

THIS PRELIMINARY PROPOSED RULE LANGUAGE AND ACCOMPANYING DISCUSSION IS BEING RELEASED TO SUPPORT INTERACTIONS WITH STAKEHOLDERS AND THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS (ACRS). THIS LANGUAGE HAS NOT BEEN SUBJECT TO COMPLETE NRC MANAGEMENT OR LEGAL REVIEW, AND ITS CONTENTS SHOULD NOT BE INTERPRETED AS OFFICIAL AGENCY POSITIONS. THE NRC STAFF PLANS TO CONTINUE WORKING ON THE CONCEPTS AND DETAILS PROVIDED IN THIS DOCUMENT AND WILL CONTINUE TO PROVIDE OPPORTUNITIES FOR PUBLIC PARTICIPATION AS PART OF THE RULEMAKING ACTIVITIES.

THE STAFF IS PRIMARILY SEEKING INSIGHTS REGARDING THE CONCEPTS IN THIS PRELIMINARY LANGUAGE AND SECONDARILY SEEKING INSIGHTS RELATED TO DETAILS SUCH AS NUMERICAL VALUES FOR VARIOUS CRITERIA. WHILE THE NRC WILL CONSIDER ALL COMMENTS RECEIVED IN FURTHER DEVELOPING THE PRELIMINARY LANGUAGE, IT WILL NOT PROVIDE WRITTEN RESPONSES TO THOSE COMMENTS. ONCE THE PROPOSED RULE IS ISSUED IN THE *FEDERAL REGISTER*, THE PUBLIC WILL HAVE AN ADDITIONAL OPPORTUNITY TO PROVIDE COMMENTS AND THE AGENCY WILL RESPOND IN WRITING TO ALL PUBLIC COMMENTS ON THE PROPOSED RULE WHEN ISSUING A FINAL RULE.

THE NRC IS ALSO CURRENTLY ENGAGED IN THE “DEVELOPMENT OF REGULATORY IMPROVEMENTS FOR PRODUCTION AND UTILIZATION FACILITIES TRANSITIONING TO DECOMMISSIONING RULEMAKING” (NRC-2015-0070). AS THESE RULEMAKINGS PROGRESS, THE STAFF WILL CONSIDER REVISIONS TO PART 53, AS NEEDED, TO ALIGN THE TWO RULEMAKING EFFORTS.

SUBPART G - Decommissioning Requirements – PRELIMINARY RULE LANGUAGE

(December 2021)

Subpart G Decommissioning Requirements	
Preliminary Language	Discussion
<p>§ 53.1000 Scope and purpose</p> <p>Each applicant for or holder of an operating license or combined license under this part must meet the requirements for decommissioning under this subpart. The requirements related to maintaining financial assurance for decommissioning are in §§ 53.1010 through 53.1060. The requirements for transitioning from operations to decommissioning, termination of commercial nuclear plant licenses, and ultimately supporting unrestricted use of the site are in §§ 53.1070 through 53.1080.</p>	<p>This section discusses the scope and purpose for Subpart G. This first iteration maintains the focus on the power reactor site for the decommissioning requirements in Subpart G. These requirements, including the need to develop cost estimates for decommissioning of a site, are applicable for either facilities constructed at a power reactor site or those that might use transportable reactor modules that are operated at a power reactor site.</p> <p>This subpart does not address the complete life cycle of potential transportable reactors that could involve delivery of a manufactured reactor module and subsequent removal of that module to a center for refurbishment or waste disposal. The staff plans to address the need for decommissioning funds for refurbishment centers separate from the Part 53 rulemaking.</p>

	<p>The scope of this subpart in this first iteration does not include manufacturing licenses (MLs) but the staff notes that for those MLs considering factory loading of fuel, Part 70 includes requirements for decommissioning. The staff is interested in stakeholder views on the adequacy of the provisions in Part 70 for potential MLs under Part 53 as well as insights on the possible arrangements for manufacturing and refurbishment centers (e.g., separate or same facilities).</p>
<p>§ 53.1010 Financial Assurance for Decommissioning</p> <p>(a) This section establishes requirements for indicating to NRC how a licensee will provide reasonable assurance that funds will be available for the decommissioning process. For commercial nuclear plant licensees licensed under this part, reasonable assurance consists of a series of steps as provided in paragraph (b) of this section and §§ 53.1020, 53.1030 and 53.1040. Funding for the decommissioning of commercial nuclear plants may also be subject to the regulation of Federal or State Government agencies (e.g., Federal Energy Regulatory Commission (FERC) and State Public Utility Commissions (PUC)) that have jurisdiction over rate regulation. The requirements of this subpart, in particular § 53.1020, are in addition to, and not substitution for, other requirements, and are not intended to be used by themselves or by other agencies to establish rates.</p> <p>(b) Each applicant for an operating license or a combined license under this part must prepare a plan and an associated decommissioning report that ensures and documents that adequate funding will be available to decommission the facility. Each holder of an operating license or combined license must implement and maintain the plan.</p> <p>(1)(i) Before the Commission issues an operating license, the applicant must update the decommissioning report to certify that</p>	<p>From §§ 50.75(a) and (b)</p> <p>The need to submit the decommissioning report with initial estimates of decommissioning costs and assurances on the availability of funds included in Subpart H.</p>

<p>it has provided financial assurance for decommissioning in the amount proposed in the application and approved by the NRC in accordance with § 53.1020.</p> <p>(ii) No later than 30 days after the Commission issues the notice of intended operation under § 53.1307 for a COL, the licensee must update the decommissioning report to certify that it has provided financial assurance for decommissioning in the amount proposed in in the application and approved by the NRC in accordance with § 53.1020.</p> <p>(2) The amount to be provided or actually provided must be adjusted annually using a rate at least equal to that stated in § 53.1030.</p> <p>(3) The amount must be covered by one or more of the methods described in § 53.1040 as acceptable to the NRC.</p> <p>(4) The amount stated in the applicant's or licensee's certification must be based on a cost estimate for decommissioning the facility in accordance with § 53.1020. As part of the certification, a copy of the financial instrument obtained to satisfy the requirements of § 53.1040 must be submitted to NRC.</p>	
<p>§ 53.1020 Cost Estimates for Required Decommissioning Funds</p> <p>Each applicant for an operating license or a combined license under this part must include in the application a site-specific cost estimate for decommissioning the facility. The cost estimate must account for the engineering, labor, equipment, transportation, disposal, and related charges needed to support termination of the NRC license. The cost estimates prepared for this section must include the costs for decontaminating structures, systems and components and site environs; removal of contaminated components and materials from the plant and site environs; disposal costs for removed components and materials in appropriate facilities; and any other associated costs supporting the ultimate release of the property and termination of the license. The cost estimate report must address the</p>	<p>The specific estimates for PWRs and BWRs currently provided in § 50.75(c) would not be replicated in Part 53, Subpart G. Rather, this Subpart would include a requirement to perform site-specific cost estimates for decommissioning. Such cost estimates could be supported by guidance documents and “generic” analyses that would be shown to be applicable to a subject design and site. The staff is interested in the development of such guidance through either review of industry-developed guidance/estimates or preparing NRC standalone guidance/estimates. The staff would appreciate a discussion on this topic during a future public meeting, especially regarding any stakeholder plans to develop technology-inclusive or non-LWR design-specific cost estimates for decommissioning.</p> <p>Example cost estimates are provided in NUREG/CR-5884, “Revised Analyses of Decommissioning for the Reference</p>

<p>planned approach to annual adjustments to the cost estimates required by § 53.1030.</p>	<p>Pressurized Water Reactor Power Station” (ADAMS ML14008A187), and NUREG/CR-5884, “Revised Analyses of Decommissioning for the Reference Boiling Water Reactor Power Station” (ADAMS ML013240031).</p>
<p>§ 53.1030 Annual Adjustments</p> <p>Each holder of an operating license or combined license under this part must annually adjust the NRC-approved cost estimate for decommissioning to account for escalation in labor, energy, and waste burial costs. Licensees may elect to use either the site-specific adjustment factors in paragraph (a) of this section as reviewed and approved by the NRC with the cost estimates required by § 53.1010 or use the generic adjustments in paragraph (b) of this section.</p> <p>(a) A site-specific adjustment factor for this section must at a minimum address the estimated contributions and escalation of costs for the following aspects of decommissioning:</p> <ol style="list-style-type: none"> (1) labor, materials, and services, (2) energy and waste transportation, and (3) radioactive waste burial or other disposition. <p>(b) A generic adjustment factor for this section must be at least equal to $0.65 L + 0.13 E + 0.22 B$, where L and E are escalation factors for labor and energy, respectively, and are to be taken from regional data of U.S. Department of Labor Bureau of Labor Statistics and B is an escalation factor for waste burial and is to be taken from NRC report NUREG-1307, "Report on Waste Burial Charges."</p>	<p>An adjustment factor developed for PWRs and BWRs is currently provided in § 50.75(c). This first iteration allows for a site-specific adjustment factor to instead be prepared and submitted to the NRC or for use of the existing “generic” adjustment factor. The staff would appreciate a discussion on this topic during a future public meeting, especially regarding the applicability of LWR adjustment factors and the possible development of other generic or technology-specific formulas for annual adjustments.</p>
<p>§ 53.1040 Financial Instruments for Decommissioning Funds</p> <p>Financial assurance is to be provided by the following methods.</p>	<p>From § 50.75(e), with conforming changes to refer to Part 53 sections and to reflect that the BWR and PWR formulas from § 50.75(c) were not included in § 53.1020 as a means to estimate the costs of decommissioning.</p>
<p>(a) <i>Prepayment.</i> Prepayment is the deposit made preceding the start of operation or the transfer of a license under § 53.1340</p>	

into an account segregated from licensee assets and outside the administrative control of the licensee and its subsidiaries or affiliates of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs at the time permanent termination of operations is expected. Prepayment may be in the form of a trust, escrow account, or Government fund with payment by, certificate of deposit, deposit of government or other securities or other method acceptable to the NRC. This trust, escrow account, Government fund, or other type of agreement shall be established in writing and maintained at all times in the United States with an entity that is an appropriate State or Federal government agency, or an entity whose operations in which the prepayment deposit is managed are regulated and examined by a Federal or State agency. A licensee that has prepaid funds based on a site-specific cost estimate under § 53.1020 may take credit for projected earnings on the prepaid decommissioning trust funds, using up to a 2 percent annual real rate of return from the time of future funds' collection through the time of permanent termination of operations or the projected decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate. This includes the periods of safe storage, final dismantlement, and license termination. A licensee may use a credit of greater than 2 percent if the licensee's rate-setting authority has specifically authorized a higher rate. Actual earnings on existing funds may be used to calculate future fund needs.

(b) *External sinking fund.* An external sinking fund is a fund established and maintained by setting funds aside periodically in an account segregated from licensee assets and outside the administrative control of the licensee and its subsidiaries or affiliates in which the total amount of funds would be sufficient to pay decommissioning costs at the time permanent termination of operations is expected. An external sinking fund may be in the form of a trust, escrow account, or Government fund, with payment by certificate of deposit, deposit of Government or

other securities, or other method acceptable to the NRC. This trust, escrow account, Government fund, or other type of agreement shall be established in writing and maintained at all times in the United States with an entity that is an appropriate State or Federal government agency, or an entity whose operations in which the external linking fund is managed are regulated and examined by a Federal or State agency. A licensee that has collected funds based on a site-specific cost estimate under § 53.1020 may take credit for projected earnings on the external sinking funds using up to a 2 percent annual real rate of return from the time of future funds' collection through the time of permanent termination of operations or the decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate. This includes the periods of safe storage, final dismantlement, and license termination. A licensee may use a credit of greater than 2 percent if the licensee's rate-setting authority has specifically authorized a higher rate. Actual earnings on existing funds may be used to calculate future fund needs. A licensee whose rates for decommissioning costs cover only a portion of these costs may make use of this method only for the portion of these costs that are collected in one of the manners described in this paragraph. This method may be used as the exclusive mechanism relied upon for providing financial assurance for decommissioning in the following circumstances:

- (1) By a licensee that recovers, either directly or indirectly, the estimated total cost of decommissioning through rates established by "cost of service" or similar ratemaking regulation. Public utility districts, municipalities, rural electric cooperatives, and State and Federal agencies, including associations of any of the foregoing, that establish their own rates and are able to recover their cost of service allocable to decommissioning, are deemed to meet this condition.
- (2) By a licensee whose source of revenues for its external sinking fund is a "non-bypassable charge," the total amount of which will provide funds estimated to be needed for

decommissioning pursuant to §§ 53.1020, 53.1060, or 53.1350 of this part.

(c) A surety method, insurance, or other guarantee method:

(1) These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, or letter of credit. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(i) The surety method or insurance 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 day the issuer notifies the NRC, the beneficiary, and the licensee of its intention not to renew. The surety or insurance must also provide that the full-face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the NRC within 30 days after receipt of notification of cancellation.

(ii) The surety or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the NRC. An acceptable trustee includes an appropriate State or Federal 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.

(2) A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to 10 CFR part 30.

(3) For commercial companies that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix C to 10 CFR part 30. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are as contained in appendix D to 10 CFR part 30. For non-profit entities, such as colleges, universities, and non-profit hospitals, a guarantee of

The staff plans to coordinate future iterations of paragraphs (2) and (3) with the current rulemaking involving the Dodd-Frank Act, "Alternatives to the Use of Credit Ratings" (Docket ID NRC-2017-0021).

<p>funds by the applicant or licensee may be used if the guarantee and test are as contained in appendix E to 10 CFR part 30. A guarantee by the applicant or licensee may not be used in any situation in which the applicant or licensee has a parent company holding majority control of voting stock of the company.</p>	
<p>(d) For a commercial nuclear plant licensee that is a Federal licensee, a statement of intent containing a cost estimate for decommissioning and indicating that funds for decommissioning will be obtained when necessary.</p>	<p>From § 50.75(e)(1)(iv)</p>
<p>(e) Contractual obligation(s) on the part of a licensee's customer(s), the total amount of which over the duration of the contract(s) will provide the licensee's total share of uncollected funds estimated to be needed for decommissioning pursuant to §§ 53.1020, 53.1060 or 53.1350. To be acceptable to the NRC as a method of decommissioning funding assurance, the terms of the contract(s) shall include provisions that the buyer(s) of electricity or other products will pay for the decommissioning obligations specified in the contract(s), notwithstanding the operational status either of the licensed commercial nuclear plant to which the contract(s) pertains or force majeure provisions. All proceeds from the contract(s) for decommissioning funding will be deposited to the external sinking fund. The NRC reserves the right to evaluate the terms of any contract(s) and the financial qualifications of the contracting entity or entities offered as assurance for decommissioning funding.</p>	
<p>(f) Any other mechanism, or combination of mechanisms, that provides, as determined by the NRC upon its evaluation of the specific circumstances of each licensee submittal, assurance of decommissioning funding equivalent to that provided by the mechanisms specified in paragraphs (a) through (e) of this section. Licensees who do not have sources of funding described in paragraph (b) of this section may use an external sinking fund in combination with a guarantee mechanism, as specified in paragraph (c) of this section, provided that the total</p>	

<p>amount of funds estimated to be necessary for decommissioning is assured.</p>	
<p>§ 53.1045 Financial Management of Decommissioning Funds</p> <p>(a)(1) Decommissioning trust funds may be used by licensees if—</p> <p>(i) The withdrawals are for expenses for decommissioning activities consistent with the definition of decommissioning in § 53.020;</p> <p>(ii) The expenditure would not reduce the value of the decommissioning trust below an amount necessary to place and maintain the reactor in a safe storage condition if unforeseen conditions or expenses arise; and</p> <p>(iii) The withdrawals would not inhibit the ability of the licensee to complete funding of any shortfalls in the decommissioning trust needed to ensure the availability of funds to ultimately release the site and terminate the license.</p> <p>(2) Initially, 3 percent of the amount determined in accordance with § 50.1020 may be used for decommissioning planning. For licensees that have submitted the certifications required under § 53.1350 and commencing 90 days after the NRC has received the post-shutdown decommissioning activities report (PSDAR) required by § 53.1060, an additional 20 percent may be used. An updated site-specific decommissioning cost estimate must be submitted to the NRC prior to the licensee using any funding in excess of these amounts.</p>	<p>From § 50.82(a)(8) – inserted here as a fund management requirement instead of within the license termination requirements in §§ 50.82 and 53.1350</p>
<p>(b) Licensees that are not "electric utilities" as defined in § 53.020 that use prepayment or an external sinking fund to provide financial assurance shall provide in the terms of the arrangements governing the trust, escrow account, or Government fund, used to segregate and manage the funds that—</p> <p>(1) The trustee, manager, investment advisor, or other person directing investment of the funds:</p>	<p>From § 50.75(h), with only conforming changes for use in Part 53</p>

(i) Is prohibited from investing the funds in securities or other obligations of the licensee or any other owner or operator of any nuclear power reactor or their affiliates, subsidiaries, successors or assigns, or in a mutual fund in which at least 50 percent of the fund is invested in the securities of a licensee or parent company whose subsidiary is an owner or operator of a foreign or domestic nuclear power plant. However, the funds may be invested in securities tied to market indices or other non-nuclear sector collective, commingled, or mutual funds, provided that this subsection shall not operate in such a way as to require the sale or transfer either in whole or in part, or other disposition of any such prohibited investment that was made before the publication date of this rule, and provided further that no more than 10 percent of trust assets may be indirectly invested in securities of any entity owning or operating one or more nuclear power plants.

(ii) Is obligated at all times to adhere to a standard of care set forth in the trust, which either shall be the standard of care, whether in investing or otherwise, required by State or Federal law or one or more State or Federal regulatory agencies with jurisdiction over the trust funds, or, in the absence of any such standard of care, whether in investing or otherwise, that a prudent investor would use in the same circumstances. The term "prudent investor," shall have the same meaning as set forth in the Federal Energy Regulatory Commission's "Regulations Governing Nuclear Plant Decommissioning Trust Funds" at 18 CFR 35.32(a)(3).

(2) The licensee, its affiliates, and its subsidiaries are prohibited from being engaged as investment manager for the funds or from giving day-to-day management direction of the funds' investments or direction on individual investments by the funds, except in the case of passive fund management of trust funds where management is limited to investments tracking market indices.

(3) The trust, escrow account, Government fund, or other account used to segregate and manage the funds may not be

amended in any material respect without written notification to the Director, Office of Nuclear Reactor Regulation, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, at least 30 working days before the proposed effective date of the amendment. The licensee shall provide the text of the proposed amendment and a statement of the reason for the proposed amendment. The trust, escrow account, Government fund, or other account may not be amended if the person responsible for managing the trust, escrow account, Government fund, or other account receives written notice of objection from the Director, Office of Nuclear Reactor Regulation, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, within the notice period.

(4) Except for withdrawals being made under paragraph (a) of this section or for payments of ordinary administrative costs (including taxes) and other incidental expenses of the fund (including legal, accounting, actuarial, and trustee expenses) in connection with the operation of the fund, no disbursement or payment may be made from the trust, escrow account, Government fund, or other account used to segregate and manage the funds until written notice of the intention to make a disbursement or payment has been given to the Director, Office of Nuclear Reactor Regulation, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, at least 30 working days before the date of the intended disbursement or payment. The disbursement or payment from the trust, escrow account, Government fund or other account may be made following the 30-working day notice period if the person responsible for managing the trust, escrow account, Government fund, or other account does not receive written notice of objection from the Director, Office of Nuclear Reactor Regulation, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, within the notice period. Disbursements or payments from the trust, escrow account, Government fund, or other account used to segregate and manage the funds, other than for payment of ordinary

administrative costs (including taxes) and other incidental expenses of the fund (including legal, accounting, actuarial, and trustee expenses) in connection with the operation of the fund, are restricted to decommissioning expenses or transfer to another financial assurance method acceptable under § 53.1040 until final decommissioning has been completed. After decommissioning has begun and withdrawals from the decommissioning fund are made under paragraph (c) of this section, no further notification need be made to the NRC.

(c) Licensees that are "electric utilities" under § 53.020 that use prepayment or an external sinking fund to provide financial assurance shall include a provision in the terms of the trust, escrow account, Government fund, or other account used to segregate and manage funds that except for withdrawals being made under paragraph (a) of this section or for payments of ordinary administrative costs (including taxes) and other incidental expenses of the fund (including legal, accounting, actuarial, and trustee expenses) in connection with the operation of the fund, no disbursement or payment may be made from the trust, escrow account, Government fund, or other account used to segregate and manage the funds until written notice of the intention to make a disbursement or payment has been given the Director, Office of Nuclear Reactor Regulation, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, at least 30 working days before the date of the intended disbursement or payment. The disbursement or payment from the trust, escrow account, Government fund or other account may be made following the 30-working day notice period if the person responsible for managing the trust, escrow account, Government fund, or other account does not receive written notice of objection from the Director, Office of Nuclear Reactor Regulation, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, within the notice period.

Disbursements or payments from the trust, escrow account, Government fund, or other account used to segregate and manage the funds, other than for payment of ordinary

<p>administrative costs (including taxes) and other incidental expenses of the fund (including legal, accounting, actuarial, and trustee expenses) in connection with the operation of the fund, are restricted to decommissioning expenses or transfer to another financial assurance method acceptable under § 53.1040 until final decommissioning has been completed. After decommissioning has begun and withdrawals from the decommissioning fund are made under paragraph (a) of this section, no further notification need be made to the NRC.</p> <p>(d) A licensee that is not an "electric utility" under § 53.020 and using a surety method, insurance, or other guarantee method to provide financial assurance shall provide that the trust established for decommissioning costs to which the surety or insurance is payable contains in its terms the requirements in § 53.1045(b).</p>	
<p>§ 53.1050 NRC Authority</p> <p>The NRC reserves the right to take the following steps in order to ensure a licensee's adequate accumulation of decommissioning funds: review, as needed, the rate of accumulation of decommissioning funds; and, either independently or in cooperation with the FERC and the licensee's State PUC, take additional actions as appropriate on a case-by-case basis, including modification of a licensee's schedule for the accumulation of decommissioning funds.</p>	<p>From § 50.75(e)(2)</p>
<p>§ 53.1060 Reporting Requirements</p>	<p>Decommissioning reporting/licensing requirements included here for first iteration. Staff is assessing and may relocate some reporting/licensing requirements to Subparts I and J.</p>
<p>(a) Each holder of an operating license under this part or holder of a combined license under this part after fuel loading must report, at least once every 2 years on the status of its certification of decommissioning funding for each reactor or part of a reactor that it owns. The information in this report must include, at a minimum, the amount of decommissioning funds estimated to be required pursuant to §§ 53.1020 and 53.1030; the amount of decommissioning funds accumulated to the end of</p>	<p>From § 50.75(f)</p>

<p>the calendar year preceding the date of the report; a schedule of the annual amounts remaining to be collected; the assumptions used regarding rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections; any contracts upon which the licensee is relying pursuant to § 53.1040(e); any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and any material changes to trust agreements. If any of the preceding items is not applicable, the licensee should so state in its report. Any licensee for a plant that is within 5 years of the projected end of its operation, or where conditions have changed such that it will close within 5 years (before the end of its licensed life), or that has already closed (before the end of its licensed life), or that is involved in a merger or an acquisition shall submit this report annually.</p>	
<p>(b) Each holder of a combined license under this part shall, 2 years before and 1 year before the scheduled date for initial loading of fuel, submit a report to the NRC containing a certification updating the decommissioning cost estimates and a copy of the financial instrument to be used to satisfy § 53.1040. No later than 30 days after the Commission publishes notice in the <i>Federal Register</i> under § 53.1307(a), the licensee shall submit a report containing a certification that financial assurance for decommissioning is being provided in an amount specified in the licensee's most recent updated certification, including a copy of the financial instrument obtained to satisfy the requirements of paragraph (e) of this section.</p>	
<p>(c) Each licensee shall keep records of information important to the safe and effective decommissioning of the facility in an identified location until the license is terminated by the Commission. If records of relevant information are kept for other purposes, reference to these records and their locations may be used. Information the Commission considers important to decommissioning consists of—</p>	<p>From § 50.75(g)</p>

(1) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when significant contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(2) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(3) Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

(4) Records of:

(i) The licensed site area, as originally licensed and any revisions, which must include a site map and any acquisition or use of property outside the originally licensed site area for the purpose of receiving, possessing, or using licensed materials;

(ii) The licensed activities carried out on the acquired or used property; and

(iii) The release and final disposition of any property recorded in paragraph (c)(1) of this section, the historical site assessment performed for the release, radiation surveys performed to support release of the property, submittals to the NRC made in accordance with § 53.1350, and the methods employed to ensure that the property met the radiological criteria of 10 CFR part 20, subpart E, at the time the property was released.

<p>(d) Each commercial nuclear plant licensee shall at or about 5 years prior to the projected end of operations submit a preliminary decommissioning cost estimate which includes an up-to-date assessment of the major factors that could affect the cost to decommission.</p>	<p>From § 50.75(f)(3)</p>
<p>(e) Prior to or within 2 years following permanent cessation of operations, the licensee shall submit a PSDAR to the NRC, and a copy to the affected State(s). The PSDAR must contain a description of the planned decommissioning activities along with a schedule for their accomplishment, a discussion that provides the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements, and a site-specific decommissioning cost estimate (DCE), including the projected cost of managing irradiated fuel.</p> <p>(f) For decommissioning activities that delay completion of decommissioning by including a period of storage or surveillance, the licensee shall provide a means of adjusting cost estimates and associated funding levels over the storage or surveillance period.</p> <p>(g) After submitting its site-specific DCE required by paragraph (e) of this section, and until the licensee has completed its final radiation survey and demonstrated that residual radioactivity has been reduced to a level that permits termination of its license, the licensee must annually submit to the NRC, by March 31, a financial assurance status report. The report must include the following information, current through the end of the previous calendar year:</p> <p>(1) The amount spent on decommissioning, both cumulative and over the previous calendar year, the remaining balance of any decommissioning funds, and the amount provided by other financial assurance methods being relied upon;</p> <p>(2) An estimate of the costs to complete decommissioning, reflecting any difference between actual and estimated costs for work performed during the year, and the decommissioning criteria upon which the estimate is based;</p>	<p>From § 50.82(a)(4)(i)</p> <p>From § 50.82(a)(8)(iv)</p> <p>From § 50.82(a)(8)(v)</p>

<p>(3) Any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and</p> <p>(4) Any material changes to trust agreements or financial assurance contracts.</p> <p>(5) If the sum of the balance of any remaining decommissioning funds, plus earnings on such funds calculated at not greater than a 2 percent real rate of return, together with the amount provided by other financial assurance methods being relied upon, does not cover the estimated cost to complete the decommissioning, the financial assurance status report must provide information on changes to the decommissioning plans or the means to restore financial assurance in the ability to cover the estimated cost of completion.</p> <p>(h) After submitting its site-specific DCE required by paragraph (e) of this section, the licensee must annually submit to the NRC, by March 31, a report on the status of its funding for managing irradiated fuel. The report must include the following information, current through the end of the previous calendar year:</p> <p>(1) The amount of funds accumulated to cover the cost of managing the irradiated fuel;</p> <p>(2) The projected cost of managing irradiated fuel until title to the fuel and possession of the fuel is transferred to the Secretary of Energy; and</p> <p>(3) If the funds accumulated do not cover the projected cost, a plan to obtain additional funds to cover the cost.</p>	<p>From § 50.82(a)(8)(vii)</p>
<p>§ 53.1070 Termination of license.</p> <p>(a) For commercial nuclear plant licensees—</p> <p>(1)(i) When a licensee has determined to permanently cease operations the licensee shall, within 30 days, submit a written certification to the NRC, consistent with the requirements of § 53.040(b)(8);</p>	<p>License termination reporting/licensing requirements included here for first iteration. Staff is assessing and may relocate some reporting/licensing requirements to Subparts I and J.</p> <p>The NRC is currently pursuing another rulemaking, "Development of Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning Rulemaking, (NRC-2015-0070). As these rulemakings progress,</p>

(ii) Once fuel has been permanently removed from the reactor vessel, the licensee shall submit a written certification to the NRC that meets the requirements of § 53.040(b)(9); and

(A) The licensee shall establish and maintain staffing consisting of certified fuel handlers, as defined under § 53.020, and other non-licensed personnel with appropriate qualifications, and in sufficient numbers, to ensure support for facility operations and radiological control activities, as required by the facility defueled technical specifications. These personnel shall be subject to the training requirements of §§ 53.780 through 53.781. Additionally, each certified fuel handler shall, both prior to qualification and biennially thereafter, pass a medical examination by a physician to determine that the medical condition and general health of the certified fuel handler will not adversely affect the performance of assigned job duties or cause operational errors endangering public health and safety.

(2) Upon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, or when a final legally effective order to permanently cease operations has come into effect, the license issued under this part no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel.

(3) Decommissioning will be completed within 60 years of permanent cessation of operations. Completion of decommissioning beyond 60 years will be approved by the Commission only when necessary to protect public health and safety. Factors that will be considered by the Commission in evaluating an alternative that provides for completion of decommissioning beyond 60 years of permanent cessation of operations include unavailability of waste disposal capacity and other site-specific factors affecting the licensee's capability to carry out decommissioning, including presence of other nuclear facilities at the site.

(4)(i) Prior to or within 2 years following permanent cessation of operations, the licensee shall submit a PSDAR and site-specific DCE in accordance with § 53.1060(e).

the staff will consider revisions to Part 53 to align the two rulemaking efforts.

The staff is interested in any information on the timelines for decommissioning, application of lessons learned from recent plant decommissioning, and suggestions related to various deployment strategies. An area of particular interest is possible approaches for construction permits/operating licenses or combined licenses for manufactured reactor modules that may be transported to and from a particular licensed site.

(ii) The NRC shall notice receipt of the PSDAR and make the PSDAR available for public comment. The NRC shall also schedule a public meeting readily accessible to individuals in the vicinity of the licensee's facility upon receipt of the PSDAR. The NRC shall publish a notice in the Federal Register and in a forum, such as local newspapers, which is readily accessible to individuals in the vicinity of the site, announcing the date, time, and location of the meeting, along with a brief description of the purpose of the meeting.

(5) Licensees shall not perform any major decommissioning activities, as defined in § 53.020, until 90 days after the NRC has received the licensee's PSDAR submittal and until certifications of permanent cessation of operations and permanent removal of fuel from the reactor vessel, as required under § 53.1350, have been submitted.

(6) Licensees shall not perform any decommissioning activities, as defined in § 53.020, that—

- (i) Foreclose release of the site for possible unrestricted use;
- (ii) Result in significant environmental impacts not previously reviewed; or
- (iii) Result in there no longer being reasonable assurance that adequate funds will be available for decommissioning.

(7) In taking actions permitted under § 53.1320 following submittal of the PSDAR, the licensee shall notify the NRC, in writing and send a copy to the affected State(s), before performing any decommissioning activity inconsistent with, or making any significant schedule change from, those actions and schedules described in the PSDAR, including changes that increase the decommissioning cost by more than 20 percent from the previously provided DCE.

(8) Licensees may use the decommissioning trust funds within the restrictions included in § 53.1045(a). Licensees must report on the status of the trust funds in accordance with the schedules and required content of submittals included in § 53.1060.

(9) All commercial nuclear plant licensees must submit an application for termination of license in accordance with

The staff is interested in any insights on potential benefits or issues with citing a specific cost increase (20 percent) instead of using terminology such as "significant" and including numerical values in guidance.

§ 53.1350. The application for termination of license must accompany or precede an NRC-approved license termination plan to be submitted for NRC review.

(i) The license termination plan must be a supplement to the FSAR or equivalent and must be submitted at least 2 years before termination of the license date.

(ii) The license termination plan must include—

(A) A site characterization;

(B) Identification of remaining dismantlement activities;

(C) Plans for site remediation;

(D) Detailed plans for the final radiation survey;

(E) A description of the end use of the site, if restricted;

(F) An updated site-specific estimate of remaining decommissioning costs;

(G) A supplement to the environmental report, pursuant to § 51.53, describing any new information or significant environmental change associated with the licensee's proposed termination activities; and

(H) Identification of parts, if any, of the facility or site that were released for use before approval of the license termination plan.

(iii) The NRC shall notice receipt of the license termination plan amendment application and make the license termination plan application available for public comment. The NRC shall also schedule a public meeting readily accessible to individuals in the vicinity of the licensee's facility upon receipt of the license termination plan application. The NRC shall publish a notice in the Federal Register and in a forum, such as local newspapers, which is readily accessible to individuals in the vicinity of the site, announcing the date, time, and location of the meeting, along with a brief description of the purpose of the meeting.

(10) If the license termination plan application demonstrates that the remainder of decommissioning activities will be performed in accordance with the regulations in this chapter, will not be inimical to the common defense and security or to the health and safety of the public, and will not have a significant effect on the quality of the environment and after notice to interested persons,

<p>the Commission shall review and if appropriate approve the plan, by license amendment, subject to such conditions and limitations as it deems appropriate and necessary and authorize implementation of the license termination plan.</p> <p>(11) The Commission shall terminate the license if it determines that—</p> <ul style="list-style-type: none"> (i) The remaining dismantlement has been performed in accordance with the approved license termination plan, and (ii) The final radiation survey and associated documentation, including an assessment of dose contributions associated with parts released for use before approval of the license termination plan, demonstrate that the facility and site have met the criteria for decommissioning in 10 CFR part 20, subpart E. 	
<p>§ 53.1080 Release of part of a commercial nuclear plant or site for unrestricted use.</p> <p>(a) Prior written NRC approval is required to release part of a facility or site for unrestricted use at any time before receiving approval of a license termination plan. Section 53.1060 specifies recordkeeping requirements associated with partial release. Nuclear power reactor licensees seeking NRC review and approval shall--</p> <ul style="list-style-type: none"> (1) Evaluate the effect of releasing the property to ensure that-- <ul style="list-style-type: none"> (i) The dose to individual members of the public does not exceed the limits and standards of 10 CFR part 20, subpart D; (ii) There is no reduction in the effectiveness of emergency planning or physical security; (iii) Effluent releases remain within license conditions; (iv) The environmental monitoring program and offsite dose calculation manual are revised to account for the changes; (v) The siting criteria of 10 CFR part 100 continue to be met; and (vi) All other applicable statutory and regulatory requirements continue to be met. (2) Perform a historical site assessment of the part of the facility or site to be released; and 	<p>From § 50.83</p>

(3) Perform surveys adequate to demonstrate compliance with the radiological criteria for unrestricted use specified in § 20.1402 for impacted areas.

(b) For release of non-impacted areas, the licensee may submit a written request for NRC review and approval of the release if a license amendment is not otherwise required. The request submittal must include--

- (1) The results of the evaluations performed in accordance with paragraphs (a)(1) and (a)(2) of this section;
- (2) A description of the part of the facility or site to be released;
- (3) The schedule for release of the property;
- (4) The results of the evaluations performed in accordance with § 53.1320 and the licensed site boundary; and
- (5) A discussion that provides the reasons for concluding that the environmental impacts associated with the licensee's proposed release of the property will be bounded by appropriate previously issued environmental impact statements.

(c) After receiving a request from the licensee for NRC review of the release of a non-impacted area, the NRC shall--

- (1) Determine whether the licensee has adequately evaluated the effect of releasing the property as required by paragraph (a)(1) of this section;
- (2) Determine whether the licensee's classification of any release areas as non-impacted is adequately justified; and
- (3) If determining that the licensee's submittal is adequate, inform the licensee in writing that the release is approved.

(d) For release of impacted areas, the licensee shall submit an application for amendment of its license for the release of the property. The application must include--

- (1) The information specified in paragraphs (b)(1) through (b)(3) of this section;
- (2) The methods used for and results obtained from the radiation surveys required to demonstrate compliance with the radiological criteria for unrestricted use specified in § 20.1402; and

(3) A supplement to the environmental report, under § 51.53, describing any new information or significant environmental change associated with the licensee's proposed release of the property.

(e) After receiving a license amendment application from the licensee for the release of an impacted area, the NRC shall--

(1) Determine whether the licensee has adequately evaluated the effect of releasing the property as required by paragraph (a)(1) of this section;

(2) Determine whether the licensee's classification of any release areas as non-impacted is adequately justified;

(3) Determine whether the licensee's radiation survey for an impacted area is adequate; and

(4) If determining that the licensee's submittal is adequate, approve the licensee's amendment application.

(f) The NRC shall notice receipt of the release approval request or license amendment application and make the approval request or license amendment application available for public comment. Before acting on an approval request or license amendment application submitted in accordance with this section, the NRC shall conduct a public meeting readily accessible to individuals in the vicinity of the licensee's facility for the purpose of obtaining public comments on the proposed release of part of the facility or site. The NRC shall publish a document in the Federal Register and in a forum, such as local newspapers, which is readily accessible to individuals in the vicinity of the site, announcing the date, time, and location of the meeting, along with a brief description of the purpose of the meeting.