

Office Memorandum • UNITED STATES GOVERNMENT

TO : G. W. MORGAN AND CECIL R. BUCHANAN DATE: February 9, 1957

FROM : *John N. Maddox*
John N. Maddox, Senior Technical Reviewer, Byproduct Licensing Branch
Isotopes Extension

SUBJECT: SOME PROBLEMS OR ITEMS WHICH SHOULD BE DISCUSSED WITH U. S. RADIUM
CORPORATION DURING CONTEMPLATED VISIT

SYMBOL: IEB:JNM

Their comprehensive license No. 37-30-2 is issued to U.S. Radium Corporation, Post Office Box 380, Bloomsburg, Pennsylvania, Attention: Mr. C. C. Carroll, Chairman, Radioisotope Committee (also General Manager Bloomsburg Division). Mr. H. H. Dooley, Chief Chemist and Mr. C. W. Wallhausen, Vice President, Morristown, New Jersey, Phone: Sterling 4-3510 should also be contacted.

- (1) As per our phone call to Dooley of February 5 they should submit an application to have their license amended to provide for field use, use in their various field offices and for customer demonstrations. Obtain information regarding lost or stolen sources in California.
- (2) We need to answer Wallhausen's letter of February 1 concerning his misunderstanding that their present license continued the arrangement established on Authorization Nos. 22212 and 24365 for the loan of various sealed sources to his customers and return to U.S. Radium within 30 days. These two authorizations are not in effect since Amendment No. 1, Condition 13 to their present license superseded these authorizations on August 7, 1956. The normal expiration date on these authorizations was December 31, 1954 and September 30, 1955 respectively. However, Authorization No. 24365 was extended to expire on March 31, 1957. It is believed that Wallhausen had learned from Mr. Eisler at Rock Island Arsenal, Illinois that we had written Mr. Eisler a letter stating that U.S. Radium could not loan him sources without him possessing a specific license.
- (3) Their license should also be amended to add Condition Nos. 15, 16, and 17 for broad license leak testing clauses concerning beta and/or gamma sources, alpha sources and requirement of reporting over exposures or losses of materials.
- (4) Should investigate whether or not they have continued their old arrangement of sending tritium to Radiation Research Corporation, Florida and subsequent return without Radiation Research Corporation being appropriately licensed. CEC's letter of August 6, 1954 to Wallhausen regarding Authorization No. 24365 had okayed this arrangement.

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- (5) Charlie Ferrell has stated that he needs to receive a number of LAB drawings and information concerning their sealed sources in order to complete his catalog. He will list these items separately.
- (6) LAB-62-B is their drawing for Polonium 210 - Beryllium neutron sources containing up to 500 millicuries. The method of fabrication, involved equipment and instrumentation and procedures utilized should be gone over very carefully with this group. At one time they were separating Polonium 210 themselves from irradiated bismuth. They were directed by CEC to procure a satisfactory neutron survey meter. I have not been able to determine whether or not this instrument was procured. Their application for polonium had also requested permission to procure fabricated neutron sources up to 10 curies each. Undoubtedly these will be procured from Mound Laboratory. It is my understanding that Isotope Specialties is the only other concern fabricating polonium beryllium neutron sources.

When?

yes

- (7) Should discuss with them their present waste disposal procedures versus our latest Part 20. Most of their material is being returned to ORNL, however, some of it is being stored in a concrete well.
- (8) Discuss in detail their recommended procedures for leak testing tritium, Krypton 85, Polonium 210 foil and neutron sources.
- (9) Over the years they have consistently attempted to obtain the latest information from the Isotopes Extension concerning the present and future pricing and availability of a number of isotopes. Therefore, individuals visiting this group should be prepared to either answer or avoid policy decision questions concerning the following radioisotopes: Polonium 208, Americium 241, Promethium 147, Tritium, Krypton 85, Nickel 63, Nickel 62 (stable), Iron 55, Zinc 65, Actinium 227, Vanadium 49, Selenium 75, Cadmium 109, Lanthanum 138 and any other isotopes which they may presently be interested in. Wallhausen will undoubtedly question the status of the Commission reviewing the possibility of increasing the present maximum procurement limit of 5000 curies of tritium. It is my understanding that Joe Machurek wishes to raise this by a factor of 10³. *We have applied for 500,000 curies*
- (10) It is recommended that a detailed inspection visit be made at the same time. *Pending*
- (11) Only license and RSB folder (maybe general institution correspondence files) need be reviewed prior to visit. I spent a number of hours condensing and consolidating our records.