

AUG 18 1969

Jack R. Roeder, Chief, Materials Inspection and Enforcement Branch, Division of Compliance, HQ

**COMPLIANCE INQUIRY MEMORANDUM**  
**WESTINGHOUSE ELECTRIC CORPORATION**  
**BOX 2278**  
**PITTSBURGH, PENNSYLVANIA 15230**  
**LICENSE NO. 37-09442-01**  
**EXPOSURE**

Transmitted herewith, for your information, is a report of an inadvertent exposure of 17.4 R to a film badge which was not being worn at the time of exposure.

On August 8, 1969, Mr. A. P. Sabo, Staff Advisor for Westinghouse Nuclear Energy Systems, made a telephone report to CO:I of the following facts: The licensee suspected that an employee, ██████████ might have received a 17.4 rem whole body gamma exposure on July 7, 1969 while calibrating instruments with a 30 curie cobalt-60 sealed source. The licensee was notified, on August 1, 1969, by R. S. Landauer and Company of the exposure to ██████████ film badge.

On August 11, 1969, CO:I received a telegram, dated August 8, 1969, from the licensee confirming Sabo's telephone report. A copy of the telegram is attached to this memorandum as Exhibit A.

On August 11, 1969, C. Coner of CO:I telephoned Sabo to determine what additional information might have been uncovered since Sabo sent his last message to CO:I. Sabo informed Coner that Mr. M. Beebe is the licensee's RSO and that he (Sabo) was requested, on August 8, 1969, by the Manager, Astronuclear Laboratory, to investigate the suspected over-exposure. He stated that he had met with members of the licensee's Isotope Committee on August 8 and the Committee was at the time of Coner's call again in session discussing the matter.

Sabo stated that the facts of the matter were as follows: The licensee first became aware of the exposure on August 1, 1969, when an R. S. Landauer employee telephoned Beebe and informed him that the film badge assigned to ██████████ had been exposed to 350 millirems of neutrons and 7,400 millirems of hard gamma radiation during the June 23 - July 4, 1969 wearing period. On the same day Beebe determined that ██████████, a mature well-trained technician, had worn a pocket dosimeter each day during this period and his pocket chamber had never read greater than 200 milliroentgens.

Information in this record was deleted  
in accordance with the Freedom of Information Act, exemption

1200-377 CONER:jd  
FOIA-  
DATE 8/18/69

He asked [redacted] if he could account for the reported exposure to his film badge. [redacted] recalled to the best of his ability his activities during this time period and concluded that the film badge had been exposed in the following manner: At the end of the day on Thursday, July 3, 1969, he had hung his lab coat, with the film badge clipped to the lapel, on a hook in the calibration trailer. He should have removed the film badge and placed it in a film badge rack but he did not do this. Between Thursday evening and Monday morning, a health physics technician collected all the film badges, for the period June 23 - July 4, 1969, that had been placed in the film badge rack. The technician replaced the old badges with new badges, of a different color, for the issue period of July 7 through 18. On Monday morning [redacted] picked up his new-issue film badge, a fresh lab coat, and some radiation survey meters which were scheduled for calibration that morning. He went to the calibration trailer and accomplished the calibrations taking 30 to 45 minutes of exposure time. When the 30 Ci Co-60 source was in the exposed position it was approximately 3' from the hook on which [redacted] had hung his lab coat and film badge. Later in the day, [redacted] recalled, a health physics technician asked him to turn in his old film badge. He unclipped the old film badge from the lab coat, with no thought of the exposure it must have received that morning, and delivered it to the health physics office.

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Sabo stated that, if the normal routine had been followed, [redacted] film would have been mailed, with the other late-turn-ins, to Landauer on Wednesday, July 9, 1969. However, he stated, for some unknown reason the film was not sent to Landauer until July 18, the last day of the next issue period. Sabo stated that Landauer probably received the film on the following Monday, July 21, 1969. Again, under normal circumstances, Landauer would have developed and evaluated the film on the same day or on the following day. In fact, Landauer did not read the film until August 1, 1969, and informed Beebe of the exposure on that date.

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As previously reported, Beebe concluded after investigating the matter that [redacted] had not worn the badge during exposure and the incident was therefore not reportable. Sabo stated that no further action would have been taken except that [redacted] after considering the matter for a week, reported to Beebe on August 7, 1969, that it was possible that his recollection of events on July 7, 1969 had been faulty. He told Beebe that he may in fact have been wearing his June 23 - July 4 film badge on July 7 and have forgotten to retract the source after calibration.

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Sabo stated that when Beebe heard this report from [redacted] he immediately notified management and an inquiry was scheduled for the following day. Sabo stated that all the available facts were presented to him and to the Isotope Committee. He stated that Beebe had asked Landauer for a re-evaluation of the film badge with the hope that its exposure pattern might indicate whether the film badge had been exposed at random angles as one would expect had the badge moved about on [redacted] lab coat or if

Exh

it had been exposed at a single angle as would be the case with the badge hanging in a fixed position relative to the source. Landauer reported that no such determination could be made because of the magnitude of the exposure. Incidentally, they also reported that the 350 millirems of neutron exposure, which was originally reported, was in error; there had been no neutron exposure to the film.

Sabo stated that it was his opinion and the consensus of the Committee that it was far more probable that the exposure of [redacted] film badge had resulted from the events that [redacted] had originally described than from the events that he had described on August 7, 1969. He stated that their belief was based on the following considerations:

1. Beebe inspected the calibration facility on August 7, 1969 and found that the warning light system was operating properly (the red light was activated when the source was exposed).
2. [redacted] had not reported any malfunction of the facility since July 7, 1969.
3. If the warning light was functioning properly at the time of the incident it was thought to be unlikely that [redacted] who routinely used the facility, would have ignored the warning light.
4. If he had failed to retract the source his pocket dosimeter would have read off-scale.
5. If he had failed to retract the source on July 7 he would certainly have been aware of this fact when he again used the source and found it to be in the exposed condition.
6. [redacted] work record during the June 18 - July 4 period was examined and it revealed that [redacted] had had no other occasion to have been exposed in radiation fields above 5 mr/hr. In fact his pocket dosimeter record has never, since he was employed by the licensee, indicated an exposure above 200 mr.

Ex-6  
CO:I concurs with the licensee's conclusion that [redacted] did not in fact receive an exposure of 17.4 rem during the period of time described in this memo. CO:I considers the matter closed and will take no further action.

Paul R. Nelson

Senior Radiation Specialist

CO:I:CEC

Enclosure:

Exhibit A - Licensee Telegraphic Notification

CLASS OF SERVICE

This is a ~~fast~~ message  
unless its deferred char-  
acter is indicated by the  
proper symbol.

# WESTERN UNION

TELEGRAM

W. P. MARSHALL  
CHAIRMAN OF THE BOARD

R. W. McFALL  
PRESIDENT

SYMBOLS
DL - Day Letter
NL - Night Letter
LT - International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination.

627P EDT AUG 8 69 PA298

P NKA644 PDF TDNK MADISON PENN 8 544P EDT

THE ATOMIC ENERGY COMMISSION, DLY 75 PHONE 645-3960

REGION 1 DIVISION OF COMPLIANCE 970 BROAD ST ATTN MR CLEVELAND  
DIRECTOR I W KIRKMAN NEWARK NJER  
WESTINGHOUSE ASTRO NUCLEAR LAB IS REPORTING A POSSIBLE OVER  
EXPOSURE TO EMPLOYEE C FOR AN APPARENT EXPOSURE JULY 7 AS REPORTED  
BY FILM BADGE BENDER AUGUST 1ST THE POSSIBLE OVER EXPOSURE  
MAY HAVE OCCURRED WHILE THE INDIVIDUAL WAS CALIBRATING INSTRUMENTATION

USING A 30 CI CO-60 SOURCE IN THE WESTINGHOUSE ASTRO NUCLEAR  
LAB RADIATION CALIBRATION FACILITIES AT THE WOLTZ MILL SITE  
SOURCE POSSESS UNDER UFAEC LICENSE NUMBER 37-9442-1 EXPIRATION  
DATE AUGUST 31 1972 EMPLOYEE C IS [REDACTED] →  
A P SABO WESTINGHOUSE

C 7 1 30 CI CO-60 UFAEC 37-9442-1 31 1972 C SS 180-28-9388

F1201(R2-65)

Rec'd  
Do. T/F  
8/11/69