

- (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 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.
- (9) 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).
- (10) The cost estimate includes costs for all major decommissioning and site control and maintenance activities specified in Section A.3 of Appendix A to 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.

In addition to these criteria, the cost estimate should 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.

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.

- (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 in a deficiency letter, which will be prepared by the licensing project manager.

SAMPLE EVALUATION FINDINGS

Documentation of the evaluation findings by the 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 the NRC staff to determine if the certification of financial assurance was developed in accordance with NRC regulations and guidance. The 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, the 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 most recent 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 preparer should enter the required prescribed amounts under all applicable parts of 10 CFR (i.e., Parts 30, 40, and 70) on the appropriate lines and add them 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 the NRC. The NRC staff should use this guidance to the extent necessary in reviewing certifications of financial assurance submitted by licensees.

EVALUATION CRITERIA

The information supplied by the licensee should be sufficient to allow the 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 four of the following conditions:

- (1) 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).
- (2) Where the licensee is authorized to possess more than one radionuclide, the unity rule (as defined in Appendix B to Part 30) is applied to all radionuclides with half-life greater than 120 days.
- (3) 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). Figure 4.1 provides a worksheet for determining the required prescribed amount.
- (4) 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):	<input type="checkbox"/> Part 30 <input type="checkbox"/> Part 40 <input type="checkbox"/> 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 to this volume. 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).

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 in a deficiency letter.

SAMPLE EVALUATION FINDINGS

Documentation of the evaluation findings by the 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.

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 only if the license is being terminated under restricted conditions. Acceptable financial assurance for a restricted release site may be demonstrated either by a trust fund segregated from the licensee's assets and outside the licensee's administrative control or through special arrangements with a government entity that assumes custody and ownership of the site.

The NRC staff will verify that the financial assurance mechanism for decommissioning and site maintenance and control (if applicable) 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 the NRC. The NRC staff should use this guidance to the extent necessary in reviewing financial mechanisms submitted by licensees.

EVALUATION CRITERIA

The 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, the 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 the 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 the submission does not present evidence of the trustee’s qualifications, 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’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 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>>. As of the date of this revision, the four district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:

- Northeastern District Office (Telephone: (212) 790-4055)—CT, DE, northeast KY, ME, MD, MA, NH, NJ, NY, NC, PA, RI, SC, VT, VA, WV, District of Columbia, Puerto Rico, and Virgin Islands.
 - Southern District Office (Telephone: (214) 720-7052)—AL, AR, FL, GA, southern KY, LA, MS, southeast MO, OK, TN, and TX.
 - Central District Office (Telephone: (312) 360-8881)—IL, IN, northeast and southeast IA, central KY, MI, MN, eastern MO, ND, OH, and WI.
 - Western District Office (Telephone: (720) 475-7650)—AK, AZ, CA, CO, HI, ID, central and western IA, KS, western MO, MT, NE, NM, NV, OR, SD, 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 (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. 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 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 prepaid 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., the 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 the 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, "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies," 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 the 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 the submission does not include evidence of the issuer's qualifications, 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's) 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>. As of the date of this revision, the four district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:

- Northeastern District Office (Telephone: (212) 790-4055)—CT, DE, northeast KY, ME, MD, MA, NH, NJ, NY, NC, PA, RI, SC, VT, VA, WV, District of Columbia, Puerto Rico, and Virgin Islands.
- Southern District Office (Telephone: (214) 720-7052)—AL, AR, FL, GA, southern KY, LA, MS, southeast MO, OK, TN, and TX.
- Central District Office (Telephone: (312) 360-8881)—IL, IN, northeast and southeast IA, central KY, MI, MN, eastern MO, ND, OH, and WI.
- Western District Office (Telephone: (720) 475-7650)—AK, AZ, CA, CO, HI, ID, central and western IA, KS, western MO, MT, NE, NM, NV, OR, SD, 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 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 the 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, the 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 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 the NRC may consider exceptions to this rule on a case-by-case basis. Evidence might include the guarantor’s most recent Securities and Exchange Commission (SEC) 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, “Criteria Relating to Use of Financial Tests and Parent Company Guarantees for Providing Reasonable Assurance of Funds for Decommissioning,” to 10 CFR Part 30, “Rules of General Applicability to Domestic Licensing of Byproduct Material.” Furthermore, the guarantor passes the financial test for *all* costs covered by a financial test, including (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., the U.S. Environmental Protection Agency (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, the 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 the 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, the NRC staff will verify the accountant's credentials by contacting the State Board of Accountancy in the accountant's State.

- A parent company guarantee may not be used in combination with any other financial assurance methods, except an external sinking fund. 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 the 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 (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 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, the

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 the 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, the NRC staff will verify the accountant's credentials by contacting the State Board of Accountancy in the accountant's State.

- A self-guarantee may not be used in combination with any other financial assurance methods, except an external sinking fund. 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 the 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 the 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:** 10 CFR 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 the 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 the 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.

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 the 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 (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>>. As of the date of this revision, the four district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:

- Northeastern District Office (Telephone: (212) 790-4055)—CT, DE, northeast KY, ME, MD, MA, NH, NJ, NY, NC, PA, RI, SC, VT, VA, WV, District of Columbia, Puerto Rico, and Virgin Islands.
- Southern District Office (Telephone: (214) 720-7052)—AL, AR, FL, GA, southern KY, LA, MS, southeast MO, OK, TN, and TX.
- Central District Office (Telephone: (312) 360-8881)—IL, IN, northeast and southeast IA, central KY, MI, MN, eastern MO, ND, OH, and WI.

- Western District Office (Telephone: (720) 475-7650)—AK, AZ, CA, CO, HI, ID, central and western IA, KS, western MO, MT, NE, NM, NV, OR, SD, 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 (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. 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., the 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

GENERAL 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 (1) that the supporting financial information provided with the instrument is correct and complete and (2) 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 the instrument(s) meets all applicable regulatory requirements. If the mechanism is identical to the recommended wording in Appendix A to this volume, 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 nonconforming 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 nonconforming 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).

- The NRC staff will verify that the submission includes all of the necessary items (as identified in Section 4.3.2). 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.)
- The 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 the NRC will have ready access to adequate funding for decommissioning and/or site control and maintenance. Where such potential exists, the 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.

- The 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.)
- The 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, the NRC staff will determine (with assistance from DURLD as necessary) whether the deviations potentially reduce the mechanism's protections in ensuring that the 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 the 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 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 the 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 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 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 NONCONFORMANCES

If the NRC staff identifies nonconformances 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 nonconforming language or documentation. Where appropriate, NRC staff will identify the reasons that the nonconforming 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.

Nonconformances 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 the NRC to licensees for cases where no deficiencies are found in the submittal.

4.4 WEB SITES FOR FINANCIAL REVIEW

The 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 for non-NRC entities have been provided to make it easy for stakeholders to find information. As of June 2011, 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.

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 (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 (FFIEC) Trust Institutions Search	< http://www.fdic.gov/bank/individual/trust/ >	< http://www.fdic.gov >	From the FDIC Web site > Analysts > Trust Institutions Data

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

5. BANKRUPTCY OVERVIEW

OVERVIEW

NRC regulations at 10 CFR 30.34, 40.41, and 70.32 require a licensee to notify the 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 the NRC. Chapters 5 and 6 do not supersede NUREG-1556, "Consolidated Guidance About Materials Licenses," Volume 15, "Guidance About Changes of Control and About Bankruptcy Involving Byproduct, Source, or Special Nuclear Material Licenses," issued November 2000, 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 the NRC of any change of control or bankruptcy that results in changes to the information being reviewed by the NRC in the application review process that would impact the basis on which the 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.

A licensee's financial condition could affect its ability to control licensed material. Therefore, the NRC must be notified so that it can ensure 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.

The 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 United States 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 that 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 the NRC's Public Document Room. If it is necessary to submit proprietary information, licensees should follow the procedure in 10 CFR 2.390, "Public inspections, exemptions, requests for withholding." 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 the 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 the 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.

5.2 BANKRUPTCY REVIEW TEAM

The 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 the NRC's response to the bankruptcy filing.

The 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.

6. PROCEDURES FOR DRAWING ON FINANCIAL ASSURANCE INSTRUMENTS

The following discussion outlines the procedures used to draw money from financial instruments. Detailed 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 requires 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 the NRC to draw funds. For example, if a licensee does not fulfill its obligation to decommission a site or facility, the NRC could draw funds for placement in a trust. A BRT is not necessary for such cases, although coordination among 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 cannot 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 the NRC does not directly acquire funds. The 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 the 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 the specific procedures that 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 the NRC is desired.

Arrangements for direct transfer of the funds to the standby trust must be made so that the NRC does not directly acquire funds. The 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 the 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 the NRC does not directly acquire funds. The NRC staff must not accept funds, even if instruments are made out to the trustee. The NRC staff must never allow the parent company to make any instrument payable directly to the 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 the NRC does not directly acquire funds. The 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 the NRC. Payments by the guarantor must be made to a standby trust fund established at the same time that the guarantee is created.

7. PROCEDURE FOR APPROVING DISBURSEMENTS FROM DECOMMISSIONING FUNDS

The standard contract language for decommissioning funds includes a provision for the 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, the 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 the NRC but do not require the NRC's approval. However, all withdrawals require the licensee to certify to the trustee that it is in decommissioning status.

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 in 10 CFR 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.

Appendix A

Standard Format and Content of Financial Assurance Mechanisms for Decommissioning

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 U.S. Nuclear Regulatory Commission (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 the NRC that will (1) aid the licensee or license applicant in ensuring that the information is complete, (2) help ensure that applicable requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Parts 20, 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 Title 10 of the *Code of Federal Regulations*:

- 10 CFR Part 30, “Rules of General Applicability to Domestic Licensing of Byproduct Material”—Financial assurance requirements can be found in 10 CFR 30.35, “Financial Assurance and Recordkeeping for Decommissioning,” and 10 CFR 30.36, “Expiration and Termination of Licenses and Decommissioning of Sites and Separate Buildings or Outdoor Areas.”
- 10 CFR Part 40, “Domestic Licensing of Source Material” (except uranium recovery facilities)—Financial assurance requirements can be found in 10 CFR 40.36, “Financial Assurance and Recordkeeping for Decommissioning,” and 10 CFR 40.42, “Expiration and Termination of Licenses and Decommissioning of Sites and Separate Buildings or Outdoor Areas.”

- 10 CFR Part 70, “Domestic Licensing of Special Nuclear Material”—Financial assurance requirements can be found in 10 CFR 70.25, “Financial Assurance and Recordkeeping for Decommissioning,” and 10 CFR 70.38, “Expiration and Termination of Licenses and Decommissioning of Sites and Separate Buildings or Outdoor Areas.”
- 10 CFR Part 72, “Licensing Requirements for the 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, “Financial Assurance and Recordkeeping for Decommissioning,” and 10 CFR 72.54, “Expiration and Termination of Licenses and Decommissioning of Sites and Separate Buildings or Outdoor Areas.”
- Subpart E, “Radiological Criteria for License Termination,” of 10 CFR Part 20, “Standards for Protection against Radiation”—Financial assurance requirements can be found in 10 CFR 20.1403, “Criteria for License Termination under Restricted Conditions.”

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 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” (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 Part 30, 10 CFR Part 40, 10 CFR Part 70, and 10 CFR Part 72, which were approved by the Office of Management and Budget (OMB), approval numbers 3150-0017, 3150-0020, 3150-0009, and 3150-0132, respectively. The 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 the NRC.

Licensees and applicants should read Section A.1 in its entirety. The section includes a “master” checklist that directs the reader to other relevant sections and checklists in this appendix. To prepare a financial assurance demonstration that the NRC is likely to accept, 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 the NRC for review and approval.

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):

<input type="checkbox"/> Part 30	<input type="checkbox"/> Part 40
<input type="checkbox"/> Part 70	<input type="checkbox"/> Part 72

Type of Submission:

- ☐ Certification of Financial Assurance → attach Checklist 2
- ☐ Decommissioning Funding Plan → attach Checklist 3
- ☐ Decommissioning Plan → attach Checklist 13-A

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-A
- ☐ Special Arrangement with a Government Entity → attach Checklist 13-B

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).

Note: 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 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 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

The 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 the 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.

<u>Type of License</u>	<u>Minimum License Threshold Requiring Financial Assurance</u>
10 CFR PART 30	<p><i>Unsealed byproduct material with a half-life greater than 120 days in amounts greater than 10^3 times the applicable quantities of Appendix B, “Quantities of Licensed Material Requiring Labeling,” to 10 CFR 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 10 CFR Part 30</i></p> <p><i>Or</i></p>

<u>Type of License</u>	<u>Minimum License Threshold Requiring Financial Assurance</u>
	<i>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 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</i>
10 CFR PART 40	<i>Source material in a readily dispersible form exceeding 10 millicuries (mCi)</i>
10 CFR PART 70	<i>Unsealed special nuclear material in amounts greater than 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 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 10 CFR Part 30</i>
10 CFR PART 72	<i>Any amount of spent fuel or high-level radioactive waste</i>

Licensees who exceed the minimum thresholds outlined above are required to demonstrate financial assurance for decommissioning that is acceptable to the 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 a license application or renewal. This section does not apply to licensees preparing or updating financial assurance demonstrations as part of a decommissioning plan (DP). These licensees 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), which are 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), 10 CFR 40.36(b), or 10 CFR 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. Specifically, if a survey required under 10 CFR 20.1501(a) detects residual radioactivity at a site at levels that would, if left uncorrected, prevent the site from meeting the unrestricted use criteria of 10 CFR 20.1402 "Radiological Criteria for Unrestricted Use," then the licensee must submit an updated DFP within one year of when the survey is complete. Alternatively, 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 that 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 thresholds identified below 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****10 CFR 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 10 CFR 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 10 CFR Part 30

10 CFR PART 40

Source material in a readily dispersible form exceeding 100 mCi

Type of License**Minimum License Threshold Requiring Financial Assurance****10 CFR PART 70**

Unsealed special nuclear material in amounts greater than 10^5 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 10^5 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 10 CFR Part 30

10 CFR 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.

The 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 extended by a bank on behalf of a licensee and essentially acts as an irrevocable guarantee of payment to the NRC. 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).

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 ensure 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.

- 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 ensure 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 the NRC rather than to a standby trust fund, the 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.12 for applicable guidance.
- Licensees who use a standby trust fund should complete Checklist 12-A (in Section A.12).

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.13.2.2 for applicable guidance.
- Licensees who use a special arrangement with a government entity should complete Checklist 13-B (in Section A.13).

A.1.5 Recordkeeping

The recordkeeping requirements for licensees are in 10 CFR 30.35(g), 10 CFR 40.36(f), 10 CFR 70.25(g), and 10 CFR 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), 10 CFR 40.41(f), 10 CFR 70.32(a)(9), and 10 CFR 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," issued November 2000.
- Reports that certify completion of the activities for which financial assurance is provided must be submitted to the agency 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 the 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 the NRC for review and approval or notify the NRC that decommissioning has been completed. If the licensee provides a replacement mechanism to the NRC for review, the current mechanism will *not* be canceled or released before the NRC's review and approval of the replacement mechanism. Licensees should provide the NRC with adequate time to review proposed replacement mechanisms. Upon the 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. Chapter 8 of this volume provides additional detail about returning, canceling, or reducing financial assurance instruments.

If the license holder is expected to change as a result of a corporate acquisition or divestiture, the licensee must obtain the 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, the NRC must approve the replacement before NRC will release the existing mechanism. The 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.

A.2 Certification of Financial Assurance

All licensees required to provide financial assurance under 10 CFR Part 30, 10 CFR Part 40, 10 CFR Part 70, and 10 CFR Part 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. Section A.2.4 provides a Model Certification of Financial Assurance 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 a 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:

- The 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 the 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), 10 CFR 40.42(g)(4)(v), 10 CFR 70.38(g)(4)(v), and 10 CFR 72.54(g)(5).

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

In addition, 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. In addition, a materials licensee may not base its financial assurance for decommissioning on a certification amount when the licensee's site surveys indicate the presence of residual radioactivity in amounts that would prevent the site from meeting the unrestricted use criteria in 10 CFR 20.1402. 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:

- 10 CFR Part 30—Byproduct Material
- 10 CFR Part 40—Source Material
- 10 CFR 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.

A.2.1.1 10 CFR Part 30 Prescribed Amounts

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

- **The lowest level prescribed amount of \$113,000 applies** to 10 CFR 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 10 CFR 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 10 CFR 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 10 CFR 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 10 CFR 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 10 CFR 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 10 CFR 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 10 CFR Part 40 Prescribed Amounts

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

- ***A prescribed amount of \$225,000 applies*** to a 10 CFR 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 10 CFR 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 10 CFR 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 10 CFR Part 70 Prescribed Amounts

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

- **The middle level prescribed amount of \$225,000** applies to a 10 CFR Part 70 licensee who is authorized to possess or use unsealed special nuclear material as follows:
 - 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 a 10 CFR 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 10 CFR 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 10 CFR 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 NRC staff considers the model wording for certifications of financial assurance presented in Section A.2.4 to be acceptable. 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., 10 CFR 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), 10 CFR 40.36(b)(2), and 10 CFR 70.25(b)(2), licensees who use prescribed amounts of financial assurance must submit the following to the 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 the NRC. Licensees under 10 CFR Part 72 are not required to submit originals of the financial assurance documents. 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 U.S. dollars]* has been obtained for the purpose of decommissioning as prescribed by 10 CFR Part *[insert 30, 40, 70, or 72]*.

[This paragraph is needed for a 10 CFR Part 72 licensee (10 CFR 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 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 is needed for 10 CFR Part 72 licensees (10 CFR 72.30(e)) only.] Contact information for this certification of financial assurance by *[insert name of licensee]* is the following: *[insert the licensee’s 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 Decommissioning Funding Plan

The DFPA 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.

A.3 Decommissioning Funding Plans

A 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):

- | | |
|----------------------------------|----------------------------------|
| <input type="checkbox"/> Part 30 | <input type="checkbox"/> Part 40 |
| <input type="checkbox"/> Part 70 | <input type="checkbox"/> 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 statement that financial assurance for decommissioning has been provided in the amount of the decommissioning cost estimate (see Section A.2.4)
- ☐ Include a financial instrument and supporting documentation.

A.3.1 Preparing the Site-Specific Cost Estimate

In evaluating decommissioning cost estimates, the 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).

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 through 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 must assume that the work will be performed by an independent third party and 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, the 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 10 CFR 20.1403, "Criteria for license termination under restricted conditions," can be met.

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 the 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. *The 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,” issued July 1998, and other NRC cost estimating references. The bibliography of this appendix cites other documents that may help in calculating estimates for decommissioning costs.

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 Section A.3.1.2.3. Estimated costs must 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 must 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 source for the labor costs (e.g., Bureau of Labor Statistics' schedules of labor rates for specified areas of the country; current commonly used standard cost estimating manuals; or labor costs in current or projected third-party contracts with the licensee) should be described in sufficient detail to allow the NRC staff to confirm them. Licensees also should consider including other supporting material, such as electronic versions of spreadsheets used to build the cost estimate and web addresses for Internet-accessible data. 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.)

The 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

The licensee must identify and adequately justify the key assumptions used in the decommissioning cost estimate. 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, the NRC may approve credit for salvage value based on its review of explicit documentation provided by the licensee to justify the credit.

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 following types of events must be evaluated in the triennial adjustment for their effect on the decommissioning cost estimate:

- 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, “Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning,” issued June 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.
- 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, the licensee must make an adjustment 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 and include reasonable estimates of pond leakage.

A.3.3 Submitting the Required Documentation

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

10 CFR Part 72 licensees are not required to submit originals of the financial assurance documents. 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 appendix describes the allowable financial instruments in general terms in Section A.1 and 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 the NRC.

In addition to submitting these materials to the 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.

A.3.4 Facility Description Summary

NRC license numbers and types (i.e., Parts 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.

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)			

A.3.6 Planning and Preparation (Workdays)

Estimate the number of workdays, 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), 10 CFR 40.42(g)(1), 10 CFR 70.38(g)(1), or 10 CFR 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						

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

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							

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

Estimate the number of workdays, by specific labor category, 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 (Workdays)

Estimate the number of workdays, by specific labor category, 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 (Workdays)

Estimate the number of workdays, by specific labor category, required to complete site stabilization and long-term surveillance activities.

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

A.3.11 Total Workdays by Labor Category

Enter the total workdays 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 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.

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 Workday**						
Note: * Source: ** Based on _____ workdays per year (e.g., 260 days).						

A.3.13 Total Labor Costs by Major Decommissioning Task

Multiply the estimated workdays for each specific labor category (from Table A.3.11) by the total cost per workday 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 the 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.

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/truckload)	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.

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	

A.3.17 Miscellaneous Costs

Estimate any other applicable costs.

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

A.3.18 Total Decommissioning Costs

Enter the total costs reported in Table A.3.13, Table A.3.14(a)–(c), Table A.3.15, Table A.3.16, and Table 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		

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. The 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 following sections discuss the primary criteria the NRC will use to determine the acceptability of particular trust fund submissions:

- 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 acceptable to the NRC.

This section also contains two checklists designed to assist licensees in preparing acceptable decommissioning trusts. Checklist 4-A summarizes the primary criteria used by the 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.

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.

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. The referenced sections are to the model trust fund agreement.

- ☐ 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 2 and Schedule A).
- ☐ Words of transfer, conveyance, and delivery in trust (Section 3).
- ☐ Description of trust property (Section 4 and Schedule B) includes the following:
 - ☐ 1. cash;
 - ☐ 2. securities; and
 - ☐ 3. other liquid assets.
- ☐ Additions to trust (Section 4).
- ☐ Distribution of trust principal (Section 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 6–8) includes the following:
 - ☐ 1. discretionary powers;
 - ☐ 2. fiduciary duty;
 - ☐ 3. commingling and investment;

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

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

- ☐ Taxes and expenses (Section 9).
- ☐ Annual valuation (Section 10).
- ☐ Advice of counsel (Section 11).
- ☐ Authority, compensation, and tenure of trustees (Sections 12–14) includes the following:
 - ☐ 1. trustee compensation (Schedule C);
 - ☐ 2. successor trustee; and
 - ☐ 3. instructions to trustee.
- ☐ Amendment of agreement (Section 15).
- ☐ Irrevocability and termination (Section 16).
- ☐ Immunity and indemnification (Section 17).
- ☐ Law to govern construction and operation of trust (Section 18).
- ☐ Interpretation and severability (Section 19).
- ☐ Signatures and titles.
- ☐ Acknowledgments, seals, or attestations, if necessary or desired (witness by notary public).
- ☐ Acceptance of trust by trustee or trustees (acknowledgment).

A.4.1 Qualifications of the Trustee

The regulations on financial assurance for decommissioning (10 CFR 30.35(f)(2)(ii), 10 CFR 40.36(e)(2)(ii), and 10 CFR 70.25(f)(2)(ii)) require that the trustee be acceptable to the 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, the 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 whether 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>.) As of the date of this revision, the four district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:

- Northeastern District Office (Telephone: (212) 790-4055)—CT, DE, northeast KY, ME, MD, MA, NH, NJ, NY, NC, PA, RI, SC, VT, VA, WV, District of Columbia, Puerto Rico, and Virgin Islands.
 - Southern District Office (Telephone: (214) 720-7052)—AL, AR, FL, GA, southern KY, LA, MS, southeast MO, OK, TN, and TX.
 - Central District Office (Telephone: (312) 360-8881)—IL, IN, northeast and southeast IA, central KY, MI, MN, eastern MO, ND, OH, and WI.
 - Western District Office (Telephone: (720) 475-7650)—AK, AZ, CA, CO, HI, ID, central and western IA, KS, western MO, MT, NE, NM, NV, OR, SD, 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 whether 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 the NRC, any successor trustee must meet the same standard as the original trustee (i.e., the new trustee 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 the NRC and the current trustee.

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 only 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 the 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.

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 recommended model trust agreement that would meet the NRC's requirements. Other documentation must also be submitted with a trust agreement. Supporting documentation may differ for licensees who submit trusts that deviate 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.

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,” “proprietorship,” or “limited liability company (LLC)”]*, 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, 70, or 72]*. 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, 70, or 72]* 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, 70, or 72]*, 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.

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 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*]

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 <u>LICENSE NUMBER(S)</u>	NAME AND ADDRESS OF <u>LICENSEE</u>	ADDRESS OF LICENSED <u>ACTIVITY</u>	COST ESTIMATES FOR REGULATORY ASSURANCES DEMONSTRATED BY <u>THIS AGREEMENT</u>
--	---	---	--

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.

A.4.6 Model Specimen Certificate of Events

[Insert name and address of trustee]

Attention: Trust Division

To Whom It May Concern *[May be personalized]*:

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

A.4.7 Model Specimen Certificate of Resolution

I, _____, do hereby certify that I am Secretary of [*insert name of licensee*], a [*insert organization type: corporation, partnership, proprietorship, or LLC*] organized under the laws of [*insert name of state*] and that the resolution listed below was duly adopted at a meeting of this company'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.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]

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 the 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 the 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 the NRC will find particular surety bond submissions acceptable.

- 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 the 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 the 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.

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.

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.
- ☐ 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 the NRC by certified mail at least 90 days prior to cancellation or nonrenewal.

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

- ☐ 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, the NRC may draw upon the bond prior to cancellation.
- ☐ Adjustment of penal sum.
- ☐ Severability provision.
- ☐ Liability limit of the bond.
- ☐ Date.
- ☐ Signatures.
- ☐ Premium.

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/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. Section A.12 provides information on the qualifications of trustees of standby trusts.

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.

A.5.3 Recommended Documentation

As summarized in Checklist 5-A, licensees who wish to use surety bonds to provide financial assurance for decommissioning must 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 is acceptable to and recommended by the NRC. Licensees who wish to use other wording should refer to Checklist 5-B to be sure that the alternative wording contains all of 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.

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,” “corporation,” or “LLC”*]

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, 70, or 72*], 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;

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.

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: \$ _____

A.6 Letters of Credit

A *letter of credit* is extended by a bank on behalf of a licensee and essentially acts as an irrevocable guarantee of payment to the NRC. 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 the 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 the 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 the NRC will find particular letter-of-credit submissions acceptable.

- 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 the 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 the NRC uses 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.

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.

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 the NRC and the licensee at least 90 days prior to nonrenewal.
- ☐ An automatic payment provision must be included stating that, if the licensee is unable to secure alternative financial assurance to replace the letter of credit within 30 days of notification of cancellation, the 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 the 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).

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>>.) As of the date of this revision, the four district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:

- Northeastern District Office (Telephone: (212) 790-4055)—CT, DE, northeast KY, ME, MD, MA, NH, NJ, NY, NC, PA, RI, SC, VT, VA, WV, District of Columbia, Puerto Rico, and Virgin Islands.
 - Southern District Office (Telephone: (214) 720-7052)—AL, AR, FL, GA, southern KY, LA, MS, southeast MO, OK, TN, and TX.
 - Central District Office (Telephone: (312) 360-8881)—IL, IN, northeast and southeast IA, central KY, MI, MN, eastern MO, ND, OH, and WI.
 - Western District Office (Telephone: (720) 475-7650)—AK, AZ, CA, CO, HI, ID, central and western IA, KS, western MO, MT, NE, NM, NV, OR, SD, 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 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. Section A.12 provides information on the qualifications of trustees of standby trusts.

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 is acceptable to and recommended by the 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.

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, 70, or 72], which require that a holder of, or an applicant for, a materials license issued under 10 CFR Part [insert 30, 40, 70 or 72] 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.

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”].

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 the 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 the 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 the NRC will find particular insurance policy submissions acceptable.

- 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 the NRC to evaluate insurance policies. Checklist 7-B presents terms and conditions that are recommended for insurance policies. The NRC has not yet developed model insurance policy wording that is acceptable to insurers and to the 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.

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 the 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, the NRC may draw upon the policy prior to cancellation.
- ☐ The insurance policy must be payable to a standby trust.
- ☐ Signatures.
- ☐ Date.

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 of 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.

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 Part 40, 10 CFR Part 70, and 10 CFR Part 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 the 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 the NRC will find particular parent company guarantee submissions acceptable.

- 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 chief executive officer (CEO) letter acceptable to the NRC.
- Section A.8.5 presents a model chief financial officer (CFO) letter acceptable to the NRC.
- Section A.8.6 presents a model parent company guarantee financial test I acceptable to the NRC.
- Section A.8.7 presents a model parent company guarantee financial test II acceptable to the NRC.
- Section A.8.8 presents a model auditor's special report acceptable to the NRC.

- Section A.8.9 presents a model schedule reconciling amounts contained in the CFO's letter with amounts in financial statements acceptable to the NRC.

This section also contains two checklists designed to assist licensees in preparing acceptable parent company guarantees. Checklist 8-A summarizes the primary criteria the NRC uses 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.

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-subsidary relationship have been submitted to the NRC for review).
- ☐ The amount of the parent company guarantee equals or exceeds the required coverage level.

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.
- ☐ 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).

**Checklist 8-B Terms and Conditions Needed in Parent Company Guarantees
(continued)**

- ☐ 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).

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 the 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 the 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.

In addition, for the purposes of these financial tests, “total net worth” is defined to exclude the net book value and goodwill of the nuclear facility and site. “Tangible net worth” is defined to exclude all intangible assets and the net book value of the nuclear facility and site.

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 total 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/or 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) Total net worth at least six times 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 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 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 is acceptable to and recommended by the NRC. Other documentation that is to be submitted with a parent company guarantee is identified below and 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 the NRC. Licensees who use other wording should refer to Checklist 8-B to be sure that the alternative wording contains all of 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 (SEC), 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., the U.S. Environmental Protection Agency).

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 the 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.

A.8.4 Model Chief Executive Officer 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," "corporation," or "LLC"*]. 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*]

A.8.5 Model Chief Financial Officer 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,” “corporation,” or “LLC”]*. 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:

<u>Name of Facility</u>	<u>License Number</u>	<u>Location of Facility</u>	<u>Certified Amounts or Current Cost Estimates</u>
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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]

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. Total 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	\$_____	
	<u>Yes</u>	<u>No</u>
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.	_____	_____
14. Is line 9 at least 6 times line 1?	_____	_____

Guarantor must meet two of the following three ratios:

APPENDIX A

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 minus all intangible assets and excluding the net book value of the nuclear facility and site.
- *** Excluding the net book value and goodwill of the nuclear facility and site.

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 net worth***	\$_____	
*7.	Total assets in United States	\$_____	
		<u>Yes</u>	<u>No</u>
8.	Is line 5 at least \$21 million?	_____	_____
9.	Is line 6 at least 6 times line 1?	_____	_____
10.	Are at least 90 percent of firm's assets located in the United States? If not, complete line 11.	_____	_____
11.	Is line 7 at least 6 times line 1?	_____	_____

12. 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 minus all intangible assets and excluding the net book value of the nuclear facility and site.
- *** Excluding the net book value and goodwill of the nuclear facility and site.

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 [*insert "could" or "could not"*] materially adversely affect the ability of [*insert name of parent guarantor*] to pay decommissioning costs.

APPENDIX A

We [*insert “have” or “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

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	Total 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:

The model schedule above does not illustrate an entire schedule. Rather, it illustrates the form of schedule the NRC expects to be submitted by licensees. Details and reconciling items will differ in specific situation.

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," "corporation," or "LLC"]* 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 *[insert name of 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 total 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) Total 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 *[insert name of licensee]* unless *[insert name of licensee]* has done so.

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 recital 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: _____

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 Part 40, 10 CFR Part 70, and 10 CFR Part 72. The financial test alternatives consider accounting ratios, net worth, assets, operating revenues, and bond rating data relative to fixed criteria. The licensee's financial statements must also 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 in which a licensee has a parent company holding majority control of its voting stock.

The 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, "Criteria Relating to Use of Financial Tests and Self-Guarantees for Providing Reasonable Assurance of Funds for Decommissioning," to 10 CFR Part 30.
- *Commercial companies that do not issue bonds.* Self-guarantees by these licensees are regulated under Appendix D, "Criteria Relating to Use of Financial Tests and Self-Guarantee for Providing Reasonable Assurance of Funds for Decommissioning by Commercial Companies That Have No Outstanding Rated Bonds," to 10 CFR Part 30.
- *Nonprofit colleges, universities, and hospitals.* Self-guarantees by these licensees are regulated under Appendix E, "Criteria Relating to Use of Financial Tests and Self-Guarantee for Providing Reasonable Assurance of Funds for Decommissioning by Nonprofit Colleges, Universities, and Hospitals," to 10 CFR Part 30.

A self-guarantee must remain in force unless the licensee sends notice of cancellation by certified mail to the 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 the 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 the NRC will find particular self-guarantee submissions acceptable.

- 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 CEO or CFO letter that the NRC has found to be acceptable.
- Section A.9.5 presents a model self-guarantee financial test for commercial companies that issue bonds that the NRC has found to be acceptable.
- Section A.9.6 presents a model self-guarantee financial test for nonprofit colleges and universities that issue bonds that the NRC has found to be acceptable.
- Section A.9.7 presents a model self-guarantee financial test for nonprofit colleges and universities that do not issue bonds that NRC has found to be acceptable.
- Section A.9.8 presents a model self-guarantee financial test for nonprofit hospitals that issue bonds that the NRC has found to be acceptable.
- Section A.9.9 presents a model self-guarantee financial test for nonprofit hospitals that do not issue bonds that the NRC has found to be acceptable.
- Section A.9.10 presents a model auditor's special report that the NRC has found to be acceptable.
- Section A.9.11 presents a model schedule reconciling amounts contained in the CEO or CFO letter with amounts in financial statements that the NRC has found to be acceptable.
- Section A.9.12 presents a model self-guarantee agreement that the 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 the NRC uses 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 (CEO) or chief financial officer (CFO) 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.

Checklist 9-B Terms and Conditions Needed in Self-Guarantees

Use this checklist only if deviating from the wording recommended in Section A.9.12.

- ☐ 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.
- ☐ 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).

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), 10 CFR 40.36(e)(2), 10 CFR 70.25(f)(2), and 10 CFR 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.

- 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 the 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 the 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 the NRC’s self-guarantee regulations.

In addition, for the purposes of these financial tests, “total net worth” is defined to exclude the net book value and goodwill of the nuclear facility and site. “Tangible net worth” is defined to exclude all intangible assets and the net book value of the nuclear facility and site.

A.9.1.1 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 total 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: 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.)

A.9.1.2 Financial Test for Commercial Companies that Do Not Issue Bonds

The licensee must have the following:

- (i) Tangible net worth of at least \$21 million and total net worth of 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 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 total net worth less than 1.5.

(Note: Cash flow equals the sum of net income plus depreciation, depletion, and amortization.)

A.9.1.3 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: 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.)

A.9.1.4 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).

A.9.1.5 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.

(Note: 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.)

A.9.1.6 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) use 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.9.12 of this appendix is a model self-guarantee agreement that is acceptable to and recommended by the NRC. Other documentation that is to be submitted with a self-guarantee is listed below 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.9.12 is acceptable to the 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.9.10) 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.9.11) 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.

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," "LLC," "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:

<u>Name of Facility</u>	<u>License Number</u>	<u>Location of Facility</u>	<u>Certified Amounts or Current Cost Estimates</u>
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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]*.

The 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.]

I hereby certify that the content of this letter is true and correct to the best of my knowledge.

[Signature]

[Name]

[Title]

[Date]

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 net worth*** \$_____
- *7. Total assets in United States \$_____

	<u>Yes</u>	<u>No</u>
8. Is line 5 at least \$21 million?	_____	_____
9. Is line 6 at least 10 times line 1?	_____	_____
10. Are at least 90 percent of firm's assets located in the United States? If not, complete line 11.	_____	_____
11. Is line 7 at least 10 times line 1?	_____	_____

12. 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? _____
13. 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 all intangible assets and excluding the net book value of the nuclear facility and site.
- *** Excluding the net book value and goodwill of the nuclear facility and site.

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?

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 \$_____
- | | <u>Yes</u> | <u>No</u> |
|--|------------|-----------|
| 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.

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?

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		\$_____
	<u>Yes</u>	<u>No</u>
10. Is line 3 at least 100 times line 1?	_____	_____
<u>Guarantor must meet each of the following ratios:</u>		
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.

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 the United States. Nuclear Regulatory Commission's (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 [insert "*could*" or "*could not*"] materially adversely affect the ability of [insert name of self-guarantor] to pay decommissioning costs.

We [*insert “have” or “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

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

<u>Per Line Number in CFO's Letter</u>		<u>Per Financial Statements</u>	<u>Reconciling Items</u>	<u>CFO's Letter</u>
	Total 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:

The model schedule above does not illustrate an entire schedule. Rather, it illustrates the form of schedule the NRC expects to be submitted by licensees. Details and reconciling items will differ in specific situation.

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," "LLC," "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) 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 of at least \$21 million, and total 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 of at least \$21 million and total net worth of 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 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 total 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 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]* or
 - (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, 70, or 72], 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, 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: _____

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: Licensees under 10 CFR Part 72 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 10 summarizes the primary criteria the NRC uses 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 Section A.4 of this appendix. Information on the qualifications of issuers of surety methods or insurance is provided in Sections A.5 through A.7 of this appendix.

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 Section A.4 and attach Checklist 4-A, as applicable); and
 - ☐ 2. surety method, parent company guarantee or self-guarantee, or insurance (originally signed duplicate) and all supporting documentation (see Sections A.5 through A.9 and attach Checklists 5-A through 9-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.10.2 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:** Licensees under 10 CFR Part 72 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.

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.4.3) *and* the surety method or insurance (see Sections A.5 through A.7).

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), 10 CFR 40.36(e)(4), 10 CFR 70.25(f)(4), and 10 CFR 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 acceptable to the NRC.

This section also contains two checklists designed to assist licensees in preparing acceptable statements of intent. Checklist 11-A summarizes the primary criteria the NRC uses 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.

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.

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.

A.11.1 Qualifications of the Issuer

Under the NRC's decommissioning financial assurance regulations (10 CFR 30.35(f)(4), 10 CFR 40.36(e)(4), 10 CFR 70.25(f)(4), and 10 CFR 72.30(e)(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.

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. The statement of intent should contain a complete citation of the statute or designation of authority for the signatory to sign the statement of intent. 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 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.

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

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 the NRC's decommissioning financial assurance regulations (10 CFR 30.35(f)(2)(ii), 10 CFR 40.36(e)(2)(ii), 10 CFR 70.25(f)(2)(ii)), and 10 CFR 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 the NRC rather than to a standby trust fund, the 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 the NRC will find particular standby trust fund submissions acceptable.

- 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 acceptable to the NRC.

This section also contains two checklists designed to assist licensees in preparing acceptable decommissioning standby trusts. Checklist 12-A summarizes the primary criteria the NRC uses 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.

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.

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. The referenced sections are from the model standby trust agreement.

- ☐ 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 2 and Schedule A).
- ☐ Words of transfer, conveyance, and delivery in trust (Section 3).
- ☐ Description of trust property (Section 4 and Schedule B):
 - ☐ 1. cash;
 - ☐ 2. securities; and
 - ☐ 3. other liquid assets.
- ☐ Additions to trust (Section 4).
- ☐ Distribution of trust principal (Section 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 limited to 10 percent of the remaining funds available for that license unless NRC written approval is attached.
- ☐ Trust management (Sections 6–8):
 - ☐ 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);
 - ☐ 9. operation of business (optional); and
 - ☐ 10. compromise of claims (optional).

Checklist 12-B Terms and Conditions Needed in Decommissioning Standby Trust Agreements (continued)

- ☐ Taxes and expenses (Section 9).
- ☐ Annual valuation (Section 10).
- ☐ Advice of counsel (Section 11).
- ☐ Authority, compensation, and tenure of trustees (Sections 12–14):
 - ☐ 1. trustee compensation (Schedule C);
 - ☐ 2. successor trustee; and
 - ☐ 3. instructions to trustee.
- ☐ Amendment of agreement (Section 15).
- ☐ Irrevocability and termination (Section 16).
- ☐ Immunity and indemnification (Section 17).
- ☐ Law to govern construction and operation of trust (Section 18).
- ☐ Interpretation and severability (Section 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).

A.12.1 Qualifications of the Trustee

The decommissioning financial assurance regulations (10 CFR 30.35(f)(2)(ii), 10 CFR 40.36(e)(2)(ii), 10 CFR 70.25(f)(2)(ii)), and 10 CFR 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, the 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>.) As of the date of this revision, the four district offices of the OCC, along with the States and territories under their jurisdiction, are as follows:

- Northeastern District Office (Telephone: (212) 790-4055)—CT, DE, northeast KY, ME, MD, MA, NH, NJ, NY, NC, PA, RI, SC, VT, VA, WV, District of Columbia, Puerto Rico, and Virgin Islands.
- Southern District Office (Telephone: (214) 720-7052)—AL, AR, FL, GA, southern KY, LA, MS, southeast MO, OK, TN, and TX.
- Central District Office (Telephone: (312) 360-8881)—IL, IN, northeast and southeast IA, central KY, MI, MN, eastern MO, ND, OH, and WI.
- Western District Office (Telephone: (720) 475-7650)—AK, AZ, CA, CO, HI, ID, central and western IA, KS, western MO, MT, NE, NM, NV, OR, SD, 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 the 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 the 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 the 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 the 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 the 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.

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,” “proprietorship,” or “LLC”]*, 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, 70, or 72]*. 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, 70, or 72]* 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.

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.

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*]

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 <u>NUMBER(S)</u>	NAME AND ADDRESS OF LICENSEE <u>LICENSEE</u>	ADDRESS OF LICENSED ACTIVITY <u>ACTIVITY</u>	COST ESTIMATES FOR REGULATORY ASSURANCES DEMONSTRATED BY THIS <u>AGREEMENT</u>
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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.

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

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]

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, 10 CFR 40.36, or 10 CFR 70.25. In addition, licensees must submit a DP in accordance with 10 CFR 30.36, 10 CFR 40.42, or 10 CFR 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 the 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, 10 CFR 40.42, and 10 CFR 70.38. The decommissioning financial assurance demonstration must include the following:

- 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.12 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.

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–A.12 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 the 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.

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), 10 CFR 40.42(e), and 10 CFR 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.12 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)
- Standby trust fund (see Section A.12)

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 and 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 must 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, (6) permission to install and maintain physical controls, if any are used, (7) the location of a copy of the final radiation status report that is available for public inspection, and (8) 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 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 0.25mSv (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 the 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), 10 CFR 40.42(e), and 10 CFR 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 trust fund to provide coverage for site control and maintenance, the text of the trust fund agreement 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 trust fund 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 *both* 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.12 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 trust funds, which are explained in Section A.4 of this appendix.

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.

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 the NRC uses 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, Volume 1, "Final Environmental Impact Statement on Uranium Milling: Project M-25, Summary and Text," Section 14.34 at page 14-14 (Agencywide Documents Access and Management System Accession No. 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

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.

A.14 Bibliography for Cost Estimating and Financial Assurance

10 CFR Part 20, “Standards for Protection Against Radiation.”

10 CFR Part 30, “Rules of General Applicability to Domestic Licensing of Byproduct Material.”

10 CFR Part 40, “Domestic Licensing of Source Material.”

10 CFR Part 61, “Licensing Requirements For Land Disposal of Radioactive Waste.”

10 CFR Part 70, “Domestic Licensing of Special Nuclear Material.”

10 CFR Part 72, “Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste.”

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— — — — —. NUREG-1556, “Consolidated Guidance About Materials Licenses,” Vol. 15, “Guidance About Changes of Control and About Bankruptcy Involving Byproduct, Source, or Special Nuclear Material Licenses.” Washington, DC. November 2000.

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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.” Washington, DC. April 1991.

A.15 Attachments 1 and 2

Attachments 1 and 2 are taken directly from the Standard Review Plan (SRP) (NUREG-1727).

ATTACHMENT 1

**Table for Determining Financial Assurance Requirements
Under 10 CFR Part 30, 10 CFR Part 40, and 10 CFR Part 70
by Type of Isotope and Activity Level**

ISOTOPE	<i>Sealed Sources/ Plated Foils under 10 CFR Part 30</i>		<i>Unsealed Sources under 10 CFR Parts 30, 40, and 70</i>			
	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

ISOTOPE	<i>Sealed Sources/ Plated Foils under 10 CFR Part 30</i>		<i>Unsealed Sources under 10 CFR Parts 30, 40, and 70</i>			
	Financial Assurance Not Required	\$113,000 Certification Allowed	Financial Assurance Not Required	\$225,000 Certification Allowed	\$1,125,000 Certification Allowed	DFP Required
Indium-115	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
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

ISOTOPE	<i>Sealed Sources/ Plated Foils under 10 CFR Part 30</i>		<i>Unsealed Sources under 10 CFR Parts 30, 40, and 70</i>			
	Financial Assurance Not Required	\$113,000 Certification Allowed	Financial Assurance Not Required	\$225,000 Certification Allowed	\$1,125,000 Certification Allowed	DFP Required
Thallium-204	≤100,000 Ci	>100,000 Ci	≤10 mCi	>10 mCi, ≤100 mCi	>100 mCi, ≤1 Ci	>1 Ci
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

ATTACHMENT 2

**Table for Determining Quantities of Licensed Material Requiring Labeling
(Source: Appendix B to 10 CFR Part 30)**

APPENDIX B TO 10 CFR PART 30

Quantities¹ 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").

Appendix B

U.S. Nuclear Regulatory Commission Response to Comments

The U.S. Nuclear Regulatory Commission (NRC) published Revision 1 of NUREG-1757, Volume 3, for public comment on January 22, 2008. The comment period lasted for 107 days. During that period, the NRC received comments from two organizations: the Portland General Electric Company (PGE) on behalf of the Trojan Independent Spent Fuel Storage Installation (ISFSI) and the Nuclear Energy Institute (NEI). With only minor differences, the majority of the NEI comments were identical to those from PGE. The following tables present the PGE comments, as well as the single unique NEI comment, and the NRC response to each.

**Table B-1 Comments from the Portland General Electric Company,
Trojan Independent Spent Fuel Storage Installation**

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 U.S. Nuclear Regulatory Commission (NRC) staff agrees with the commenter and has revised the text at the places indicated in the comment. The definition of Decommissioning Funding Plan was amended, and references to Title 10 of the *Code of Federal Regulations* (10 CFR) 72.30, “Financial Assurance and Recordkeeping for Decommissioning,” or 10 CFR 72.30(b) were added to the pages indicated in the comment (in some cases pagination has changed slightly). The staff also revised Checklist 3 and Section A.3.3.

Comment:

The definition on page xxiv of the draft Guidance Document appears to be consistent with the section 72.30(b)(6) change. Parts 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 Parts 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

**Table B-1 Comments from the Portland General Electric Company,
Trojan Independent Spent Fuel Storage Installation (continued)**

NRC Response:

The NRC staff agrees with the commenter and has revised the text at the places indicated in the comment to specify that licensees under 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste," are now required to submit a certification of financial assurance. Where appropriate, the staff has also specified the 3-year period for submissions. The staff made no change to Section A.2.3 because 10 CFR 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 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:

**Table B-1 Comments from the Portland General Electric Company,
Trojan Independent Spent Fuel Storage Installation (continued)**

<ul style="list-style-type: none"> • <i>Amount of Cost Estimate ... Demonstrated by this Agreement</i> • <i>Date that the Cost Estimate listed here was last adjusted and approved by NRC</i> <p align="center">NRC Response:</p> <p>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.</p>
<p>Comment:</p> <p>Section 10 CFR 72.30(e) of the proposed rule change adds a new requirement for Part 72 licensees that states, in part:</p> <p align="center"><i>“(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.”</i></p> <p>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: <i>“Unlike other material licensees, part 72 licensees are not required to submit originals of the financial instruments used to provide financial assurance.”</i> 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:</p> <ul style="list-style-type: none"> • Page 4-1, first paragraph • Page 4-2, third paragraph • Page A-25, section A.2.3 <p>NRC Response:</p> <p>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 places indicated in the comment) to reflect that, if the information changes, 10 CFR Part 72 licensees will be required to submit updated financial instruments. The staff concluded that no change was necessary to page 4-2.</p>
<p>Comment:</p> <p>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:</p> <ul style="list-style-type: none"> • 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)

Table B-1 Comments from the Portland General Electric Company, Trojan Independent Spent Fuel Storage Installation (continued)

<ul style="list-style-type: none"> • 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) <p>NRC Response:</p> <p>The NRC staff agrees and has corrected the section numbering at the places indicated in the comment.</p>	<p>Comment:</p> <p>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:</p> <p><i>“(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.”</i></p> <p>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.</p> <p>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).</p> <p>NRC Response:</p> <p>The NRC staff agrees and has made the recommended changes.</p>
<p>Comment:</p> <p>Section 10 CFR 72.30(c)(4) of the current rule and renumbered section 72.30(e)(4) in the proposed rule state:</p> <p><i>“(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.”</i></p> <p>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.</p> <p>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).</p> <p>NRC Response:</p> <p>The NRC staff agrees and has made the recommended changes.</p>	

**Table B-1 Comments from the Portland General Electric Company,
Trojan Independent Spent Fuel Storage Installation (continued)**

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 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.

Table B-2 Comments from the Nuclear Energy Institute

NEI submitted comments that were, with the exception of minor differences in wording at a few points, the same as the comments submitted by the Portland General Electric Company. Refer to Table B-1 for these comments and the NRC responses. 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.

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The U.S. Nuclear Regulatory Commission (NRC) 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," issued September 2000) and NUREG/BR-0241 ("NMSS Handbook for Decommissioning Fuel Cycle and Materials Licensees," issued March 1997). 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 submittal to the NRC. The NRC staff will use this guidance in reviewing these documents and related license amendment requests. Volume 3 is intended to apply only to the decommissioning of materials facilities licensed under Title 10 of the Code of Federal Regulations Parts 30, 40, 70, and 72.

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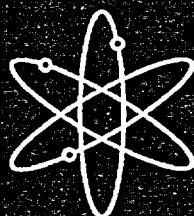
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Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities



Supplement 1

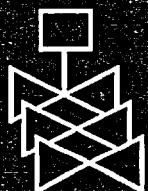


Regarding the Decommissioning of Nuclear Power Reactors



Main Report, Appendices A through M

Final Report



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**Generic Environmental
Impact Statement on
Decommissioning of
Nuclear Facilities**

Supplement 1

**Regarding the Decommissioning of
Nuclear Power Reactors**

Main Report, Appendices A through M

Final Report

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**Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation
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Abstract

This document is a supplement to the U.S. Nuclear Regulatory Commission (NRC) document *Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities* issued in 1988 (NUREG-0586, referred to here as the 1988 Generic Environmental Impact Statement [GEIS]). This Supplement was prepared because of technological advances in decommissioning operations, experience gained by licensees, and changes made to NRC regulations since the 1988 GEIS.

This Supplement updates the information provided in the 1988 GEIS. It is intended to be used to evaluate environmental impacts during the decommissioning of nuclear power reactors as residual radioactivity at the site is reduced to levels that allow for termination of the NRC license. This Supplement addresses only the decommissioning of nuclear power reactors licensed by the NRC. It updates the sections of the 1988 GEIS relating to pressurized water reactors, boiling water reactors, and multiple reactor stations. It goes beyond the 1988 GEIS to explicitly consider high-temperature gas-cooled reactors and fast breeder reactors. This document can be considered a stand-alone document for power reactor facilities such that readers should not need to refer back to the 1988 GEIS. The environmental impacts described in this Supplement supercede those described for power reactor facilities in the 1988 GEIS.

The scope of this Supplement is based on the decommissioning activities performed to remove radioactive materials from structures, systems, and components from the time that the licensee certifies that it has permanently ceased power operations until the license is terminated. The scope of the document was determined through public scoping meetings and meetings with other Federal agencies and the nuclear industry. An evaluation process was then developed to determine environmental impacts from nuclear power reactor facilities that are being decommissioned. The evaluation process involved determining the specific activities that occur during reactor decommissioning and obtaining data from site visits and from licensees at reactor facilities currently being decommissioned. The data obtained from the sites were analyzed and then evaluated against a list of variables that defined the parameters for facilities that are currently operating but which will one day be decommissioned. This evaluation resulted in a range of impacts for each environmental issue that may be used for comparison by licensees that are or will be decommissioning their facilities.

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Executive Summary

This document is a supplement to the U.S. Nuclear Regulatory Commission (NRC) document *Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities*, issued in 1988 (NUREG-0586, referred to hereafter as the 1988 Generic Environmental Impact Statement [GEIS]).^(a) As a supplement, this document considers the technological advances in decommissioning, the experience gained by licensees, and changes made to NRC regulations since the 1988 GEIS. The information from the 1988 GEIS that is still current and applicable to permanently shut down and currently operating commercial nuclear power reactors is included here. This Supplement is intended to be used to evaluate environmental impacts during the decommissioning of nuclear power reactors as residual radioactivity at the site is reduced to levels that allow for termination of the NRC license.

The NRC elected to supplement the GEIS:

- (1) to further the purposes of the National Environmental Policy Act (NEPA)
- (2) to update the information in the GEIS
- (3) to provide additional information to the public on decommissioning activities
- (2) to establish an envelope of environmental impacts that could be associated with decommissioning activities.

Unlike the 1988 GEIS, which took a broad look at decommissioning of a variety of sites and activities, this Supplement addresses only nuclear power reactors licensed by the NRC. It updates the sections of the 1988 GEIS relating to pressurized water reactors, boiling water reactors, and multiple reactor stations. It goes beyond the 1988 GEIS and considers the existing permanently shut down high-temperature gas-cooled reactor and fast breeder reactor. It does not include research and test reactors or the power reactor facilities that have been involved in a significant accident resulting in large-scale contamination of structures, systems, and components (SSCs). It also does not include other types of fuel-cycle facilities, such as fuel-reprocessing plants or small mixed oxide fuel-fabrication plants.

The intent of this Supplement is to consider in a comprehensive manner all aspects related to the radiological decommissioning of nuclear reactor facilities by incorporating updated information, regulations, and analyses. Since the 1988 GEIS was written, the NRC and the industry have gained substantially more nuclear power facility decommissioning experience. Based on the number of reactors shut down and the date that they permanently ceased

(a) The GEIS is considered "generic" in that it evaluates environmental impacts from decommissioning activities common to a number of nuclear power facilities.

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operations, over 200 facility-years' worth of decommissioning experience have accumulated since the NRC published the 1988 GEIS. Currently, there are 19 commercial power reactor facilities in the decommissioning process. This includes nine that permanently ceased operations after the NRC published the 1988 GEIS. Since the 1988 GEIS, there are three facilities that have completed decommissioning and terminated their licenses. There are also new technologies and approaches applicable to decommissioning that the 1988 GEIS does not address. The regulations for decommissioning reactors have also undergone significant changes since the 1988 GEIS.

Scope of the Supplement

The content of this Supplement was initially defined by the scope of the 1988 GEIS and was modified based on current decommissioning regulations, input received during four public scoping meetings, letters and comments received during the scoping period, and meetings between the NRC and the U.S. Environmental Protection Agency (EPA) and the Council on Environmental Quality (CEQ). The public comments received during the scoping process that were considered to be within the scope of the environmental review are provided in Volume 2 Appendix N. The NRC staff published for comment Supplement 1 to the GEIS in October 2001. Public meetings in San Francisco, California, Boston Massachusetts, Chicago, Illinois and Atlanta, Georgia were held in December, 2001 to describe the preliminary results of the NRC environmental review, to answer questions, and to provide members of the public with information to assist them in formatting comments on the draft Supplement. All comments received on the draft Supplement were considered by the staff in developing the final document and are presented in Appendices O and P.

The scope of this Supplement is based on the decommissioning activities performed to remove radioactive materials from SSCs from the time that the licensee certifies that it has permanently ceased power operations until the license is terminated. As a result, the activities performed before permanent cessation of operations (except for decommissioning planning) or impacts that are related to the decision to permanently cease operations (for example, the impact from the loss of generation capacity) are outside the scope of this document.

The Commission defines decommissioning as "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." The staff has included activities that are directly related to the removal of radioactive material from the facility or that must be performed in order to facilitate the removal of contaminated SSCs, as well as the activities and impacts related to the removal of uncontaminated SSCs (such as the intake structure or cooling towers) that were required for the operation of the reactor.

The decommissioning process continues until the licensee requests termination of the license and demonstrates that radioactive material has been removed to the levels that permit

termination of the NRC license. At that point, the NRC no longer has jurisdiction over the site and the owner of the site is no longer subject to NRC regulations. As a result, activities performed after license termination and the resulting impacts are outside the scope of this Supplement. These activities may include any non-NRC required monitoring, site restoration (grading, planting of vegetation, etc.), continued dismantlement (removal of uncontaminated structures or those that have been radiologically decontaminated), or continued use of the site for activities such as power production using natural gas, oil, or coal.

Any potential radiological impacts following license termination that are related to activities performed during the decommissioning period are not considered in this Supplement. Those impacts are covered by the *Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities* (NUREG-1496). Nonradiological impacts following license termination that are related to activities performed during the decommissioning period are considered in this Supplement.

Levels of Significance and Applicability of Environmental Impacts

This Supplement provides a measure of (a) the significance and severity of potential environmental impacts and (b) the applicability of these impacts to a variety of plants both permanently shut down and operating. The significance of the environmental impacts is described as either SMALL, MODERATE or LARGE. The applicability of these impacts to a variety of plants is categorized as either generic or site-specific.

Levels of Significance: For decommissioning, the staff is using a standard of significance derived from the CEQ terminology for "significantly" (40 CFR 1508.27, which considers "context" and "intensity"). The NRC has defined three significance levels: SMALL, MODERATE, and LARGE.

SMALL - Environmental impacts are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts in this Supplement, the NRC has concluded that those impacts that do not exceed permissible levels in the Commission's regulations are considered small.

MODERATE - Environmental impacts are sufficient to alter noticeably but not to destabilize important attributes of the resource.

LARGE - Environmental impacts are clearly noticeable and are sufficient to destabilize important attributes of the resource.

The discussion of each environmental issue in this Supplement includes an explanation of how the significance level was determined. In determining the significance level, the NRC staff assumed that ongoing mitigation measures would continue (including those mitigation

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measures implemented during plant construction and/or operation) during decommissioning, as appropriate. Benefits of additional mitigation measures during or after decommissioning are not considered in determining significance levels.

Applicability: In addition to determining the significance of environmental impacts, this Supplement includes a determination of whether the analysis of the environmental issues could be applied to all plants, and whether additional mitigation measures would be warranted. An environmental issue may be assigned to one of two categories:

- Generic - For each environmental issue, the analysis reported in this Supplement shows the following:
 - (1) Environmental impacts associated with the issue have been determined to apply either to all plants, or for some issues to plants of a specific size, specific location or having a specific type of cooling system or site characteristics, and
 - (2) A single significance level (i.e., SMALL, MODERATE, or LARGE) has been assigned to the impacts, and
 - (3) Mitigation of adverse impacts associated with the issue has been considered in the analysis, and it has been determined that additional plant-specific mitigation measures are likely not to be sufficiently beneficial to warrant implementation.
- Site-specific - For each environmental issue that was determined to be site-specific, the analysis reported in this Supplement has shown that one or more of the generic criteria was not met. Therefore, additional plant-specific review is required. An example of a site-specific issue is threatened and endangered species.

Use and Development of this Supplement

This Supplement can be used by the public to understand the decommissioning process, the activities performed during decommissioning, and the potential environmental impacts resulting from these activities. It identifies activities that can be bounded by a generic evaluation. Licensees can rely on the information in this Supplement as a basis for meeting the requirements in 10 CFR 50.82(a)(6)(ii). This requirement states that the licensee must not perform any decommissioning activity that causes any significant environmental impact not previously reviewed. The NRC staff will also rely on this Supplement as a basis for determining if anticipated decommissioning impacts require an additional review.

The staff first created an initial list of environmental issues and activities that this Supplement should address. The initial list of environmental issues was developed from issues (such as air

quality, aquatic ecology, and radiological impacts) identified in the 1988 GEIS and in the list specified in 10 CFR Part 51, Subpart A, Appendix B, for license renewal. This list was used because it represents the potential impacts associated with nuclear power facilities. The initial list of decommissioning activities was modified based on experience, public participation in the scoping process, site visits to six facilities currently being decommissioned, and meetings with EPA and CEQ. After compiling the issue and activity lists, the staff assessed which activities might have environmental impacts for each of the issues. The next step was to identify the variables that might affect the decommissioning impact for a specific issue and activity. For example, the proximity of the plant to a barge slip or railroad might affect the licensee's decision to remove the steam generator or other large components intact and ship them to a waste site. If the barge slip needs additional dredging, or an additional railroad line needs to be installed, then the environmental impacts may change.

The analyses in this Supplement include data from both operating and decommissioning facilities in order to appropriately span the range of impacts that could be expected. Data from decommissioning facilities was used to determine whether the potential impacts from decommissioning activities for the various issues are generic or site-specific. Data from operating facilities were used to ensure that this Supplement will be valid for all commercial nuclear power reactors.

Alternatives

The alternative to the action of decommissioning is not to decommission the facility. The option to restart the reactor is not considered to be an alternative to decommissioning because the decision to permanently cease operation prevents the licensee from operating the reactor without a significant safety and environmental review by the NRC staff.

The alternative to decommissioning at the end of the licensing period is a "no action" alternative, implying that a licensee would simply abandon or leave a facility after ceasing operations. NRC regulations do not allow the option of not decommissioning. Once the facility permanently ceases operation, if the licensee does not conduct decommissioning activities to an extent that meets the license termination criteria in 10 CFR Part 20, Subpart E, then the license will not be terminated (although the licensee will not be authorized to operate the reactor). The licensee will be required to comply with the necessary requirements for the operating license. As a result, the environmental impacts for maintaining the nuclear reactor facility will be considered to be in the bounds of the appropriate, previously issued Environmental Impact Statements. Under NRC regulations, the original operating license for a nuclear power plant is issued for up to 40 years. The license may be renewed for periods of up to 20 years if NRC requirements are met. However, at the end of the licensing period (whether it has been extended or not), the regulations require that the facility be decommissioned.

Conclusions

Table ES-1 presents each evaluated environmental issue and identifies whether the issue is considered generic or site-specific. If the issue is considered generic, then it is assigned a significance level of either SMALL, MODERATE or LARGE. Of the environmental issues assessed, most of the impacts are generic and SMALL for all plants regardless of the activities and identified variables (see Appendix E for a list of the variables). The two issues determined to be site-specific are threatened and endangered species and environmental justice. Four issues are considered to be conditionally site-specific.

- land use involving offsite areas to support decommissioning activities
- aquatic ecology for activities beyond the operational area
- terrestrial ecology for activities beyond the operational area
- cultural and historic resources for activities beyond the operational area with no current cultural and historic resource survey.

The operational area is defined as the portion of the plant site where most or all of the site activities occur, such as reactor operation, materials and equipment storage, parking, substation operation, facility service, and maintenance. This includes areas within the protected area fences, the intake, discharge, cooling, and associated structures as well as surrounding paved, graveled, maintained landscape, or other maintained areas.

Licensees undergoing or planning decommissioning of a commercial nuclear power reactor can use this Supplement in support of their evaluation of the environmental consequences from decommissioning. The impacts identified in this Supplement are designed to span the range of impacts from all plants that are currently permanently shut down as well as the plants that are currently operating, including the plants that have or may renew their licenses beyond the original 40-year license; a renewed license can be issued for a period not to exceed 20 years beyond the expiration of the operating license. When planning a specific decommissioning activity, licensees that fall within the bounds of the impacts, as described in Chapter 4, may proceed with the activity with no further analysis. However, if the planned activity could result in environmental impacts greater than those predicted by this supplement, then the activity cannot be performed until the licensee performs a site-specific analysis of the activity. Depending on the results of the site-specific evaluation, the staff may determine that it is appropriate to consult with another agency (such as the U.S. Fish and Wildlife Service or a State Historic Preservation Office). If the activity would result in an impact that is outside the bounds of the GEIS or other environmental assessments, the licensee would be required to submit a license-amendment request.

Table ES-1. Summary of the Environmental Impacts from Decommissioning Nuclear Power Facilities

Issue	Generic	Impact
Onsite/Offsite Land Use		
- Onsite land use activities	Yes	SMALL
- Offsite land use activities	No	Site-specific
Water Use	Yes	SMALL
Water Quality		
- Surface water	Yes	SMALL
- Groundwater	Yes	SMALL
Air Quality	Yes	SMALL
Aquatic Ecology		
- Activities within the operational area	Yes	SMALL
- Activities beyond the operational area	No	Site-specific
Terrestrial Ecology		
- Activities within the operational area	Yes	SMALL
- Activities beyond the operational area	No	Site-specific
Threatened and Endangered Species	No	Site-specific
Radiological		
- Activities resulting in occupational dose to workers	Yes	SMALL
- Activities resulting in dose to the public	Yes	SMALL
Radiological Accidents	Yes	SMALL
Occupational Issues	Yes	SMALL
Cost	NA ^(a)	NA
Socioeconomic	Yes	SMALL
Environmental Justice	No	Site-specific
Cultural and Historic Resource Impacts		
- Activities within the operational areas	Yes	SMALL
- Activities beyond the operational areas	No	Site-specific
Aesthetics	Yes	SMALL
Noise	Yes	SMALL
Transportation	Yes	SMALL
Irretrievable Resources	Yes	SMALL

(a) A decommissioning cost assessment is not a specific National Environmental Policy Act (NEPA) requirement. However, an accurate decommissioning cost estimate is necessary for a safe and timely plant decommissioning. Therefore, this Supplement includes a decommissioning cost evaluation, but the cost is not evaluated using the environmental significance levels nor identified as a generic or site-specific issue.

Abbreviations/Acronyms

μ Gy	microGray(s)
μ Sv	microSieverts
ac	acre(s)
AEA	Atomic Energy Act of 1954
AEC	U.S. Atomic Energy Commission
ALI	annual limits on intake
ALARA	as low as reasonably achievable
ANPR	advance notice of proposed rulemaking
BLM	Bureau of Land Management
BMP	best management practice
Bq	Bequerel(s)
BWR	boiling water reactor
C	Celsius
CAA	Clean Air Act
CDE	committed dose equivalent
CEDE	committed effective dose equivalent
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
Ci	Curie
CWA	Clean Water Act
DAC	derived air concentration
dB	decibel
dBA	A-weighted sound levels
dB(C)	C-weighted sound levels
DBA	design basis accident
DDREF	dose or dose rate effectiveness factor
DE	dose equivalent
DNL	day-night average sound level
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation

Abbreviations/Acronyms

EA	environmental assessment
EDE	effective dose equivalent
EIS	environmental impact statement
EJ	environmental justice
EPA	U.S. Environmental Protection Agency
ER	environmental report
ESA	Endangered Species Act of 1973
ES&H	environment, safety and health
F	Fahrenheit
FAA	Federal Aviation Administration
FBR	fast breeder reactor
FES	final environmental statement
FHA	Federal Housing Administration
FR	Federal Register
FSAR	Final Safety Analysis Report
ft	foot/feet
FWPCA	Federal Water Pollution Control Act (also known as the Clean Water Act of 1977)
FWS	U.S. Fish and Wildlife Service
gal.	gallon(s)
GEIS	Generic Environmental Impact Statement
gpd	gallons per day
gpm	gallons per minute
GTCC	Greater-than-Class-C (waste)
Gy	gray(s)
ha	hectare(s)
HDA	high decommissioning activity
HEPA	high-efficiency particulate air (filter)
HLW	high-level waste
h	hour
HTGR	high-temperature gas-cooled reactor
HUD	U.S. Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
IAEA	International Atomic Energy Agency
in.	inch(es)
I&C	instrumentation and control

Abbreviations/Acronyms

ICRP	International Commission on Radiological Protection
ISFSI	independent spent fuel storage installation
kg	kilogram(s)
km	kilometer(s)
kV	kilovolt(s)
kWh	kilowatt hour(s)
L	liter(s)
LDA	low-decommissioning activity
LER	licensee event report
LET	linear energy transfer
LLW	low-level waste
LOS	level of service
LRA	license renewal application
LTP	license termination plan
LWR	light water reactor
m	meter(s)
m ³ /d	cubic meters per day
m ³ /s	cubic meters per second
MARSSIM	Multi-agency Radiation Survey and Site Investigation Manual, NUREG-1575
MBTA	Migratory Bird Treaty Act of 1918
mi	mile(s)
mGy	milliGray(s)
MPC	maximum permissible concentrations
mrad	millirad(s)
mrem	millirem(s)
MRS	monitored retrievable storage
mSv	milliSievert(s)
MTHM	metric tonnes of heavy metal
MT	metric ton(s) (or tonne[s])
MTU	metric ton(s)-uranium
MW	megawatt(s)
MWd/MTU	megawatt-days per metric ton of uranium
MW(e)	megawatt(s) electric
MW(t)	megawatt(s) thermal
MWh	megawatt hour(s)

Abbreviations/Acronyms

NA	not applicable
NAS	National Academy of Sciences
NBS	National Bureau of Standards

Abbreviations/Acronyms

NCRP	National Council on Radiation Protection and Measurements
NEI	Nuclear Energy Institute
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act of 1966
NIST	National Institute of Standards and Technology
NMFS	National Marine Fisheries Service
NO _x	nitrogen oxide(s)
NPDES	National Pollutant Discharge Elimination System
NRC	U.S. Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation
NWPA	Nuclear Waste Policy Act of 1982
ODCM	Offsite Dose Calculation Manual
OSHA	Occupational Safety and Health Administration
PAG	protective action guide
PCBs	polychlorobiphenyls
PEL	permissible exposure limit
POL	possession-only license
PPE	personal protective equipment
PSDAR	post-shutdown decommissioning activities report
PV	pressure vessel
PWR	pressurized water reactor
QA/QC	quality assurance/quality control
RCRA	Resource Conservation and Recovery Act of 1976
RCS	reactor coolant system
ROW	right-of-way/rights-of-way
RPV	reactor pressure vessel
SARA	Superfund Amendments and Reauthorization Act
SHPO	State Historic Preservation Officer
SI	Système Internationale (international system of units)
SO ₂	sulfur dioxide
SO _x	sulfur oxide(s)
SSCs	structures, systems, and components
Sv	sievert(s)

Abbreviations/Acronyms

TEDE	total effective dose equivalent
THPO	Tribal Historic Preservation Officer
UNSCEAR	United Nations Scientific Committee on The Effects of Atomic Radiation
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound
VRM	Visual Resource Management (system)
wk	week(s)
YNPS	Yankee Nuclear Power Station
yr	year(s)

1.0 Introduction

1.1 Purpose and Need for This Supplement

This document supplements the *Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities* (NRC 1988), issued in 1988 (NUREG-0586, referred to hereafter as the 1988 GEIS) for power reactor facilities. This Supplement updates information provided in the 1988 GEIS by considering technological advances in decommissioning activities gained since 1988 and changes in U.S. Nuclear Regulatory Commission (NRC) regulations and, where appropriate, other agency regulations. The NRC has adopted the following definition of the purpose and need of this Supplement:

The purpose and need are to provide an analysis of environmental impacts from decommissioning activities that can be treated generically so that decommissioning activities for commercial nuclear power reactors conducted at specific sites will be bounded, to the extent practicable, by this and appropriate previously issued environmental impact statements.

This Supplement is intended to be used to evaluate environmental impacts during the decommissioning of nuclear power facilities as residual radioactivity at the site is reduced to levels that allow for termination of the NRC license. This Supplement can be considered a stand-alone document for power reactor facilities such that readers should not need to refer back to the 1988 GEIS. The environmental impacts described in this Supplement supersede those described in the 1988 GEIS for power reactor facilities.

The NRC elected to supplement the 1988 GEIS:

- (1) to further the purposes of the National Environmental Policy Act (NEPA)
- (2) to update the information in the 1988 GEIS
- (3) to provide additional information to the public on decommissioning activities
- (4) to establish an envelope of environmental impacts associated with decommissioning activities.

Unlike the 1988 GEIS, this Supplement covers only reactor facilities licensed by the NRC for commercial power production. It updates the sections of the 1988 GEIS relating to pressurized water reactors, boiling water reactors, and multiple reactor stations. It goes beyond the 1988 GEIS and considers the permanently shut down high-temperature gas-cooled reactors and fast

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I breeder reactors. It does not cover research and test reactors or power reactor facilities that
I have been involved in a significant accident resulting in large-scale contamination of structures,
I systems, and components (SSCs). It also does not cover other types of fuel-cycle facilities,
such as fuel-reprocessing plants or small mixed oxide fuel-fabrication plants.

I This Supplement incorporates updated information, regulations, and analyses. Since the 1988
I GEIS was written, the NRC and the industry have gained over 200 facility-years' worth of
additional decommissioning experience. Currently, there are 19 nuclear power reactor facilities
in the decommissioning process. This includes nine that permanently ceased operations after
the NRC published the 1988 GEIS. Since the 1988 GEIS, three facilities have completed
decommissioning and terminated their licenses: Pathfinder, Shoreham, and Fort St. Vrain.
This Supplement addresses new decommissioning technologies and approaches that the 1988
GEIS did not address. Also, the decommissioning regulations have changed since the 1988
GEIS.

1.2 Process Used to Determine Scope of This Supplement

The content of this Supplement was initially defined by the scope of the 1988 GEIS and was
modified based on current decommissioning regulations, inputs from the scoping process and
the outcome of meetings between the NRC, the U.S. Environmental Protection Agency (EPA),
and the Council on Environmental Quality (CEQ).

Four public scoping meetings were held between April and June 2000 as part of the scoping
process. During the meetings, the NRC outlined the GEIS revision process and accepted
comments regarding the scope of this Supplement. In addition to comments obtained during
the scoping meetings, the NRC received 12 letters from industry groups, other interested
organizations, and private citizens. A total of 397 comments were provided during the scoping
process. The staff reviewed the comments and categorized them as either relevant to this
Supplement or outside of its intended scope. The staff prepared and issued a scoping
I summary report on April 17, 2001 (NRC 2001), that summarized the comments and NRC
I responses to the comments. Appendix N is an extraction of comments from the scoping
I summary report that were considered to be within the scope of the environmental review. The
I NRC staff published for comment draft Supplement 1 to the GEIS in October 2001. Public
I meetings in San Francisco, California, Boston, Massachusetts, Chicago, Illinois and Atlanta,
I Georgia, were held in December 2001, to describe the preliminary results of the NRC
I environmental review, to answer questions, and to provide members of the public with
I information to assist them in formatting comments on the draft Supplement. All comments
I received on the draft Supplement were considered by the staff in developing the final
I document. Appendix O provides a compilation of comments received on the draft Supplement
I and staff responses to the comments. Originally, the staff planned to publish the scoping