NRC would be required to deposit the funds in the U.S. Treasury as general revenue. Consequently, the funds would not be available to pay for decommissioning costs.

The remainder of this section discusses the primary criteria that determine whether particular standby trust fund submissions will be acceptable to NRC.

- Section A.12.1 describes qualifications required of the trustee.
- Section A.12.2 addresses funding and the adequacy of coverage.
- Section A.12.3 discusses the documentation that supports a standby trust fund.
- Section A.12.4 presents a model standby trust fund submission that NRC has found to be acceptable.

This section also contains two checklists designed to assist licensees in preparing acceptable decommissioning standby trusts. Checklist 12-A summarizes the primary criteria used by NRC to evaluate standby trust funds. Checklist 12-B (which should be used only by licensees who revise or do not use the model wording for standby trust agreements) presents terms and conditions that are recommended for standby trust agreements.

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Checklist 12-A Standby Trust Funds

☐ Documentation is complete when the following are included:

- ☐ 1. standby trust agreement (originally signed duplicate),
- ☐ 2. Schedule A,
- ☐ 3. Schedule B,
- ☐ 4. Schedule C,
- ☐ 5. specimen certificate of events,
- ☐ 6. specimen certificate of resolution,
- ☐ 7. letter of acknowledgment, and
- ☐ 8. Checklist 12-B (if model standby trust wording is modified or not used).

☐ The trustee is qualified when the following conditions are true:

☐ The financial institution is regulated by a Federal or State agency.

☐ The financial institution has authority to act as a trustee and has trust operations that are regulated and examined by a Federal or State agency.

A.12.1 Qualifications of the Trustee

The decommissioning financial assurance regulations (10 CFR 30.35(f)(2)(ii), 40.36(e)(2)(ii), 70.25(f)(2)(ii)), and 72.30(e)(2)(ii) require that the trustee be acceptable to NRC. Acceptable trustees include appropriate Federal or State government agencies and financial institutions that have the authority to act as trustees and whose trust operations are regulated and examined by a Federal or State agency. Trust operations are regulated separately from other banking operations, and it is very common for a regulated bank not to have the authority to act as a trustee. In addition, NRC's requirement for trustees is not usually met by individuals who are not acting as a representative of a financial institution.

- The word "National" in the title of a financial institution signals that the institution is *Federally regulated*, as do the words "National Association" or the initials "N.A." following its title. To determine whether such a financial institution qualifies as an acceptable trustee, licensees should access the Federal Financial Institutions Examination Council's (FFIEC) Trusts Institutions Search database on the World Wide Web at <http://www.fdic.gov/bank/individual/trust/>, and look to see that the bank branch has full trust powers.

  Alternatively, licensees may contact the appropriate district office of the Office of the Comptroller of the Currency (OCC) and confirm that the institution (1) is Federally regulated ***and*** (2) has Federally regulated trust operations. (The OCC's home page on the World Wide Web is located at <http://www.occ.treas.gov>.) The six district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:

  - Northeastern District Office (Telephone: (212) 819-9860)—CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, District of Columbia, Puerto Rico, and Virgin Islands.

- Southeastern District Office (Telephone: (404) 659-8855)—AL, FL, GA, MS, NC, SC, TN, VA, and WV.
- Central District Office (Telephone: (312) 360-8800)—IL, IN, KY, MI, OH, and WI.
- Midwestern District Office (Telephone: (816) 556-1800)—IA, KS, MN, MO, NE, ND, and SD.
- Southwestern District Office (Telephone: (214) 720-0656)—AR, LA, OK, and TX.
- Western District Office (Telephone: (415) 545-5900)—AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY, and Guam.

- The word "State" in the title of a financial institution signals that the institution is *State regulated*. U.S. branches of foreign banks are usually regulated by the State in which they are located. To determine whether a State-regulated financial institution qualifies as an acceptable trustee, licensees should access the FFIEC's Trusts Institutions Search database on the World Wide Web at <http://www.fdic.gov/bank/individual/trust/>, and look to see that the bank branch has full trust powers.

  Alternatively, licensees may contact the applicable State banking authority and confirm that the institution (1) is State regulated, ***and*** (2) has State-regulated trust operations.

- The titles of some financial institutions do not suggest that they are either Federally regulated or State regulated. In many such cases (but not all), these institutions are State regulated, as are many domestic branches of foreign banks.

The licensee may need or choose to replace the current trustee with a new trustee. To be acceptable to NRC, any successor trustee must meet the same standard as the original trustee (i.e., must be an appropriate Federal or State government agency or an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency). To ensure that the change in trustee does not negatively impact the standby trust, the licensee should replace the trustee only after sufficient notification (i.e., 90 days or more) has been provided to both NRC and the current trustee.

A.12.2 Level of Coverage

Standby trusts generally do not need to contain any money or property at the time they are established. State law in some States may require a standby trust fund to contain a de minimis level of funding in order to be effective. The standby trust should, however, anticipate that it will or may be funded in the full prescribed amount or estimated decommissioning cost. For example, the standby trust agreement should allow the trustee to access the full level of coverage as appropriate to complete decommissioning activities. (In the model wording for a standby trust agreement, for example, the trustee is authorized to make decommissioning payments only up to the amount listed in Schedule A to the standby trust agreement. If the amount listed in Schedule A is not at least as great as the NRC-approved cost estimate or prescribed amount, the trustee may not be able to make sufficient payments to complete decommissioning, even if there are sufficient monies in the standby trust.)

If the funds from the licensee's primary financial assurance mechanism are deposited into a standby trust fund, the trust must at all times contain sufficient assets, valued at their *current market value*, to complete decommissioning activities.

A.12.3 Recommended Documentation

The terms and conditions of a standby trust are governed by a written standby trust agreement. The wording of a standby trust agreement may vary, but Section A.12.4 of this appendix is a model standby trust agreement that would meet NRC's requirements and is recommended by NRC. In addition to the standby trust agreement, other documentation is to be submitted with a standby trust, as summarized in Checklist 12-A, including the following:

- The *standby trust agreement* (along with any amendments) is the written document that specifies the terms and conditions of the standby trust. The wording contained in the model standby trust in Section A.12.4 is acceptable to NRC. Licensees who use other wording should refer to Checklist 12-B to be sure that the alternative wording contains all the necessary terms and conditions.
- *Schedule A* (Section A.12.5) identifies the name and address of the licensee, the NRC license numbers covered by the standby trust, the addresses of the licensed activity, the amount of regulatory assurances demonstrated by the standby trust agreement, and the date on which these amounts were last adjusted and approved by NRC.
- *Schedule B* (Section A.12.5) lists the property (i.e., cash, securities, or other liquid assets) initially used to establish the standby trust fund. A standby trust may be established with no property in the fund initially. In this case, Schedule B may simply state "none."
- *Schedule C* (Section A.12.5) specifies the compensation to be paid by the licensee to the trustee for its services.
- The *specimen certificate of events* (Section A.12.6) and the *specimen certificate of resolution* (Section A.12.7) provide the required format for instructing the trustee to release monies from the standby trust in order to fund decommissioning activities at the licensee's facility. When submitted as part of a financial assurance package, the specimen certificates should be unexecuted drafts. (Actual authorization to release funds from the standby trust is accomplished when completed and notarized versions of these certificates are signed by the secretary of the licensee and presented to the trustee.)
- The notarized *letter of acknowledgment* (Section A.12.8) verifies the execution of the standby trust agreement and certifies the trustee's signature and authority to enter into the agreement.

Supporting documentation may differ for licensees who submit standby trusts that differ from the recommended model.

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Checklist 12-B Terms and Conditions Needed in Decommissioning Standby Trust Agreements

Use this checklist only if deviating from the wording recommended in Section A.12.4.

☐ Execution date of standby trust.

☐ Purpose of standby trust ("whereas" clauses).

☐ Statement of licensee's regulatory obligations as reason for the standby trust fund.

☐ Grantor or grantors (introductory paragraph).

☐ Trustee or trustees (introductory paragraph):

- ☐ 1. names and addresses, and
- ☐ 2. bank or corporate trustee.

☐ Identification of facilities (name, address, and license number) and cost estimates or prescribed amount (Section A.2 and Schedule A).

☐ Words of transfer, conveyance, and delivery in trust (Section A.3).

☐ Description of trust property (Section A.4 and Schedule B):

- ☐ 1. cash,
- ☐ 2. securities, and
- ☐ 3. other liquid assets.

☐ Additions to trust (Section A.4).

☐ Distribution of trust principal (Section A.5) when the following conditions are met:

- ☐ 1. disbursement to licensee upon proper certification;
- ☐ 2. payment for activities at NRC's direction in writing;
- ☐ 3. refund to grantor at NRC's written specification upon completion of decommissioning; and
- ☐ 4. maximum withdrawal of funds at one time for a particular license is limited to 10 percent of the remaining funds available for that license unless NRC written approval is attached.

☐ Trust management (Sections A.6–A.8):

- ☐ 1. discretionary powers,
- ☐ 2. fiduciary duty,
- ☐ 3. commingling and investment,
- ☐ 4. sale or exchange of trust property,
- ☐ 5. scope of investments,
- ☐ 6. express powers of trustee,
- ☐ 7. borrowing money and encumbering trust assets,
- ☐ 8. insurance (optional),

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Checklist 12-B Terms and Conditions Needed in Decommissioning Standby Trust Agreements (continued)

- ☐ 9. operation of business (optional), and
- ☐ 10. compromise of claims (optional).

☐ Taxes and expenses (Section A.9).

☐ Annual valuation (Section A.10).

☐ Advice of counsel (Section A.11).

☐ Authority, compensation, and tenure of trustees (Sections A.12–A.14):

- ☐ 1. trustee compensation (Schedule C),
- ☐ 2. successor trustee, and
- ☐ 3. instructions to trustee.

☐ Amendment of agreement (Section A.15).

☐ Irrevocability and termination (Section A.16).

☐ Immunity and indemnification (Section A.17).

☐ Law to govern construction and operation of trust (Section A.18).

☐ Interpretation and severability (Section A.19).

☐ Signatures and titles.

☐ Acknowledgments, seals, or attestations, if necessary or desired (witness by notary public).

☐ Acceptance of standby trust by trustee or trustees (acknowledgment).

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A.12.4 Model Standby Trust Agreement

STANDBY TRUST AGREEMENT

TRUST AGREEMENT, the Agreement entered into as of [*insert date*] by and between [*insert name of licensee*], a [*insert name of State*] [*insert "corporation," "partnership," or "proprietorship"*], herein referred to as the "Grantor," and [*insert name and address of a trustee acceptable to NRC*], the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in title 10, Chapter I, of the *Code of Federal Regulations*, Part [*insert 30, 40, or 70*]. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a materials license issued pursuant to 10 CFR Part [*insert 30, 40, or 70*] provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a [*insert "letter of credit," "surety bond," "insurance policy," "parent company guarantee," or "self-guarantee"*] to provide [*insert "all" or "part"*] of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under a [*insert "letter of credit," "surety bond," "insurance policy," "parent company guarantee," or "self-guarantee"*], this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee;

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the NRC licensee who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the trustee who enters into this Agreement and any successor trustee.

Section 2. Costs of Decommissioning. This Agreement pertains to the costs of decommissioning the materials and activities identified in License Number [*insert license number*] issued pursuant to 10 CFR Part [*insert 30, 40, 70, or 72*], as shown in Schedule A.

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a standby trust fund (the Fund) for the benefit of NRC. The Grantor and the Trustee intend that no third party shall have access to the Fund except as provided herein.

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Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

(a) A certificate duly executed by the Secretary of the Grantor attesting to the occurrence of the events, and in the form set forth in the attached Certificate of Events, and

(b) A certificate attesting to the following conditions:

    (1) that decommissioning is proceeding pursuant to an NRC-approved plan;

    (2) that the funds withdrawn will be expended for activities undertaken pursuant to that plan; and

    (3) that NRC has been given 30 days prior notice of [*insert name of licensee*]'s intent to withdraw funds from the trust fund.

No withdrawal from the Fund for a particular license can exceed 10 percent of the remaining funds available for that license unless NRC written approval is attached.

In addition, the Trustee shall make payments from the Fund as NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by NRC from the Fund for expenditures for required activities in such amounts as NRC shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims, except that:

(a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal government, and in obligations of the Federal government such as GNMA, FNMA, and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard & Poor's or Baa or higher by Moody's Investment Services; and

(c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment advice is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and NRC or to reinvest in securities at the direction of the Grantor;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other

securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. After payment has been made into this standby trust fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the standby trust fund, furnish to the Grantor and to NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and NRC shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C.)

Section 13. Successor Trustee. Upon 90 days notice to NRC and the Grantor, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee, the successor accepts the appointment, the successor is ready to assume its duties as trustee, and NRC has agreed, in writing, that the successor is an appropriate Federal or State government agency or an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency. The successor Trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. When the resignation or replacement is effective, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the

Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust, in a writing sent to the Grantor, NRC, and the present Trustee, by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this Agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. If NRC issues orders, requests, or instructions to the Trustee these shall be in writing, signed by NRC or its designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or NRC hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or NRC, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and NRC, or by the Trustee and NRC if the Grantor ceases to exist. All amendments shall meet the relevant regulatory requirements of NRC.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and NRC, or by the Trustee and NRC if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the Grantor or NRC issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the State of [*insert name of State*].

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this Agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

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IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

[*Insert name of licensee (Grantor)*]
[*Signature of representative of Grantor*]
[*Title*]

ATTEST:
[*Title*]
[*Seal*]

[*Insert name and address of Trustee*]
[*Signature of representative of Trustee*]
[*Title*]

ATTEST:
[*Title*]
[*Seal*]

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A.12.5 Model Standby Trust Agreement Schedules

Schedule A

This Agreement demonstrates financial assurance for the following cost estimates or prescribed amounts for the following licensed activities:

U.S. NUCLEAR REGULATORY COMMISSION LICENSE NUMBER(S)	NAME AND ADDRESS OF LICENSEE	ADDRESS OF LICENSED ACTIVITY	COST ESTIMATES FOR REGULATORY ASSURANCES DEMONSTRATED BY THIS AGREEMENT

The cost estimates listed here were last adjusted and approved by NRC on [*insert date*].

Schedule B

DOLLAR AMOUNT _____

AS EVIDENCED BY _____

Schedule C

[*Insert name, address, and phone number of Trustee.*]

Trustee's fees shall be $_____ per year.

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A.12.6 Model Specimen Certificate of Events

[*Insert name and address of trustee*]

Attention: Trust Division

Gentlemen:

In accordance with the terms of the Agreement with you dated _____, I, _____, Secretary of [*insert name of licensee*], hereby certify that the following events have occurred:

1. [*Insert name of licensee*] is required to commence the decommissioning of its facility located at [*insert location of facility*] (hereinafter called the decommissioning).

2. The plans and procedures for the commencement and conduct of the decommissioning have been approved by the United States Nuclear Regulatory Commission, or its successor, on _____ (copy of approval attached).

3. The Board of Directors of [*insert name of licensee*] has adopted the attached resolution authorizing the commencement of the decommissioning.

_____
Secretary of [*insert name of licensee*]

_____
Date

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A.12.7 Model Specimen Certificate of Resolution

I, _____, do hereby certify that I am Secretary of [*insert name of licensee*], a [*insert State of incorporation*] corporation, and that the resolution listed below was duly adopted at a meeting of this Corporation's Board of Directors on _____, 20___.

IN WITNESS WHEREOF, I have hereunto signed my name and affixed the seal of this Corporation this ___ day of _____, 20___.

_____
Secretary

RESOLVED, that this Board of Directors hereby authorizes the President, or such other employee of the Company as he may designate, to commence decommissioning activities at [*insert name of facility*] in accordance with the terms and conditions described to this Board of Directors at this meeting and with such other terms and conditions as the President shall approve with and upon the advice of Counsel.

A.12.8 Model Letter of Acknowledgment

STATE OF _____.
To Wit: _____.
CITY OF _____.

On this ___ day of _____, before me, a notary public in and for the city and State aforesaid, personally appeared _____, and she/he did depose and say that she/he is the [*insert title*] of _____ [*if applicable, insert ", national banking association" or ", State banking association"*], Trustee, which executed the above instrument; that she/he knows the seal of said association; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the association; and that she/he signed her/his name thereto by like order.

_____
[*Signature of notary public*]

My Commission Expires: _____
[*Date*]

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A.13 Financial Assurance Demonstrations Included in a Decommissioning Plan

At the end of licensed operations, licensees must maintain all decommissioning financial assurance established pursuant to 10 CFR 30.35, 40.36, or 70.25. In addition, licensees must submit a DP pursuant to 10 CFR 30.36, 40.42, or 70.38, if (1) such a plan is required by a license condition, or (2) the procedures and activities necessary to carry out decommissioning (and, if applicable, site control and maintenance) have not been approved by NRC and these procedures could increase the potential health and safety impacts to workers or the public.

The purpose of this section is to provide general guidance to licensees on preparing the financial assurance demonstration that is to be included as part of a DP under 10 CFR 30.36, 40.42, and 70.38. The decommissioning financial assurance demonstration must include:

- an updated, detailed cost estimate for decommissioning and, if the license is being terminated under restricted conditions, for control and maintenance of the site following license termination;
- one or more financial assurance mechanisms (including supporting documentation);
- a comparison of the cost estimate to the level of coverage provided by the financial assurance mechanisms; and
- if applicable, a description of the means to be employed for adjusting the cost estimate and associated funding level over any storage or surveillance period.

These requirements are summarized below in Checklist 13-A.

In preparing cost estimates for inclusion in DPs, licensees should refer to the detailed guidance and cost estimating tables in Section A.3 of this appendix, and to the supplementary guidance included below. In preparing financial assurance mechanisms for inclusion in DPs, licensees should refer to the detailed guidance, checklists, and recommended wording in Sections A.4 through A.16 of this appendix, as well as the supplementary guidance included below.

The remainder of this section is divided into two parts. Section A.13.1 addresses financial assurance demonstrations in cases where the license will be terminated for unrestricted release. Section A.13.2 addresses financial assurance demonstrations in cases where the license will be terminated under restricted conditions.

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Checklist 13-A Decommissioning Plans

License Number(s):_____

Applicable Parts of 10 CFR (check all that apply): ☐ Part 30 ☐ Part 40 ☐ Part 70

License will be terminated: ☐ For unrestricted release (see Section A.13.1)
☐ Under restricted conditions (see Section A.13.2)

☐ Prepare an updated site-specific cost estimate (see Section A.3, and Section A.13.1.1 or A.13.2.1).

☐ Prepare a financial assurance mechanism (see Sections A.4–16, and Section A.13.1.2 or A.13.2.2).

☐ Compare the cost estimate to the level of financial assurance provided (see Section A.13.1.3 or A.13.2.3).

☐ Determine the means that will be used to adjust the site-specific cost estimate and associated funding level over any storage or surveillance period (see Section A.13.1.4 or A.13.2.4).

☐ Include the necessary documentation:

- ☐ updated, detailed, site-specific cost estimate;
- ☐ description of the means that will be used to adjust the site-specific cost estimate and associated funding level;
- ☐ comparison of the cost estimate to the level of coverage provided by the financial assurance mechanism(s); and
- ☐ financial instrument(s) and supporting documentation.

A.13.1 License Termination For Unrestricted Release

A.13.1.1 Decommissioning Cost Estimate

Cost estimates included in a DP for license termination for unrestricted release are similar in many respects to those required for DFPs submitted at the time of license application or renewal. As a result, licensees should refer to the detailed guidance in Section A.3 for specific instructions on preparing a cost estimate.

Licensees who have already prepared cost estimates as part of DFPs do not need to prepare entirely new cost estimates for inclusion in their DPs. Rather, to reduce burden, these licensees may simply update their existing cost estimates to reflect any changes that have occurred since the estimate was last submitted to NRC. Cost estimates should be updated to reflect completed decommissioning activities, current contamination levels, inflation, changes in waste disposal costs and other prices of goods and services, changes in decommissioning procedures, and any

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other changes in facility conditions. In order to facilitate NRC's review, licensees should prepare documentation explaining in detail how the cost estimate has been updated. Licensees should also ensure that the updated cost estimate includes all of the items called for in Section A.3.

Licensees who have not already prepared a decommissioning cost estimate (e.g., because they had previously been using a certification of financial assurance) should prepare the cost estimate using the guidance above as well as the guidance and cost estimating tables contained in Section A.3.

A.13.1.2 Financial Assurance Mechanism

As specified in 10 CFR 30.36(e), 40.42(e), and 70.38(e), licensees must maintain financial assurance for decommissioning until the license has been terminated. The amount of this financial assurance must be adjusted as necessary to cover the updated cost estimate for decommissioning. (The text of the financial assurance mechanism(s) could remain unchanged in this case.)

Alternatively, licensees may choose to provide a new financial assurance mechanism in place of their previous mechanism(s). In preparing the new mechanism, licensees should consult the guidance provided in Sections A.4 through A.16 of this appendix, as applicable. The new mechanism would need to be in an amount that is at least as great as the updated cost estimate for decommissioning.

Acceptable mechanisms for providing financial assurance for decommissioning include the following:

- Trust funds (see Section A.4)
- Surety bonds (see Section A.5)
- Letters of credit (see Section A.6)
- Insurance policies (see Section A.7)
- Parent company guarantees (see Section A.8)
- Self-guarantees (see Section A.9)
- External sinking funds (see Section A.10)
- Statements of intent (see Section A.11)

A.13.1.3 Comparison of the Cost Estimate to the Current Level of Financial Assurance

The DP must include a comparison of the amount of the updated cost estimate for decommissioning to the amount of coverage provided by the licensee's financial assurance mechanism(s). If the cost estimate exceeds the financial assurance coverage, the licensee must

increase the amount of coverage to at least the amount of the cost estimate. If the cost estimate is less than the financial assurance coverage, the licensee may retain the current level of coverage or reduce the level of coverage as appropriate.

A.13.1.4 Means for Adjusting the Cost Estimate and Associated Funding Level

The DP must include a description of the means the licensee will employ for adjusting the cost estimate and associated funding level over any storage or surveillance period. In general, the cost estimate should be adjusted to account for completed decommissioning activities, for inflation and other changes in the prices of goods and services (e.g., waste disposal cost increases), for changes in facility conditions, and for changes in decommissioning procedures. As discussed above, if at any time the cost estimate exceeds the financial assurance coverage, the licensee must increase the amount of coverage to at least the amount of the cost estimate.

A.13.2 License Termination Under Restricted Conditions

A.13.2.1 Cost Estimate for Decommissioning and Site Control/Maintenance

Cost estimates included in a DP for license termination under restricted conditions are similar in many respects to those required for DFPs submitted at the time of license application or renewal. As a result, licensees should refer to the detailed guidance in Section A.3 of this appendix for specific instructions on preparing a cost estimate.

Costs for Site Control and Maintenance

In addition to costs for standard decommissioning activities, the cost estimate also must include costs for site control and maintenance activities. These estimated costs should be sufficient to allow an independent third party to conduct site control and maintenance activities if the site landowner is unwilling or unable to do so. Control and maintenance of a site would not necessarily have to be carried out by an independent third party. For example, the site landowner (who may be the former licensee) may carry out such activities if capable, and could be paid directly from the financial assurance funds provided for performing the work, if appropriate.

The primary component of site control and maintenance costs is the cost associated with institutional controls, including proprietary institutional controls, governmental institutional controls, and physical controls. Proprietary institutional controls include easements, restrictive covenants, equitable servitudes, reverter clauses, and government ownership of land. Governmental institutional controls include zoning, deed restrictions, water supply restrictions, building permit requirements, and property law regulations. Physical controls include fences, markers, and earthen covers. At a minimum, the following costs should be estimated for the institutional controls that will be employed at the site:

- Establishment and Implementation. The cost estimate should include the costs of putting institutional controls into place (e.g., construction costs for physical barriers).

- Enforcement. Mechanisms for enforcement of controls include periodic inspection, surveys, control, monitoring, and maintenance of physical barriers at the site; inspections of the property; and maintenance of deed restrictions and monitoring of deed compliance.
- Recordkeeping. The party responsible for site control and maintenance should maintain records containing at least (1) a legal description of the property, (2) the name or names of the current owners of the property as reflected in public land records, (3) identification of the parties who can enforce the restrictions, (4) the reason for the restrictions, (5) the duration of the restrictions, (7) permission to install and maintain physical controls, if any are used, (8) the location of a copy of the final radiation status report that is available for public inspection, and (9) official actions and financial payments.
- Periodic Site Checks. Under 10 CFR 20.1403(e)(2)(iii), the party responsible for site control and maintenance must perform periodic checks of the site no less frequently than every 5 years by to ensure that the institutional controls continue to function effectively. The periodic checks should include an onsite inspection to verify that prohibited activities are not being conducted. Also, although a review of the deed to ensure that deed restrictions are still in place is usually not necessary, the deed should be reviewed if there is any cause to believe that the restrictions are not still properly part of the deed.
- Corrective Actions. In some cases, corrective actions must be taken in the event a restriction needs to be broken. Because the need for corrective actions cannot be predicted, costs for these activities cannot be explicitly accounted for in the cost estimate. Rather, the cost estimate should include a sufficient contingency factor to cover these costs. For example, a "no excavation" restriction may need to be broken if a water main under the site bursts and must be repaired.

The cost estimate for site control and maintenance should be consistent with the amount of radioactivity remaining at the site, the radionuclides involved, the characteristics of the residual radioactivity at the site, and site-specific exposure scenarios, pathways, and parameters. The estimate should include adequate periods of site control and should account for all associated costs during this period. Finally, the estimate should be based on activities that are sufficient to prevent the annual dose to the average member of the critical group from exceeding 0.25 mSv (25 mrem).

Preparing the Cost Estimate

Licensees who have already prepared cost estimates as part of DFPs do not need to prepare entirely new cost estimates for inclusion in their DPs. Rather, to reduce burden, these licensees may simply update their existing cost estimates to reflect (1) the costs associated with site control and maintenance, and (2) any changes that have occurred since the estimate was last submitted to NRC. Cost estimates should be updated to reflect completed decommissioning activities, current contamination levels, inflation, changes in waste disposal costs and other prices of goods and services, changes in decommissioning procedures, and any other changes in facility conditions. In order to facilitate NRC's review, licensees should prepare documentation explaining in detail how the cost estimate has been updated. Licensees should also ensure that the updated cost estimate includes all of the items called for in Section A.3 of this appendix.

Licensees who have not already prepared a decommissioning cost estimate (e.g., because they had previously been using a certification of financial assurance) should prepare the cost estimate using the guidance above as well as the guidance and cost estimating tables contained in Section A.3 of this appendix.

A.13.2.2 Financial Assurance Mechanism

As specified in 10 CFR 30.36(e), 40.42(e), and 70.38(e), licensees must maintain financial assurance for decommissioning until the license has been terminated. The amount of this financial assurance must be adjusted as necessary to cover the updated cost estimate for decommissioning.

In addition, pursuant to 10 CFR 20.1403(c), licensees requesting license termination under restricted conditions must also provide financial assurance for site control and maintenance. If a licensee wishes to use its existing decommissioning financial assurance mechanism(s) to provide coverage for site control and maintenance, the text of the mechanism(s) would need to be changed as necessary to reflect its applicability to site control and maintenance activities. Also, the amount of coverage provided by the mechanism(s) would need to be adjusted to cover the estimated costs for site control and maintenance.

Alternatively, licensees may choose to provide a new, separate mechanism to cover site control and maintenance costs, or may provide a new financial assurance mechanism to cover <u>both</u> decommissioning and site control and maintenance costs. In preparing the new mechanism(s), licensees should consult the guidance provided in Sections A.4 through A.11 of this appendix, as applicable. The new mechanism(s) would need to be in an amount that is at least as great as the updated cost estimate for decommissioning and site control and maintenance.

Acceptable mechanisms for providing financial assurance for decommissioning and site control and maintenance include special arrangements with a government entity, as described later in this section, as well as the following mechanisms, which are explained in earlier sections of this appendix:

- Trust funds (see Section A.4)
- Surety bonds (see Section A.5)
- Letters of credit (see Section A.6)
- Insurance policies (see Section A.7)
- Parent company guarantees (see Section A.8)
- Self-guarantees (see Section A.9)
- Statements of intent (see Section A.11)

Regardless of the mechanism used, the licensee or custodian for the site should permit public access to records on financing for site controls and maintenance. These records should be available for inspection by the public for a period of 25 years.

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Special Arrangements with a Government Entity

In addition to the mechanisms listed above, licensees may provide financial assurance through a special arrangement deemed acceptable by a governmental entity when the governmental entity assumes custody and ownership of a site. Licensees choosing to use such an arrangement should submit documentation of the terms and conditions governing the arrangement. Also, the government entity with whom the arrangement is made should have the authority to receive and hold funds for specified purposes (e.g., decommissioning, site control and maintenance). Checklist 13-B below summarizes the primary criteria used by NRC to evaluate special arrangements.

Checklist 13-B Special Arrangements with a Government Entity

- ☐ Documentation of the arrangement is provided.
- ☐ The government entity has the authority to receive and hold funds for specified purposes.
- ☐ The amount of financial assurance provided by the arrangement equals or exceeds the required coverage level.

A.13.2.3 Comparison of the Cost Estimate to the Current Level of Financial Assurance

The DP must include a comparison of the amount of the updated cost estimate for decommissioning and site control and maintenance with the amount of coverage provided by the licensee's financial assurance mechanism(s). In determining the amount of financial assurance coverage for site control and maintenance (but *not* decommissioning), licensees may assume a real (i.e., inflation adjusted), after-tax rate of return of up to 1 percent per year *if* funds are set aside in an account (e.g., a trust or escrow) segregated from the licensee's assets and outside its administrative control. The rationale for the value of 1 percent per year is taken from NUREG-0706, Vol.1, "Final Environmental Impact Statement on Uranium Milling: Project M-25, Summary and Text," Sec. 14.34 at page 14-14, available in ADAMS (ML032751663). If the cost estimate exceeds the financial assurance coverage, the licensee must increase the amount of coverage to at least the amount of the cost estimate. If the cost estimate is less than the financial assurance coverage, the licensee may retain the current level of coverage or reduce the level of coverage as appropriate.

A.13.2.4 Means for Adjusting the Cost Estimate and Associated Funding Level

The DP must include a description of the means the licensee will employ for adjusting the cost estimate and associated funding level over any storage or surveillance period. In general, the cost estimate should be adjusted to account for completed decommissioning activities, for inflation and other changes in the prices of goods and services (e.g., waste disposal cost increases), for changes in facility conditions, and for changes in procedures for decommissioning

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and/or site control and maintenance. As discussed above, if at any time the cost estimate exceeds the financial assurance coverage, the licensee must increase the amount of coverage to at least the amount of the cost estimate.

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— — — — —. Policy and Guidance Directive Fuel Cycle 90-2, "Standard Review Plan for Evaluating Compliance with Decommissioning Requirements for Source, Byproduct, and Special Nuclear Material License Applications." NRC: Washington, DC. April 1991.

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A.15 Attachments 1 and 2

Attachments 1 and 2 are taken directly from the Standard Review Plan (SRP) (NUREG–1727).

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ATTACHMENT 1

Table for Determining Financial Assurance Requirements
Under 10 CFR Parts 30, 40, and 70
by Type of Isotope and Activity Level

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ISOTOPE	*Sealed Sources/ Plated Foils under 10 CFR Part 30*		*Unsealed Sources under 10 CFR Parts 30, 40, and 70*			
	Financial Assurance Not Required	**$113,000 Certification Allowed**	**Financial Assurance Not Required**	**$225,000 Certification Allowed**	**$1,125,000 Certification Allowed**	**DFP Required**
Americium-241	≤100 Ci	>100 Ci	≤0.01 mCi	>0.01 mCi, ≤0.1 mCi	>0.1 mCi, ≤1 mCi	>1 mCi
Antimony-125	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Barium-133	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Bismuth-210	≤10,000 Ci	>10,000 Ci	≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi
Cadmium-109	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Calcium-45	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Carbon-14	≤1,000,000 Ci	>1,000,000 Ci	≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci, ≤10 Ci	>10 Ci
Cerium-144	≤10,000 Ci	>10,000 Ci	≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi
Cesium-134	≤10,000 Ci	>10,000 Ci	≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi
Cesium-135	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Cesium-137	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Chlorine-36	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Cobalt-60	≤10,000 Ci	>10,000 Ci	≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi
Europium-152 13yr	≤10,000 Ci	>10,000 Ci	≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi
Europium-154	≤10,000 Ci	>10,000 Ci	≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi
Europium-155	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Gadolinium-153	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Holmium-166	≤1,000,000 Ci	>1,000,000 Ci	≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci, ≤10 Ci	>10 Ci
Hydrogen-3	≤10,000,000 Ci	>10,000,000 Ci	≤1 Ci	>1 Ci, ≤10 Ci	>10 Ci, ≤100 Ci	>100 Ci
Indium-115	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci

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ISOTOPE	*Sealed Sources/ Plated Foils under 10 CFR Part 30*		*Unsealed Sources under 10 CFR Parts 30, 40, and 70*			
	Financial Assurance Not Required	**$113,000 Certification Allowed**	**Financial Assurance Not Required**	**$225,000 Certification Allowed**	**$1,125,000 Certification Allowed**	**DFP Required**
Iodine-129	≤1,000 Ci	>1,000 Ci	≤0.1 mCi	>0.1 mCi, ≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi
Iron-55	≤1,000,000 Ci	>1,000,000 Ci	≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci, ≤10 Ci	>10 Ci
Krypton-85	≤1,000,000 Ci	>1,000,000 Ci	≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci, ≤10 Ci	>10 Ci
Manganese-54	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Nickel-59	≤1,000,000 Ci	>1,000,000 Ci	≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci, ≤10 Ci	>10 Ci
Nickel-63	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Niobium-93m	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Platinum-193	≤1,000,000 Ci	>1,000,000 Ci	≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci, ≤10 Ci	>10 Ci
Plutonium-239	-	-	≤0.01 mCi	>0.01 mCi, ≤0.1 mCi	>0.1 mCi, ≤1 mCi	>1 mCi
Polonium-210	≤1,000 Ci	>1,000 Ci	≤0.1 mCi	>0.1 mCi, ≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi
Promethium-147	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Radium-226	≤100 Ci	>100 Ci	≤0.01 mCi	>0.01 mCi, ≤0.1 mCi	>0.1 mCi, ≤1 mCi	>1 mCi
Rubidium-87	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Ruthenium-106	≤10,000 Ci	>10,000 Ci	≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi
Samarium-151	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Silver-110m	≤10,000 Ci	>10,000 Ci	≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi
Strontium-90	≤1,000 Ci	>1,000 Ci	≤0.1 mCi	>0.1 mCi, ≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi
Technetium-97	≤1,000,000 Ci	>1,000,000 Ci	≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci, ≤10 Ci	>10 Ci
Technetium-99	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Thallium-204	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci

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ISOTOPE	*Sealed Sources/ Plated Foils under 10 CFR Part 30*		*Unsealed Sources under 10 CFR Parts 30, 40, and 70*			
	Financial Assurance Not Required	**$113,000 Certification Allowed**	**Financial Assurance Not Required**	**$225,000 Certification Allowed**	**$1,125,000 Certification Allowed**	**DFP Required**
Thorium (natural)	-	-	≤10 mCi	>10 mCi, ≤100 mCi	-	>100 mCi
Thulium-170	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Thulium-171	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Tungsten-181	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Uranium (natural)	-	-	≤10 mCi	>10 mCi, ≤100 mCi	-	>100 mCi
Uranium-233	-	-	≤0.01 mCi	>0.01 mCi, ≤0.1 mCi	>0.1 mCi, ≤1 mCi	>1 mCi
Uranium-234/235	-	-	≤0.01 mCi	>0.01 mCi, ≤0.1 mCi	>0.1 mCi, ≤1 mCi	>1 mCi
Zinc-65	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Zirconium-93	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
Any alpha emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition (with a half-life greater than 120 days)	≤100 Ci	>100 Ci	≤0.01 mCi	>0.01 mCi, ≤0.1 mCi	>0.1 mCi, ≤1 mCi	>1 mCi
Any radionuclide other than alpha emitting radionuclides, not listed above or mixtures of beta emitters of unknown composition (with a half-life greater than 120 days)	≤1,000 Ci	>1,000 Ci	≤0.1 mCi	>0.1 mCi, ≤1 mCi	>1 mCi, ≤10 mCi	>10 mCi

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ATTACHMENT 2

Table for Determining Quantities of Licensed Material Requiring Labeling
(Source: Appendix B of 10 CFR Part 30)

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APPENDIX B TO 10 CFR PART 30
Quantities[1] of Licensed Material Requiring Labeling

Material	Microcuries	Material	Microcuries	Material	Microcuries	Material	Microcuries
Americium-241	0.01	Gadolinium-159	100	Osmium-191	100	Tantalum-182	10
Antimony-122	100	Gallium-72	10	Osmium-193	100	Technetium-96	10
Antimony-124	10	Germanium-71	100	Palladium-103	100	Technetium-97m	100
Antimony-125	10	Gold-198	100	Palladium-109	100	Technetium-97	100
Arsenic-73	100	Gold-199	100	Phosphorus-32	10	Technetium-99m	100
Arsenic-74	10	Hafnium-181	10	Platinum-191	100	Technetium-99	10
Arsenic-76	10	Holmium-166	100	Platinum-193m	100	Tellurium-125m	10
Arsenic-77	100	Hydrogen-3	1,000	Platinum-193	100	Tellurium-127m	10
Barium-131	10	Indium-113m	100	Platinum-197m	100	Tellurium-127	100
Barium-133	10	Indium-114m	10	Platinum-197	100	Tellurium-129m	10
Barium-140	10	Indium-115m	100	Plutonium-239	0.01	Tellurium-129	100
Bismuth-210	1	Indium-115	10	Polonium-210	0.1	Tellurium-131m	10
Bromine-82	10	Iodine-125	1	Potassium-42	10	Tellurium-132	10
Cadmium-109	10	Iodine-126	1	Praseodymium-142	100	Terbium-160	10
Cadmium-115m	10	Iodine-129	0.1	Praseodymium-143	100	Thallium-200	100
Cadmium-115	100	Iodine-131	1	Promethium-147	10	Thallium-201	100
Calcium-45	10	Iodine-132	10	Promethium-149	10	Thallium-202	100
Calcium-47	10	Iodine-133	1	Radium-226	0.01	Thallium-204	10
Carbon-14	100	Iodine-134	10	Rhenium-186	100	Thorium(natural)[1]	100
Cerium-141	100	Iodine-135	10	Rhenium-188	100	Thulium-170	10
Cerium-143	100	Iridium-192	10	Rhodium-103m	100	Thulium-171	10
Cerium-144	1	Iridium-194	100	Rhodium-105	100	Tin-113	10
Cesium-131	1,000	Iron-55	100	Rubidium-86	10	Tin-125	10
Cesium-134m	100	Iron-59	10	Rubidium-87	10	Tungsten-181	10
Cesium-134	1	Krypton-85	100	Ruthenium-97	100	Tungsten-185	10
Cesium-135	10	Krypton-87	10	Ruthenium-103	10	Tungsten-187	100
Cesium-136	10	Lanthanum-140	10	Ruthenium-105	10	Uranium(natural)[2]	100
Cesium-137	10	Lutetium-177	100	Ruthenium-106	1	Uranium-233	0.01
Chlorine-36	10	Manganese-52	10	Samarium-151	10	Uranium-234	0.01
Chlorine-38	10	Manganese-54	10	Samarium-153	100	Uranium-235	0.01
Chromium-51	1,000	Manganese-56	10	Scandium-46	10	Vanadium-48	10
Cobalt-58m	10	Mercury-197m	100	Scandium-47	100	Xenon-131m	1,000
Cobalt-58	10	Mercury-197	100	Scandium-48	10	Xenon-133	100
Cobalt-60	1	Mercury-203	10	Selenium-75	10	Xenon-135	100
Copper-64	100	Molybdenum-99	100	Silicon-31	100	Ytterbium-175	100
Dysprosium-165	10	Neodymium-147	100	Silver-105	10	Yttrium-90	10
Dysprosium-166	100	Neodymium-149	100	Silver-110m	1	Yttrium-91	10
Erbium-169	100	Nickel-59	100	Silver-111	100	Yttrium-92	100
Erbium-171	100	Nickel-63	10	Sodium-24	10	Yttrium-93	100
Europium-152 9.2 h	100	Nickel-65	100	Strontium-85	10	Zinc-65	10
Europium-152 13 yr	1	Niobium-93m	10	Strontium-89	1	Zinc-69m	100
Europium-154	1	Niobium-95	10	Strontium-90	0.1	Zinc-69	1,000
Europium-155	10	Niobium-97	10	Strontium-91	10	Zirconium-93	10
Fluorine-18	1,000	Osmium-185	10	Strontium-92	10	Zirconium-95	10
Gadolinium-153	10	Osmium-191m	100	Sulphur-35	100	Zirconium-97	10

Any alpha emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition. 0.01
Any radionuclide other than alpha emitting radionuclides, not listed above or mixtures of beta emitters of unknown composition. 0.1

[1] Based on alpha disintegration rate of Th-232, Th-230 and their daughter products.

[2] Based on alpha disintegration rate of U-238, U-234, and U-235.

NOTE: For purposes of §20.303, where there is involved a combination of isotopes in known amounts, the limit for the combination should be derived as follows: Determine, for each isotope in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific isotope when not in combination. The sum of such ratios for all the isotopes in the combination may not exceed "1" (i.e., "unity").

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Appendix B

NRC Response to Comments

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Table B-1 Comments from The Portland General Electric Company, Trojan ISFSI

Comment:

Various sections of the draft Guidance Document address the contents of a decommissioning funding plan, however, they do not cover all of the above information specified in the proposed rule. It is recommended that the following draft Guidance Document sections be changed to conform to the proposed rule changes in section 72.30(b)(1) through (b)(6):

- Page xxv, Decommissioning Funding Plan (DFP) definition
- Page 4-5, last paragraph and last bullet
- Page A-28, Checklist 3 (also add a Part 72 box)
- Page A-35, Section A.3.3, first paragraph and bullets (also add reference to 72.30(b)

NRC Response:

The NRC staff agrees with the commenter and has revised the text at the points indicated in the comment. The definition of Decommissioning Funding Plan was amended, and references to § 72.30 or 72.30(b) were added to the pages indicated in the comment (in some cases pagination has changed slightly). Checklist 3 and Section A.3.3 have also been revised.

Comment:

The definition on page xxiv of the draft Guidance Document appears to be consistent with the section 72.30(b)(6) change. Part 30, 40, and 70 licensees typically submit a "certification to a prescribed amount of financial assurance." Various sections of the draft Guidance Document currently state that Part 30, 40, and 70 licensees are required to submit a certification and that Part 72 licensees do not need to submit a certification of financial assurance for decommissioning with their decommissioning funding plan. In accordance with the above proposed rule change, Part 72 licensees will be required to submit a certification of financial assurance to the NRC at the time of license renewal and at intervals not to exceed 3 years. It is recommended that the following sections of the draft Guidance Document be changed to conform to the above 72.30(b)(6) proposed rule change, including the requirement to submit it every 3 years:

- Page 4-3, last paragraph
- Page 4-4, last paragraph
- Page 4-5, last paragraph
- Page A-10, DFP paragraph
- Page A-20, first paragraph
- Page A-25, section A.2.3
- Page A-26, section A.2.4

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Table B-1 Comments from The Portland General Electric Company, Trojan ISFSI (continued)

NRC Response:

The NRC staff agrees with the commenter and has revised the text at the points indicated in the comment to specify that part 72 licensees are now required to submit a certification of financial assurance. Where appropriate, the staff has also specified the three-year period for submissions. No change was made to section A.2.3 because Part 72 licensees are not able to use prescribed certification amounts.

Comment:

Section 10 CFR 72.30(c) coupled with 72.30(b) of the proposed rule contains a new requirement for Part 72 licensees to submit an updated decommissioning funding plan to the NRC for approval at intervals not to exceed 3 years. Section 72.30(c) states, in part:

> *"(c) At the time of license renewal and at intervals not to exceed 3 years the decommissioning funding plan must be re-submitted with adjustments as necessary to account for changes in costs and the extent of contamination. If the amount of financial assurance will be adjusted, this cannot be done until the updated decommissioning funding plan is approved. The decommissioning funding plan must update the information submitted with the original or prior approved plan and must specifically consider ..."*

When the above proposed rule change is considered along with the draft Guidance Document requirements related to the content of Trust Agreements, there is a significant impact on PGE as a Part 72 ISFSI Site-Specific Licensee. The draft Guidance Document Page A-62 for section A.4.5 Model Trust Agreement Schedules and page A-181 for section A.12.5 Model Standby Trust Agreement Schedules contain requirements for Trust Agreement document Schedule A to contain the following information:

- *Amount of Cost Estimate ... Demonstrated by this Agreement*
- *Date that the Cost Estimate listed here was last adjusted and approved by NRC*

It is not clear why the Trust Agreement Contract document between the licensee and the trustee needs to contain these two pieces of information when this information will already be retained in the NRC's records system under the licensee's docket number. In accordance with the proposed rule section 72.30(c) above, a Part 72 Site-Specific Licensee would obtain NRC approval of their updated decommissioning funding plan, which includes the decommissioning cost estimate, every 3 years. The updated funding plan and associated cost estimate will be adjusted for inflation and radioactive waste burial costs and may also include a change to the projected date of ISFSI decommissioning if the USDOE schedule for assuming title to the licensee's spent fuel has changed. To keep the Trust Agreement current, the licensee will need to change Schedule A every 3 years to reflect the amount of the adjusted cost estimate and the NRC approval date.

For PGE Company, any changes to the current Trust Agreement require review and approval by the PGE Board of Directors and the Trustee's representative. Requiring the Board of Directors

Table B-1 Comments from The Portland General Electric Company, Trojan ISFSI (continued)

and the Trustee to review and approve a change to the Trust Agreement every 3 years, to reflect the amount of the adjusted cost estimate and the NRC approval date, is considered an unnecessary burden, since this is already docketed information. It is recommended that the draft Guidance Document page A-62 and page A-181 for Model Trust Agreement Schedule A be revised to delete the requirements for Part 72 licensees to include the following information in their Trust Agreement Schedule A:

- *Amount of Cost Estimate … Demonstrated by this Agreement*
- *Date that the Cost Estimate listed here was last adjusted and approved by NRC*

NRC Response:

The existing regulation in 10 CFR 72.30(c)(1) states that liquid assets must be sufficient to pay decommissioning costs. The NRC staff believes that, as a result, the trust agreement must spell out the decommissioning cost that is being covered. The NRC does not agree that updating the cost estimate dollar amount in Schedule A is unnecessarily burdensome. Updating of the trust agreement and approval of the updated trust by the Board of Directors and the Trustee to reflect the amount of the updated cost estimate will ensure that the trust continues to reflect the current decommissioning cost estimate. No change was made in response to the comment to the guidance document.

Comment:

Section 10 CFR 72.30(e) of the proposed rule change adds a new requirement for Part 72 licensees that states, in part:

> *"(e) The financial instrument must include the licensee's name, license number, and docket number; and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee. When any of the foregoing information changes, the licensee must, within 30 days, submit financial instruments reflecting such changes."*

The draft Guidance Document was not changed to conform to the above proposed rule change. Many sections of the draft Guidance Document currently contain wording similar to: *"Unlike other material licensees, part 72 licensees are not required to submit originals of the financial instruments used to provide financial assurance."* It is recommended that the Guidance Document be changed to reflect that Part 72 licensees are required to submit copies of financial instruments to the NRC within 30 days, whenever changes specified in section 72.30(e) are made to these financial instruments. Changes to the following Guidance Document sections should be considered:

- Page 4-1, first paragraph
- Page 4-2, third paragraph
- Page A-25, section A.2.3

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Table B-1 Comments from The Portland General Electric Company, Trojan ISFSI (continued)

NRC Response:

The NRC staff agrees with the proposed changes to page 4-1 and section A.2.3 and has revised the guidance to reflect the new requirements for financial instruments. The staff has also revised the guidance (at the points indicated in the comment) to reflect that if the information changes, Part 72 licensees will be required to submit updated financial instruments. The staff concluded no change was necessary to page 4-2.

Comment:

The NRC proposed rule change added sub-sections to 10 CFR 72 that resulted in renumbering of some sub-sections (e.g., 72.30(d) was changed to 72.30(f)), and the draft Guidance Document was not changed to conform with this change. The following sections of the Guidance Document should be changed to reflect the renumbering of 10 CFR 72 sections:

- Page 3-1, Regulatory Requirements: change 72.30(d) to 72.30(f)
- Page 3-2, References to Other Records: change 72.30(d) to 72.30(f)
- Pages 3-3, 3-4 and 3-5, section 3.1.2, Items 2, 3, 4 and 5: change 72.30(d) to 72.30(f)
- Page 3-7, section 3.3, Regulatory Requirements: change 72.30(d) to 72.30(f)
- Page 4-10, last paragraph, change "all nine of" to say "all eleven of"
- Page A-208, Endnote 32: change 72.30(c)(2) to 72.30(e)(2)

NRC Response:

The NRC staff agrees and has corrected the section numbering at the points indicated in the comment.

Comment:

Section 10 CFR 72.30(c)(2)(ii) of the current rule and renumbered section 72.30(e)(2)(ii) in the proposed rule state:

> *"(ii) The surety method or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency."*

As indicated above, the proposed rule change only renumbered this section. During our review of the draft Guidance Document, it was noted that page A-168, second paragraph and page A-169, section A.12.1 do not contain a reference to the above section 72.30(e)(2)(ii) that allows a Part 72 licensee to use a standby trust.

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Table B-1 Comments from The Portland General Electric Company, Trojan ISFSI (continued)

Although this change is not within the scope of the proposed rule change, it is recommended that the wording in the second paragraph on page A-168 and page A-169, section A.12.1 of the draft Guidance Document be changed to add a reference to section 72.30(e)(2)(ii). **NRC Response:** The NRC staff agrees and has made the recommended changes.
Comment: Section 10 CFR 72.30(c)(4) of the current rule and renumbered section 72.30(e)(4) in the proposed rule state: *"(4) In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning, and indicating that funds for decommissioning will be obtained when necessary."* As indicated above, the proposed rule change only renumbered this section. During our review of the draft Guidance Document, it was noted that page A-164, second paragraph and section A.11.1, do not contain a reference to the above section 72.30(e)(4) that allows a Part 72 licensee to use a statement of intent. Although this change is not within the scope of the proposed rule change, it is recommended that the wording in the second paragraph and in section A.11.1 on page A-164 of the draft Guidance Document be changed to add a reference to section 72.30(e)(4). **NRC Response:** The NRC staff agrees and has made the recommended changes.
Comment: Section 10 CFR 72.30(c)(5) of the current rule and renumbered section 72.30(e)(5) in the proposed rule state: *"(5) In the case of licensees who are issued a power reactor license under Part 50 of this chapter, the methods of 10 CFR 50.75(b), (e), and (h), as applicable."* As indicated above, the proposed rule change only renumbered this section. During our review of the draft Guidance Document, it was noted that page 4-33, section 4.3.2.7, last bullet, still contains wording that was changed in a previous rulemaking. Specifically, this Guidance Document wording states, in part*: "Exception: Part 72 licensees who are electric utility licensees (as defined in 10 CFR Part 50) may use an external sinking fund without having to couple it with a surety method or insurance (i.e., they may use a gradually funded prepayment mechanism only), in which case the amount of the fund may be below the cost estimate or prescribed amount prior to decommissioning."* The NRC final rule effective December 24, 2003 (Decommissioning Trust Provisions, 67 FR 78332, dated December 24, 2002) changed the words "who are electric utility licensees" to say "who are issued a power reactor license under

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Table B-1 Comments from The Portland General Electric Company, Trojan ISFSI (continued)

Part 50 of this chapter." Although this change is not within the scope of the proposed rule change, it is recommended that the wording in the last bullet on page 4-33, section 4.3.2.7 of the draft Guidance Document be changed to reflect the above wording in section 72.30(e)(5). **NRC Response:** The NRC staff agrees and has made the recommended changes.

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Table B-2 Comments from the Nuclear Energy Institute (NEI)

The NEI submitted comments that were, with the exception of minor differences in wording at a few points, the same as the comments submitted by Portland General Electric, Trojan ISFSI. The comments and NRC responses are presented in Table B-1. In addition, the NEI submitted the following comment:

Comment:

Section 10 CFR 72.3(c) **(sic.)** states: At the time of license renewal and at intervals not to exceed 3 years the decommissioning funding plan must be re-submitted with adjustments as necessary to account for changes in costs and the extent of contamination.

The draft Guidance Document does not conform to this part of the proposed rule. Guidance Document section A.3.2 states that the DFP should be updated every 3 years but does not address submission to the NRC. Section A.3.3, titled: Submitting the Required Documentation, does not include the proposed rule requirement to re-submit the DFP at intervals not to exceed 3 years.

It is recommended that the Guidance Document section A.3.3 be revised to conform with the proposed rule regarding re-submittal of the updated DFP to the NRC.

NRC Response:

The NRC staff agrees and has made the suggested revision.

DRAFT