



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 22, 1998

Mr. Juan R. Velasquez
United Nuclear Corporation
1720 Louisiana N.E., Suite 400
Albuquerque, NM 87110

SUBJECT: EVALUATION OF CHURCH ROCK RADON FLUX TESTS

Dear Mr. Velasquez:

The U.S. Nuclear Regulatory Commission (NRC) staff has completed its evaluation of the radon flux measurements for United Nuclear Corporation's (UNC's) Church Rock, New Mexico, uranium mill tailings piles, transmitted by UNC's letters dated January 3, 1997, and January 13, 1998. The staff has concluded that the results of the radon flux tests are acceptable, subject to future testing of the evaporation pond areas on the south cell. The evaluation is documented in the enclosed Technical Evaluation Report.

If you have any questions concerning this letter or the enclosure, please contact the NRC Project Manager for the Church Rock site, Ken Hooks, at (301) 415-7777.

Sincerely,

A handwritten signature in cursive script, appearing to read "Joseph J. Holonich".

Joseph J. Holonich, Chief
Uranium Recovery Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

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

Enclosure: As stated

cc: R. Edge, DOE Grand Junction
G. Lyssy, EPA Region 6
M. Hanning, NMED Superfund Oversight Section
L. Benally, Navajo EPA Superfund Program

TECHNICAL EVALUATION REPORT ON
THE UNITED NUCLEAR CORPORATION CHURCH ROCK SITE
RADON FLUX REPORT

DATE: April 15, 1998
DOCKET NO.: 40-8907
LICENSE NO.: SUA-1475
LICENSEE: United Nuclear Corporation
FACILITY: Church Rock Site
PROJECT MANAGER: Ken Hooks
TECHNICAL REVIEWER: Elaine Brummett

BACKGROUND

The January 3, 1997, letter from United Nuclear Corporation (UNC) transmitted the report on radon emanation testing on the radon barrier of the Church Rock tailings piles to demonstrate compliance with Criterion 6 (2) in Appendix A to 10 CFR Part 40. The radon barrier placement on the piles (except for the two evaporation ponds) was completed in 1996 and radon flux measurements were performed September 25, 1996, which the licensee indicated were delayed because of weather conditions. The NRC staff reviewed the report and requested more information in September 1997. The January 13, 1998, letter from UNC provided the requested data, two page corrections for the report, and a revised map indicating the extent of tailings in relation to the flux canister placement.

EVALUATION

The NRC staff reviewed the additional information and Inspection Report 40-8907/96-01 (inspection October 1996), and concluded that the appropriate procedures were used, and that the quality assurance data were within acceptable limits. The average measured radon flux (112 locations) was 5.7 pCi/m²/s, compared to the limit of 20 pCi/m²/s, so the data demonstrate that UNC meets the requirements of Criterion 6(2) for the areas tested. However, UNC indicated that reclamation of the evaporation ponds will be delayed until the ground water corrective action plan is completed. Since the ponds cover approximately 17 acres of the approximately 110 acres tailings area, at least 17 more flux measurements will be required after the ponds are reclaimed (Ra-226 contaminated material exists in or under the ponds). Therefore, staff will need to review the final radon flux data before concluding that the Criterion 6 (2) has been met for the total tailings area.

Enclosure

April 22, 1998

Mr. Juan R. Velasquez
United Nuclear Corporation
1720 Louisiana N.E., Suite 400
Albuquerque, NM 87110

SUBJECT: EVALUATION OF CHURCH ROCK LAKE RADON FLUX TESTS

The U.S. Nuclear Regulatory Commission (NRC) staff has completed its evaluation of the radon flux measurements for United Nuclear Corporation's (UNC's) Church Rock, New Mexico, uranium mill tailings piles, transmitted by UNC's letters dated January 3, 1997, and January 13, 1998. The staff has concluded that the results of the radon flux tests are acceptable, subject to future testing of the evaporation pond areas on the south cell. The evaluation is documented in the enclosed Technical Evaluation Report.

If you have any questions concerning this letter or the enclosed TER, please contact the NRC Project Manager for the Church Rock site, Ken Hooks, at (301) 415-7777.

Sincerely,

[Original signed by]
Joseph J. Holonich, Chief
Uranium Recovery Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

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Docket No. 40-8907
License No. SUA-1475
Case Closed: L51492
Enclosure: Technical Evaluation Report
cc: R. Edge, DOE Grand Junction
G. Lyssy, EPA Region 6
M. Hanning, NMED Superfund Oversight Section
L. Benally, Navajo EPA Superfund Program

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