



Department of Energy
Albuquerque Operations Office
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Mr. Paul H. Lohaus
Branch Chief, Operations Branch
Division of Low-Level Waste
Management & Decommissioning
Office of Nuclear Materials Safety
and Safeguards
Mail Stop 5-E-4
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Lohaus:

The enclosed narrative is submitted in accordance with action item No. 2 of the agreed upon Department of Energy/Nuclear Regulatory Commission November 1, 1989, action item list regarding the construction of the Spook cell and temporary exceedence of the maximum allowable elevation for the top of the tailings. The Project Interface Documents relative to this event are included in the final Remedial Action Plan.

In summary, it is our opinion the circumstances prompting exceedence of the maximum elevation does not present a programmatic problem, nor does it warrant further consideration.

Should you have any questions, please contact Michael Abrams of my staff at FTS 845-4628.

Sincerely,

Mark L. Matthews
Acting Project Manager
Uranium Mill Tailings Project Office

Enclosure

cc w/enclosure:
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SPOOK: SUMMARY OF CELL CONSTRUCTION INCIDENT

During the final construction phase of the Spook site remediation, an incident occurred that has raised concerns with the NRC that a programmatic problem exists in DOE's execution of the UMTRA program. The following narrative will attempt to define the Spook disposal cell design criteria and constraints, the chronology of events surrounding the incident, as well as the corrective action implemented to ameliorate the effects of the incident.

There are three contributing physical design criteria and constraints that are significant when examining this incident. The primary physical design criteria for the construction of the disposal cell was the maximum elevation for tailings placement, which was not to exceed an elevation of 5,074 feet, thereby ensuring that when erosion occurred there would remain at least 20 feet of material between the peak of the tailings pile and the ground surface. This overburden of material would then constitute the disposal cell radon barrier. The secondary physical design constraint was due to the fact that the disposal cell was constructed in a pit that limited the overall disposal cell footprint, such that any expansion of the cell would necessitate a redesign of the cell itself. The tertiary constraint was that the AML material was being deposited alongside of and at the same rate as the mill tailings. This method of placement would gradually lead to an overall reduction in capacity of the cell as the elevation increased. In addition, the final construction drawings contain a note that states if increased volumes of contaminated material requiring disposal are encountered, the elevation of the cell would be increased to accommodate the additional material.

Thus, as the final days of the remediation project neared completion, the maximum elevation of mill tailings placement in the disposal cell was exceeded due to one day's production of tailings relocation from the Spook site to the disposal cell. At that time, the MK-ES design engineer of record was contacted and informed that the elevation of the tailings pile was now in excess of the maximum elevation of 5,074 feet and varied from 5,080 feet at the side to 5,095 feet at the peak. The MK-F personnel on site were then told that they could continue to an elevation of 5,100 feet. Thus, the direction given by MK-ES was due to a misunderstanding concerning the intent of the maximum elevation limit. The DOE and TAC site managers were informed of the direction given to MK-F the next morning and of the need for an elevation constraint. Immediately, the DOE site manager directed all construction activities to halt. Arrangements were then made for the MK personnel to be on site within a day in order to evaluate the situation and determine a design solution to increase the disposal cell capacity. DOE, State, and contractor personnel then met at the site, evaluated all the options, and presented them to the DOE site manager. A design solution was then chosen by the DOE site manager and formulated into a Project Interface Document (PID). The NRC was then informed of the circumstances surrounding the incident (including cost and schedule impacts) and a PID was telecopied to them so they could concur in the redesign of the disposal cell as required by the procedures.

If the site field personnel had foreseen that the material being placed on the disposal cell would exceed the maximum elevation prior to the incident, there would have been no difference in the resolution of the problem. Construction activities would have been halted, and a redesign of the cell undertaken. The PID submitted would have been the same as the

outcome of the situation. The miscommunication can be attributed to the circumstances and physical design constraints of the disposal cell; however, it had no tangible effect on the situation or the solution of the problem. As there are no other UMTRA sites where tailings and other non-UMTRA contaminated materials will be disposed of in the manner described above. The potential for this type of problem reoccurring is highly unlikely.

In the Project Office's opinion, the details and circumstances described above indicate that this was an isolated incident that does not have any implications as to being a programmatic problem, nor does it warrant any further consideration. The management and execution of the design solution of this incident was well conceived and effectively implemented. The PID process was efficiently employed and all project personnel affected, including the State and NRC, were informed in a timely manner and corrective action was initiated within one week of the occurrence. Therefore, this office plans to take no further action concerning this issue.