

Donald E. Warner, Acting Assistant
Director for Materials, Division of Compliance MAR 23 1961

Robert W. Kirkman, Director
Compliance Division, NYOO

TRANSMITTAL OF LICENSE COMPLIANCE INSPECTION REPORT -
10 CFR 20 - 30

CMP:EE

Transmitted herewith is the following reinspection report
involving noncompliance:

ALUMINUM COMPANY OF AMERICA
ALCOA RESEARCH LABORATORIES
Freeport Road
New Kensington, Pennsylvania

License No. 37-7653-2 w/amend. 1

The following items of noncompliance were noted during
the course of this inspection:

20.201 "Surveys"

- (b) - in that an inadequate evaluation has been made of the concentration of radioactive materials in the exhaust air released to the environments from the hood in the general chemistry laboratory caused by the evaporation to dryness of liquids containing radioactive waste materials. (See item 13B of report details.)

20.203 "Caution signs, labels and signals"

- (b) "Radiation Areas"
 - in that a radiation area, the radioisotope storage room, was not posted as required by this section.
 - in that a radiation area about the Sr-90 beta thickness gauge was not posted as required by this section. (See item 13B and 17 of report details.)

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20.206 "Instruction of personnel; posting of notices to employees"

- (a) - in that Anthony Kurucker, a mill operator using a 13.5 mc Sr-90 beta thickness gauge in a restricted area, has not been instructed as to radiation hazards in the restricted area where he works, nor has he been instructed in safety problems associated with exposure to radiation, nor with the Commission regulations. (See item 13A of report details.)
- (b) Neither a copy of the license, the regulations, or safety procedures have been posted at any location within the Alcoa Aluminum Foil Mill, nor is any file available for these employees to view these items. (See item 13A of report details.)
- (c) - in that Form AEC-3 was not posted at any location within the Alcoa Aluminum Foil Mill. (See item 13A of report details.)

20.401 "Records of surveys, radiation monitoring, and disposal"

- (b) - in that the licensee did not maintain records of surveys made by him under 20.201(b) of the area about the 13.5 mc Sr-90 beta thickness gauge. (See item 13B of report details.)

License Condition 10

- in that the 13.5 mc Sr-90 beta thickness gauge is used at an Alcoa Aluminum Foil Mill, a separate organization from the Research Laboratories, located one mile from the Laboratories. (See item 11 of report details.)

License Condition 18

- in that no copy of the licensee's administrative instructions was given to Kurucker, the user of a 13.5 mc Sr-90 beta thickness gauge, or to any person in the Alcoa Aluminum Foil Mill. (See item 13A of report details.)

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The items of noncompliance were discussed with Mr. John Lewis, RSO, and Dr. L. M. Foster, Chief, Physical Chemistry Division, a member of management. Lewis expressed annoyance with the regulations in the presence of Mr. A. Mammarelli, a representative of the State of Pennsylvania. Lewis stated that the regulations were petty and unduly restrictive, and that they required him to perform too many clerical tasks. Lewis stated, however, he would comply with the regulations. Foster was advised of the regulations and informed that the item of noncompliance, 20.201(b), Failure to evaluate the concentration of radioactive materials released to the environs caused by the evaporation of waste solutions, had occurred during our initial inspection. It was also pointed out to Foster and Lewis that during our follow-up inspection of 7/21/59 they had stated that such evaporations had ceased, and that if they were resumed they would have a proper evaluation made. This was also confirmed in their letter to DL&R dated 6/12/59. Foster stated that they would comply with the regulations but that he would prefer to have a letter from the Commission detailing the items of noncompliance. No citation is being made for Part 20.106 "Concentration in effluents to unrestricted areas" regarding the licensee's release of tritium gas to the atmosphere because the licensee did not exceed the limitation in Appendix B, Table 2 which existed in old 10 CFR 20. The licensee should be advised however that he will approach or exceed the limitation for the release of tritium gas to the environs imposed in new 10 CFR 20.

With regard to the evaporation operation, we wish to note that a new room and different type exhaust hood was used during the present evaporation operation. The present exhaust hood used to evaporate waste solutions has an air flow of only 150 cfm. This air flow rate may be insufficient to exhaust the vapors from the waste solution to the environs if the hood window is not kept closed during waste evaporations. Also there is the strong possibility that once the material is evaporated, handling of the concentrates in this hood could cause an individual to be exposed to airborne contamination. As noted in the report details, the waste solution contains Hg-203. Mercury besides being radioactive is also a toxic material. We feel that the licensee should be advised to evaluate his

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procedures in evaporating waste solutions in an exhaust hood with a low air flow rate.

A hazard exists and a follow-up inspection will be made.

We recommend that the licensee, Dr. L. M. Foster, be informed of the items of noncompliance and be required to take corrective action to the satisfaction of the Commission.

Enclosure:

4 cys of Rpt.