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REPORT OF FINDINGS - WESTINGHOUSE, BLOOMFIELD, NEW JERSEY

On October 21, 1976, Howard Dickson, ORNL, and I visited Westinghouse, located at 1 Westinghouse Plaza, Bloomfield, New Jersey, to make a preliminary radiological assessment of areas utilized in the early 1940's for work under MED contract involving radioactive material. Operations at that time consisted of the production of small quantities of uranium metal by a photochemical reaction of U-oxide with potassium fluoride utilizing direct sunlight in large vats installed on the roof of Building 7. Process materials were transferred to the basement laboratory by gravity flow through a pipe which was stripped from the facility, along with other process equipment, at the conclusion of MED work. Some batch transfer of material was made to the basement via the elevator. The basement area included laboratory facilities and about six electrolytic pots for uranium purification. It is reported that production capacity for the operation was about 1 Ton-U per month, maximum.

During the visit, we were accompanied by Mr. C. W. Bickerstaff, Administrator of the Westinghouse Headquarters Industrial Hygiene Laboratory and by Mr. Dick Williams of the Bloomfield Plant. At the conclusion of the visit, findings were discussed with Mr. Harold J. Rourke, Plant Manager.

The following will summarize our findings and subsequent Westinghouse decontamination actions:

Radiological Status

On October 21, all areas known, or suspected, of having been involved in the MED work were surveyed including roof, elevator, basement lab, storage yard, and shipping dock areas. Readings indicating traces of residual contamination slightly in excess of USNRC guidelines were found in the basement on the floor, around columns, at drains, and at some wall/floor intersections. Samples scraped from these areas confirmed the contamination to be uranium. Several years ago, some lab scale work with thorium was done in the basement areas as part of Westinghouse R&D in the Lamp Division. On other floors of this six-story building thorium is presently utilized by Westinghouse in



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ongoing lamp development under NRC License SMB-353. Elevated readings in the 1-2 mrad/hr range were also found under the shipping dock outside the building.

Decontamination

Subsequent to the ERDA survey, Westinghouse made its own survey and decontaminated all areas except certain basement floor drains and main support posts on the shipping dock. The attached Westinghouse survey report documents the post-decontamination condition of the MED areas in and around Building 7. It is evident that further decontamination would not be cost effective in further reducing the already minimal potential for radiation exposure to personnel under present and foreseeable conditions of building use.

Conclusions

It is concluded that:

- (1) The Westinghouse survey is an adequate documentation of radiological conditions in former MED contract areas.
- (2) Decontamination by Westinghouse has been effective in reducing residual contamination to levels as low as is reasonably achievable.
- (3) Since certain basement drains and connecting subfloor piping and some loading dock support members are contaminated with uranium above NRC unrestricted use guidelines, measures are required to provide long-term control of these contaminated building components in case of future demolition.

Recommendation

It is recommended that NRC and the State of New Jersey be advised of the present radiological status of the former MED areas at the Westinghouse Bloomfield Plant, as documented by the enclosed report, so that either or both -- as appropriate -- may implement the necessary long range controls. It would seem most feasible, in our opinion, to expand the existing NRC license to include identified contaminated areas.

If HQ concurs in this recommendation, OR will provide copies of these reports to NRC and State officials for their information and action.



W. T. Thornton
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OSE:WTT

Enclosure:
Westinghouse Survey Report