



**DEPARTMENT OF ENERGY**

**FINDING OF NO SIGNIFICANT IMPACT,**  
**LOW-LEVEL WASTE DRUM STAGING BUILDING**  
**LOS ALAMOS NATIONAL LABORATORY**

**PROPOSED ACTION:** The United States Department of Energy proposes to construct and use a small prefabricated building to temporarily hold low-level radioactive waste at Technical Area 16 of the Los Alamos National Laboratory in Los Alamos, New Mexico. The proposed staging building is needed to make more efficient use of existing laboratory space, and to help reduce the radiation dose to workers. The proposed staging building would be a 3 meter (10 feet) by 4.5 meter (15 foot) [13.5 square meter (150 square feet)] prefabricated storage building to temporarily hold up to eight sealed 55-gallon drums of noncompactible tritium-contaminated solid waste before Laboratory waste management personnel transport them to the Laboratory's low-level radioactive waste disposal area at Technical Area 54. The proposed drum staging building would be placed on a bermed asphalt pad near other existing similar structures used for accumulating office trash and compactible low-level radioactive waste.

The proposed staging building would be used for non-compactible low-level radioactive waste from operations at the Weapons Engineering Tritium Facility (Tritium Facility). The Weapons Engineering Tritium Facility repackages small quantities of tritium (in laboratories inside the Facility) to meet precise requirements of experiments. In the course of this work, noncompactible waste is generated, such as used or broken valves, plumbing, pumps, sieves, etc. Because tritium, a radioactive gas, is used in these laboratories, the waste is presumed to be contaminated with small amounts of tritium. Up to ten drums of waste are generated per year. Space inside the Tritium Facility is limited, and only one drum for noncompactible waste can be stored inside the building. Workers inside the Tritium Facility

are exposed to releases of tritium when drums are opened to receive more waste, and, although the total personnel dose is well below five rem per year (the Departmental limit for worker exposure), continuing to keep the drums inside the building does not allow the Department to reduce the dose to workers.

The Department has prepared an environmental assessment (DOE/EA-0874) that compares impacts of the proposed action with those of continuing with present practices (the "no action" alternative). The Department considered, but dismissed as unreasonable, the alternative of using a staging building at another facility at the Laboratory.

**ENVIRONMENTAL IMPACTS:** The environmental assessment indicates that the environmental impacts from constructing and using the proposed staging building would be very small. The prefabricated building would be erected on an already-disturbed site adjacent to an existing building and would not impact any ecologically or culturally sensitive areas, including floodplains or wetlands. The proposed building would not affect the amount of waste generated and stored: the only difference between the proposed action and the "no action" alternative is whether the sealed drums would be stored and opened to receive waste inside the laboratory or inside the drum staging building. The individual radiation dose to the ten or less people working inside the Tritium Facility is estimated to range between 5 to 200 millirem per year; the dose to the individual who adds waste to the drums could be as much as 0.34 millirem per year (with a resulting risk of excess fatal cancer of  $1.4 \times 10^{-7}$ ) in addition to the dose associated with other Tritium Facility operations. This dose would be the same whether the drum is in the proposed staging building or in the Tritium Facility, but workers inside the Tritium Facility would not receive this additional exposure if drums were filled in a

staging building. Under normal operating conditions, any tritium released from the waste drums would escape to the environment, regardless of whether the drums were inside the laboratory space or inside the proposed drum staging building. Under accident conditions, the dose to an individual in the adjacent building would be  $6.6 \times 10^{-3}$  millirem, yielding a  $2.6 \times 10^{-9}$  risk of excess fatal cancers. (A worker in the proposed staging building is assumed to immediately evacuate to the Tritium Facility.) The dose to a maximally exposed offsite individual from the proposed staging building under accident conditions would be  $3 \times 10^{-4}$  millirem, yielding a  $1.5 \times 10^{-10}$  risk of excess fatal cancers.

The Department consulted with the New Mexico State Historic Preservation Officer, the United States Fish and Wildlife Service, the New Mexico Fish and Game Department, and the New Mexico Department of Natural Resources to develop the impact analysis in the environmental assessment.

**FOR FURTHER INFORMATION CONTACT:** For further information on the proposal or the National Environmental Policy Act review program concerning proposals at the Laboratory, please contact:

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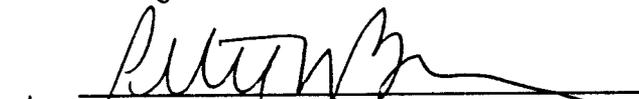
For general information on the Department's National Environmental Policy Act process,  
please contact:

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Copies of the environmental assessment are also available for public review at the Los Alamos National Laboratory Community Reading Room, 1450 Central Ave., Suite 101, Los Alamos, New Mexico 87544. For information on the availability of specific documents and hours of operation, please contact the reading room at (505) 665-2127, or (800) 543-2342.

**FINDING:** Based on the analysis of impacts in the environmental assessment, construction and operation of the proposed low-level waste drum staging building would not significantly affect the quality of the human environment within the meaning of the National Environmental Policy Act, 42 U.S.C. 4321, et seq. Therefore, the Department is issuing this finding of no significant impact and an environmental impact statement is not required.

Signed in Washington, D.C., this 29<sup>th</sup> day of July, 1994.

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Environment, Safety and Health