

POLICY ISSUE
(Information)

October 1, 2002

SECY-02-0177

FOR: The Commissioners

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SUBJECT: INITIAL ANALYSIS AND PLAN FOR ADDRESSING LICENSE
TERMINATION RULE ISSUES

PURPOSE:

To provide the Commission with the initial results of the staff's analysis of how to make the restricted release/alternate criteria provisions of the License Termination Rule (LTR) more available for licensee use. In addition, this paper identifies other issues that the staff plans to evaluate in order to improve the decommissioning of sites under the LTR. The initial results for each issue addressed in this LTR analysis include scoping of specific issues, the staff's planned evaluations, and a schedule. This Commission paper responds to the June 18, 2002, Staff Requirements Memorandum (SRM)-SECY-01-0194 and updates SECY-02-0008 on the status of the U.S. Department of Energy's (DOE's) efforts regarding potential site transfers under Section 151(b) of the Nuclear Waste Policy Act (NWPA).

BACKGROUND:

The staff experience using the LTR since it was finalized in 1997 has revealed some important implementation issues. While only a few privately owned sites have considered restricted release, for various reasons, they have been unable to achieve restricted release under 10 CFR 20.1403. The staff has been working to resolve this problem by seeking DOE agreement to exercise its authority under Section 151(b) of NWPA to assume Federal Government ownership and long-term stewardship. However, this effort has thus far been unsuccessful (see SECY-02-0008).

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As part of a site-specific case, the Commission directed the staff and AAR Manufacturing Group, Inc. (AAR) to consider creative options that would make restricted release more available. This direction was part of a Commission decision, in SRM-SECY-01-0194, approving the staff's proposal to deny using the unimportant quantities of source material in 10 CFR 40.13(a) as decommissioning criteria.

Thus, the AAR case, combined with the unsuccessful efforts with DOE, and other licensee difficulties discussed in Attachment 1, led the Commission to expand its direction to the staff in SRM-SECY-01-0194 to conduct a comprehensive analysis of the restricted release provisions of the LTR, in an effort to make this option more available to appropriate licensees.

DISCUSSION:

1. Initial Results

a. Identification of LTR Issues

The staff has identified the following four LTR issues, based on both the Commission-directed evaluations in SRM-SECY-01-0194 and other issues that have hindered the staff's and licensee's efforts to decommission sites under the LTR.

- ! Restricted release/alternate criteria and institutional control (IC) requirements (**SRM directed**);
- ! Relationship between the LTR release limits and other release limits:
 - S Unimportant quantities limit under 10 CFR 40.13(a) [including insights from the Jurisdictional Working Group (JWG) efforts] (**SRM directed**);
 - S On-site disposal under 10 CFR 20.2002 (**SRM directed**);
 - S Appropriateness of developing an alternative unrestricted release standard for uranium and thorium (**SRM directed**); and
 - S Control of solid materials (staff initiated);
- ! Realistic exposure scenarios (staff initiated); and
- ! Measures to prevent future legacy sites (staff initiated).

Many of these issues are interrelated and therefore need to be evaluated together so that the impacts of options for one issue can be considered when evaluating related issues. For example, the restricted release options could be affected by options associated with exposure scenarios or alternative unrestricted release standards for uranium and thorium.

b. Scoping specific issues and planned evaluations

The staff has evaluated each of the four issues to determine the nature and extent of the issue and to identify specific subissues. Similarly, for each of the four issues, the staff has identified evaluations that will be conducted to provide, as appropriate, the basis for identifying options, pros and cons for each option, and recommendations. Included in the staff's planned evaluations for the restricted release issue are the interactions with AAR that the Commission requested in SRM-SECY-01-0194. Restricted release subissues and planned evaluations are summarized in Attachment 1. Issues and planned evaluations for the other LTR issues are summarized in Attachment 2.

For restricted release, the staff's initial analysis resulted in identifying the specific issues (see Attachment 1) that appear, based on staff experience, to be the primary causes of difficulties implementing the restricted release provisions for the small set of licensed sites considering restricted release. In summary, these subissues reflect difficulties establishing a clear, graded approach, based on radiological risk and duration of risk, for ICs that ensure long-term effectiveness, such as Federal/State ownership, independent third-party oversight, and legally enforceable ICs that will also apply to future owners (i.e., "run with the land").

The staff's initial analysis also identified planned evaluations (see Attachment 1). The staff plans on evaluating the approaches and experiences of other groups that are actively involved with restricted release/institutional control issues, such as the U.S. Environmental Protection Agency and DOE, as well as considering the experience from the staff's uranium recovery program under the Uranium Mill Tailings Radiation Control Act of 1978. The staff also has started discussions with its licensees that might consider restricted release such as AAR, and future publicly noticed meetings are being scheduled in calendar year 2002, to exchange views on the issues and potential options for these sites. Other licensees will be invited to participate in these meetings. Finally, the staff has recently become involved with a new cooperative effort sponsored by the Environmental Council of States Subcommittee on Long-Term Stewardship. The purpose of this subcommittee is to provide a forum, for major Federal agencies and interested representatives from States and Tribes, to periodically meet and exchange information on long-term stewardship issues and solutions. Based on the staff's initial attendance at an August 2002 workshop, a continued monitoring and information-gathering role appears to be an efficient and effective way to establish Agency contacts, access new information and experience, and benefit from collaborative solutions to key issues.

These information-collecting activities and others listed in Attachment 1 are necessary to provide a sound basis for identifying, evaluating, and recommending to the Commission new options to resolve the specific issues and broaden the choice of options already available under the LTR. Attachment 1 identifies some new options, under a graded approach, that the staff will consider, including those directed by the Commission in SRM-SECY-01-0194. Other options may emerge as the staff continues its analysis.

c. Status of Interactions with DOE

The staff provided the Commission with a status report, on January 14, 2002, on its efforts to develop a memorandum of understanding (MOU) with DOE, for a decision process regarding potential site transfers under Section 151(b) of the NWPA (SECY-02-0008). This MOU had the potential for addressing the restricted release issue by providing licensees with a process for seeking the Federal ownership option already authorized by Congress (assuming DOE approval). The following status report is included so that this option can be considered within the broader

context of the restricted release issues and new options that may be needed to make the restricted release provisions of the LTR more available for licensee use.

As noted in SECY-02-0008, the Chairman sent a letter, on November 2, 2001, to the Secretary of Energy, that encouraged DOE to complete the MOU. DOE responded on January 24, 2002, to the Chairman's letter and recommended working together with the appropriate Federal land management agencies, such as the U.S. Department of the Interior (DOI), as well as the Office of Management and Budget (OMB), to seek a viable solution to this and other important land management issues. Although the MOU was not explicitly mentioned in the letter, the staff understands, from the DOE perspective, that the MOU effort has been superseded by DOE's proposed policy change and initiatives to seek either DOI or other Federal options.

Subsequent to DOE's January letter, periodic coordination meetings have been held between senior Nuclear Regulatory Commission (NRC) and DOE management, and the staff has routinely been updated regarding DOE's meetings with DOI and preparations for a meeting with OMB. Although DOE has not yet met with OMB, background information has been provided. The staff has recently learned, from DOE, that DOI has expressed reservations about DOE's approach, although DOE has not yet submitted a formal proposal to DOI. As a result, DOE is considering multiple options for the management of long-term stewardship. These options range from maintaining an Office within DOE to conduct long-term stewardship activities for the Department, to continuing to pursue a coordinated Federal Government approach to managing land with long-term stewardship requirements. Although the staff plans on continuing to monitor these efforts, the timing or feasibility of these potential solutions is highly uncertain at this time. Thus, as a follow-up to the Commission's request in SRM-SECY-00-0180, the staff is informing the Commission that the efforts to seek an MOU have not been successful and a feasible alternative is unclear at this time. These results reinforce the Commission's direction, in SRM-SECY-01-0194, for the staff to evaluate other options to make restricted release more available to licensees.

2. Future Products and Schedule

The results of the planned evaluations will be provided to the Commission in March 2003. The planned Commission paper will give the results of the analysis of the four LTR issues, including options, associated pros and cons, and recommendations, where appropriate. Depending on the results of those analyses, the planned evaluations may lead to additional reports to the Commission following the March 2003 paper.

This action is being coordinated with the work of the 10 CFR Part 40 JWG, whose evaluations and recommendations are also due to be provided to the Commission in March 2003. That paper will include evaluations and recommendations relevant to the subissue regarding unimportant quantities under 10 CFR 40.13(a).

The March 2003 schedule is needed to conduct the planned evaluations listed in the attachments. It is noted that the staff has a number of ongoing activities in the decommissioning area, some of which may involve policy issues that will be addressed in the March paper. While the staff does not believe that this schedule will delay licensing decisions, separate Commission papers will be prepared, if needed, to address site-specific issues.

RESOURCES:

The staff estimates that about 0.5 full time equivalent (FTE) will be needed in fiscal year (FY) 2003, to conduct the planned evaluations of all four issues identified above and to prepare the LTR issues Commission paper. The current FY 2003 budget request for the Decommissioning Program does not include resources for conducting the LTR analysis. Therefore, the additional FTE will be reallocated from lower-priority activities using the Planning, Budgeting, and Performance Management process.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objections.

/RA/

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Attachments:

1. "Initial Results of the Restricted Release and Institutional Control Analysis: Issues and Planned Evaluations"
2. "Other License Termination Rule Issues and Planned Evaluations"

INITIAL RESULTS OF THE
RESTRICTED RELEASE AND INSTITUTIONAL CONTROL ANALYSIS:
ISSUES AND PLANNED EVALUATIONS

1. BACKGROUND

As discussed in SECY-02-0008, the restricted release and institutional control (IC) issue is currently important to only a small number of sites. At this time, the following four decommissioning sites are considering restricted release: (1) Sequoyah Fuels Corporation (SFC); (2) SCA Services, Inc. (SCA); (3) Shieldalloy Newfield; and (4) Jefferson Proving Ground (JPG). The staff also noted in SECY-02-0008 that an additional five operating sites with large quantities of long-lived radionuclides could consider restricted release in the future. All of these sites have large volumes of long-lived radionuclides (i.e., uranium and thorium). Thus, the primary focus of the restricted release issue has been finding approaches that assure the effectiveness of ICs over the long time periods needed for the long-lived radionuclides at these few sites.

As mentioned in the background section of this paper, the staff has not been able to obtain U.S. Department of Energy (DOE) agreement to assume ownership and IC responsibilities, as authorized under section 151(b) of the Nuclear Waste Policy Act. This option of Federal Government ownership was recognized in the "Statement of Considerations" for the License Termination Rule (LTR) as an approach for sites with large quantities of long-lived radionuclides. This option and the status of the staff's efforts to seek DOE agreement are described in SECY-02-0008 and updated in this paper.

Licensees of privately owned sites have encountered difficulties finding private or governmental entities to provide the required long-term ICs (e.g., SFC and SCA). Some licensees and former licensees with privately owned sites (e.g., Molycorp Washington, Fansteel, and Kaiser), that had been planning on restricted release, have changed their plans to higher-cost unrestricted release for a variety of reasons, including: (1) lack of a restricted release solution with DOE; (2) uncertainty over when or even if there will be a required independent third party solution; and (3) for some cases, intense public and State opposition to restricted release.

The JPG site is the only site with what appears to be an acceptable plan for ICs, because it is an existing Federally owned site (U.S. Army) and agreements have been made with the U.S. Air Force and U.S. Fish and Wildlife Service to provide the necessary controls.

2. ISSUE DESCRIPTIONS AND EVENTUAL DESIRED OUTCOME

Issue: U.S. Nuclear Regulatory Commission (NRC) licensees have difficulties arranging the ICs required by the restricted release and alternate criteria provisions of the LTR that ensure long-term effectiveness. Subissues include:

- 1) Governments and Tribes are unwilling to accept transfer of ownership of private sites, because of long-term liability and funding concerns (e.g., potential future additional cleanup, potential failure of engineered barriers, and one-time payment to U.S. Treasury for Federal ownership).
- 2) Lack of independent third party to ensure long-term effectiveness of ICs and, if needed, to provide control and maintenance if current owner/licensee abandons the site, goes bankrupt, or if a subsequent owner does not provide control and maintenance. Also, there is a concern over long-term continuity of an independent third party.
- 3) Difficulties establishing legally enforceable ICs involving various types of “deed restrictions” that “run with the land” to ensure effectiveness over long periods of time and if property ownership changes.
- 4) Unclear and limited flexibility of the existing LTR graded approach to IC requirements for providing degrees of effectiveness based on dose levels and half-life. This includes the meaning of “enforceable” and “durable” controls, as well as use of engineered barriers, role of independent third party, and degree of public involvement.
- 5) Selecting realistic exposure scenarios that appropriately consider IC effectiveness and radiological risk. Note that this issue overlaps with the broader LTR issue on realistic dose scenarios and will be evaluated under the broader issue. However, it is noted here because of the importance that scenario selection can have on making the restricted release option more available to licensees.

Eventual desired outcome: Make the restricted release and alternate criteria provisions of the LTR more available for NRC licensee use by providing feasible IC options and removing existing regulatory or implementation impediments (such as the issues identified above) currently associated with the IC requirements of both the restricted release and alternate criteria provisions of the LTR. Graded IC options should be based on radiological risk and time frame that the IC must remain effective.

3. PLANNED EVALUATIONS

3.1 Evaluations of Information and Experience

- 1) The U.S. Environmental Protection Agency’s approach to IC under the Resource Conservation and Recovery Act and the Comprehensive Environmental Response, Compensation, and Liability Act (**Staff Requirements Memorandum (SRM) directed**);
- 2) Ohio’s approach and experience with a perpetual license (i.e., decommissioning possession-only license);
- 3) Approaches from relevant guidance documents (e.g., American Society for Testing and Materials standard for engineering and institutional controls and the National Research Council report on long-term institutional management);

- 4) Insights from other NRC programs (e.g., general license approach under 10 CFR Part 40, Appendix A/Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA); 10 CFR Part 61; and 10 CFR Part 63);
- 5) Site-specific NRC licensee interactions and evaluation of suggestions, including AAR Manufacturing Group Inc. (AAR), SFC/Cherokee Nation, and JPG; and
- 6) Interactions with cooperative efforts to share information and seek solutions among Federal, State, Tribes, and other groups involved with long-term stewardship (e.g., Environmental Council of States Subcommittee on Long-Term Stewardship).

3.2 Evaluations of Potential Options

- 1) Clarifications or modifications to the LTR graded approach for ICs, including an approach in which the assurance to be required of an IC is proportional to the radiological risk and duration of risk (**SRM directed**);
- 2) Potential feasibility and effectiveness of new options for license termination after decommissioning. For each new option, evaluate: methods of implementation (e.g., rulemaking, guidance, exemption); appropriate degree of public participation; appropriate environmental review (i.e., environmental assessment or environmental impact statement); impact on fees; impact on each of the Agency's four performance goals; and effectiveness for resolving the subissues identified in section 2.0. New options include, but are not limited to, the following:
 - a. License termination for lower-risk sites using redundant and legally enforceable ICs, but without independent third-party oversight;
 - b. License termination for lower-risk sites using ICs and NRC monitoring for compliance (includes use of a deed restriction to restrict future use to an industrial scenario) (**SRM directed**);
 - c. NRC perpetual license (e.g., general license or specific license for control/maintenance) for lower or higher risk sites after completion of remediation and termination or amendment of the current license (**SRM directed**); and
 - d. Evaluate, for State or Federal Government ownership cases, allowing an exemption from the LTR requirement for dose "caps," assuming IC would no longer be in effect. That is, in limited Government ownership cases, do not presume that Government controls will fail, as is currently required in 10 CFR 20.1403;
- 3) Status and feasibility of existing Federal ownership options, such as DOE or U.S. Department of the Interior (update to SECY-02-0008); and
- 4) Potential clarifications of guidance for existing options, such as:

a. Existing risk-informed, graded approach for IC [e.g., 1mSv/yr (100 mrem/yr) threshold; role of independent third party; meaning of terms “enforceable” and “durable”; and degree of public participation]; and

b. Role and evaluation of engineered barriers to complement ICs and minimize long-term liability (like UMTRCA/10 CFR Part 40, Appendix A and 10 CFR Part 61).

OTHER LICENSE TERMINATION RULE ISSUES AND PLANNED EVALUATIONS

1. RELATIONSHIP BETWEEN THE LICENSE TERMINATION RULE (LTR) RELEASE LIMITS AND OTHER RELEASE LIMITS

1.1 Relationship between LTR and the Unimportant Quantities Limit in 10 CFR 40.13(a) (Staff Requirements Memorandum (SRM) directed).

1.1.1 Issue Description and Eventual Desired Outcome

Issue: There is a potential inconsistency between the dose allowed by the LTR and the dose if 10 CFR 40.13(a) were used, and the appropriate relationship between the two regulations is not clear. The staff identified the potential inconsistency in SECY-01-0194 and argued that 10 CFR 40.13(a) is not an appropriate decommissioning criterion. The Commission approved the staff's proposal to deny the use of 10 CFR 40.13(a) as a decommissioning criterion.

Eventual desired outcome: Describe a clear relationship, or resolve/eliminate the inconsistency between the LTR and 10 CFR 40.13(a).

1.1.2. Planned Evaluations

In an August 13, 2002, memorandum to the Commission, the staff discussed its evaluations and considerations of a potential recommendation to limit the U.S. Nuclear Regulatory Commission's (NRC's) regulatory authority to uranium and thorium that are purposely extracted or used. The staff is still analyzing how to implement this, but one approach may include eliminating 10 CFR 40.13(a). This approach, if approved by the Commission, would eliminate the existing inconsistency with the LTR.

The staff has recently published language in the "Statement of Considerations," to the proposed rule changes to 10 CFR 40.51, that serves to clarify NRC's intent concerning the relationship of these provisions. It indicates that 10 CFR 40.13(a) is not a disposal standard, that on-site disposal of mixtures of material containing less than 0.05 percent by weight source material is not addressed by 40.13(a), and that any on-site disposal would require approval under 10 CFR 20.2002, with reevaluation under the LTR (i.e., 10 CFR 40.13(a) is not applicable as a decommissioning standard).

Planned 10 CFR Part 40 Jurisdictional Working Group evaluations from the August 13, 2002, memorandum, that are also needed before the staff makes its recommendation to the Commission on that issue include:

- 1) Evaluate how to implement this approach logistically, including a change to NRC's legislative authority or reinterpretation of the Atomic Energy Act via rulemaking;

- 2) Evaluate impact on currently licensed and Site Decommissioning Management Plan sites that will no longer be under NRC jurisdiction;
- 3) Evaluate impacts on international treaties; coordinate with State Department; and
- 4) Evaluate approach's consistency with ongoing NRC security initiatives.

1.2 Relationship between LTR and On-Site Disposal under 10 CFR 20.2002 (SRM directed)

1.2.1 Issue Description and Eventual Desired Outcome

Issue: 10 CFR 20.2002 does not establish a clear standard for approving on-site burials, but allows Agency discretion to approve, on a case-by-case basis, as long as the action remains within the public dose limit of 1mSv/yr (100 mrem/yr). However, it appears clear, from the LTR "Statement of Considerations," that on-site disposals, under 10 CFR 20.2002, were to be reconsidered under the LTR at the time of license termination. In addition, the requirements of the Timeliness Rule in 10 CFR 30.36, 40.42, and 70.38 apply to on-site burials and warrant assessment. This suggests that the LTR constraint of 0.25 mSv/yr (25 mrem/yr) and as low as reasonably achievable (ALARA), for unrestricted release, should be used for approval of on-site burials during operation. Similarly, the same constraint should be used for offsite disposals, under 10 CFR 20.2002.

Eventual desired outcome: Clarify the appropriate standard to use for approving on-site burials.

1.2.2 Planned Evaluations

- 1) Evaluate current practice for approving on-site burials and current practice for applying the Timeliness Rule (10 CFR 30.36, 40.42, and 70.38) to on-site burials.
- 2) Evaluate appropriate options for standards to be used for approvals of on-site burials, including evaluating potential impacts on future license termination with restricted release.

1.3 Appropriateness of Developing an Alternative Unrestricted Release Standard for Uranium and Thorium (SRM directed)

1.3.1 Issue Description and Eventual Desired Outcome

Issue: The appropriateness of regulating uranium and thorium differently than other radionuclides (specifically, with respect to developing a separate unrestricted release standard) should be considered given that: 1) uranium and thorium are ubiquitous in nature and cause varying degrees of radiation exposure to humans as a result; and 2) the unrestricted release standard in the LTR is different than

other NRC regulations dealing with remediation of uranium and thorium (10 CFR Part 40, Appendix A); State and Federal regulations of technologically enhanced naturally occurring radioactive material (TENORM), and international standards of the International Commission on Radiological Protection (ICRP), which are based on concentrations.

Eventual desired outcome: Decide whether it is appropriate to develop a separate (from the LTR) unrestricted release criteria (either concentration or dose-based) for uranium and thorium, or describe a clear relationship to other standards.

1.3.2 Planned Evaluations

1) Evaluate available insights and existing and planned regulations from national and international groups for unrestricted release criteria for naturally occurring radioactive material and TENORM (e.g., ICRP, Conference of Radiation Control Program Directors, Inc. (CRCPD), and EPA).

2) Evaluate other NRC regulations for remediation of uranium and thorium (e.g., Part 40, Appendix A).

3) Based on above evaluations, identify and characterize potential inconsistencies between the LTR and internal and external regulations for unrestricted release for uranium and thorium.

4) Evaluate impacts of potential inconsistencies on safety, public confidence, unnecessary regulatory burden (including number of sites affected and potential for fewer restricted release sites), and staff efficiencies.

5) Based on results of evaluations, determine appropriateness of developing an alternate unrestricted release standard.

6) If the staff determines that an alternate standard is appropriate, identify and evaluate options to implement this change, such as a concentration standard like 10 CFR Part 40, Appendix A, or a dose standard [greater than 0.25 mSv/yr (25 mrem/yr)] using the 10 CFR 20.1404 alternate criteria standard under the LTR.

1.4 Relationship between the LTR and Control of Solid Materials (Staff initiated)

1.4.1 Issue Description and Eventual Desired Outcome

Issue: The relationship is unclear between the LTR's dose constraint of 0.25 mSv/yr (25 mrem/yr) and ALARA for unrestricted release of a site, and existing guidance for controlling solid materials on a case-by-case basis, particularly for instances where residual contamination might be removed from an unrestricted release site after license termination.

Eventual desired outcome: Describe the relationship between the LTR's unrestricted release dose constraint and the existing case-by-case approach for controlling solid materials.

1.4.2 Planned Evaluations

1) Prepare an explanation of the relationship, including:

a) Differences in types of contamination, potential future uses, and exposure pathways between the LTR unrestricted release and control of solid materials under current guidelines; and

b) Discussion of factors, such as ALARA and effects of mixing and dilution, that realistically would reduce the dose if residual contamination were removed from an unrestricted use site after the license is terminated.

2. REALISTIC EXPOSURE SCENARIOS (STAFF INITIATED)

2.1 Issue and Desired Outcome

Issue: Clear direction and guidance are needed for selecting more realistic exposure scenarios for both unrestricted release and restricted release that appropriately considers IC effectiveness and radiological risk.

Eventual desired outcome: Implement dose assessment exposure scenarios and modeling assumptions that are risk-informed, realistic, and that reflect a logical extension of existing site-specific conditions for the foreseeable future. Specifically, identify what justifications are adequate to use scenarios other than the generic screening scenario of a resident farmer, in light of the 1000-year dose modeling time period.

2.2 Planned Evaluations

1) Evaluate approaches and assumptions used by others (e.g., U.S. Environmental Protection Agency; U.S. Department of Energy; American Society for Testing and Materials; CRCPCD) to select scenarios.

2) Evaluate underlying assumptions used as the basis for identifying what land use is foreseeable to justify realistic scenarios, such as: 1) assuming continuity of existing society rather than catastrophic collapse of society; 2) assuming a logical extension of existing land use of a site and surrounding area; and 3) assuming when existing site conditions that are not likely to change would limit future scenarios (e.g., wetlands).

3) Evaluate when assuming continued industrial use would be acceptable.

4) Evaluate the consequences of changes to scenario selection on potential restricted release sites.

3. MEASURES TO PREVENT FUTURE LEGACY SITES (STAFF INITIATED)

3.1 Financial Assurance/Bankruptcy

3.1.1 Issue Description and Eventual Desired Outcome

Issue: Staff experience has resulted in identifying the following financial assurance risks:

- 1) Initial underestimation of costs;
- 2) Increased costs after certain events (e.g., groundwater contamination);
- 3) Unavailability of funds in bankruptcy;
- 4) Inadequate financial disclosure; and
- 5) Corporate reorganization.

Eventual desired outcome: Minimize the potential for future legacy sites by reviewing and revising financial assurance requirements and guidance, as necessary, to ensure adequate decommissioning funding is available for licensees.

3.1.2 Planned Evaluations

- 1) For each of the financial assurance risks identified in section 3.1.1, identify and evaluate potential changes to requirements or guidance and make recommendations.

3.2 Potential Regulatory Changes to Licensee Operations

3.2.1 Issue Descriptions and Desired Outcomes

Issue: A number of legacy sites have substantial contamination including subsurface soil and groundwater contamination. These sites were operating long before the current decommissioning regulatory infrastructure existed. While much has been done to prevent such future sites, could more be done through rulemaking, guidance development, or in changes to existing operating licensees?

Eventual desired outcome: Make regulatory changes, as necessary, to minimize the potential for legacy sites.

3.2.2 Planned Evaluations

- 1) Identify events or factors that have or could lead to future legacy sites.
- 2) Identify existing regulatory tools (e.g., requirements, guidance, inspections, enforcement, etc.) and their effectiveness for addressing the events and factors identified above in order to reduce the potential for future legacy sites (e.g., cleanup of spills during operations or periodic offsite disposal of waste to limit accumulation of large volumes of onsite waste).

3) Identify, evaluate, and recommend potential changes to regulatory tools, if needed, to adequately address the events and factors identified above.