



**STATE OF NEW MEXICO**

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Comments on the Closure Plans for the TA-54 Area L Container Storage  
(Unpermitted) and Landfill

The following comments are preliminary; the closure plan submitted by LANL is not sufficiently detailed to allow more specific comments. LANL is urged to review the closure plan requirements of 206.C.2. and 206.C.9.d. and must submit a closure plan that addresses the standards, objectives, and specific content requirements of those sections.

1. The plan is marked "ROUGH DRAFT," and so does not bind LANL to any closure activities. This is not acceptable.
2. There is no specified year of closure. At Area L, how many more years of operation at current rates of disposal are possible?
3. The interrelationships in time of the closure activities required are not clarified with a sufficiently detailed schedule of steps, covering at least: packing and disposal of wastes, detailed site operations, sampling and analysis, inspections, and landscaping.

The closure plan LANL submitted speaks of requiring thirty days to "characterize and treat (pack) the last wastes received." If the waste analysis plan submitted separately is implemented, no waste characterization will be needed.

4. The container storage area at Area L does not appear on any of LANL's Part A applications, does not have interim status, may not be used for storage greater than 90 days, does not require a closure plan, and should be dropped from the closure plan title.
5. The surface impoundments at Area L have interim status, are assumed to have received hazardous waste since November 19, 1980 -- since LANL is unwilling to certify that they have not received hazardous waste, and since LANL has applied (in 1980 and 1983) for interim status for the impoundments -- and require a detailed closure plan. Comments on the closure plan submitted are given below, in items 10. and 11.

The impoundments may not be used for the disposal of any liquid wastes, hazardous or not, radioactive or not, pursuant to 206.B.9.b. and 206.C.9.g. This was discussed with Karen Balo of HSE-7 on August 1, 1984 and confirmed in a letter from EID to William Crisman on August 8.

6. The closure plan should include a detailed site plan and description, including:



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- a. the location, dimensions, depths, and trends (if not vertical) of individual shafts;
- b. the kinds of wastes and approximate waste volumes interred in each shaft;
- c. detailed topographic and drainage information, using a contour interval in the range of 1 foot;
- d. existing vegetation and soil characteristics;
- e. detailed geologic and hydrologic data, including but not limited to:
  - i. the location (if known), orientation, and areal density of tuff cooling fractures and recent faults (if present);
  - ii. location of and recharge/discharge data for nearby perched water bodies;
  - iii. physical and hydrologic properties of the tuff (both in situ and as backfilled) and the underlying basalt;
  - iv. past, existing, and proposed monitoring locations
  - v. detailed monthly analysis of moisture balance, under present and historical climates.

Basically the plan as submitted does not address the clear requirements of 206.C.9.d.(3) at all.

7. The portion of the plan dealing with decontamination of the less-than-ninety-day storage area uses the same language and is subject to the same comments as given for the closure plan for the TA-3-102 container storage area.
8. The soil sampling scheme outlined in the plan needs to be more specific and detailed, both in methodology and location. The analysis done needs to be specified, along with the decision criteria affecting the site operations that will be based on these analyses.
9. Closure of a particular shaft or cell constitutes partial landfill closure. This needs to be explicit in the closure plan. At Area L, the procedure for partial closure is acceptable if it is modified to include: a better method for sealing the shafts against annular leakage around the cap; an appropriate specification for the concrete in the cap; an inspection and certification procedure for partial closure that involves a licensed engineer; and the emplacement of adequate monitoring instrumentation (see under post-closure plan).

Note that the procedure used for partial closure may (or may not) conflict with the procedure for final closure; LANL will probably want to develop these in concert. Any modification in partial closure procedures must be submitted to EID prior to implementation.
10. The "evaporation" (misnomer) pits seem unlikely to fill with deposits to within "3 feet of the spill point, " since most of the liquid added to them probably enters the porous non-welded tuff that forms the walls and floor of the pits. This contention is given credence by the absence of deposits of measurable depth in the pits. In any case, as noted above, these unlined pits may no longer receive liquid wastes.

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11. The closure procedure warranted for these impoundments depends closely on the nature of the wastes that have been disposed of there. If no hazardous waste or hazardous waste constituents remain, and if there is no body of elevated soil moisture in the impoundment area, closure can be much simplified.

Therefore the closure plan needs to include a detailed sampling and analysis program. The EID will want to split samples with LANL during this sampling. As mentioned above, this surveillance should also confirm the presence or absence of any body of decreased moisture tension in or beneath the impoundment area.

12. Section 206.C.9.d. requires LANL to place a final cover over the landfill. The purpose of this or any landfill cover is fulfill the performance standard given in 206.C.2.b. and the objectives of 206.C.9.d.(2).

A landfill cover must prevent infiltration at the landfill (or near the boundaries of the cover if infiltration there could reach the landfill cells); it must prevent erosion at the landfill and in the surrounding area; and it must minimize the need for maintenance of the site. Its overriding purpose is to contain the contents of the landfill for as long as technically possible prior to renewal of the cover or other remedial action.

There is no mention of a final cover in the closure plan for area L. EID technical staff will review LANL's cover design when it is submitted.

13. Landscaping cannot be evaluated in the absence of a cover design. Objectives include long-term erosion control, maintenance of cover integrity, low maintenance overall, and possibly enhanced evapotranspiration.

14. The EID may have further comments when more detailed submittals are made.