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Ms. Hoditschek,

Four important issues concerning the MDA-P closure strategy were posed in a letter from you to Steve Slaten on June 3, 1993. The issues are addressed below.

(1) Why is closure in-place preferred over clean closure for MDA-P and how will closure in-place be more protective of human health and the environment than clean closure?

Several closure alternatives were considered, including closure in-place, complete removal, in-place treatment, and hazardous constituent partial removal. In-place treatment and hazardous constituent partial removal were determined to be infeasible because of the heterogeneous nature of the waste materials and the impossibility of determining the exact location of hazardous materials within the disposal area.

Previous studies at MDA-P indicate that diverting surface water run-on, protecting against the 100 year flood, constructing a soil and vegetative cover, and stabilizing the landfill slope will eliminate any potential migration of contaminants from MDA-P that could have an adverse impact on human health and the environment. The revised closure plan will include field investigations to confirm the results of these previous studies. Removal could have adverse human health and environmental impacts resulting from releases to the environment of hazardous constituents that are now contained. Closure in-place is at least as protective of human health and the environment as removal, and meets the requirements of 40 CFR 265.

Complete removal has considerable worker safety risks associated with the removal of large quantities of material from the canyon side, and public and worker risks from potential accidents during transport of these materials. Safety risks to workers and the public from complete removal activities are not offset by any potential improvement to human health or environmental risks from clean closure.



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B. Hoditschek, page 2.

When options are equally protective, then other balancing criteria such as feasibility and cost may be considered to select a closure option. The estimated cost for complete removal is much higher than that for closure in-place, which includes monitoring for 30 years. Complete removal is expected to take at least two years and have a severe negative impact on Laboratory operations.

(2) What are the long-term liabilities of post-closure care?

Post closure care includes maintaining the cap, protecting against a 100 year flood, controlling surface run-on, and monitoring for 30 years. All of these requirements are practical, are part of the closure strategy, and will be described in detail in the closure / postclosure plan. The proposed monitoring activities are consistent with the Laboratory's on-going environmental surveillance program.

(3) Is it feasible to design a cap to cover the waste material at MDA-P, since it is "cascading over the side of a canyon wall?"

The proposed cap for MDA-P is a soil and vegetative cover. The slope of the eastern portion of the landfill will be reduced with surface scrap materials and fill to facilitate covering. The slope of the western portion of the landfill has been stable for decades and has a well established cover of vegetation and soil covered by a rock facing that will be enhanced during closure.

(4) The schedule for completing the closure is "lengthy."

The closure plan includes two phases. Phase 1 will require two years to complete, Fiscal Years 1994-5, and will include the following activities:

Diversion of stormwater run-on that now flows onto the landfill from adjacent areas. This water will be redirected to preclude run-on infiltration into the Area P landfill.

An intensive monitoring program to: (1) evaluate the existence of potential contaminants of concern not previously characterized, (2) confirm the findings of earlier site studies that there is no potential for significant contaminant migration into the tuff under the landfill, and (3) confirm that surface water runoff and subsurface water movement are not routes of potential significant contaminant migration from the Area P landfill to the Canyon del Valle stream.

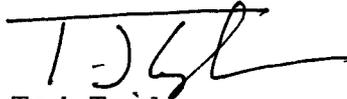
B. Hodischek, page 3.

Phase 2 final closure activities will be implemented in Fiscal Year 1996. If Phase 1 monitoring confirms the absence of significant potential contaminant migration, Phase 2 final closure activities will include: (1) stabilizing the landfill slope, (2) improving the base of the landfill slope to withstand a 100 year flood event in the Canyon del Valle stream, and (3) completion of the landfill capping, utilizing layered soil covering and vegetation.

If Phase 1 monitoring indicates the potential for significant contaminant migration, enhanced closure activities will be required. Enhanced closure activities could include enhanced cap design, upgradient vadose zone water diversion, or downgradient runoff and vadose zone water collection and treatment. Therefore, it is prudent to complete Phase 1 monitoring before completion of the closure design.

The revised closure plan will be submitted to you by August 30, 1993. If you or your staff have questions do not hesitate to call me at 665-7203 or Paul Treat at 667-5808.

Sincerely,



Ted Taylor  
Program Manager  
Environmental Restoration Program  
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cc

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