



Hazardous & Solid Waste, ESH-19
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Date: February 12, 2002
Refer to: ESH-19:02-011

Mr. Joe Vozella
Associate Director of Los Alamos Facility Operations
Department of Energy Office of Los Alamos Site Operations
528 35th Street, A316
Los Alamos, New Mexico 87544

Dear Mr. Vozella:

SUBJECT: 2001 HAZARDOUS WASTE BIENNIAL REPORT

Enclosed for your review and signature is the 2001 Hazardous Waste Report (HWR) and a transmittal letter to Mr. James Bearzi of the New Mexico Environment Department (NMED). Submittal of the enclosed report by March 1, 2002 is required by the Resource Conservation and Recovery Act (RCRA), under 40 CFR §262.41 -*Biennial Report*, every two years of all generators of hazardous waste. This report encompasses hazardous and mixed waste generation, treatment and storage activities performed at the Los Alamos National Laboratory (LANL) during calendar year 2001. A quality assurance-quality control analysis of the data provided in this report was performed to ensure a high degree of accuracy and reproducibility.

Introduction

From October 2001 through February 2002, the Hazardous and Solid Waste Group (ESH-19) accumulated data on LANL activities related to management and generation of hazardous and mixed waste during 2001. Several organizations provided information to ESH-19 in development of this report. The TA-54 Waste Management Group (FWO-SWO) was the primary source of information regarding handling, storage, and shipment of hazardous and mixed wastes, as their data system contains information on most LANL wastes managed by their organizations prior to disposal. Data related to on-site treatment or disposal activities (including treatment of wastes via approved treatability studies) were obtained from the responsible LANL organizations.

Data on open burning and open detonation of scrap explosives and high-explosives-contaminated wastes were provided by DX-DO. Data on open burning and incineration were provided by ESA-FM. Data on cementation and neutralization treatment were provided by NMT-7. FWO-WFM provided data regarding waste received at the radioactive liquid waste collection system (RLWCS). Data regarding the Environmental Restoration project was obtained from E-ER, and the Environmental Stewardship Office provided data on the recycling of certain hazardous waste streams (e.g. batteries, scrap metal, etc.).



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1.0 Data Compilation

Over 20,000 records of transactions (i.e. waste movements, treatment, or storage actions) were provided by these organizations in development of the enclosed report. ESH-19 compiled this information into the appropriate HWR forms, and loaded data into the 2001 Biennial Reporting System (BRS) Software. This year's report has over 900 Waste Generation and Management (GM) forms.

In 2001, LANL generated about 3.5 million kilograms of RCRA hazardous waste, 3.4 million kilograms of which was generated by the Environmental Restoration (ER) project of the Environmental Science and Waste Technology Division. We have enclosed a copy of the ER team's WASTE MINIMIZATION AWARENESS PLAN that the ER team was required to submit to NMED-HWB in November 2001. This document describes ER's activities over the past year and details their waste generation quantities and processes they implemented to minimize waste generation.

2.0 Waste Minimization & Recycling

Since 1997, the Biennial Report submission does not include forms to report waste minimization and pollution prevention activities. This submission does however, include a copy of LANL's 2001 Pollution Prevention Roadmap (Section 4.0 and 5.0), which details waste minimization and pollution prevention activities for hazardous waste.

LANL has implemented a waste minimization or pollution prevention plan for the following waste streams:

LANL implemented a puncture and recycle program for aerosol cans (considered a best practice for fiscal year 2002). This program ensures that LANL will recycle 80% of all aerosol cans, thus avoiding hazardous waste generation. This best practice will be measured by relating the number of cans recycled to the number of cans recycled plus the number of cans disposed as hazardous waste.

LANL's Medical center has quit using mercury thermometers.

LANL procured a phosphor scanner that enables two large phosphor screens to replace photographic film in explosive hydrotest radiographs. By switching to the phosphor screens, LANL saves over \$50,000 annually from reduced waste disposal, lower equipment costs, and labor. Approximately 450 gallons of spent photochemicals per year are no longer generated, and the administrative activities associated with storing, characterizing, documenting, and disposing of this waste have been eliminated.

LANL eliminated eight sumps. These sumps were capped and protected so they no longer fill with rainwater that has to be treated at the HE wastewater treatment plant. This will avoid 40,000 gallons of HE wastewater. It also avoids the risk of sump overflow and release of contaminated water to the environment.

LANL recycled 7,943 kg under the bulb-recycling program. In addition, 6,400 kg of other hazardous waste was recycled in 2001. LANL sent these waste streams to offsite centers to process appropriately. Waste includes mercury, silver, chemicals for fuels blending, oils, solvents, paint thinners, and ferric chloride.

3.0 Forms Used

As required by the NMED and the Environmental Protection Agency (EPA), Los Alamos National Laboratory used the BRS software supplied by the NMED. This software generated:

the Form SI, *Site Identification*. This form contains general information identifying the LANL facility,

the Form GM, *Waste Generation and Management*. This form describes LANL RCRA hazardous waste streams and the off-site commercial treatment, storage, disposal facilities which accepted each hazardous waste and the amount shipped in 2001,

the Form OI, *Off-Site Identification*. Lists all Commercial transporters and treatment, storage and disposal facilities which accepted LANL-generated hazardous waste,

and the 3.5-inch diskette that contains all of LANL's GM and OI form data.

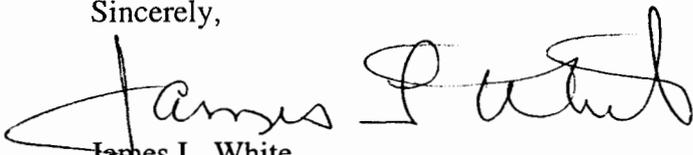
4.0 Data Representation

There are no cumulative inventory record keeping requirements for storing hazardous or mixed wastes at satellite or less-than-90-day accumulation areas. However, once such wastes are transported to TA-54 for treatment/storage, their associated data is entered into the FWO-SWO databases, which are the principal sources of information for these wastes. The data presented in this report may include information on hazardous and mixed waste accumulated before 2001, but not handled by FWO-SWO until 2001.

The NMED has asked Los Alamos National Laboratory to use the BRS software from The Florida Department of Environmental Protection. The enclosed diskette contains the BRS database that produced the 2001 Hazardous Waste Report for Los Alamos National Laboratory. This database generates the forms mentioned above in Section 3.0 (SI, GM, and OI).

A certification statement signed by LANL is also included in these documents. If you have any questions regarding the contents of this report, please contact Greg Erpenbeck at 7-1522.

Sincerely,



James L. White
Group Leader, ESH-19

JW/GE/vh

Enc: a/s

Mr. Joe Vozella

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Cy: L. McAtee, ESH-DO, w/o enc., K491
R. Hahn, FWO-SWO, w/o enc K492
G. Turner, OLASO, w/o enc A316
E. Louderbough, LC-GEN, w/o enc A187
IM-5, A150
ESH-19 File