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DE Martin

PDR

Dear Mr. Themelis:

Enclosed for your information is a report of an NRC staff review of the construction work at the Salt Lake City project. Mr. Daniel Gillen conducted the review on July 25, 1985. If you have any questions regarding the report please contact me (301) 427-4433 or Dan Gillen (301) 427-4160.

Sincerely,

Original signed by  
Leo B. Higginbotham

Leo B. Higginbotham, Chief  
Low-Level Waste and Uranium  
Recovery Projects Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Enclosure:  
As stated

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\*See previous concurrences

OFC	:WMLU: rb *	:WMLU *	:WMLU	:	:	:	:
NAME	:DM Gillen	:DE Martin	:LB Higginbotham	:	:	:	:
DATE	:85/08/8	:85/08/8	:85/08/9	:	:	:	:

SALT LAKE CITY ON-SITE CONSTRUCTION REVIEW

Performed by Daniel M. Gillen, Division of Waste Management, NRC

DATE: July 25, 1985

LOCATION: Salt Lake City and Clive, Utah

PARTICIPANTS:	<u>NRC</u>	<u>DOE/TAC</u>	<u>STATE OF UTAH</u>	<u>TOOELE COUNTY</u>
	D. Gillen	M. Matthews R. Bearden	M. Roshek C. Judd A. Brijs	J. Durrant

PURPOSE:

To conduct a review of construction activities to assess whether QA/QC systems are functioning in a manner that assures compliance with the RAP and the EPA standards.

DISCUSSION:

I arrived at the Vitro site in the morning and met with M. Matthews (DOE), R. Bearden (TAC-QA), M. Roshek (Utah DOT Project Engineer) and C. Judd (Utah DOT Field Engineer). I was presented with a draft copy of the Salt Lake City Remedial Action Inspection Plan (RAIP) which has just been drafted by the State of Utah and is under DOE review. I in turn gave a copy of our draft staff technical position (STP) on testing and inspection to the State for their information. I briefly reviewed the draft RAIP during this meeting and offered the following comments:

- o The specified frequency of density testing (one test per 2,000 cubic yards of material placed) does not meet the frequencies suggested in the STP (one test per 1,000 cubic yards of contaminated material and one test per 500 cubic yards of radon barrier material).
- o Specific Gravity and Absorption tests on the rock cover material are specified by the State as "only when the project engineer deems necessary". The STP suggests a minimum of three tests (at one-third, two-thirds and final placement) for each gradation of riprap placed.

With these exceptions, the RAIP appears to adequately address organization, testing and inspection, personnel qualifications, records control, equipment

control, and non-conformance and corrective action in a manner similar to other DOE RAIPs. Mark Matthews informed me that following DOE's review of the Salt Lake City RAIP, it will be transmitted to NRC for formal review and concurrence.

I then toured the Vitro site and observed the following activities:

- o break-up of old building foundations.
- o spreading and discing of wet contaminated material.
- o bulldozing contaminated material into stockpiles along the railroad tracks.
- o Loading of railroad cars by front-end loader.
- o Wash-down of loaded railroad cars.
- o Testing of soil for certification of clean-up in small area at the northwest corner of the site.

The Vitro clean-up operations appear to be running smoothly, with two trainloads of contaminated materials leaving the site per day.

In the afternoon, M. Matthews, R. Bearden and M. Roshek accompanied me to the Clive site. We met Mr. Brijs, the Utah DOT site inspector and Mr. Durrant, the Tooele County project inspector, and proceeded to tour the site. I observed the process of over-turning the railroad cars to dump the contaminated material. Scrapers were hauling the dumped material to a contaminated stockpile. No other earthwork operations were being performed since the State inspector had prohibited further placement of contaminated fill until placed material could dry to a point where compaction requirements could be achieved.

The contractor has been having difficulty meeting the compaction requirements (90% of Standard Proctor maximum dry density) due to excessive moisture in the contaminated material. It should be noted that even greater difficulty would exist if the contractor were made to meet moisture requirements presently in the RAP. A request for modification of these requirements has just recently been sent by the DOE to the NRC for review and concurrence.

I reviewed testing records kept at the Clive site and found them to be adequate with regard to documentation detail and frequency of tests.

#### CONCLUSIONS:

1. In light of the fact that construction at Clive is well underway, every effort should be made to finalize, approve and implement the RAIP as soon as possible.

2. Although a request for modification of moisture requirements for placement of contaminated fill has just been received by the NRC, the State has implemented the modified requirements from the beginning of fill placement. It is very likely that approval of this RAP change will be forthcoming. However, the State should be informed that the DOE and subsequently the NRC should receive early notification of any future proposed changes to avoid performance of potentially unapproved activities.
3. Regarding a non-earthwork related matter, it was brought to the NRC's attention during the Clive visit that restriction of access to the site has been lax, and that there have been incidents of unauthorized vehicles and personnel entering the construction area. This concern should be passed on by DOE to appropriate State personnel.
4. In general, the State's project management, inspection performance, and recordkeeping activities were found to be of high quality. No indications of generic problems, inadequacies, or other weaknesses that might impact the acceptability of remedial action were found.

John G. Themelis, Project Manager  
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 DE Martin

Dear Mr. Themelis:

Enclosed for your information and in accordance with the Memorandum of Understanding, are two copies of a report of an on-site construction review of the Salt Lake City project performed by Mr. Daniel Gillen of my staff on July 25, 1985. If you have questions regarding this report please contact me (FTS 427-4433) or Mr. Gillen (FTS 427-4160).

Sincerely,

Leo B. Higginbotham, Chief  
 Low-Level Waste and Uranium  
 Recovery Projects Branch  
 Division of Waste Management  
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 and Safeguards

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