

Oak Ridge National Laboratory (ORNL) Comments and Assessment on the NMED Draft Agency Initiated Modification of the WIPP Permit

ORNL opposes the NMED's Agency Initiated Modification draft WIPP Permit and requests party status and a public hearing. ORNL requests that the AIM/draft Permit be rescinded. The permit conditions proposed in the Agency Initiated Modification (AIM) in draft Permit Part 4, Sections 4.2.1.4 (Prioritization and Risk Reduction of New Mexico Waste) and 4.2.1.5 (Legacy TRU Waste Disposal Plan) would significantly and adversely affect the disposition of ORNL managed transuranic (TRU) waste. ORNL managed TRU waste is generated primarily from medical and industrial isotope production, heavy element research, and nuclear fuel research activities. These missions are essential to supporting U.S. energy independence, national security, critical domestic industries, and space exploration. Of significance, under the definitions proposed in the AIM, ORNL managed TRU waste would likely not qualify as Legacy waste. As a result, ORNL's projected 10-year shipping need—approximately 220 shipments—would be reduced to fewer than seven allowable shipments. This drastic reduction in available shipments would significantly impair ORNL's mission-critical functions and undermine ORNL's ability to meet the objectives of Executive Orders 14299 (Deploying Advanced Nuclear Reactor Technologies for National Security, 14301 (Reforming Nuclear Reactor Testing at the Department of Energy), and 14302 (Reinvigorating the Nuclear Industrial Base) which are vital to sustaining the competitiveness of the U.S. nuclear industry. Because these mission activities will continue for the foreseeable future, the ongoing certification and shipment of newly generated TRU waste are essential to responsible and compliant mission execution.

The reduction in shipment availability would require extended storage of ORNL managed TRU waste in RCRA permitted units for an indeterminate duration—contingent on the complete emplacement of all Los Alamos National Laboratory legacy waste under Permit Part 4, Section 4.2.1.4 and the emplacement of all DOE complex legacy waste under Permit Part 4, Section 4.2.1.5. Storage of ORNL managed mixed TRU waste for longer than one year is subject to the Site Treatment Plan (STP) and requires regulatory approval from the Tennessee Department of Environment and Conservation (TDEC). ORNL's TRU waste inventory is subject to enforceable STP Milestones and Target Dates, including the completion of the first WIPP certification campaign for ORNL's accumulated enduring mission mixed TRU waste by September 30, 2030.

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Projected long-term storage needs resulting from the proposed permit conditions would exceed existing permitted storage capacity in Oak Ridge within only a few years, necessitating the development of additional storage infrastructure. Over a ten-year period, the number of TRU waste containers requiring extended storage is expected to more than triple, exceeding 1,400 containers. Under Section 4.2.1.5, shipment deferrals tied to DOE complex legacy waste emplacement could extend ORNL's storage needs for 20–30 years or longer. This would result in several thousand containers in prolonged or indefinite storage, effectively generating a new “legacy waste” inventory within the Oak Ridge complex. Associated cost impacts are projected to exceed \$15 million in the first decade alone, with substantially higher costs anticipated for longer-term storage scenarios.

Indefinite storage of ORNL managed TRU waste is unlikely to be approved by TDEC under STP requirements. Additional enforceable Milestones would likely be imposed to address the potential creation of a new legacy waste inventory at ORNL. Furthermore, extended or indefinite storage poses increased risk to the environment, workers, ORNL facilities, and the surrounding community due to concerns related to container integrity and performance over long durations.