



Department of Energy

Albuquerque Operations Office
Los Alamos Area Office
Los Alamos, New Mexico 87544

MAR 25 1999

VIA HAND DELIVERY

Mr. Benito Garcia, Chief
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2044 Galisteo Street, Building A
P. O. Box 26110
Santa Fe, NM 87505



RED LINE 12-21-99

Dear Mr. Garcia:

Subject: Proposed Alternative Demonstration of Decontamination Under the Closure Plan for the Indoor Container Storage Area Located at Technical Area (TA) 21, Building 61, Los Alamos National Laboratory (LANL), EPA Hazardous Waste Identification Number NM 0890010515

The purpose of this letter is to formally request approval of an alternative demonstration of decontamination as provided in Section 3.0, *Decontamination Verification*, in the Closure Plan for TA-21-61 Mixed Waste Container Storage Units, submitted March 22, 1996 and reviewed by the New Mexico Environment Department (NMED). The basis for this request is discussed below.

TA-21-61 Waste Management History

The Indoor Storage Area at TA-21-61 was managed after July 25, 1990, as an existing mixed waste storage area pursuant to the New Mexico Hazardous Waste Management Regulations (HWMR-6) and, later, the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20 NMAC 4.1), Subpart VI standards. The building had served as a laboratory and storage area for polychlorinated biphenyl contaminated objects prior to that time. The mixed waste management history of TA-21-61 (unit) has been described in the response to the Notice of Deficiency (NOD) submitted to NMED in August 1996. Only two drums of radioactively contaminated solvent were managed at the unit and it was subsequently used for the storage of used fluorescent light bulbs from 1994 until 1996. The space was determined to be underutilized. Closure activities were initiated September 23, 1996.

TA-21-61 Closure Plan

The closure of the unit has been conducted in accordance with a closure plan originally developed by the Department of Energy/University of California (DOE/UC) in



September 1992, in accordance with the New Mexico Hazardous Waste Management Regulations, (HWMR-6), Part VI, incorporating the Code of Federal Regulations, Title 40, (40 CFR) Part 265, Subpart G, *Closure and Post-Closure*. The plan was submitted to NMED on March 22, 1996, as part of the Technical Area 21, Building 61, Closure Proposal.

The NMED Hazardous and Radioactive Materials Bureau (HRMB) issued the NOD for the closure plan on July 10, 1996, and it was answered by DOE/UC on August 12, 1996. The response to the NOD provided clarification and additional details of the building construction information and waste inventories. Since the outside area had never been used for mixed or hazardous waste storage, a proposal for transferring the activities surrounding decontamination of the outside storage area to the corrective action program at LANL was also included in the response.

Since that time, closure activities have been reported to and discussed with the RCRA Permits Management Program (RPMP) of the NMED/HRMB as they have progressed. These discussions have been conducted in the regularly scheduled permits issues meetings held between the RPMP and DOE/UC. Closure activities were preceded by washing down the container storage containment area and chemically analyzing the used wash water solutions. The closure plan originally stated that successful decontamination would be defined as determining non-detectable or statistically insignificant hazardous constituents in the final wash water samples. At the time, this approach was consistent with many other closure plans developed for mixed waste management units at LANL.

For reasons discussed further below, the need for an alternative decontamination demonstration has been explored with the RPMP subsequent to a permits issues meeting held on May 13, 1998. The possibility for proposing such an alternative is contained in Section 3.0 of the Plan that reads:

“An alternative demonstration of decontamination may be proposed and justified at the time of unit closure as circumstances dictate. The Secretary, NMED, will evaluate the proposed alternative in accordance with the standards and guidance then in effect and, if approved, incorporate the alternative into this closure plan.”

Alternative Demonstration of Decontamination

Closure activities at TA-21-61 have involved eight successive decontamination washdown and sampling events. A potable water spill, fully discussed in the report submitted to NMED on July 9, 1997, has also occurred during the closure of this unit. Further details of these events have been discussed with the RPMP in the permit issues meetings, and a full description will be provided with the independently certified final closure report. The reason for the complexity of the closure process at this container storage area is that low-level concentrations of various hazardous constituents have been found in the decontamination wash waters, including constituents that cannot be accounted for by the unit's waste management history.

The decontamination criterion contained in the original closure plan has proved to be extremely difficult to meet. There are several possibilities that have been discussed with the RPMP as reasons for this. Analytical capabilities have significantly improved since the decontamination criteria were written into the closure plan, resulting in the detection of constituents at concentrations far below environmental significance. The location of the building and the previous laboratory and industrial activities that have been performed there may contribute residual background levels of metals or other constituents that are not related to the waste management activities that have taken place. The building is not sealed, and constituents may be recontaminating the surfaces through deposition of outside dust or material between decontamination events. The containment area epoxy surfaces may also be contributing trace levels of background constituents through leaching or degradation associated with the potable water spill and the continuing decontamination washdowns.

Based upon these circumstances, we request consideration and approval of the decontamination standards contained in the U. S. Environmental Protection Agency (EPA) Region III, Risk-Based Concentration (RBC) Table (enclosed). These standards were developed to assess the health-related impact of residual levels of hazardous constituents in release sites. They are designed to provide chemical concentrations corresponding to fixed levels of risk occurring in environmental media (EPA memorandum from Jennifer Hubbard, Superfund Technical Support Section, October, 1, 1998). We believe their use in this situation is appropriate in that the unit is housed within a building and is protected from public access; the quantity of residual contaminants is very low; the potential for release pathways to the environment, such as water flow to surface or groundwater, is very low; the building is not currently planned to be used for further operations; and the condition of the site will be reassessed under scheduled corrective action by the HSWA program.

We understand that HRMB has required the use of the EPA RBCs for closure activities at another permitted facility, and we believe these levels are protective of the environment. The use of the RBCs has been previously discussed with the RPMP and no concerns have been noted to this point. DOE/UC has also recently included new closure plan decontamination criteria in permit applications for storage areas that specify determining constituents in the final samples at or below levels agreed upon with NMED as a result of situations such as this one.

An RBC level for lead is not included in the Region III Table. Lead concentrations were determined to be present in several washdown solution samples. The Maximum Contaminant Level for Human Health Standards contained in the New Mexico Administrative Code, Title 20, Chapter 6, Part 2 (20 NMAC 6.2), Section 3103, is proposed as a decontamination standard in this case (0.05 mg/l). This is consistent with the use of the tap water standards for the other constituents in the RBC Table and, therefore, represents a relevant and conservative standard.

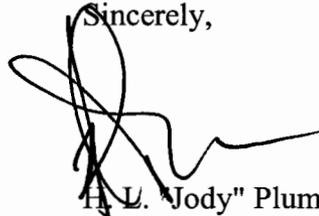
MAR 25 1999

Closure Activity Variance

Although the use of the RBCs has been discussed with RPMP for some time, DOE/UC has hoped that the non-detect decontamination criteria could be reached in the closure of this unit. This has not proven the case, although in some circumstances the RBCs and detection levels have been similar in the eight washdowns. As a result, the subsequent formal inclusion of the RBCs into the closure process was discussed in the February 25, 1999, permit issues meeting with the RPMP. At that time, DOE/UC was directed to provide this letter requesting the approval of the RBCs for the closure and to describe their use as alternate decontamination criteria as a variance in the final closure report being prepared by the certifying engineer. The final closure report is planned for submittal to HRMB before the end of March 1999.

We appreciate your consideration of this matter. Should you have any questions regarding this subject, please call me at (505) 665-5042 or Jack Ellvinger at (505) 667-0633.

Sincerely,



H.L. "Jody" Plum
Office of Environment

LAAME:3JP-115

Enclosure

cc w/enclosure:

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