SUBJECT: DRAFT INTERIM STAFF GUIDANCE ON DECOMMISSIONING FUNDING PLANS FOR MATERIALS LICENSEES

Background

Since 1988, U.S. Nuclear Regulatory Commission (NRC) licensees have been required to provide financial assurance for decommissioning activities. The NRC published its “Decommissioning Planning Rule” in the Federal Register on June 17, 2011 (76 FR 35512). The rule became effective on December 17, 2012. The rule’s purpose is to minimize the likelihood of new “legacy sites,” those sites owned or controlled by licensees with insufficient resources to complete decommissioning. Successful completion of decommissioning is a prerequisite to the NRC terminating the license.

Purpose and Scope

The NRC’s radioactive materials licensing regulations, 10 CFR Parts 30, 40, and 70, require licensees to provide financial assurance for all decommissioning activities. The purpose of this interim staff guidance (ISG) is to provide NRC staff and industry with guidance based on developments and lessons learned in financial assurance since the last update to NUREG-1757, Vol. 3. This includes decommissioning cost estimates (DCE) reflecting current facility conditions, efficiencies in developing DFPs and updates for certain financial instruments.1

Discussion

This guidance is divided into three topical areas: 1. DCE reflecting current facility conditions, 2. evaluating events since last DFP approval, and 3. updates to financial instruments.

1. DCE Reflecting Current Facility Conditions

The DCE should accurately describe the current facility condition. The relevant Decommissioning Planning Rule provisions are:

-NRC regulations 10 CFR 30.35(e)(1)(ii), 10 CFR 40.36(d)(1)(ii), and 10 CFR 70.25(e)(1)(ii), which require licensees to identify and justify the key assumptions used in preparing the DCE.

-NRC regulations 10 CFR 30.35(e)(2)(v), 10 CFR 40.36(d)(2)(v), and 10 CFR 70.25(e)(2)(v), which require licensees to specifically consider changes in authorized possession limits.

The standard review plan, NUREG-1757, Vol. 3, currently provides the following guidance:

- No credit for salvage value.
- Cost estimate to include a substantial level of detail to allow NRC to fully evaluate the adequacy of the estimate.
- In general, above a threshold quantity of radioactive material, the licensee must provide increasing amounts of financial assurance as its authorized possession limit increases.
- Cost estimate reflects decommissioning under appropriate facility conditions. For a DFP, routine facility conditions should be assumed. For a Decommissioning Plan (DP), facility conditions at the end of licensed operations should be assumed. In other words, the DCE should not assume inventory is offsite (end of licensed operations) until the DP is submitted.
- The site-specific cost estimate required for a DFP must assume that the work will be performed by an independent contractor 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

1 The DCE is a component of the DFP (see 10 CFR 30.35(e)(1), 10 CFR 40.36(d)(1), and 10 CFR 70.25(e)(1).
with routine facility conditions. By way of example, the NRC believes it reasonable for DCEs 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.

During recent reviews of Part 70 DCEs, the NRC asked requests for additional information (RAI) regarding how inventory was included in the DCE or if the licensee was relying upon an existing plan to move the inventory offsite, in support of its DCE. The submittals made the assumption that inventory would be offsite prior to the start of decommissioning. Over the last two years, NRC has approved a number of DCEs that provided assumptions with reasonable justifications for how the inventory is to be handled. Further, NRC corresponded with the Nuclear Energy Institute on this matter, see Agency-Wide Documents Access and Management System (ADAMS), ML No. ML16307A014.

For Part 70 licensees, there are three general types of inventory: licensee-owned, customer-owned, and inventory in-process. For these three categories of inventory, the following support may justify how the costs are covered.

Licensee-owned inventory—licensee-owned radioactive material, which may be used by the licensee to “level off” production (i.e., to mix or blend with customer-owned radioactive material as part of licensed activities). If, under current facility conditions, licensee-owned inventory is onsite, the licensee should address how its proposed removal to an acceptable end destination is covered. The license may: 1) include the costs for packaging, loading, and transporting the material to another facility that can accept the material under its license or 2) demonstrate another reasonable alternative showing how these costs are contractually covered. For example, a reasonable alternative may be an existing contract in which another party pays for packing, loading and shipping to an end destination that can accept the material under the end destination’s license. The licensee should provide enough detail to adequately support the DCE.

Customer-owned inventory—customer-owned radioactive material that is processed at the licensee’s facility. Customer-owned inventory may be mixed or blended with licensee-owned inventory to create inventory in-process (see paragraph below). If, under current facility conditions, customer-owned inventory is onsite, the licensee should address how its removal to an acceptable end destination is covered. The license may: 1) include the costs for packaging, loading, and transporting the material to another facility that can accept the material under its license or 2) demonstrate another reasonable alternative showing how these costs are contractually covered. For example, a reasonable alternative may be an existing contract under which the customer is responsible for packing, loading and shipping the material to an end destination that can accept the material under the end destination’s license. The licensee should provide enough detail to adequately support the DCE.

Inventory in-process—inventories in-process is radioactive material that occurs as a result of the licensed process, including radioactive material resulting from the mixture or blending of both licensee-owned and customer-owned inventory. Under the contractual arrangements in place, the finished product will either be owned by the licensee or customer. If, under current facility conditions, inventory in-process is onsite, the licensee can include in its DCE those costs associated with inventory in-process or justify a brief
number of days, such as 30 to 60 days, in which it takes to process the material through into finished product. After the material is processed into finished product, it would then fall into either licensee-owned inventory or customer-owned inventory.

2. **Evaluating Events Since Last DFP Approval**

NRC regulations 10 CFR 30.35(e)(2), 10 CFR 40.36(d)(2) and 10 CFR 70.25(e)(2) require the DFP resubmittals (and at license renewal) to specifically consider the effects of eight events on decommissioning costs.\(^2\) Past experience has shown that many DFP submittals do not address these events, thereby requiring the NRC staff to send RAIs to the licensee. In order to reduce the number of RAIs and otherwise expedite the DFP approval process, licensees submitting DFPs should address these eight events in narrative form. If the event did not occur, then the DFP submittal should affirmatively state that the event did not occur and provide any supporting basis, if appropriate. The eight events are:

1. Spills of radioactive material producing additional residual radioactivity in onsite subsurface material

   The DFP should contain a narrative describing any spills of radioactive material that have led to subsurface contamination. This narrative should be consistent with surveys and onsite records and should be updated in each DFP cycle. If there is subsurface contamination, a detailed breakdown of the estimated remediation costs should be provided.

2. Waste inventory increasing above the amount previously estimated

   The DFP should contain a narrative describing the current amount of waste inventory onsite, including, if available, the reason for the waste inventory increasing above the amount previously estimated. The narrative should compare this amount to the previous DFP. If there is waste inventory, a detailed breakdown of the estimated costs should be provided.

3. Waste disposal costs increasing above the amount previously estimated

   The DFP should contain a narrative describing the current waste disposal costs. The narrative should compare this amount to the previous DFP waste disposal costs and state whether costs have increased above the amount previously estimated, and if so, the reason for such increase. A detailed breakdown of the estimated waste disposal costs should be provided.

4. Facility modifications

   A narrative describing the facility should be included in the DFP. If there have been facility modifications since the previous DFP, the latest DFP should clearly

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\(^2\) In accordance with 10 CFR 30.35(e)(1)(A), 10 CFR 40.36(d)(1)(A), and 10 CFR 70.25(e)(1)(A), the DCE must reflect the cost of an independent contractor to perform all decommissioning activities. Thus, any cost estimates developed in response to the listed eight events should be premised upon an independent contractor performing the decommissioning work.
describe the changes. A detailed breakdown of estimated costs for facility decommissioning should be provided, including decommissioning any modifications to the facility.

5. Changes in authorized possession limits

The DFP should contain a narrative describing any changes in possession limits. The narrative should compare the possession limit amounts to those covered by the previous DFP. The licensee should provide a detailed breakdown of the estimated costs to disposition onsite radioactive material, or an applicable justification as described in the “DCE Reflecting Current Facility Conditions” section above.

6. Actual remediation costs that exceed the previous cost estimate

The DFP should contain a narrative describing any actual remediation costs that exceeded the previous cost estimate. If actual remediation costs exceeded the previous cost estimate, then the narrative should compare the actual cost amount to those covered by the previous DFP. A detailed breakdown of estimated remediation costs should be provided for all remediation work which has not been completed and this estimate should consider any applicable actual remediation cost data.

7. Onsite disposal

A narrative describing any onsite disposal should be included in the DFP. The narrative should compare this amount to what has been covered in the previous DFP. For any onsite disposal, a detailed breakdown of the estimated costs should be provided.

8. Use of a settling pond

The DFP should contain a narrative describing the use of any settling ponds; and if settling ponds are used, the narrative should include information obtained from samplings, surveys, and site records. A detailed breakdown of the estimated costs to remediate any settling ponds should be included.

As required by 10 CFR 30.35(e)(1)(i)(C), 10 CFR 40.36(d)(1)(i)(C), and 10 CFR 70.25(e)(1)(i)(C), the DFP/DCE must include an estimate of the volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the 10 CFR Part 20, Subpart E criteria for license termination. The estimated amount of radioactive contamination in onsite subsurface material should be based on subsurface surveys, as reasonable under the circumstances, and the DFP/DCE should describe these subsurface surveys. If the estimates are not based on subsurface surveys, licensees should provide a description of the circumstances that prevent the licensee from performing surveys.

Regulatory Guide 4.22 states that licensees should: “periodically conduct surveys that are reasonable under the circumstances in accordance with 10 CFR 20.1501(a) to identify the horizontal and vertical extent of significant residual radioactivity throughout the site taking
into consideration the temporal distribution of radioactive contaminants…The survey design should consider areas likely to contain residual radioactivity, such as, but not limited to…[s]ubsurface media, especially around building footers, subsurface pipes and conduits, pipe tunnels linking buildings that process radioactive materials, and below-grade tanks.” As to the “reasonable under the circumstances” standard, the NRC recognizes that an area within the footprint of a building, during licensed operations, may not be a suitable area for subsurface residual radioactivity surveys if the process of sampling would have an adverse impact on facility operations.

The decision to perform subsurface residual radioactivity sampling in a particular area should be balanced against the potential to jeopardize the safe operation of the facility. To reduce the number of RAIs, licensees should provide a narrative in the DFP describing the surveys conducted to estimate the volume of onsite subsurface material or if surveys were not conducted, licensees should provide a description of the circumstances that prevented surveys. This narrative will assist the NRC staff in completing the DFP approval process, including the Safety Evaluation Report. While reviewing recent DFPs, the NRC staff has found that many submittals did not indicate whether onsite subsurface surveys were performed, and if not performed, the submittals did not describe the circumstances that prevented the licensees from conducting such surveys.

While performing reviews of DFPs/DCEs, if NRC staff determines that the DFP/DCE meets all the requirements, but still has clarifying questions and staff understands the responses to the questions will not result in an increase to the DCE, the staff may work with the site Project Manager or NRC licensing point of contract to determine whether a more efficient communication path is feasible such as an e-mail or teleconference rather than the formal RAI process to obtain clarification.

3. Updates to Financial Instruments

Through reviews performed since the Decommissioning Planning Rule became effective, the NRC staff has identified six topical areas to update pertaining to financial instruments:

1. **Submission of hard copy instruments to the NRC:** As per Management Directive 8.12, the project manager is responsible for providing the original signed documents for storage and inventory. To ensure timely and proper handling, hard copy original financial instruments (e.g., signed Standby Trust Agreements, Letters of Credit, Surety Bonds, etc.) should be sent directly to the site Project Manager (licensee’s point of contact at NRC), not NRC Document Control (DC) as DC does not maintain original hard-copy documents.

2. **Submissions must include all instruments and agreements:** Some of the recent financial instruments submitted by licensees have included side letters. All instrument and agreements are to be submitted as required by 10 CFR 30.35 (e)(1)(v), 10 CFR 40.36 (d)(1)(v), and 10 CFR 70.25 (e)(1)(v). Some financial institutions issue agreements that may impact the primary financial instrument, such as a side letter. For approval, NRC staff needs to review all agreements to ensure they do not impede decommissioning funding.
A sight draft should be submitted using the template below, with specific modifications, as necessary, to comply with any requirements specific to the financial institution. Earlier guidance documents, including NUREG-1757, Volume 3 and NUREG-1556, Vol. 15, Rev. 1, “Consolidated Guidance About Materials Licenses: Guidance About Changes of Control and About Bankruptcy Involving Byproduct, Source, or Special Nuclear Materials Licenses,” do not include a sight draft template.

A sight draft is typically required by a financial institution in order to draw on the financial instrument. The following is a general template and it is important to note that each bank has its own requirement for drawing on instruments. Therefore, it is imperative for the staff to contact the financial institution to determine their specific requirements for drawing on the instrument early in the process. If NRC is considering drawing on a financial instrument, the staff should contact the issuing financial institution early in the process. Based on this, the following template can be used as a general guideline in assisting in preparing a sight draft after receiving instructions from the issuing bank, including location and number of signatures. Based on previous experience, signatures may be required on both the front and back of the sight draft.

SIGHT DRAFT – [INSERT TYPE OF FINANCIAL INSTRUMENT “LETTER OF CREDIT”, “SURETY BOND…”]

DRAWN UNDER: [insert name of financial institution, type of instrument, instrument number], Dated [insert date of instrument], for the account of [insert name of license], Address of Licensee [insert address], NRC License Number [insert number], Docket Number [insert number], and Site Name [insert name]

DATE: [insert date]

At sight, Pay to the Order of: U.S. Nuclear Regulatory Commission, as beneficiary under Bank Account No. [insert account number for the standby trust account] at [insert name of financial institution]

By wire transfer of immediately available funds:

TO: [insert name of standby trust bank]

To credit account number: Bank Account No. [insert number]

U.S. $ [insert amount of financial instrument]

[spell out dollar amount] U.S. Dollars

TO: [insert name of trustee]
4. Guarantees and Off-Balance Sheet Transactions

The NRC regulations, 10 CFR Part 30, Appendices A, C, D and E, cover the use of guarantees as a form of decommissioning financial assurance. These appendices require an independent certified public accountant to evaluate the company’s off-balance sheet transactions and provide an opinion on whether these transactions could materially adversely affect the company’s ability to pay for decommissioning costs. The 10 CFR Part 30, Appendices A, C, D and E are applicable to all NRC materials licensees (10 CFR 40.36(e)(2) and 10 CFR 70.25(f)(2) cross-reference these Part 30 appendices for source materials licensees and special nuclear materials licensees, respectively).

The following provides guidance on an accountant’s evaluation of the company’s off-balance sheet transactions and demonstrating off-balance sheet transactions do not materially adversely affect the company’s ability to pay for decommissioning costs. An example for staff can be found in ADAMS, Accession No. ML15090A165, items 5, 6 and 7 on pages 7 and 8 of this submittal.

The accountant should first determine the dollar amount of the off-sheet balance sheet transactions with an emphasis on potential liabilities. This determination may be done by reviewing the footnotes to the company’s annual report, company internal accounting records and reports and by discussions with company management. Once this dollar amount is determined, the accountant can subtract this amount from each numeric part of the financial test. Using 10 CFR Part 30 Appendix C as an example, there are two main numeric parts to the financial test: net worth and assets. The numeric parts are further broken down into total net worth, tangible net worth, and total assets in the United States.

Net Worth Requirements (10 CFR Part 30 Appendix C)

Tangible net worth of at least $21 million, and total net worth at least 10 times the amount of decommissioning funds being assured by the guarantee.
A simple example follows:

- off-balance sheet transactions = $100,000
- tangible net worth = $30,100,000
- aggregate amount of all decommissioning cost estimates = $2,000,000

The accountant would show the company has total net worth of at least $21 million and tangible net worth of at least 10 times the company’s aggregate decommissioning costs, both after subtracting out the off-balance sheet transactions.

\[ \$30,100,000 - $100,000 = $30,000,000 \]
\[ $30,000,000 > $21,000,000 \]
\[ 10 \times $2,000,000 = $20,000,000 \]
\[ $30,000,000 > $20,000,000 \]

In this example, the company passes the total net worth of at least $21 million and tangible net worth test of 10 times the amount of decommissioning funds being assured by the guarantee both after subtracting out the off-balance sheet transactions. By the accountant showing the math, the accountant is evaluating the off-balance sheet transactions and demonstrating the off-balance sheet transactions do not materially adversely affect the company’s ability to pay for decommissioning costs.

**Assets in the United States Requirement (10 CFR Part 30 Appendix C)**

Assets located in the United States amounting to at least 90 percent of total assets or at least 10 times the amount of decommissioning funds being assured by the guarantee.

A simple example follows:

- off-balance sheet transactions = $100,000
- total assets = $40,000,000
- assets in U.S. = $38,100,000

The accountant would take the total U.S. asset dollar amount and subtract out the off-balance sheet transactions, $38,100,000 - $100,000 = $38,000,000. In this example, we will show the company having both 90% of total assets in the U.S. and U.S. assets exceeding 10 times the aggregate decommissioning cost estimate amounts.

\[ $40,000,000 \times .90 = $36,000,000 \text{ and } $38,000,000 \text{ exceeds } $36,000,000. \text{ In this example, the 90% test is passed.} \]

$38,000,000 also exceeds $20,000,000. Again, $20,000,000 is 10 times the aggregate decommissioning cost estimate amounts. In this example, assets at least 10 times the amount of decommissioning funds being assured by the guarantee is also passed.
By the accountant showing the math, the accountant is evaluating the off-balance sheet transactions and demonstrating the off-balance sheet transactions do not materially adversely affect the company’s ability to pay for decommissioning costs.

As the other guarantee appendices to 10 CFR Part 30, Appendices A, D and E, have similar numeric requirements, this same methodology of showing the calculation of subtracting out the off-balance sheet transactions can be applied to these other appendices in order to meet the off-balance sheet requirement.

5. Supporting Documentation for statements of Intent

The following guidance supplements the existing guidance provided in Section A.11.3, Recommended Documentation, of NUREG-1757, Volume 3. To adequately demonstrate that a government licensee can request funding for decommissioning from its funding body when necessary, the licensee should provide supporting documentation along with the statement of intent which demonstrates the signatory of the statement of intent and his or her office has authority to request funding from the organization’s external funding body (e.g., the Congress of the United States of America, State legislature). The supporting documentation should show that the signatory determines the content of the licensee’s proposed budget in accordance with administrative guidelines on the preparation and submission of the budget, and has the authority to make a budget request to an external funding body. An example for staff can be found in ADAMS, Accession No. ML16279A280. Supporting documentation to be submitted with the statement of intent should include citations to Federal or State statutes that define budget authority within a government agency. For example, in the case of a Federal government agency, the licensee would cite the relevant U.S. code. To demonstrate that the signatory of the statement of intent has the authority to request and obtain decommissioning funds from the appropriate funding body when necessary, the licensee should also provide documentation describing the organization and function of the office headed by the signatory. The supporting documentation should show that the office plans, organizes, and carries out annual and multi-year budgeting in support of the licensee. For example, the licensee should submit with the statement of intent submittals, NRC staff found that some submittals did not show the authority of the signatory to request funding from ultimate funding body and an RAI needed to be issued.

6. Trust operations are regulated and examined by a Federal or State agency

The following guidance updates websites and contact information needed to confirm the qualifications of a trustee in Section 4.3.2.1, Trust Funds, (see p. 4-17) and 4.3.2.10, Standby Trust Funds, (see p. 4-25 – 4-26) as well as all existing guidance provided in Section A.4.1 and Section A.12.1, Qualifications of the Trustee, of NUREG-1757, Volume 3.

The regulations for decommissioning financial assurance 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 and trust must 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 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 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.

To determine which entity regulates a financial institution and should be contacted to see that the institution has full trust powers, enter the name of the institution into the Federal Financial Institution Examination Council’s (FFIEC’s) Consumer Help Center search function online at https://www.ffiec.gov/consumercenter/default.aspx. The search will identify one of the following as the appropriate regulator to contact for more information:

- **Office of the Comptroller of the Currency (OCC):** Licensees may contact the appropriate OCC district office and confirm that the institution (1) is Federally regulated, and (2) has Federally regulated trust operations. 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) 790-4000)—responsible for nationally-chartered institutions headquartered in CT, DE, eastern KT, ME, MD, MA, NH, NJ, NY, NC, PA, RI, SC, VT, VA, WV, District of Columbia, and a number of national trust companies outside the northeast region.
  - **Southern District Office** (Telephone: (214) 720-0656)—responsible for national banks headquartered in AL, AR, FL, GA, LA, MS, OK, TN, and TX.
  - **Central District Office** (Telephone: (312) 360-8800)—responsible for national banks headquartered in IL, IN, KT, MI, MN, eastern MO, ND, OH, and WI.
  - **Western District Office** (Telephone: (720) 475-7600)—responsible for national banks headquartered in AK, AZ, CA, CO, HI, ID, IA, KS, western MN, western MO, MT, NE, NM, NV, OR, SD, UT, WA, and WY.

- **Federal Reserve Board:** The Federal Reserve Board supervises State-chartered banks that are members of the Federal Reserve System. Licensees may contact the Federal Reserve Board at (202) 452-3000 or submit a request through their website at: https://www.federalreserve.gov/aboutthefed/contact-us-topics.htm to confirm that the institution (1) is State regulated, and (2) has State-regulated trust operations.

- **Federal Deposit Insurance Corporation (FDIC):** The FDIC supervises State-chartered banks that are not members of the Federal Reserve System. Licensees may submit an
email inquiry to FDICinforeq@FDIC.gov or call (877) 275-3342 to confirm that the institution (1) is State regulated, and (2) has State-regulated trust operations.

Financial institutions that cannot be found using the FFIEC’s Consumer Help Center search function online are likely to be State-chartered trust companies that may not be regulated or examined by a Federal regulator. In this case, licensees may contact the applicable State banking authority and confirm that the institution (1) is State regulated, and (2) has State-regulated trust operations.

References


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 70 “Domestic Licensing of Special Nuclear Material.”