EIS

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Sent: Thursday, June 02, 2005 2:07 PM
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Subject: Waste Management NEPA Determination Document

Attachments: rlwtf.baseline.tables.doc; TA-50_54_key_facility.doc


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Kirk, attached are two sets of tables for the Waste Management NEPA Determination Document. One set was done by the liquid waste POC and one was done by the solid waste POC.

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Memo

TO: John Isaacson
FROM: J.C. Del Signore
DATE: 05/27/05
SUBJECT: Baseline Tables for RLWTF

In response to your request, below please find revised Tables 1A, 2A, and 3A from NEPA Determination Document 14 [A]. These revised tables are part of the baseline definition that will be used in the 2006 SWEIS; they do not reflect either the reduced operations alternative or the expanded operations alternative. Also please note that Table 1A does not list the RLW facilities at TA-21 and at TA-53.

Table 1A. Principal Buildings and Structures of the Radioactive Liquid Waste Treatment Facility

Technical Area	Principal Structures and Buildings
TA-50	50-001, Radioactive Liquid Waste Treatment Facility 50-250, Pumphouse and Influent Storage Building

Table 2A. Radioactive Liquid Waste Treatment Facility Capabilities

Capability	Operational Examples
1. Waste Characterization Packaging, Labeling	1.1 Support, certify, and audit generator characterization programs. 1.2 Maintain waste acceptance criteria for radioactive liquid waste treatment facilities.
2. Waste Transport, Receipt, and Acceptance	2.1 Collect radioactive liquid waste from generators and transport to TA-50 and TA-53.
3. Radioactive Liquid Waste Pretreatment	3.1 Pretreat 200,000 liters/year of radioactive liquid waste at TA-21. 3.2 Pretreat 150,000 liters/year of transuranic RLW in Room 60. 3.3 Solidify, characterize, and package 6 m^3/year of TRU waste sludge in Room 60.
4. Radioactive Liquid Waste Treatment	4.1 Install equipment for nitrogen reduction in 2007. 4.2 Treat 10 million liters/year of radioactive liquid waste at TA-50. 4.3 Treat 500 thousand liters per year RLW at TA-53 by solar evaporation. 4.4 Dewater, characterize, and package 60 m^3/year of LLW sludge. 4.5 Install upgraded main treatment process and facility in 2011.
5. Treatment of Secondary Radioactive Liquid Wastes	5.1 Process one million liters per year through interim evaporator. 5.2 Transport 250,000 liters per year of evaporator bottoms for solidification at an off-site commercial facility. 5.3 Receive 20 m^3/year of LLW solidified bottoms for disposal at Area G.

[A] ESH-20, 05/31/2001. "ESH-20 NEPA Determination Document 14 Waste Management Key Facility Radioactive Liquid Waste Treatment Facility (TA-50), and Solid Radioactive Waste Facilities (TA-54 and TA-50)", LA-UR-01-3040.

Table 3A.
TA-50 Radioactive Liquid Waste Treatment Facility Operations Data

Parameter	Units [a]	SWEIS ROD
Radioactive Air Emissions:		
• Americium-241	Ci/yr.	Negligible
• Plutonium-238	Ci/yr.	Negligible
• Thorium-230	Ci/yr.	Negligible
• Uranium-234	Ci/yr.	Negligible
NPDES Discharge Process[b]		
• Outfall 051	MLY	10
Wastes:		
• Chemical	kg/yr.	200
• Low-level waste	m^3/yr	300
• Mixed low-level waste	m^3/yr	4
• TRU waste	m^3/yr	2
• Mixed TRU waste	m^3/yr	6

a: Ci/yr. = curies per year; MLY = millions of liters per year.
b: NPDES is National Pollutant Discharge Elimination System.

References:

- Bachmeier, C. and Scott, J., "Waste Volume Forecast", Revision 1, LA-UR-04-6682, September 2004.

- Del Signore, J.C. and Watkins, R.L., "RLWTF Annual Report for 2004", May 2005.

cc: R.A. Alexander
W.D. Moss

Attachment 2: NCB Screening Checklist

Table 1A. Principal Buildings and Structures of the Radioactive Liquid Waste Treatment Facility

Technical Area	Principal Structures and Buildings
TA-50	Radioactive Liquid Waste Treatment Facility: 50-1

Table 1B. Principal Buildings and Structures of the TA-50 and TA-54 Solid Radioactive and Chemical Waste Facilities

Technical Area	Principal Structures and Buildings
TA-50	ARTIC (Actinide Research and Technology Instruction Complex),: 50-37 Note this is not one of our (NWIS) facilities Waste Characterization, Reduction, and Repackaging Facility: 50-69
TA-54	Drum Preparation Facility: 54-033 Radioactive Assay and Nondestructive Test Facility: 54-038 PCB Storage Building: 54-039, -215 TRU Waste Storage Domes: 54-049, -048, -153, -283, -226, -375, -229, -230, -231, -232 Mixed Waste Storage Domes/Sheds: 54-144, -145, -146, -177215, -224, 1027, -1028, -1030, -1041 Chemical/Hazardous Waste Operations: Asphalt (cleared) area, 54-031, -032, -058, -068, -069, -070 MLLW, Chemical, and Hazardous Waste Operations: 54-006 MLLW and TRU Waste Storage Building: 54-008 TRU Waste Characterization: Pad 10 Gas Cylinder Storage Canopy: 54-216 Compactor Facility: 54-281 Storage Dome for Supplies/universal waste: 54-282 Decontamination and Volume Reduction System: 54-412

Table 2A. Radioactive Liquid Waste Treatment Facility Capabilities[a,b]

Capability	Operational Examples
1. Waste Characterization Packaging, Labeling	1.1 Support, certify, and audit generator characterization programs. 1.2 Maintain waste acceptance criteria for radioactive liquid waste treatment facilities.
2. Waste Transport, Receipt, and Acceptance	2.1 Collect radioactive liquid waste from generators and transport to TA-50.
3. Radioactive Liquid Waste Pretreatment	3. Pretreat 900,000 liters/year of radioactive liquid waste at TA-21. 3.2 Pretreat 80,000 liters/year of radioactive liquid waste from TA-55 in Room 60. 3.3 Solidify, characterize, and package 3 m^3/year of TRU waste sludge in Room 60.
4. Radioactive Liquid Waste Treatment	4.1 Install ultrafiltration and reverse osmosis (UF/RO) equipment in 1997 4.2 Install equipment for nitrate reduction in 1999. 4.3 Treat 35 million liters/year of radioactive liquid waste. 4.4 Dewater, characterize, and package 10 m^3/year of LLW sludge. 4.5 Solidify, characterize, and package 32 m^3/year of TRU waste sludge.

5. Decontamination Operations	5.1 Decontaminate LANL personnel respirators for reuse (approximately 700/month). 5.2 Decontaminate air-proportional probes for reuse (approximately 300/month). 5.3 Decontaminate vehicles and portable instruments for reuse (as required).

a: Source: Modified from SWEIS 1998 Yearbook (LANL 1999).
b: Includes installation of UF/RO and nitrate reduction processes in Building 50-01 and installation of above-ground tanks for the collection of influent radioactive liquid waste.

Table 2B. TA-50 and TA-54 Solid Radioactive and Chemical Waste Facilities Capabilities[a]

Capability	Operational Examples
1. Waste Characterization, Packaging, and Labeling	1.1 Support, certify, and audit generator characterization programs. 1.2 Maintain waste acceptance criteria for LANL waste management facilities. 1.3 Characterize 100 m^3 of legacy MLLW. 1.4 Characterize 8400 m^3 of legacy TRU waste and 1600 m3 of newly generated waste. 1.5 . 1.6 Maintain waste acceptance criteria for off-site treatment, storage, and disposal facilities. 1.7 Overpack and bulk waste as required. 1.8 Perform coring and visual inspection of a percentage of TRU waste packages. 1.9 Ventilate 1200 m3 of TRU waste retrieved from below grade. 1.10 Maintain current version of WIPP acceptance criteria and liaison with WIPP operations.
2. Compaction	2.1 Compact up to 25,400 m^3 of LLW.
3. Size Reduction	3.1 Size reduce 2400 m^3 of TRU waste at DVRS
4. Waste Transport, Receipt, and Acceptance	4.1 Collect chemical and mixed wastes from LANL generators and transport to Consolidated Remote Storage Sites and TA-54 4.Continue shipments to WIPP. 4.3 Between 2007 and 2011: • Ship 32,000 metric tons of chemical wastes and 150 m^3 of MLLW for off-site land disposal restrictions, treatment, and disposal • • Ship 8400 m^3 of legacy TRU waste and 1600 m3 of newly generated waste (including ER waste to WIPP. • . • 4.4 Annually receive, on average, 5 to 10 shipments of LLW and TRU waste from off-site locations.
5. Waste Storage	5.1 Stage chemical and mixed wastes prior to shipment for off-site treatment, storage, and disposal. 5.2 Store legacy TRU waste and MLLW. 5.3 Store LLW uranium chips until sufficient quantities have accumulated for stabilization.
6. Waste Retrieval	. 6.1 Begin retrieval of TRU, low level and CMP wastes from pits, shafts and trenches in 2007. 6.2 Retrieve approximately ??? m3 by 2015.
7. Other Waste Processing	Between 2007 and 2011: . 7.3 Stabilize 870 m^3 of uranium chips. . 7.5 Accept up to2850 m^3 of solified MLLW (environmental restoration soils) for disposal

Attachment 2: NCB Screening Checklist

	at Area G.
8. Disposal	8.1 Between 2007 and 2011: • Dispose 420 m^3 of LLW in shafts at Area G. • Dispose 115,000 m^3 of LLW in disposal cells at Area G. (Requires expansion of on-site LLW disposal operations beyond existing Area G footprint). • •