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ENVIRONMENT DEPARTMENT

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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 21, 1993

Mr. Jerry L. Bellows, Area Manager
Los Alamos Area Office
Department of Energy
528 35th Street
Los Alamos, New Mexico 87544-5000

RE: TA-35 TSL-85 SURFACE IMPOUNDMENT: DENIAL OF CLEAN CLOSURE
EQUIVALENCY DEMONSTRATION AND DISAPPROVAL OF CLOSURE PLAN.

Dear Mr. Bellows:

NMED hereby disapproves the TA-35 TSL-85 Surface Impoundment Closure Plan and clean closure equivalency demonstration proposed by the Department of Energy/Los Alamos National Laboratory (DOE/LANL). Enclosed is a detailed statement of the reasons for our disapproval and the requirements you must include in the new or modified plan. The disapproval is based on the administrative record as of June 1, 1993.

As required by HWMR-7, Part VI, 40 CFR 265.112(d)(4), you must modify the closure plan or submit a new closure plan for approval within thirty (30) days of receipt of this letter.

The NMED will approve, or modify and approve the new or modified closure plan within sixty (60) days of our receipt of your response. If NMED must modify the plan, this modified plan becomes the approved closure plan. If NMED modifies the plan for approval, a copy of the modified plan with a detailed statement of the reasons for the modifications will be sent to you. NMED must insure that the approved plan is consistent with closure regulations. DOE/LANL will be required to implement this closure plan according to the approved schedule of activities. NMED will determine whether or not approved closure activities meet closure by removal standards when all activities are completed and certified. If Closure by removal standards are met then NMED will terminate interim status for the unit.

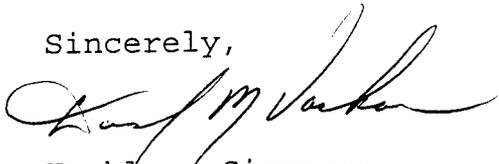
Please contact Mr. Carl Stubbs, of my Staff at (505) 827-4308 if you have any questions.



5116

Mr. Jerry L. Bellows
June 21, 1993
Page 2

Sincerely,



for Kathleen Sisneros
Division Director
Water and Waste Management Division

xc: Benito Garcia, NMED HRMB
David Neleigh, US EPA Region VI
Dave McInroy, LANL
File Red

REASONS FOR DISAPPROVAL

May 24, 1993

NEW MEXICO ENVIRONMENT DEPARTMENT

Reasons for Closure Plan Disapproval
and
Recommended Modifications for Approval

Department of Energy/Los Alamos National Laboratory
TA-35 TSL-85 Surface Impoundment

Stated below are the reasons for the NMED disapproval of the TA-35 TSL-85 Surface Impoundment Closure Plan based on the administrative record as of May 24, 1993. Also included are the NMED's technical and regulatory recommendations to assist DOE/LANL in developing an approvable closure plan for the unit.

1. Reasons for Disapproval

The closure plan does not include a description of the removal of contaminated subsoils pursuant to the New Mexico Hazardous Waste Management Regulations (HWMR-7), Part VI, Section 40 CFR 265.228(a)(1).

A. The subsoil near the 6 inch PVC pipe extending from Building 85 to the surface impoundment is contaminated. The contaminants found in excess of health-based action levels and their sample locations are as follows:

1. Selenium at sample site 85PL-4;
2. Beryllium at sample sites 85PL-1 through 85PL-12; and
3. Antimony at sites 85PL-3 and 85PL-6 through 85PL-11.

B. Analysis of soil samples for semi-volatiles has been compromised by interference from non-hazardous di-electric waste oil. During analysis, DOE/LANL raised the limit of quantitation (LOQ) to accommodate this interference. The LOQ for some of the subsoil samples was in excess of the estimated quantitation limit (ELQ) of 1 mg/Kg as recommended in SW-846 Method 8270. Those samples in excess of the ELQ have been determined to be unacceptable. Since these samples do not document the absence of hazardous constituents above health-based concentrations, the subsoil is considered to be contaminated.

Recommended Changes for the New or Modified Closure Plan

The closure plan must be revised to include a plan for removal of all contaminated subsoils. Describe the plan to conduct

confirmation sampling to verify that all contaminants have been removed as required in Part VI, Section 40 CFR 265.228(a)(1). In the instance of the di-electric oil soaked ground, the soil must be removed to the extent that the remaining soil can be properly analyzed for semivolatiles to prove that all hazardous constituents in the subsoils are below health-based concentrations.

2. Reasons for Disapproval

During the removal of the UST, the contractor discovered a 6 inch PVC pipe connected to the pipe from the UST to the surface impoundment. The origin of this pipe has not been identified. It is also unclear if the accessible portion of this pipe was removed and decontaminated and if the inaccessible portion of the pipe was pressure tested, decontaminated, grouted, and/or capped.

The origin and removal or decontamination of the 2 inch galvanized steel pipe, discovered by the contractor during pressure testing of the tank, has not been described in detail.

Recommended Changes for the New or Modified Closure Plan

The closure plan must be revised to provide documentation of the origin of these pipes. Describe how the accessible portions of these pipes were removed or decontaminated. Describe how the inaccessible portions of the pipe were pressure tested, decontaminated, grouted, and/or capped. Decontamination procedures must demonstrate that no hazardous constituents remain in the pipe above NMED-approved Health-Based Exposure criteria.

3. Reasons for Disapproval

The discovery of hazardous waste constituents which were not anticipated from the Process Knowledge investigation of Buildings 85 and 188 suggests that there may be other, as yet unknown, hazardous constituents in the soil. Soil samples were tested for a limited number of hazardous constituents.

Recommended Changes for the New or Modified Closure Plan

The closure plan must be revised to include a plan to resample and analyze soil from selected locations for all of the Hazardous Constituents found in Part II, Section 40 CFR 261, Appendix VIII.

4. Reasons for Disapproval

The closure plan states in Section 5.2.1 Underground Storage Tank/Lines Verification Sample Risk Analysis on page 23 that:

"The semivolatile analyses on the soil samples collected from beneath the underground storage tank and underground storage tank lines were performed after the EPA-allowable 40-day holding time. For this reason, semivolatile organic analytical results are not considered valid."

The closure plan states in Section 5.3.1 Canyon Verification Sample Risk Analysis on page 25 that:

"The semivolatile analysis on the soil samples collected from the canyon spill path route were performed after the EPA-allowable 40-day holding time. For this reason, semivolatile organic analytical results are not considered valid."

U.S. EPA allows for a risk assessment to demonstrate that any hazardous constituents left in subsoils will not cause unacceptable risks to human health and the environment (52 FR 8704, March 19, 1987). For the underground storage tank and underground storage tank lines and canyon spill path route investigation, valid data on the semivolatiles analyses does not exist. The risk assessment is invalid because it cannot be determined whether any hazardous constituents left in subsoils will not cause unacceptable risks to human health and the environment.

Recommended Changes for the New or Modified Closure Plan

Sample collection, analysis, and risk assessment for the canyon spill route must be rescheduled and performed again.

5. Reasons for Disapproval

Quality Assurance (QA) and Quality Control (QC) of Phase III Volatile Organic Compounds has been compromised. In Enclosure 4-F, Volatile Organic Analyses, Quality Assurance Report, Surrogate Results for EPA Volatiles, 64 percent of Surrogate 3 samples do not fall within the EPA limits (SW-846). Samples affected by QA/QC deficiencies have been determined to be invalid.

Recommended Changes for the New or Modified Closure Plan

The closure plan must be modified to include a sample collection and analysis plan to replace the invalid samples noted above.

6. Reasons for Disapproval

Many of the soils analyses from the Phase One Clean Closure Verification Samples: Soil Samples at Two Foot Depth (Enclosure 4-D) contain the volatiles 1,1,1-Trichloroethane, 2-Butanone, o-Xylene, and Mixed-Xylenes. In the case of multiple hazardous

constituents either an aggregate hazard index or aggregate risk level must be determined.

Recommended Changes for the New or Modified Closure Plan

The closure plan must be modified to describe either an aggregate hazard index or aggregate risk level. Combined health effects of constituents left in-place must be considered to evaluate a clean closure demonstration.

7. Reasons for Disapproval

Enclosure 4-E, Phase Two Clean Closure Verification Samples: Corehole Samples to Approximately 49 Feet, Volatile Organic Analyses, lists the detection of Acetone, Benzene, 2-Butanone, Tetrachloroethylene and 4-Isopropyltoluene. In the Enclosure 5, Risk Assessment Calculation Results and Methodology, Soil Removal/Corehole Verification Samples, the risk calculation tables do not include these hazardous constituents. Neither an aggregate hazard index nor aggregate risk level has been described.

Recommended Changes for the New or Modified Closure Plan

The closure plan must be modified to include the constituents described. Provide an aggregate hazard index or aggregate risk level.

CONCERNS

The following are concerns that have been determined to be significant, but not severe enough in nature to justify disapproval of the closure plan. They will need to be addressed as well as the preceding concerns.

I. Volatile organic chemical analysis revealed the presence of 1,1,1-Trichloroethane. The closure plan must be revised to include a detailed description of the degreasing solvents used at these buildings. Copies of the MSDS should be included. 1,1,1-Trichloroethane appears in the Hazardous Waste from Non-specific Sources list in Part II, Section 40 CFR 261.31 with the Industry and EPA Hazardous Waste Number of F001 and F002, and possibly F003, F004, and/or F005. Hazardous wastes with any of these Industry and EPA Hazardous Waste Numbers may require removal down to a concentration of 0.

II. In the Enclosure 5, Risk Assessment Calculation Results and Methodology, Explanation for Risk Calculation Tables it states that the "Reference for CSF and RFD data is EPA's IRIS data base

April 1991 edition." Verification must be provided that the current and April 1991 Integrated Risk Information System (IRIS) Reference Dose (RfD) and Carcinogenic Slope Factors (CSFs) correspond. In the case of multiple hazardous constituents, either an aggregate hazard index or aggregate risk level must be determined.