

6/24/96

NEW MEXICO ENVIRONMENT DEPARTMENT (NMED)
RESPONSE TO COMMENTS RECEIVED ON THE U.S.
DEPARTMENT OF ENERGY, LOS ALAMOS NATIONAL
LABORATORY PACKED-BED REACTOR/SILENT
DISCHARGE PLASMA UNIT CLASS 2 PERMIT
MODIFICATION

EPA ID NUMBER: NM0890010515

Comment Period Started on April 26, 1996
and Ended on June 24, 1996.

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| Martine A. Joseph, Concerned Citizen, Santa Fe, New Mexico..... | 1 | 1-2 |

NOTE: Changes made in the draft Permit due to Public Comments are indicated as follows: **shaded areas** indicate added material, **strikeouts** indicate deleted material. This will assist the reader in rapid identification of the changes that were made.

PUBLIC COMMENTS:

COMMENTS RECEIVED FROM MARTINE A. JOSEPH, SANTA FE, NEW MEXICO

Comment # 1:

RE: LANL Request to Modify Research, Development, and Demonstration (RD&D) Permit-Packed-Bed Reactor/Silent Discharge Plasma (PBR/SDP) Treatment Unit.

Although I was unable to attend the public hearings in Santa Fe regarding the above referenced matter, I am writing to express my strong opposition to this request. Any further development of nuclear weapons will exacerbate the already serious problem New Mexico and our nation has with nuclear waste build-up and storage. More nuclear testing will further pollute and endanger all of our lives and the life of our Earth. Finally, this request would necessitate more plutonium trucks traveling along our highways.

For God's sake, doesn't LANL and the nuclear weapons industry realize that it is time to convert its scientific capabilities towards peaceful objectives?

My response to LANL request is NO!

HRMB RESPONSE

In response to Comment # 1, the RD&D Permit that NMED issued to LANL on April 21, 1994 contains information describing the experiments that will be conducted to destroy hazardous waste generated at other areas of LANL. This permit for which the proposed modification was requested has no relation to nuclear weapons production at LANL.

The following is a summary description of the experiments that LANL will be conducting under this modified permit:

DESCRIPTION OF THE PBR/SDP UNIT:

The combined Packed-Bed Reactor/Silent Discharge Plasma (PBR/SDP) unit will be housed in Building 421. The PBR treatment unit involves use of an alumina pellet filled bed that is heated with an external electrical furnace. Liquid organic hazardous wastes are injected along with a carrier gas (air) into the PBR where many of the hazardous compounds undergo vaporization and thermal decomposition.

More complex hazardous compounds may resist thermal decomposition within the PBR and, therefore, require further treatment. As part of the RD&D activities, this further treatment will be provided by the SDP.

The SDP treatment is an advanced oxidation technique that will be used for second stage treatment of effluents from the PBR unit. SDP technology involves the use of a non-thermal electrical discharge plasma. Large quantities of reactive free radicals are generated in the plasma, and the free radicals react with and decompose the remaining hazardous organic constituents in the effluent. In contrast to thermal processes, the SDP operates at near-ambient temperature and pressures, thereby eliminating complications typical of thermal treatment.

The end products of the PBR/SDP waste treatment process include primarily carbon dioxide, water, carbon monoxide, acids, and trace quantities of unreacted waste and reaction by-products.

HRMB hopes that the above explanation allays the Commentor's fear that nuclear weapons are being produced at LANL, rather it is an experiment to destroy hazardous waste, which include oil with 1,1,1, Trichloroethane, Lacquer thinner from cleaning road painting equipment, and mixtures of Ethanol/Acetone for degreasing oily parts.

Permit Modification. None