



Westinghouse Electric Corporation

3 Gateway Center
Box 2278, Pittsburgh, Pa. 15230

May 14, 1968

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U. S. Atomic Energy Commission
Division of Compliance
Washington, D.C. 20545

Attention: Mr. L. D. Low, Director

Subject: Report of Exposure

Gentlemen:

Attached is a report covering the radiation exposure of a Westinghouse Electric Corporation employee. It occurred while the employee was working at the Astronuclear Laboratory at Large, Pennsylvania, operating under License 37-09442-02. Employee "A" was engaged in conducting radiochemical analyses of irradiated fuel samples. Information concerning the employee is presented on a supplementary sheet. The employee has been notified per 10CFR20.405(b).

Very truly yours,

Karl R. Schendel

Karl R. Schendel
License Administrator

Attachments: Report of Exposure and
Supplementary Sheet (2 copies each)

✓ cc: Mr. R. W. Kirkman
Region I, Division of Compliance, USAEC
970 Broad Street
Newark, New Jersey 07102

E/7

10-15-1968

Westinghouse Electric Corporation
P. O. Box 2278
Pittsburgh, Pennsylvania 15230

REPORT OF EXPOSURE

EMPLOYEE "A"

5/14/68

In the report from R. S. Landauer, Jr. & Co. to the Westinghouse Astronuclear Laboratory, dated April 15, 1968, it was indicated that Employee "A" had received an exposure to the hands of 6900 mR gamma and 13,440 mrad beta during the month of March, which was in excess of the quarterly limit specified in 10CFR20.101. The whole body exposure of Employee "A" was 170 mR gamma and 230 mrad beta. This individual had no previous exposure during the quarter.

The exposure occurred during the radiochemical analysis of irradiated fuel material. A radiation survey showed that the radiation levels involved ranged from 0.8 R/hr to 4.1 R/hr gamma at four inches from the sample, as measured by a portable survey meter. At the time of the survey, it was estimated that the length of time required to perform the work would be short enough so that the hand exposure would be well within the permissible level. Such was the case for another employee. Most of the unexpected exposure is believed to have occurred during the removal of the samples from the small "pill boxes" in which they were shipped. The lids were stuck on some of the boxes, requiring extra time to open them. This operation was performed by the technician with his hands while wearing rubber gloves.

The analyses of the samples have been completed. However, if similar work is to be done in the future, an improved technique will be used. A subsequent, detailed examination of the operation revealed an alternate method utilizing a remote handling technique. The "pill boxes" are made of a steel alloy which can be held in place by a magnet. Another magnet, fastened to a long shaft, can be used to lift the lid from the "pill box." Since the direct handling of samples would not be required, the use of somewhat cumbersome, lead-impregnated gloves would not pose a problem. By utilizing the extra shielding supplied by lead-impregnated gloves, the hand exposure can be reduced significantly. This is especially true for the high beta exposure.

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SUPPLEMENTARY SHEET

REPORT OF EXPOSURE

EMPLOYEE "A"

5/14/68

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The individual identified as Employee "A" in the attached "Report of Exposure, Employee "A", dated 5/14/68, is [REDACTED] a Westinghouse Electric Corporation employee, Social Security Number [REDACTED] At the time of the exposure [REDACTED] was working at the Westinghouse Astronuclear Laboratory at Large, Pennsylvania under License 37-09442-02.