LANL - PART B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
INTERFIRST TWO BUILDING, 1201 ELM STREET
DALLAS, TEXAS 75270

MAR 18 1986

copy given to Steve Zappe

Mr. Peter Pache, Manager
Hazardous Waste Section
Groundwater & Hazardous Waste Bureau
New Mexico Health & Environmental Department
P.O. Box 968
Santa Fe, NM 87504-0968

Dear Mr. Pache:

Following is a summary of our technical review of the Los Alamos National Laboratory (LANL) ground water monitoring waiver request. LANL has identified sites L and G in Technical Area 54, where hazardous wastes have been disposed of in the past by land disposal. Site L has organic and inorganic wastes stored in vertical shafts, while Site G has pits containing low-level radioactive wastes as well as chemical waste disposal shafts. Both sites L and G are located on the same mesa top. No hazardous wastes are being currently disposed of there. The facility has requested a permit for an incinerator to dispose of hazardous wastes. In support of their ground water monitoring waiver request, LANL has provided the following data.

(i) Proximity to residential areas:

The nearest residential community, Whiterock is 1.15 miles to the SE. Las Alamos (Population 20,000) is 4.4 miles to the NW of the land disposal areas.

(ii) Proximity to surface waters:

The Rio Grande River is 4.5 miles to the SE of the land disposal area. The river is approximately 1200 feet lower than the mesa top land disposal area.

(iii) Flood potential:

Both sites L and G are located on a mesa top and have run-on control systems. There is little likelyhood of flooding.

(iv) Potential for waste migration:

There is little likelyhood of migration due to the negative net evapo-transpiration rate. Precipitation is in the form of snow and thunderstorms resulting in high run-off and little infiltration.

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(v) Proximity to drinking water sources:

The principal drinking water source is the main aquifer located approximately 950 feet below site L and 850 feet below site G.

(vi) Geologic formation:

There are no known faults on the mesa on which site L and G are located.

(vii) Natural soil properties:

The saturated permeability varies from 0.8 to 22 gpd/ft^2. Natural moisture content in the underlying volcanic tuff is about 5.1% by volume.

Considering the above factors in addition to several others provided by the facility, we concur with your decision to grant a groundwater monitoring waiver.

The facility is currently performing unsaturated zone monitoring under a Consent Agreement with NMEID. While the most probable paths for contaminants at site L and G would be through the collapse of the vertical shafts, this should be detected through changes in the gas and moisture content of the mesa which is being monitored. The LANL should be required to prepare a contingency plan should such an event occur. Also the facility closure plan for sites L and G should be thoroughly examined before granting approval.

To ensure that the LANL is compliant with NMEID's Consent Agreement, the monitoring data periodicaly should be examined to detect any changes in gas or moisture content that may indicate a leak and subsequent migration.

EPA will maintain close contact with NMEID regarding the monitoring data and closure plans. Should you have any questions regarding this review, please call Prakash Dave' at (214) 767-9727.

Sincerely,

Erlece P. Allen

Erlece P. Allen, Acting Section Chief
Technical Section (6H-CT)