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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

May 10, 1993

Mr. Jerry Bellows, Area Manager
Department of Energy
Los Alamos Area Office
528 35th Street
Los Alamos, New Mexico, 87544

RE:NOTICE OF DEFICIENCY
NM0890010515

Mr. Bellows,

The New Mexico Environment Department (NMED) has completed an administrative review of the the Los Alamos National Laboratory (LANL) Research, Development and Demonstration (RD&D) permit application entitled: Packed Bed Reactor/Silent Discharge Plasma Treatment Unit, dated December, 1992, for an RD&D permit as required under the Resource Conservation and Recovery Act.

Based on this review, NMED has found the application to be administratively deficient. Attached is a list of the deficiencies that must be addressed in accordance with the New Mexico Hazardous Waste Management Regulations (HWMR-7, as amended 1992), Part IX, 40 CFR §264 and §270. You are asked to comment where necessary in order to rectify any misunderstandings.

Please submit the above requested information in one package within 30 days from the receipt of this letter. You may request a meeting to discuss the deficiencies and the required information. Such a meeting must be held within the 30 day period and will not suspend the 30 day deadline for compliance with this notice. Failure to provide all requested information within the 30 days could result in permit denial.

Upon submission of a complete application, LANL will be notified of the determination. A permit fee of \$10,000.00 will be assessed and technical review of the application will commence.



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Bellows, LANL
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If there are any questions regarding this issue, you may contact
Cornelius Amindyas of my staff at (505) 827-4308.

Sincerely,


Barbara Hoditschek, Manager
RCRA Permitting Program
Hazardous and Radioactive Materials Bureau

cc: Benito Garcia, Bureau Chief, HRMB
Jerry Bellows, LANL, MS-490
K. Hargis, EM-8, LANL, MS-K490
D. Hjeresen, EE-AETO, LANL, MS-F643
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ATTACHMENT

Note: The following is a list of the sections from LANL Part B RD&D permit application for the Packed Bed Reactor/Silent Discharge Plasma Unit that must be discussed:

1. **LANL Application Section 2.0: General Facility Information**
HWMR - 7, Part IX, 40 CFR, §270.14(b)(19)

LANL must provide a topographic map showing a distance of 1000 feet around the facility at a scale of 2.5 centimeters (1 inch) equal to not more than 61.1 meters (200 feet). Contours must be shown on the map. The contour interval must be sufficient to clearly indicate the pattern of surface water flow in the vicinity of the facility.

The presence of any Holocene faults within 61.1 meters must also be shown on the map to meet the requirements of HWMR - 7, Part IX, 40 CFR, §264.18(a).

2. **LANL Section 3.3: General Waste Analysis**
HWMR - 7, Part IX, 40 CFR, §264.13, and §270.13(i,j)

LANL must explain how the characterization and analysis of the effluent hazardous wastes and residual trace organics after treatment will be conducted. The type, concentration, and chemistry of the subject waste constituents before, during, and after treatment must be described. LANL must also state why the effluent is not to be monitored beyond the last monitoring point shown on diagrams 6 and 7 of the application text. The chemistry of the "trace quantities of unreacted waste and reaction by-products" which constitute part of the wastes that are generated continuously must be presented.

3. **LANL Section 3.3: Sampling Plan**
HWMR - 7, Part IX, 40 CFR, §264.13(b)(3); and §270.14(d)(1)(v)

LANL must demonstrate how representative samples of hazardous wastes will be obtained from the barrels. A sampling and analysis plan (SAP) that is site-specific and third-party executable must be provided. The SAP must include at a minimum the following: the methods used to sample the wastes of interest; the rationale for the choice of the sampling methods; the statistical approach, procedures and principles applied in data acquisition and evaluation (e.g. determination of the appropriate number of samples to be taken from the containers); and the frequency of sampling should also be

stated.

In addition, LANL must submit a specification of all wastes that have been managed at the unit, to the extent available, as well as a brief discussion of performance data that was gathered previously on the operation of the unit. The types of samples to be taken from the containers and the chain-of-custody procedures must be presented.

4. **LANL Section 5.2: Design and Operation of the Facility**
HWMR - 7, Part IX, 40 CFR, §264.31

LANL must explain the discrepancy in operating temperature ranges found in section 5.2, page 13 of the application (given as 250°C to 1300°C) contrary to the values of the same parameters presented in Attachment 4, Section IV, paragraph "a" of the text (as ranging from 800°C to 1000°C). LANL must also present the advantages and disadvantages of closed loop and open piping that were mentioned in LANL's description of the Silent Discharge Plasma components.

LANL must also provide additional detailed information for the RD&D unit and its operation, including: process efficiency, data accumulation requirements, expected duration of operation, quantity of waste processed for individual experiment runs, and training records for all individuals that will be involved in the research.

5. **LANL Section 5.3: Monitoring and Records**
HWMR - 7, Part IX, 40 CFR, §270.30(j) and §264 Appendix I

LANL must state what parameters they will be monitoring for in both the Packed-Bed Reactor and the Silent Discharge Plasma Treatment Units. LANL must also indicate how often the equipment in question will be monitored.

LANL's project monitoring records for data gathering and analysis shall include:

- (a) The date, exact place, and time of sampling or measurements;
- (b) The individual(s) who performed the sampling or measurements;
- (c) The date(s) analyses were performed;
- (d) The individual(s) who performed the analyses;
- (e) The analytical techniques or methods used; and
- (f) The results of such analyses.
- (g) Environmental monitoring for protection of human life and the environment.

LANL must generate worksheets and / or checklists specific to this project. Further, LANL must supply a format for recording

personnel training to include certifications already held and where the training record will be kept on site.

6. **LANL Section 5.4: Inspection Procedures**
HWMR-7, Part IX, 40 CFR, §264.35

LANL must explain why no provision is made for aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the Hazardous Waste Research, Development and Demonstration Activity.

LANL must provide easy access to the three hazardous waste containers for inspection purposes. LANL's inspection form presented in Attachment Five must be specific to the research facility in question and not generalized for the entire laboratory system. The hazardous waste barrels shall bear conspicuous labels signifying their contents.

7. **LANL Section 6.0: Quality Assurance/Quality Control (QA/QC)**
HWMR-7, Part IX, 40 CFR, §264.13; §270.30(e)

LANL must describe the entire RD&D Program in detail, including the whole Quality Assurance and Quality Control plan, since the QA/QC implementation will determine the accuracy, precision, and overall integrity of the project. LANL must furnish a comprehensive account on the procedures for data handling, review and reporting (providing examples of records to be maintained and their location at the facility), and specify data validation techniques.

8. **LANL Section 8.0: Security and Safety Plans**
HWMR-7, Part IX, 40 CFR, §§264.14; and 264.56

LANL must provide a site-specific security plan and show how that plan will interface with LANL's facility-wide plan. LANL must furnish information regarding the safety of the building itself (e.g. the soundness of the building, its walls, surfaces, ventilation system, and the floor); and show how the requirements of §264.14(a) and (b) are met.

LANL must provide reasons for the lack of 24-hour surveillance and restricted entry to non-personnel visitors. LANL must supply a format for recording personnel training to include certifications already held and where the training record must be kept on site.