

January 25, 1999

FOR: The Commissioners

FROM: William D. Travers /s/
Executive Director for Operations

SUBJECT: GUIDANCE TO TERMINATE AGREEMENT STATE URANIUM RECOVERY LICENSES UNDER REQUIREMENTS OF 10 CFR 150.15a(a) AND SECTION 274c

PURPOSE:

To inform the Commission of the staff's approach to make determinations that all applicable standards and requirements have been met prior to Agreement State uranium recovery license termination, as required by 10 CFR 150.15a(a) and Section 274c of the Atomic Energy Act of 1954, as amended (AEA).

BACKGROUND:

The Office of State Programs (OSP) has received five requests from the State of Texas regarding NRC concurrence on the State's determinations regarding termination of uranium recovery licenses. Three of these requests address license amendments that remove a portion of a site from a license and the other two cases address termination of the license for an entire site. It is expected that similar requests will be received in the future from Agreement States.

Section 150.15a(a) indicates that the Commission shall have made a determination that all applicable standards and requirements pertaining to material as defined in 10 CFR 150.3(c)(2) (i.e., uranium mill tailings) have been met prior to termination of any Agreement State license for such material. This provision in NRC's regulations stems from section 274c(4) of the AEA which reads in part: "[t]he Commission shall also retain authority under any such agreement to make a determination that all applicable standards and requirements have been met prior to termination of a license for byproduct material, as defined in 11e.(2)."

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Two kinds of Agreement State uranium recovery licenses are involved: conventional and non-conventional (mainly in-situ uranium extraction licenses) uranium mill licenses. A conventional uranium mill is a facility that generates mill tailings and will be transferred to a custodial agency for long term care in accordance with 10 CFR 40.28 after the entire license is terminated. A non-conventional uranium mill is a facility that generates limited byproduct materials which are normally transferred to tailings impoundments for disposal and therefore no land transfer is required at license termination. For both types of licenses, the Agreement State is expected to conduct its review for decommissioning, reclamation and/or groundwater restoration in accordance with State regulations which are compatible with the requirements of 10 CFR Part 40. Agreement States are responsible for approval of the remediation plans of uranium recovery facilities in their States and for site inspections to ensure that the actual remedial actions have been completed pursuant to the approved plans.

In the past, the former Uranium Recovery Field Office (URFO) and OSP have made six determinations under section 150.15a(a) for the termination of non-conventional uranium mill licenses in Agreement States. These determinations were based on the State's conclusion that the licensee had cleaned up the site buildings and soil to meet unrestricted release criteria, that the groundwater had been restored to meet State criteria, and that the wells had been plugged in accordance with State well plugging criteria, if necessary.

No Agreement State has of yet proposed to terminate a conventional uranium mill license authorizing uranium recovery operations which generate uranium tailings. However, in the past three years, the NRC has terminated two such NRC uranium mill licenses; they are the Tennessee Valley Authority (TVA) and the Atlantic Richfield Company (ARCO) licenses. Attachment 1 is a copy of a completion review report which documents the NRC staff's basis for its conclusion to terminate the ARCO's license at the Bluewater Mill site. There is an equivalent report to terminate the TVA's license at the Edgemont, SD site; however, the ARCO report is more representative for illustration because the TVA Edgemont site does not have groundwater remediation issues. Attachment 2, issued in December 1996, is guidance to the NRC staff on the license termination process for NRC conventional uranium mill licenses.

In accordance with the provisions at 10 CFR 150.15a(a) and Section 274c of the AEA for Agreement State licensees, prior to termination of the specific license, the NRC determines whether the licensee has met all applicable standards and requirements. The Agreement State conducts reviews of licensee submittals relative to the remedial actions. These reviews are in accordance with each State's standards and regulations. With NRC concurrence, the Agreement State terminates the specific licenses for its licensees.

Historically, the NRC has reviewed non-conventional uranium recovery license termination requests from Agreement States on a case-by-case basis without any specific guidance. This paper describes the specific guidance the NRC would use to ensure consistency in the process and information that NRC would need from an Agreement State to make its determination prior to termination of pending and future Agreement State conventional and non-conventional uranium recovery licenses. Note that the NRC staff does not intend to duplicate the State's review by conducting an independent detailed technical review of the proposed license termination or determination of any specific documentation for the Agreement State licensees. Rather, NRC would rely on a review of the completeness and documentation of the Agreement State action as well as the normal periodic NRC review of the Agreement State program under the Integrated Materials Performance Evaluation Program (IMPEP).

Staff believes that each Agreement State license amendment that terminates a portion of the site from a license should be considered as a partial license termination and the NRC would make the AEA section 274c(4) determination for each case. Similar license termination processes would be followed for both partial and entire license termination cases. This is consistent with the NRC general practice in the decommissioning area.

DISCUSSION:

With the approval of Management Directive 9.15, "Organization and Functions, Office of State Programs" on July 6, 1993, OSP was explicitly assigned responsibility for making determinations under 150.15a(a). Management Directive 9.15 provides, in part, that the Office "[m]akes the determination required in Section 274c of the Act of 1954 that all applicable standards and requirements have been met before an Agreement State terminates a license for byproduct material as defined in Section 11e.(2). This determination will be made in consultation with the Office of Nuclear Material Safety and Safeguards."

The following discussion is divided into three sections: I. Identification of the standards and requirements to be used by NRC to make the determination; II. Bases to be used for the determination; and III. Process to be followed.

I. Standards and Requirements

The "standards and requirements" to be used by NRC in making a determination under section 150a(a) would be the applicable regulations and license requirements in the Agreement State. The applicable Agreement State regulations for existing Agreement States having uranium recovery authority were reviewed and approved by NRC when their agreements were amended to include 11e.(2) byproduct material. Similar reviews would be performed for new Agreement States, such as Ohio, which will include the licensing of 11e.(2) byproduct material in their agreement. Agreement States are also expected to adopt any changes to NRC's uranium recovery rules or programs that are identified as required for compatibility or because of their health and safety significance within 3 years of their enactment. NRC usually reviews changes to State rules when they are proposed for adoption and ensures State regulations and other program elements are compatible through review of final adopted State rules. Overall adequacy and compatibility of an Agreement State program is determined through IMPEP reviews.

II. Bases for NRC Determination

The determination that all applicable standards and requirements have been met prior to termination of an Agreement State license would have two primary supporting bases:

- A. The first basis would be a completion review report requested from the Agreement State containing the conclusions from the State's review of a licensee's completed remedial actions. This report would document the State staff's bases for its conclusion that all requirements have been met. NRC staff would provide guidance, documented in Attachment 3, to the State and request a completion review report similar to that contained in Attachment 1.

Upon receipt of the completion review report submitted by the State, the NRC staff would review the document for completeness of the State's review process. If the content of the completion review report did not demonstrate that a complete review has been performed, the NRC could request additional information from the Agreement State prior to making its determination. The completion review report should include the following information depending on whether the license being terminated is a conventional or non-conventional uranium mill license.

1. Conventional Uranium Mill License
 - a. A brief description of licensee's activities associated with decommissioning, tailings remediation and/or groundwater cleanup.
 - b. Documentation that the completed surface remedial actions were performed in accordance with license requirements and regulations.
 - c. Documentation that the completed site decommissioning actions were performed in accordance with license requirements and regulations. This documentation should include a discussion of results of radiation survey and confirmatory soil samples which indicates that the subject site meets unrestricted release requirements.
 - d. Documentation that the completed groundwater corrective actions, if necessary, were performed in accordance with license requirements and regulations.
 - e. Discussion of results of State's site closure inspection.
 - f. Documentation that release of this portion of the site will not negatively impact the remainder of the site to be closed at a later date, if it is a partial license termination case.
2. Non-conventional Uranium Mill License (Mainly In-situ Uranium Extraction License)

- a. A brief description of licensee's activities associated with license termination.
 - b. Groundwater information which demonstrates that the groundwater has been adequately restored to meet the State restoration criteria.
 - c. Documentation that the production, injection, and monitoring wells have been closed and plugged in accordance with the State criteria.
 - d. Decommissioning information which documents that all contaminated materials have been removed from the site.
 - e. Discussion of results of radiation survey and confirmatory soil samples which indicates that the subject site meets unrestricted release requirements.
 - f. Discussion of results of the State's site closure inspection.
 - g. Documentation that release of this portion of the site will not negatively impact the remainder of the site to be closed at a later date, if it is a partial license termination case.
- Note: Additional information may be required on a case-by-case basis for the termination of a non-in-situ uranium extraction license under the non-conventional uranium license category.

- B. The second basis would be NRC reviews of the Agreement State's uranium recovery regulatory program, currently conducted under the IMPEP. The results of the IMPEP reviews would provide a basis for confidence on the determinations and conclusions reached by the Agreement State, as set out in the completion report, and also a basis of confidence that the State's reviews, licensing actions, and inspections associated with termination have been conducted appropriately. The periodic reviews of selected technical areas, conducted under IMPEP, which also include training and qualifications of staff and adherence to necessary program procedures, e.g., license termination process for uranium recovery licenses or equivalent procedures, will also serve as a basis that all applicable standards and requirements are met.

The emphasis of NRC reviews of technical quality of inspection and licensing may be placed on different areas during each IMPEP review, for example, evaluating the financial surety portion of the State's uranium recovery program, or reviewing the State's licensing actions related to groundwater remediation or geotechnical aspects of the cover design. In addition, under IMPEP, the depth of review in any program area is increased if problem areas are identified. On occasion, NRC staff would also accompany State staff to the mill facilities during the actual reclamation or construction stage of the licensed activity, in order to evaluate the State's performance.

III. Process

Based on the above discussion and the existing guidance ([Attachment 2](#)) for NRC licensees, the staff has developed a guidance document on the license termination process for conventional and non-conventional uranium mill licenses in Agreement States. The detailed step by step process is listed in [Attachment 3](#). The NRC staff would review the completion review report and rely on the adequacy and compatibility of the Agreement State's program to regulate uranium recovery licensees to confirm that the State's conclusions demonstrate that all appropriate requirements have been met by its licensee. Note that an Agreement State request for amendment to release a portion of a site from license also requires NRC to make a determination based on a site specific completion review report for that portion of the site. Similar license termination processes would be followed for both partial and entire license termination cases.

Given a determination that all applicable standards and requirements have been met, the NRC should notify the State of its determination by formal correspondence. Upon notification from the NRC, the Agreement State should be ready to terminate the specific license, if it is a non-conventional uranium mill license, or amend the license to remove the remediated portion from that license, if the license is being partially terminated.

For the full termination of a conventional uranium mill license, the NRC staff would also review a site Long-Term Surveillance Plan (LTSP) submitted by the custodial agency. Provisions and activities identified in the final LTSP will form the bases of the custodial agency's long-term surveillance at the site. Note that sites that have been partially terminated have involved areas surrounding the actual milling area which were released without the need for a LTSP. The review of the LTSP would be very similar for both NRC and Agreement State licensees since the review and acceptance of the LTSP is conducted in accordance with [10 CFR 40.28](#) which is the sole purview of the NRC. Given NRC's determination that all applicable standards and requirements have been met and upon notification from the NRC that a LTSP has been accepted, the Agreement State should be ready to terminate the conventional uranium license.

CONCLUSION:

Staff will request review and comments on [Attachment 3](#) from Agreement States with authority to regulate uranium recovery operations. After receipt and analysis of comments, Attachment 3 will be modified as warranted and issued as a final guidance document. Currently, the staff plans to apply similar license termination processes for both partial and entire license termination cases and make the determination relying on the review of a site

specific completion review report requested from the Agreement State and NRC reviews of the Agreement State program conducted under the IMPEP. The completion review report should contain the conclusions from the State's review of a licensee's performance of remedial actions and document the State staff's bases for its conclusion that all requirements have been met. If the NRC has found that the State's program is adequate to protect public health and safety, found that the State's program for regulating uranium recovery is compatible with NRC's program, and found that the State staff's review of license termination is complete, the finding would be made that all applicable standards and requirements have been met.

RESOURCES:

The resources to review and concur on partial or entire site termination requests from Agreement States will be part of the routine activities of the OSP. Although this may require additional reviews when a site is only partially terminated, at this time, no additional resources are required to implement the actions discussed in this paper.

COORDINATION:

The Office of the General Counsel has no legal objection with the staff's proposed approach.

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- Attachments:
1. [Completion Review Report](#)
 2. [Guidance to the NRC Staff on the License Termination Process for Conventional Uranium Mill Licensees](#)
 3. [Termination Process for Conventional and Non-conventional Uranium Mill Licenses in Agreement States](#)

ATTACHMENT 3

Termination Process for Conventional and Non-Conventional Uranium Mill Licenses in Agreement States

Termination of uranium licenses in Agreement States has been divided into two major parts as follows: (a) termination of conventional uranium mill licenses; and (b) termination of non-conventional uranium mill licenses (mainly in-situ uranium extraction licenses).

(a) Termination of Conventional Uranium Mill Licenses

Step 1 through step 7 are applied to entire license termination cases; steps 1, 2, 5 and 6 are applied to partial license termination cases.

STEP 1: LICENSEE DOCUMENTATION OF COMPLETED REMEDIAL AND DECOMMISSIONING ACTIONS

Licensees are required under 10 CFR 40.42(j) or equivalent Agreement State regulations to document the results of site decommissioning, which is accomplished by conducting a radiation survey of the premises where the licensed activities were carried out. The results of this survey, the contents of which are specified at the Agreement State regulation equivalent to 10 CFR 40.42(j)(2), are submitted to the State for review.

Criteria 5A-5D, along with Criterion 13, of Appendix A under 10 CFR 40 or equivalent Agreement State regulations incorporate the basic groundwater protection standards imposed by U.S. Environmental Protection Agency (EPA) in 40 CFR Part 192, Subparts D and E. These standards apply during operations and prior to the end of closure. If the groundwater protection standards are exceeded, the licensee is required to put into operation a groundwater corrective action program (CAP). The objective of the CAP is to return the hazardous constituent concentration levels to the concentration limits set as standards. For licensees with continuing groundwater cleanup, State approval is required for the termination of corrective action. Appropriate groundwater monitoring data and other information that provide reasonable assurance that the groundwater has been cleaned to meet the appropriate standards are submitted to the State for review.

STEP 2: REVIEW OF COMPLETED CLOSURE ACTIONS BY THE AGREEMENT STATE

Upon receipt of the decommissioning report, and if necessary, groundwater completion report, the State staff should review the content of the reports for documentation of acceptable completion of the applicable aspect of closure. The State staff should also review the licensee's completed reclamation of the tailings disposal cell. As part of its review, the State staff should conduct site inspections, examining first-hand the closure actions taken. Additionally, the State staff should conduct a final construction-completion inspection, which is expected to consist of a site walk-over.

Typically, there is an observational period following the completion of surface remedial actions for the State to access the potential long-term stability of the tailings disposal cell. Licensees should report significant cell degradation occurring during this period. All identified hazardous constituents for which groundwater compliance sampling is being conducted at a licensed site must be returned to the concentration limits set as standards prior to termination of the specific license. At license termination, the State should require licensees to sample for all constituents previously identified in the tailings liquor to ensure that no further remediation is necessary. The State should not terminate a specific license while a groundwater CAP is in operation.

STEP 3: LONG-TERM SITE SURVEILLANCE FUNDING

Prior to termination of the specific license, the NRC should establish the final amount of the long-term site surveillance fund to be paid by the licensee in accordance with Criterion 10 of Appendix A under 10 CFR 40. The NRC's process for determining this amount should include consultations with the State and the custodial agency. Payment of this amount to the appropriate State agency is required prior to termination of the specific license.

STEP 4: PREPARATION OF THE LONG-TERM SURVEILLANCE PLAN (LTSP)

While surface remediation and groundwater cleanup activities are ongoing, it is in the best interest of the licensee to begin interaction with the custodial agency with regard to that agency's preparation of the site LTSP. The custodial agency's responsibilities under the general license are defined in the LTSP. The required contents of which are provided at 10 CFR 40.28 and in Criterion 12 of Appendix A.

In addition to the regulatory requirements, the NRC should also require that the LTSP contain documentation of title transfer of the site from the licensee to the custodial agency. Because the LTSP must reflect the remediated condition of the site, it is expected that the existing licensee will interact with the custodial agency in the preparation of the LTSP.

STEP 5: SITE READY FOR LICENSE TERMINATION

When a licensee has completed site reclamation, decommissioning, and/or groundwater corrective action, and is ready to terminate its specific source material license, the licensee should formally notify the State of its intentions.

STEP 6: TERMINATION OF THE SPECIFIC LICENSE

Under Section 150.15a(a), the NRC determines whether all applicable standards and requirements have been met by the licensee in the completion of site reclamation, decommissioning, and/or groundwater corrective action. After completing the review of the licensee's performance of remedial actions, the State will be requested to submit a completion review report documenting the State staff's bases for its conclusion that all requirements have been met to the NRC for review.

Upon receipt of the completion review report submitted by the State, the NRC staff would review the document for completeness of the State's review process. If the content of the completion review report did not demonstrate that a complete review has been performed, the NRC could request additional information from the State prior to making its determination. The completion review report, similar to that contained in [Attachment 1](#), should include the following information:

1. A brief description of licensee's activities associated with decommissioning, tailings remediation and/or groundwater cleanup.
2. Documentation that the completed surface remedial actions were performed in accordance with license requirements and regulations.
3. Documentation that the completed site decommissioning actions were performed in accordance with license requirements and regulations. This documentation should include a discussion of results of radiation survey and confirmatory soil samples which indicates that the subject site meets unrestricted release requirements.
4. Documentation that the completed groundwater corrective actions, if necessary, were performed in accordance with license requirements and regulations.
5. Discussion of results of State's site closure inspection.
6. Documentation that release of this portion of the site will not negatively impact the remainder of the site to be closed at a later date, if it is a partial license termination case.

NRC's determination shall rely upon the State's reviews and acceptance of the documentation provided by the licensee. In addition, results of the State site closure inspection activities, potentially including limited confirmatory radiological surveys, will provide supplemental information to the NRC's determination. NRC's periodic IMPEP reviews of the Agreement State's regulatory program provide confidence that the State's reviews, licensing actions, and inspections associated with termination have been conducted appropriately, from a health and safety (adequacy) and compatibility perspective. Given a determination that all applicable standards and requirements have been met, the NRC should notify the State of its determination by formal correspondence. If it is a partial license termination case which an LTSP is not required, the State should be ready to amend the license to remove the remediated portion from it.

STEP 7: TERMINATION OF THE SPECIFIC LICENSE/ISSUANCE OF THE GENERAL LICENSE

In termination of an entire license, an LTSP is required prior to termination of the specific license and placement of the site and byproduct material under the [10 CFR 40.28](#) general license. Review and acceptance of the LTSP is the sole purview of the NRC. Lack of NRC acceptance of a site LTSP can delay termination of the specific license.

The NRC staff's acceptance of an LTSP should be documented in written notification to the relevant Agreement State, custodial agency, and, separately, by noticing the action in the Federal Register. Given NRC's determination that all applicable standards and requirements have been met and upon notification from the NRC that LTSP has been accepted, the Agreement State should be ready to terminate the specific license and to transfer the long-term care funds to the U.S. general treasury. The long-term custodian, for its part, should be prepared to accept title to the land and byproduct material.

(b) Termination of Non-conventional Uranium Mill Licenses (Mainly In-Situ Uranium Extraction Licenses)

The following steps are applied to both partial and entire license termination cases.

STEP 1: LICENSEE DOCUMENTATION OF COMPLETED DECOMMISSIONING AND/OR GROUNDWATER RESTORATION ACTIONS

When the surface reclamation and/or groundwater restoration is complete, the licensee should submit (i) groundwater information which demonstrates that groundwater has been restored in accordance with the State criteria and (ii) documentation indicating that the production, injection, and monitoring wells have been closed and plugged in accordance with the State criteria, to the State for review.

Licensees are also required under [10 CFR 40.42\(j\)](#) or equivalent Agreement State regulations to document the results of site decommissioning, which is accomplished by conducting a radiation survey of the premises where the licensed activities were carried out. The results of this survey, the contents of which are specified at the Agreement State regulation equivalent to [10 CFR 40.42\(j\)\(2\)](#), are submitted to the State for review.

When a licensee is ready to terminate its specific source material license, the licensee should formally notify the State of its intents.

STEP 2: REVIEW OF COMPLETED CLOSURE ACTIONS BY THE AGREEMENT STATE

Upon receipt of the decommissioning report, and if necessary, groundwater restoration report, the State staff should review the content of the report for documentation of acceptable completion of the applicable aspect of closure. As part of its review, the State staff should conduct site inspections, examining first-hand the closure actions taken. Additionally, the State staff should conduct a final site inspection, which is expected to consist of a site walk-over.

STEP 3: TERMINATION OF THE SPECIFIC LICENSE

Under Section [150.15a\(a\)](#), the NRC determines whether all applicable standards and requirements have been met by the licensee in the completion of decommissioning and/or groundwater restoration actions. After completing the review of the licensee's performance of remedial actions, the State will be requested to submit a completion review report documenting the State staff's bases for its conclusion that all requirements have been met to the NRC for review.

Upon receipt of the completion review report submitted by the State, the NRC staff would review the document for completeness of the State's review process. If the content of the completion review report did not demonstrate that a complete review has been performed, the NRC could request additional information from the State prior to making its determination. The completion review report, similar to that contained in [Attachment 1](#), should include the following information:

1. A brief description of licensee's activities associated with license termination.
2. Groundwater information which demonstrates that the groundwater has been adequately restored to meet the State restoration criteria.
3. Documentation that the production, injection, and monitoring wells have been closed and plugged in accordance with the State criteria.
4. Decommissioning information which documents that all contaminated materials have been removed from the site.
5. Discussion of results of radiation survey and confirmatory soil samples which indicates that the subject site meets unrestricted release requirements.
6. Discussion of results of the State's site closure inspection.
7. Documentation that release of this portion of the site will not negatively impact the remainder of the site to be closed at a later date, if it is a partial license termination case.

Note: Additional information may be required on a case-by-case basis for the termination of a non-in-situ uranium extraction license under the non-conventional uranium license category.

NRC's determination will rely primarily upon the State's reviews and acceptance of the documentation provided by the licensee. In addition, results of the State site closure inspection activities, potentially including limited confirmatory radiological surveys, provide supplemental information to the NRC's determination. NRC's periodic IMPEP reviews of the Agreement State's regulatory program provide confidence that the State's reviews and licensing actions associated with termination have been conducted appropriately, from a health and safety (adequacy) and compatibility perspective.

Given a determination that all applicable standards and requirements have been met, the NRC should notify the State of its determination by formal correspondence. Upon notification from the NRC, the Agreement State should be ready to terminate the specific license or amend the license to remove the remediated portion from it, if the license is being partially terminated.

Note: Additional steps may be required on a case-by-case basis for the termination of a non-in-situ uranium extraction license under the non-conventional uranium mill license category.