

**TECHNICAL EVALUATION REPORT FOR UNITED NUCLEAR CORPORATION'S
2022 SURETY ESTIMATE FOR THE CHURCH ROCK MILL SITE**

Docket No.: 040-08907

License No.: SUA-1475

DATE: 07/22/2022

FACILITY: United Nuclear Corporation's Church Rock Mill Site

TECHNICAL REVIEWERS: James Smith, Trent Wertz

PROJECT MANAGER: James Smith

Summary And Conclusions

By letter dated March 31, 2022 (United Nuclear Corporation [UNC], 2022) (Agencywide Documents Access and Management System (ADAMS) Accession No. [ML22094A011](#)), UNC submitted its annual 2022 financial assurance update for its Church Rock mill site to the U.S. Nuclear Regulatory Commission (NRC). The NRC staff reviewed the submission and has determined that the decommissioning and reclamation activities are adequately described and reasonable cost estimates for each activity were provided. Appropriate cost estimates were also provided for contingencies and long-term maintenance and surveillance. The NRC staff determined that UNC's method of increasing its surety estimate by applying an inflationary factor, using the Consumer Price Index (CPI), to the NRC approved 2020 re-baseline surety estimate adequately demonstrates compliance with the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 40, Appendix A, "[Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material From Ores Processed Primarily for Their Source Material Content](#)," Criteria 9 and 10.

Background

The UNC is the holder of NRC Materials License SUA-1475 (possession only license) for its former Church Rock conventional mill site near Gallup in McKinley County, NM. The mill site included an ore processing mill and a tailings disposal area, which covers approximately 25 and 100 acres, respectively. The UNC has been a licensee of this site since 1977. The Church Rock mill site ceased active uranium recovery operations in 1982 and has been engaging in final site reclamation activities since then.

Regulatory Requirements

The UNC's license was issued under 10 CFR Part 40, "[Domestic Licensing of Source Material](#)," Criterion 9 of Appendix A of 10 CFR Part 40, "[Financial Criteria](#)," and License Condition (LC) 25 require UNC to maintain an NRC-approved financial surety arrangement to cover estimated costs for its site decommissioning and decontamination activities. Criterion 9 provides that the Commission will review the surety mechanism to assure that sufficient funds would be available for completion of all activities by a third party. License Condition 25 requires that the cost estimate must be updated annually and that the annual update be submitted by March 31 of each year.

In addition, 10 CFR Part 40, Appendix A, Criterion 10, requires that a minimum charge of \$250,000 (1978 dollars) must be paid by each mill operator to the general treasury of the United States or appropriate State agency prior to uranium mill license termination, to account for costs associated with long-term surveillance.

The NRC has noted that Criterion 9 of 10 CFR Part 40, Appendix A requires, in part, that “[t]he amount of surety liability should be adjusted to recognize any increase or decreases resulting from inflation, changes in engineering plans, activities performed, and any other conditions affecting costs.”

Technical Evaluation

The NRC staff reviewed UNC’s annual financial assurance update using the guidance in NUREG-1620, Appendix C, Revision 1, “[Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978](#),” dated June 2003 (NRC, 2003).

The UNC’s submittal (UNC, 2022) includes a request to amend its license to update and increase its surety amount for its Church Rock mill site from \$23,421,383 (rebaselined value in 2020) to \$25,511,264 (adjusted for inflationary factor in 2022) based on an 8.922964 percent increase in the Consumer Price Index for all urban consumers (CPI-U) from the end of December 2020 (260.474) through the end of February 2022 (283.716). Staff confirmed the accuracy of the December 2020 and February 2022 CPI-U by consulting the U.S. Bureau of Labor and Statistics reference, entitled, “Historical Consumer Price Index for All Urban Consumers (CPI-U): U.S. city average, all items, by month” at <https://www.bls.gov/cpi/tables/supplemental-files/historical-cpi-u-202202.pdf>. The staff performed the following calculations to confirm the licensee’s inflationary factor is reasonable:

$$\begin{aligned} 283.716 - 260.474 &= 23.242 \\ 23.242 / 260.474 &= .08922964 \\ 1.08922964 \times \$23,421,383 &= \$25,511,264 \end{aligned}$$

In determining whether an adjustment to increase the surety amount based solely on CPI would be adequate, the NRC staff looked at several factors in 10 CFR Part 40 Appendix A, Criterion 9(f)(4) for adjusting the cost estimate as outlined. These factors included:

- Spills, leakage or migration of radioactive material leading to additional contamination;
- Waste inventory increases above previous estimate;
- Facility modifications;
- Any changes to authorized possession limits;
- Actual remediation costs above previous cost estimate; and
- Any other conditions that affected the costs.

The UNC’s Church Rock facility remains in a non-operational status with no additional recorded events of spills or leaks. In addition, there has been no change to the amount of waste inventory, changes to the facility, or changes in its authorized possession limits. Furthermore, there has been no increase to the actual remediation costs of the site nor any other known

conditions affecting the cost estimate. Therefore, the NRC has determined that an increase to the cost estimate based solely on CPI meets the requirements in 10 CFR Part 40 Appendix A, Criterion 9.

The UNC submitted its annual financial assurance update on March 31, 2022 (UNC, 2022), which was by the March 31 due date. Therefore, NRC staff has determined that the submittal meets the license requirement for a surety update to be submitted by the March 31 date specified in LC 25.

The NRC approved UNC's 2020 surety re-baseline cost estimate ([ML20345A342](#)). The 2020 estimate is based upon third party costs to reclaim, remediate, and decommission facilities and lands affected by past project operations. All unit costs, labor and equipment, and other fees were included. Also, the licensee added 15 percent for contingencies as well as costs for long-term surveillance fees based on \$250,000 (1978 dollars). Therefore, NRC staff has determined that the cost estimate is based upon third party costs, includes an adequate contingency factor of 15 percent, and accounts for long-term surveillance fees as required by 10 CFR Part 40, Appendix A, Criterion 9 and 10.

The UNC has previously submitted an NRC approved surety bond and standby trust agreement to demonstrate compliance with 10 CFR Part 40, Appendix A, Criteria 9 and 10. Within 30 days of approval of the 2022 surety amount, UNC should submit an update to its financial assurance instruments to cover the increased surety amount. The 2022 surety amount is \$25,511,264.

Environmental Review

A license amendment to reflect an update in the amount of financial assurance or corrective revisions belongs to a category of actions that the NRC has determined do not individually or cumulatively have a significant effect on the environment. Such actions qualify for a categorical exclusion under 10 CFR 51.22(c), "[Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review](#)," and do not require an environmental assessment. Specifically, the NRC staff has determined that the financial assurance (surety) update is categorically excluded from further environmental review under 10 CFR Section 51.22(c)(10)(i).

Conclusion

The NRC staff has determined the UNC's annual 2022 surety update for its Church Rock Mill site in the amount of \$25,511,264 is reasonable as it applies an appropriate inflationary factor to the NRC approved UNC 2020 re-baseline surety estimate. Within 30 days of approval of the 2022 surety amount, UNC will provide updated financial instruments to cover the increased surety amount.

Proposed License Amendment

Revise LC 25 to change the required surety amount to read: \$25,511,264.

References

10 CFR Part 40. *Code of Federal Regulations*, Title 10, Energy, Part 40, "[Domestic Licensing of Source Material](#)."

UNC, 2022. Letter from L. Hauer, United Nuclear Corporation, to B. Pham, US NRC, Church Rock Financial Surety Requirement-Source Materials License No. SUA-1475, March 31, 2022, [ML22094A011](#).

NRC, 2003. NUREG-1620, Appendix C, Revision 1, "[Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978](#)," dated June 2003.