

EIS

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Sent: Thursday, June 02, 2005 2:11 PM
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Subject: Tritium Facility NEPA Document

Attachments: Tritium_baseline_update.doc



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Kirk, attached are tables 1&2 for the Tritium Facilities NEPA Determination Document that have been updated.

Thanks, JI
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Table 1. Principal Buildings and Structures of the TA-16 and TA-21 Tritium Facilities

Technical Area	Principal Buildings And Structures
TA-16	Weapons Engineering Tritium Facility Processing Building: 16-205 Formerly the Weapons Components Test Facility: 16-450
TA-21	Tritium Science and Fabrication Facility: 21-209, Tritium system Test Assembly (TSTA 21-450)

Table 2. Tritium Facilities^b

Capability	Operational Examples
1. High-Pressure Gas Fills and Processing : WETF	1.1 Handling and processing of tritium gas in quantities of up to 100 grams at WETF with no limit on number of operations per year. Capability used approximately 65 times/year.
2. Gas Boost System Testing and Development: WETF	2.1 System testing and gas processing operations involving quantities of up to 100 grams at WETF. Capability used approximately 35 times/year.
3. Hydrogen Isotopic Separation: WETF	3.1 Research and development of tritium gas purification and processing in quantities of up to 200 grams at WETF. Capability to be installed in 2008 and used five to six times/year.
4. Diffusion and Membrane Purification: WETF	4.1 Research on tritium movement and penetration through materials. Expect six to eight experiments/month. Capability also used continuously for effluent treatment.
5. Metallurgical and Material Research: TSFF, WETF	5.1 Capability involves materials research including metal getter research and application studies. Small quantities of tritium support tritium effects and properties research and development. These studies will continue at TSFF until 2007 when the programmatic activates will be completed. Contributes <2% of LANL's tritium emissions to the environment.
6. Thin Film Loading: TSFF (WETF)	6.1 Chemical bonding of tritium to metal surfaces. Current

by 2006)	application is for tritium loading of neutron tube targets; perform loading operations up to 3000 units/year. This activities will be completed at TSAA by 2007 and transferred to WETF. The activities will continue at this annual rate.
7. Gas Analysis WETF	7.1 Analytical support to current capabilities. Operations estimated to contribute <5% of LANL's tritium emissions to the environment.
8. Calorimetry: WETF	8.1 This capability provides a measurement method for tritium material accountability. Contained tritium is placed in the calorimeter for quantity measurements. This capability is used frequently, but contributes <2% of LANL's tritium emissions to the environment.
10. Equipment disposal and packaging	10.1 Both TSFF and TSTA are schedules for D&D when funding is available. This activity will involve cutting up equipment and packaging for waste disposal. This activities could contribute up to 50% of LANL tritium emission.
9. Solid Material and Container Storage: TSFF, WETF	9.1 Storage of tritium occurs in process systems, process samples, inventory for use, and as waste. On-site storage could increase by a factor of 10 over 1995 levels, with most of the increase occurring at WETF.

a: Source: Modified from SWEIS 1998 Yearbook (LANL 1999c).

b: Includes the remodel of Building 16-450 to connect it to WETF in support of neutron tube target loading.