



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

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DALLAS, TEXAS 75202-2733

CAFB-red

August 7, 1990
Suzanne Moore-Mayne
Hazardous Waste Bureau
Environmental Improvement Division
1190 St. Frances Drive
Santa Fe, NM 87503



Dear Suzanne:

On May 15, 1990 we received closure plan information regarding a design change of the drainage footings surrounding the landfill cap at Cannon Air Force Base. You requested EPA review and comment on whether or not the design change would substantially affect the integrity or performance of the cap. We reviewed the documents you sent and offer the following comments.

1. Cannon Air Force Base should provide design calculations with the closure certification to ensure that the gutter drainage control structure capacity is indeed adequate to control the peak discharge from at least a 25-year storm. The Manning Equation can be used. This information was not supplied in the closure plan.
2. The design change of the footings does not appear to consider subsidence of the precast concrete sectional trough due to settlement of underlying materials. Also it is unclear in what manner each section will be connected together (e.g. epoxy coating or other adhesives). This could be important if subsidence of the footings causes cracking between sections and allows surface water to infiltrate the cover system, and potentially into the waste material.
3. If the gutter drainage structure was built as shown in the drawing on attachment #13, then surface water could pond between the lip of the drainage structure and the vegetative top cover (i.e. the lip of the cap of the drainage structure should be flush with the vegetative top cover).
4. In conjunction with comment number 3 above, it may be possible that surface water could infiltrate between the concrete drainage structure and the various layers of the landfill cap. Cannon AFB should explain how the design and construction will prevent both surface water and sand filter water infiltration between the cap and the concrete drainage structure.
5. The sand filter drainage layer does not appear to be connected to a surface water discharge point.

2.

In summary the closure regulations are presented as performance standards in 40 CFR 265 instead of specific design and construction criteria. The regulatory requirement for surface water drainage structures is to prevent run-on and run off from the peak discharge of a 25-year storm. Although Cannon AFB varied from the approved closure plan requirements by changing the design of the footings, the closure performance standards may still be able to be met. Comprehensive inspection and maintenance schedules should be considered by the State which requires Cannon to assess the operability of the unit's effectiveness and to assess the need for any physical modifications to the cap during the post-closure care period.

If you have any questions or need further assistance please contact Marc Sides at (214) 655-6790.

Sincerely yours,

Jon D. Ringard
for
Bill Luthans, Chief
Closure Section