

December 8, 2017

Dr. Dennis C. Bley, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: RESPONSE TO REPORT ON THE SAFETY ASPECTS OF THE NORTHWEST
MEDICAL ISOTOPES, LLC, CONSTRUCTION PERMIT APPLICATION FOR A
RADIOISOTOPE PRODUCTION FACILITY

Dear Dr. Bley:

By letter dated November 6, 2017, (Agencywide Documents Access and Management System Accession No. ML17310B511), the Advisory Committee on Reactor Safeguards (ACRS) reported on its review of the staff's safety evaluation report (SER) and Northwest Medical Isotopes, LLC's (NWMI) preliminary safety analysis report for the NWMI, Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," construction permit application. This construction permit application describes the preliminary design and analysis of NWMI's proposed commercial medical radioisotope production facility, to be located in Columbia, Missouri. The proposed NWMI production facility would be used for the processing of special nuclear material to produce the medical radioisotope molybdenum-99. The ACRS undertook this review to fulfill the requirements of 10 CFR 50.58, "Hearings and report of the Advisory Committee on Reactor Safeguards," which mandate that the ACRS review and report on construction permits for facilities of the type described in 10 CFR 50.22, "Class 103 licenses; for commercial and industrial facilities."

In its letter, the ACRS recommended that a construction permit can be issued to NWMI. Based on information provided to the ACRS and its Subcommittee and discussions during meetings with NWMI and the U.S. Nuclear Regulatory Commission staff, the ACRS noted that the following items will be addressed during the final design of the facility: (1) selection of a strategy to detect, suppress, and extinguish fires at the facility; (2) reassessment of aircraft impact probabilities to show that either these probabilities are sufficiently low or that the facility is sufficiently protected from aircraft impact; (3) reassessment of threats to the facility posed by other man-made, external hazards such as highway traffic and nearby pipelines; and (4) measures to limit the probability of damage by high winds, wind-driven missiles, and external floods.

The ACRS letter also identified that some additional attention will need to be given to high-frequency (i.e., greater than 10 hertz) seismic motions that do not threaten the structural integrity of the facility but may affect internal systems.

NWMI has committed to selecting a fire strategy, reassessing aircraft impact probabilities, reassessing man-made external hazards, limiting the probability of damage by winds and floods, and evaluating the potential seismic high-frequency impact in its final safety analysis

report. The staff is tracking these commitments in Appendix A of its SER related to the NWMI construction permit application.

The staff appreciates the ACRS' efforts on this matter and thanks the ACRS for its valuable input.

Sincerely,

/RA by Robert J. Lewis for/

Victor M. McCree
Executive Director
for Operations

cc: Chairman Svinicki
Commissioner Baran
Commissioner Burns
SECY

