

ALUMINUM COMPANY OF AMERICA

P.O. BOX 772 - NEW KEN: TON, PA.

ALCOA RESEARCH LABORATORIES



ALCOA

February 23, 1971

Mr. Phillip C. Jerman
U. S. Atomic Energy Commission
Division of Compliance, Region 1
970 Broad Street
Newark, N. J. 07102

RE: BYPRODUCT MATERIAL LICENSE NO. 37-07653-02

Dear Mr. Jerman:

Reference is made to your inspection findings at the Alcoa Research Laboratories on February 11, 1971 concerning the captioned license. We appreciate the grace period you extended us in order to complete our file records as prescribed in 10CFR 30.51 and 10CFR 31.105(c). I have included various documents with reference numbers for your inspection.

A Texas Nuclear Corporation Model 465 analyzer for x-ray fluorescence studies with two sealed sources, 30 mc of Plutonium-238 and 500 mc of Promethium-147, was rented for a period extending from March 28, 1969 to December 8, 1969, at which time they were returned to the manufacturer as shown in the following schedule, under item 7.

The movement of the sealed sources, in question, within the company are listed as follows, with reference numbers as indicated:

1. Analyzer with Pu-238 sealed source received from Texas Nuclear - March 28, 1969, reference sheet #1.
2. 500 mc Pm-147 sealed source received from Texas Nuclear - May 13, 1969, reference sheet #2.
3. Analyzer with Pu-238 sealed source shipped to our exploration office in Phoenix, Arizona - May 23, 1969, reference sheet #3.
4. Analyzer with Pu-238 sealed source was shipped from our Phoenix office to Texas Nuclear Corporation for instrumentation adjustments - June 23, 1969, reference sheet #4.
5. Analyzer with Pu-238 sealed source was returned to our Phoenix office from Texas Nuclear - August 12, 1969, reference sheet #5.

6. Analyzer with Pu-238 sealed source was returned to these laboratories from our Phoenix, Arizona exploration office on or about October 15, 1969.
7. The analyzer with Pu-238 and Pm-147 sealed sources was returned to Texas Nuclear Corporation - December 8, 1969, reference sheet #6.

I have also included, for your inspection, a copy of our Arizona Radioactive Material License, reference sheet #7, and a letter from William N. Kelley to Dr. Raymond Kramer reporting the performance of the instrument, and of interest to you. This letter contains a paragraph stating that the instrument was not used in the field; reference sheet #8. The gauging device including the sealed source was never used in Utah.

I have also included copies of my completed file cards, reference sheets #9 and #10.

Although wipe tests are required for the sealed sources, it was felt that this was unnecessary since from June 23, 1969 to August 12, 1969 the instrument (including the Pu-238 sealed source) was in the hands of the manufacturer. Since the gauge was shipped to our office in Phoenix, Arizona, and not available for use at these laboratories, the Pm-147 sealed source was kept in storage at these laboratories. A report from our geologist at our Exploration office in Phoenix, Arizona, revealed that the instrument was unacceptable for their application and further studies at these laboratories were unnecessary.

Another point of concern found during your inspection was the leak testing of a Nuclear Chicago Model 5120 density gauge containing a 2000 mc Cesium 137 sealed source at our Logans Ferry plant. The gauge was received from Texas Nuclear on December 17, 1969 and installed on May 5, 1970, reference sheet #11. Installation was made by a field engineer of the manufacturer. The leak testing service of the gauge has been provided as noted on the purchase order requesting this service, reference sheet #12.

Due to a change in personnel at our plant, leak testing and installation certificates are unavailable. I am in the process of procuring these documents from the manufacturer but believe the afore-mentioned documents will provide the necessary information for the insuring of a certificate denoting "no item of noncompliance was found" during your inspection.

Again we wish to express our gratitude for your understanding in the handling of this matter and hope to see you during our next inspection.

Very truly yours,


ROBERT C. GEIGER
Radiation Safety Officer

RCG:ES
Attachments: 12