

September 24, 2014

Mr. Roy Blickwedel
Remedial Project Manager
General Electric Company
640 Freedom Business Center
King of Prussia, PA 19406

SUBJECT: LICENSE AMENDMENT NO. 50 FOR SOURCE MATERIAL LICENSE NO. SUA-1475 FOR THE UNITED NUCLEAR CORPORATION - CHURCH ROCK MILL SITE ISSUED BY THE U.S. NUCLEAR REGULATORY COMMISSION

Dear Mr. Blickwedel:

By letter dated September 18, 2013 (Agencywide Document Access and Management System (ADAMS) Accession Numbers ML13266A361) the United Nuclear Corporation (UNC) submitted a license amendment request to the U.S. Nuclear Regulatory Commission (NRC) for the Church Rock Mill site located in Gallup, New Mexico. UNC requested that the NRC amend Source Materials License No. SUA-1475 to revise the date for the projected completion of groundwater (GW) corrective actions and to revise the dates for placement of the final radon barrier and erosion protection. The NRC considered UNC's request, and on November 7, 2013 (ADAMS Accession Nos. ML13277A278, ML13277A248), granted the request with respect to the completion of the GW corrective actions and issued the amended license.¹ On April 30, 2014, the NRC published a notice in the *Federal Register* of the opportunity to provide comments on the remaining request pertaining to the 5-year extension for the emplacement of the final radon barrier and erosion protection (79 FR 22459). The NRC received comments from one commenter (ADAMS Accession No. ML14157A320) which are addressed in Enclosure 1 to this letter. As explained in more detail herein, the NRC is granting the licensee's request to extend the time for emplacement of the final radon barrier and erosion protection.

The emplacement of the final radon barrier and erosion protection are required to be completed under the Decommissioning Plan for the Church Rock Mill site, and pursuant to Source Material License SUA-1475, these steps are required to be taken by December 31, 2014. Under the NRC's regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) 40.42(i), licensees may request alternate decommissioning schedules if the NRC determines that the extension is warranted by considering several enumerated factors.

¹ Initially, the NRC also granted UNC's request to extend the time for placement of the final radon barrier and erosion protection. However, by letter dated April 2014 (ADAMS Accession No. ML14043A486, ML14043A479), the NRC withdrew its approval of the amendment request pertaining to the emplacement of the final radon barrier and placement of erosion protection to address a procedural deficiency in its prior decision.

Although an NRC licensee, the UNC Church Rock Mill site is also a Superfund site and, as such, is subject to the regulatory authority of the U.S. Environmental Protection Agency (EPA) consistent with the EPA's Record of Decision dated September 1988 (ADAMS Accession No. ML063630443). Because of the dual regulatory jurisdiction, the two agencies, NRC and EPA, have overlapping authority over the remedial action occurring at the site. UNC stated that the 5-year extension is necessary because of the uncertainty being caused by: 1) EPA's decision to move mine waste from the adjoining Northeast Church Mine Site (ADAMS Accession No. ML12003A095) to the Church Rock Mill site²; 2) EPA's requirement that UNC perform a Site Wide Supplemental Feasibility Study (SWSFS) of the Mill site; and, 3) the associated uncertainties with respect to groundwater cleanup standards and final reclamation (ADAMS Accession No. ML13266A361).

The NRC staff has verified that the above noted licensee statements in support of an alternate schedule are factual and valid. Under 10 CFR 40.42(i)(5), one of the considerations the NRC may make in determining whether an alternate schedule for decommissioning is warranted is whether there are site-specific factors which the NRC may consider appropriate, such as the regulatory requirements of other government agencies. In this instance, UNC's compliance with the existing schedule for emplacement of the final radon barrier and erosion control would be in direct conflict with the EPA's regulatory requirements for the site. The conflict can be resolved temporarily by granting an alternate schedule.

However, under 10 CFR Part 40, Appendix A, Criterion 6A(1), the final radon barrier must be completed as "expeditiously as practicable considering technological feasibility" after the pile or impoundment ceases operation in accordance with a plan. In order to meet the expeditious timing requirement of Criterion 6A, the final radon barrier must be emplaced as quickly as possible considering: the physical characteristics of the tailings and the site; the limits of available technology; the need for consistency with mandatory requirements of other regulatory programs; and factors beyond the control of the licensee. Factors beyond the control of the licensee refers to factors proximately causing delay in meeting the schedule in the applicable reclamation plan for the timely emplacement of the final radon barrier notwithstanding the good faith efforts of the licensee to complete the barrier. The NRC has determined that factors beyond the control of the licensee may include changes to the regulatory or other legal requirements applicable to the licensee's facility that would preclude or delay the performance of activities required for compliance, or any modifications, cessation or delay ordered by State, Federal, or local agencies.

The NRC has previously stated that factors beyond the control of the licensee may form an acceptable basis for delaying placement of the final barrier. Specifically, in the final rule promulgating Criterion 6A (58 FR 28220; June 1, 1994), the NRC identified several bases for such a delay, two of which are expressly addressed in paragraph (2) of Criterion 6A, i.e., radon releases do not exceed 20 pCi/m²s or cost. "Any other reconsideration of deadlines once established as a result of changing circumstances would be evaluated under paragraph (1) of Criterion 6A giving consideration to all factors relevant to the 'as expeditiously as practicable considering technological feasibility' standard." 58 FR at 28224. The NRC finds that the EPA's

² The NRC's consideration of UNC's request for an alternate decommissioning schedule is unrelated to the license amendment request that UNC will have to submit to receive NRC approval to dispose of mine waste at the mill site.

regulatory requirements of the licensee constitute a factor beyond the control of the licensee and an acceptable basis for delaying placement of the final barrier.

The NRC notes that the licensee has only requested a five year delay to its schedule, which given the uncertainties that are inherent in the actions being considered by the EPA might be overly optimistic. Nonetheless, the NRC agrees that 5-years is a logical starting point as the matter can be reconsidered, if necessary, at that time.

It is important to note that the final radon barrier has already been placed on the most of the tailings impoundment at the Church Rock Mill site. The only areas where the final radon barrier has not been placed are the evaporation ponds, which, until remediated, by their very nature preclude radon releases. By letter dated April 22, 1998, the NRC staff's technical evaluation concluded that radon flux tests conducted at the UNC Mill site are acceptable because the data demonstrated that UNC had met the requirements of 10 CFR Part 40, Appendix A, Criterion 6(2) for the existing radon barrier, although the NRC acknowledged that the staff would need to review the final radon flux data once reclamation of the evaporation ponds has been concluded (ADAMS Accession No. ML070680251); however, completion of the pond reclamation is dependent upon completion of the groundwater corrective action plan, which is subject to delay for the reasons identified by the licensee, i.e., additional EPA regulatory requirements. The NRC has reasonable assurance that the delay in placing the final radon barrier on the evaporation ponds will not pose a public health and safety risk, as the evaporation ponds themselves serve as an effective radon barrier.

In light of the specific requirements being imposed on UNC by EPA, the NRC finds that an alternate decommissioning schedule is warranted pursuant to 10 CFR 40.42(i)(5) and that License Condition 35.B(1) shall be modified to extend the date from December 31, 2014, to December 31, 2019, for the emplacement of the erosion protection in accordance with Criterion 6 of Appendix A of 10 CFR Part 40. In addition, the date for the placement of a final radon barrier shall be extended from December 31, 2014, to December 31, 2019, under License Condition 35.A(3).

Source Material License No. SUA-1475 for the UNC Church Rock Mill Site is hereby amended (Amendment 50) to incorporate the aforementioned changes (see Enclosure 2). An environmental report for this licensing action is not required because the amendment does not meet the criteria of 10 CFR 51.60(b). The NRC staff have determined that an NRC environmental assessment for the action is not required as the requested licensing action is categorically excluded under 10 CFR 51.22(c)(11). The requested license amendment is administrative and procedural in nature and an extension in the decommissioning schedule would not result in: (i) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (ii) a significant increase in individual or cumulative occupational radiation exposure; (iii) a significant construction impact; or (iv) a significant increase in the potential for or consequences from radiological accidents.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

R. Blickwedel

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If you have any questions, please contact the project manager Dr. Tom McLaughlin at (301) 415-5869, or by e-mail to thomas.mclaughlin@nrc.gov.

Sincerely,

/RA/

Andrew Persinko, Deputy Director
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 40-8907
License No.: SUA-1475

Enclosures:

1. U.S. NRC's Response to Comments
- 2: License Amendment No. 50

cc:

UNC Church Rock Distribution List
Sarah M. Fields (Uranium Watch)

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**U.S. Nuclear Regulatory Commission
Response to Comments dated May 30, 2014, based on the
Federal Register Notice dated April 30, 2014
for the License Amendment Request to
Revise Groundwater Protection Standards for
Source Materials License SUA-1475,
United Nuclear Corporation, Church Rock Mill Site**

The U. S. Nuclear Regulatory Commission (NRC) received comments from one commenter (ADAMS Accession No. ML14157A320) in response to the opportunity for public participation noticed in the *Federal Register* (79 FR 22459; April 30, 2014) to as they pertain to License Conditions 35.A(3) and 35.B(1) for the emplacement of the final radon barrier and erosion protection. In summary, Comments Nos. 1 and 2 suggest that the NRC make a determination on the technical feasibility of implementing the proposed 5-year extension date; Comment No. 3 discusses the requirement for annual radon flux monitoring; Comment No. 4 discusses the proposed future disposal action of mine waste and the need for radon flux monitoring; and, Comment No. 5 encourages the NRC to review the regulatory revisions set forth for decommissioning and reclamation of uranium mills as a result of the U.S. Environmental Protection Agency's (EPA's) rescission of 40 CFR Part 61, Subpart T under the Clean Air Act as it applies to the NRC licensed non-operational uranium mill tailings sites (59 FR 36280; July 15, 1994).

Response to Comment Nos. 1 and 2

Comment Nos. 1 and 2 suggest that the NRC make a determination on the technical feasibility for accomplishing emplacement of the radon barrier and erosion protection by the proposed modified date. The United Nuclear Corporation (UNC) Church Rock Mill site is dually regulated by the NRC under the Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation and Control Act (UMTRCA) as an UMTRCA Title II Site, and by the EPA under the Comprehensive Environmental Recovery Compensation and Liability Act (CERCLA) authority as a Superfund Site. The August 26, 1988, Memorandum of Understanding (ADAMS Accession No. ML063630443; ML12261A057) between the NRC and the EPA, which was amended to incorporate minor administrative changes on August 2, 2013, governs the working relationship between both agencies on the decommissioning/reclamation efforts at the UNC Church Rock Mill site. Criterion 6A(1) states that the final radon barrier must be completed as expeditiously as practicable considering technological feasibility. The regulation further provides that the term expeditiously as practicable considering technological feasibility includes the consideration of *factors beyond the control of the licensee*, such as applicable regulatory requirements of other entities over which the NRC or the licensee has no control. The NRC cannot definitively conclude when the EPA action will finish. The NRC is satisfied that a 5-year delay proposed by the licensee represents a reasonable proxy for when the current EPA actions might be concluded. The alternative, which is unacceptable to the NRC, would be to have the completion open-ended.

Response to Comment No. 3

This comment suggests that Criterion 6A(2) requires that the licensee demonstrate that releases of radon-222 do not exceed an average of 20 pCi/m²s whenever milestones are delayed and as such the licensee should submit an annual radon flux compliance determination during periods of delay. The NRC disagrees with this suggestion. Criterion 6A(2) identifies two bases under which the NRC may extend the time allowed for completion of a milestone related to the final radon barrier placement, i.e., the releases of radon-222 do not exceed 20 pCi/m²s or cost, but these are not the only two justifications for such an extension. As explained in more detail in the Statement of Considerations to the final rule promulgating Criterion 6A (59 FR 28220; June 1, 1994), “[a]ny other reconsideration of deadlines once established as a result of changing circumstances would be evaluated under paragraph (1) of Criterion 6A giving consideration to all factors relevant to the ‘as expeditiously as practicable considering technological feasibility’ standard.” With respect to the amendment request under review, the NRC is not determining whether to modify the final radon barrier milestones based on a demonstration that releases of radon-222 do not exceed an average of 20pCi/m²s, nor is the NRC basing its determination on cost considerations. Instead, the NRC is determining whether a delay in the milestone would be compliant with the overall requirement that the final radon barrier be completed as expeditiously as practicable, considering technological feasibility, including a consideration as to whether a delay to the current milestone is necessary due to factors beyond the control of the licensee. An NRC determination that a delay to the milestone is warranted due to factors beyond the control of the licensee does not require that the licensee comply with the additional conditions in Criterion 6A(2).

Comment No. 3 also implies that during the proposed period of extension, annual radon flux monitoring should be required for the lined evaporation pond located on the Central Cell of the tailings impoundment at the UNC Mill site. The NRC also disagrees with this implied comment. As discussed above, the requirement for annual radon flux monitoring only applies if the basis for the delay is that the radon releases does not meet the design standard, which is not the case for this amendment request. Furthermore, as evidenced by the discussion in the preamble to the EPA’s November 15, 1993, final rule modifying generally applicable standards pertaining to uranium mill tailings disposal sites (58 FR 60340), which were adopted by the NRC in Criterion 62(A) (59 FR 28220; June 1, 1994), the EPA did not “intend the expeditious radon cover requirement to extend to areas where evaporation ponds are located, even if the pond is on the pile itself, [as long as the implementing agency, in this case the EPA and the NRC, deemed it to be a part of the overall remedial program].” 58 FR at 60354. Therefore the evaporation pond area may be covered to control radon after it is no longer in use and ready for covering. The evaporation ponds themselves serve as an effective radon barrier. Thus the EPA believes, and the NRC agrees, that provided that all other parts of the tailing impoundment are covered with a radon barrier, compliance with the 20 pCi/m²s will be met, even with the existence of the evaporation pond, and that this will be maintained until the evaporation pond area is no longer in use and is covered by a radon barrier.

In the NRC’s technical evaluation of UNC’s January 1997 report, it was acknowledged that reclamation of the evaporation ponds would be delayed until groundwater correction actions are completed at which time more radon flux measurements would be required after the ponds are reclaimed (ADAMS Accession No. ML070680251). Therefore, since the site already met the design standard of 20 pCi/m²s, no additional radon flux monitoring is required to be conducted

at the UNC Mill site until the evaporation ponds are closed. Moreover, it would be impractical to require routine radon flux measurements of the existing radon barrier without compromising the existing erosion protection.

Due to the complexity of groundwater remediation, the NRC recognized that groundwater concerns could legitimately cause for delay in the final radon barrier milestones. 59 FR 28220, 28227; June 1, 1994. Thus groundwater remediation was identified as a factor beyond the control of the licensee. In 10 CFR Part 40, Appendix A, the definition of *factors beyond the control of the licensee* is incorporated into the NRC's regulatory terminology *expeditiously as practicable considering technological feasibility* and synonymous with the EPA's regulatory terminology *expeditious radon barrier requirement*. Therefore, the NRC has the flexibility to consider the timely emplacement of the final radon barrier notwithstanding the good faith efforts of the licensee to complete the barrier given conflicting requirements of other regulatory programs.

The NRC anticipates that once the EPA has made a determination to close out the lined evaporation ponds at the UNC Mill site as part of the overall groundwater corrective actions, then the final radon barrier will be emplaced. Thereafter, it will be incumbent upon the licensee at that time to conduct the required radon flux field measurements to ensure that the design standard requirement of 20 pCi/m²s is met for the completed tailings impoundment before the erosion protection is completed.

Response to Comment No. 4

Comment No. 4 states that the "reopening of the tailings impoundment for the disposal of mine waste...requires annual radon flux monitoring of the impoundment until the radon barrier and erosion protection are finally complete..." The NRC considers this comment outside the scope of this current licensing amendment request. EPA's selected remedy for the mine waste will require UNC to submit a separate license amendment request to the NRC for the proposed mine waste disposal action, and such a request has not yet been received by the NRC.

Response to Comment No. 5

The comment recommends that the NRC review the NRC and EPA regulations that resulted in the promulgation of amendments to 40 CFR Part 192 and 10 CFR Part 40, Appendix A with respect to the establishment of reclamation milestones. Regarding Comment No. 5, the NRC reviewed the revisions to the 40 CR Part 192 and 10 CFR Part 40 Appendix A in the development of responses to Comments 1 thru 4. Pertinent sections of applicable *Federal Register* notices were discussed in detail within those responses.

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