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## Department of Energy

Albuquerque Operations Office  
P. O. Box 5400  
Albuquerque, New Mexico 87115

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WM Record File

WM Project

Docket No.

PDR

LPDR

Mr. Kenneth L. Alkema  
Dir., Div. of Environmental  
Health, Utah Dept. of Health  
P.O. Box 2500  
Salt Lake City, UT

Distribution:

Gillan  
GUGNOLI

DCM

Return to WM 622501

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Dear Ken,

On June 17, 1985, Mark Day of your staff discussed with Kelly Peil of the TAC, the problems of compacting the foundation soils of the Clive excavation to a minimum of 95% Standard Proctor as required by the approved Remedial Action Plan (RAP). A solution to this problem is to use smaller equipment (see enclosed letter), and you may want to suggest this to the contractor. However, we feel it is the contractor's responsibility to select proper methods and equipment to assure he has complied with the specifications, and to direct him in this regard provides opportunity for change claims.

Please note also that the entire depth of the tailings must be compacted to the RAP specification of 90% Standard Proctor, and the contractor must place the tailings in layer depths that will assure achievement of this compaction level.

Sincerely,

Original Signed By  
J. G. Themelis

John G. Themelis, Project Manager  
Uranium Mill Tailings Project Office

Enclosure

cc w/enclosure:  
Dan Gillan, NRC  
Mark Day, Utah DOH

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WM-41

PDR



**JACOBS ENGINEERING GROUP INC.**  
**ADVANCED SYSTEMS DIVISION, ALBUQUERQUE OPERATIONS**

5301 CENTRAL AVENUE N.E. — SUITE 1700, ALBUQUERQUE, NEW MEXICO 87108  
TELEPHONE (505) 846-4030

July 1, 1985

Mr. John G. Themelis  
UMTRA Project Manager  
U. S. Department of Energy  
Uranium Mill Tailings Project Office  
5301 Central Avenue, N.E., Suite 1700  
Albuquerque, New Mexico 87108

Attention: Mark Matthews

Re: Compaction Requirements at Clive,  
Utah  
Contract No. DE-AC04-82AL14086

Dear John:

Mr. Mark Day contacted Dr. Kelly Peil on June 17, 1985, to discuss a potential problem at the Clive site. The RAP specifies that the bottom of the excavation be scarified and compacted to a minimum of 95% Standard Proctor. Mr. Day said the contractor was having problems with too much moisture in the soils and compaction was approximately 85%.

Mr. Day made a site visit and found the equipment used was very large and was forcing the soil moisture to the surface. The TAC had Mr. Gary Allen, with SH&B, visit the site and he also felt the equipment now being used was too large.


Mr. Allen's review of the field test data indicated that one area had a compaction of 95-112% after extensive work. He found that the natural soils have a 85% compaction. Mr. Allen's recommendation, which we agree with, is to use smaller equipment for bottom compaction. An example would be a smaller Catapiller with a pneumatic pull type roller (6-10 Kips).

We also understand that the state contractor wants to place two feet of tailings on top of the properly prepared foundation soils. The full depth of tailings would then be tested for proper compaction. The contractor realizes that if the compaction for the tailings can not be obtained at the two foot depths, he will have to remove some and try again. This procedure is acceptable with the TAC.

**JACOBS WESTON TEAM**

If you have any questions, please contact Kelly Peil or me.

Very truly yours,  
JACOBS ENGINEERING GROUP, INC.



R. Krishnan, Vice President  
Advanced Systems Division

RK/KP/tb

CC: KPeil  
RRager  
BKeshian