KAWECKI BERYLCO INDUSTRIES, INC.

P. O. Box 429, Hazleton, Pennsylvania 18201
Telephone: 717 / 455-4913

August 9,1973

U.S.Atomic Energy Commission
Washington, D.C. 20545

Attention: Isotopes Branch, Division of Materials Licensing

Gentlemen:

Enclosed are completed copies of Form AEC-313 requesting renewal of Byproduct Material License 37-07676-02.

Please note that License 37-07676-02 was issued to The Beryllium Corporation. On October 15,1968, The Beryllium Corporation merged with Kawecki Chemical Company to form Kawecki Berylco Industries, Inc. All the radioactive sources and their uses remained the same after this merger as outlined in previous applications submitted by The Beryllium Corporation and in this applications submitted by Kawecki Berylco Ind.

Very truly yours,

Edmund M. Velten
Vice President

EMV:dm
Enclosures

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Form AEC-313
8-64
10 CFR 30

UNITED STATES ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved
Budget Bureau No. 38-R0027

INSTRUCTIONS.—Complete Items 1 through 16 if this is an initial application or an application for renewal of a license. Information contained in previous applications filed with the Commisson with respect to Items 8 through 15 may be incorporated by reference provided references are clear and specific. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail two copies to: U.S. Atomic Energy Commission, Washington, D.C., 20545, Attention: Isotopes Branch, Division of Materials Licensing. Upon approval of this application, the applicant will receive an AEC Byproduct Material License. An AEC Byproduct Material License is issued in accordance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30, and the Licensee is subject to Title 10, Code of Federal Regulations, Part 20.

1. (a) NAME AND STREET ADDRESS OF APPLICANT. *(Institution, firm, hospital, person, etc. Include ZIP Code.)*

Kawecki Berylco Industries, Inc.
P.O.Box 429
Hazleton, Pennsylvania 18201

(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. *(If different from 1 (a). Include ZIP Code.)*

Kawecki Berylco Industries Inc.
P.O.Box 1462
Reading, Pennsylvania 19603

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

Analytical Laboratory

3. PREVIOUS LICENSE NUMBER(S). *(If this is an application for renewal of a license, please indicate and give number.)*

37-07676-02

4. INDIVIDUAL USER(S). *(Name and title of individual(s) who will use or directly supervise use of byproduct material. Give training and experience in Items 8 and 9.)*

Kenneth J. Betz

5. RADIATION PROTECTION OFFICER *(Name of person designated as radiation protection officer if other than individual user. Attach resume of his training and experience as in Items 8 and 9.)*

Paul C. Kempchinsky

6. (a) BYPRODUCT MATERIAL. *(Elements and mass number of each.)*

Antimony 124

(b) CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM NUMBER OF MILLICURIES OF EACH CHEMICAL AND/OR PHYSICAL FORM THAT YOU WILL POSSESS AT ANY ONE TIME. *(If sealed source(s), also state name of manufacturer, model number, number of sources and maximum activity per source.)*

= 2 sealed sources - 250 millicuries each
(.U.S.Nuclear 3130 or 3200 or AECL RC-3, RC-5, RC-8, SRC-3 or C-129M)

7. DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED. *(If byproduct material is for "human use," supplement A (Form AEC-313a) must be completed in lieu of this item. If byproduct material is in the form of a sealed source, include the make and model number of the storage container and/or device in which the source will be stored and/or used.)*

Used in a Boulder Scientific Co. Model 200 Beryllium Analyzer for analysis of beryllium samples.

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(Continued on reverse side)

TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 *(Use supplemental sheets if necessary)*

8. TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING	ON THE JOB (Circle answer)	FORMAL COURSE (Circle answer)
a. Principles and practices of radiation protection	see attached sheet		Yes No	Yes No
b. Radioactivity measurement standardization and monitoring techniques and instruments			Yes No	Yes No
c. Mathematics and calculations basic to the use and measurement of radioactivity			Yes No	Yes No
d. Biological effects of radiation			Yes No	Yes No

9. EXPERIENCE WITH RADIATION. *(Actual use of radioisotopes or equivalent experience.)*

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
		see attached sheet		

10. RADIATION DETECTION INSTRUMENTS. *(Use supplemental sheets if necessary.)*

TYPE OF INSTRUMENTS (Include make and model number of each)	NUMBER AVAILABLE	RADIATION DETECTED	SENSITIVITY RANGE (mr/hr)	WINDOW THICKNESS (mg/cm²)	USE (Monitoring, surveying, measuring)
Victoreen Model 490 Meter w/a Victoreen Model 489-35 Alpha-Beta-Gamma Probe	1	Alpha Beta Gamma	Gamma Sens. 800 cpm in a 2 mR/hr gamma field	Mica 1-4 mg/cm^2	Monitoring

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE.

Every three months by Applied Health Physics, Inc., Bethel Park, Pa.

12. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED. *(For film badges, specify method of calibrating and processing, or name of supplier.)*

Film badges changed monthly. Badges supplied by R.S. Landauer, Jr., & Co.

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS IN DUPLICATE

13. FACILITIES AND EQUIPMENT. Describe laboratory facilities and remote handling equipment, storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached. *(Circle answer)* Yes No

14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source.

15. WASTE DISPOSAL. If a commercial waste disposal service is employed, specify name of company. Otherwise, submit detailed description of methods which will be used for disposing of radioactive wastes and estimates of the type and amount of activity involved.

CERTIFICATE (This item must be completed by applicant)

16. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART 30, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

Kawecki Berylco Industries, Inc.

Applicant named in item 1

Date August 9, 1973

By: Edmund M. Velten

Edmund M. Velten
Vice President

Title of certifying official

U.S. ATOMIC ENERGY COMM.
REGULATORY
BRANCH
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WARNING.—18 U. S. C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

Attachment to Application for By-product Material License

Item 8:

Paul C. Kempchinsky	Bachelor of Arts in Chemistry University of Pennsylvania 1954 Radiological Safety Training Course T-1 conducted by Boulder Scientific Co., Boulder, Colorado Radiation Physics & Radiological Safety Course, Engineer's Club of Phila., Pa. December 1965 (12 hours)
Kenneth J. Betz	Bachelor of Arts in Chemistry Albright College, 1939

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Item 9:

Paul C. Kempchinsky	2 years experience Ce 137, 25 mc sealed source in a Industrial Nucleonics Model LS-10-A dource unit. 10 years experience, Sb 124, 250 mc sealed source in a Boulder Scientific Model 200 Beryllium Analyzer.
Kenneth J. Betz	8 years experience, Sb124, 250 mc sealed source in a Boulder Scientific Model 200 Beryllium Analyzer 10 years experience X-ray diffraction analysis.

Item 13:

Reference layout sketch filed with this application.

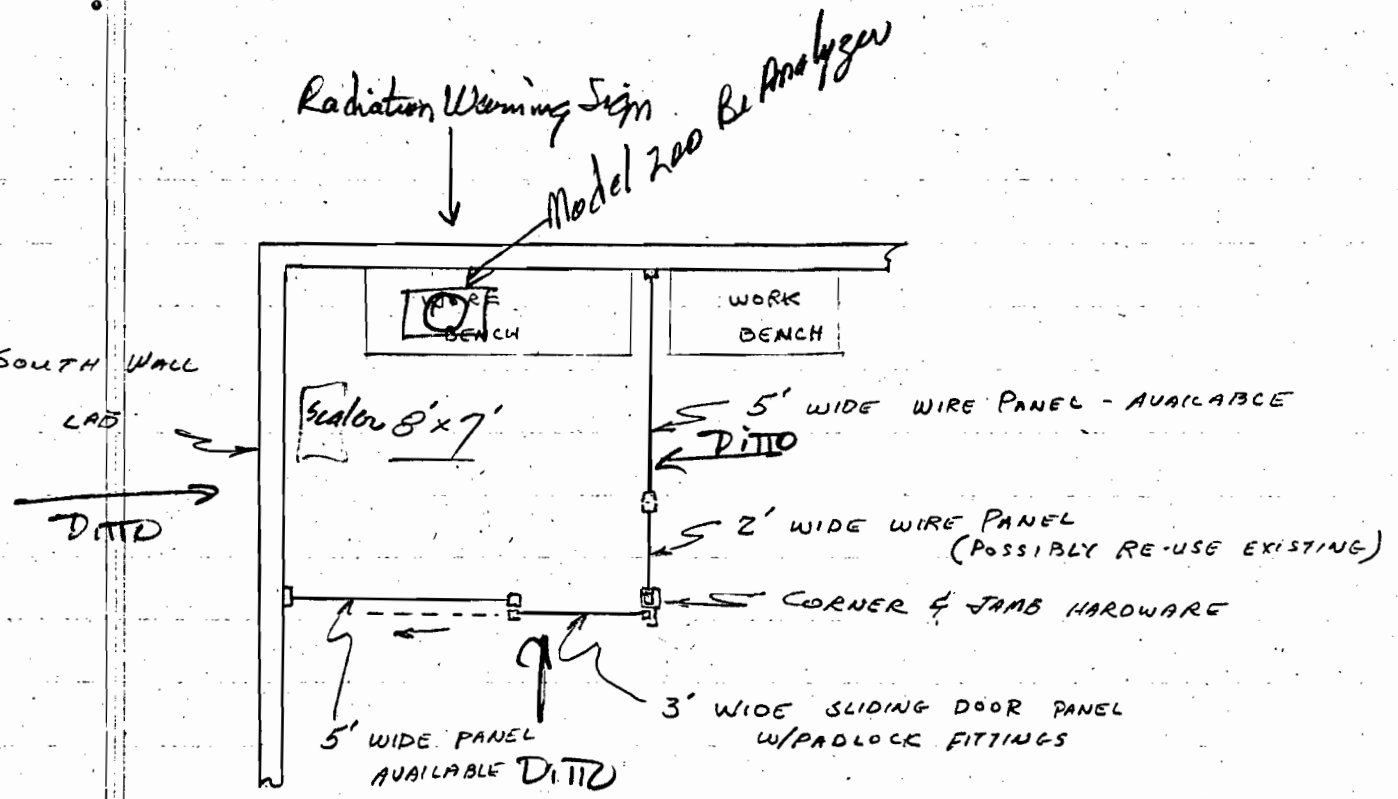
Item 14:

Reference Administrative instructions to personnel for Radiation Protection filed with this application. Leak testing will be performed by Boulder Scientific Company.

Item 15:

Spent Antimony 124 sources will be returned to Boulder Scientific Company for disposal.

4/2/68



5' WIDE x 7' HIGH PANELS AVAILABLE FOR RE-USE.

ONE PANEL 2' WIDE AVAILABLE, BUT IS NOT IN GOOD CONDITION

NEW ITEMS NEEDED

3' WIDE x 7' SLIDING DOOR W/TRACK, HDWRE —	57.23
CORNER JAMB POST & HARDWARE —	12.47
	$69.70

IF NEW 2' WIDE x 7' HIGH FILLER PANEL IS NEEDED, COST IS ONLY $17.30. I'D RECOMMEND A NEW ONE AS THE ONE WE HAVE IS BENT & WARPED - WOULD COST MORE TO STRAIGHTEN THAN THE NEW ONE.

COULD BE INSTALLED IN ONE DAY - APPROX. $100.00 INST. COST

RAW

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Administrative Instructions for the Model 200 Beryllium Analyzer

A. Supervisor of use of sealed Antimony 124 source:

Kenneth J. Betz

B. Radiation Protection Officer:

Paul C. Kempchinsky

C. Training requirements for individual users of Model 200 Beryllium Analyzer:

A formal course and/or on-the-job training in radiation safety and safe application of the Model 200 Beryllium Analyzer, manufactured by the Boulder Scientific Company, and a thorough knowledge of all present and future A.E.C. rules and regulations pertaining to the use of by-product materials.

D. Characteristics of the Model 200 Beryllium Analyzer:

This instrument is designed to detect beryllium in various types of solids and liquids using Antimony 124 as a source of gamma radiation and measuring neutrons with suitable electronic circuitry.

The Beryllium Analyzer contains a sealed Antimony 124 source equal to or less than 250 millicuries. The principle radiation is a 1.71 Mev gamma ray and it has a half life of 60 days.

E. Operational instructions for the Model 200 Beryllium Analyzer:

1. The areas of potentially dangerous radiation are directly above the source unit and in front of the slide ports. Therefore these areas must be covered at all times with the lead discs and either the sample or blank slide.

2. When converting the source unit from the shipping or storage condition to the use condition, care must be taken to perform this operation as rapidly as possible. The 6 1/8 inch diameter lead plug can be removed and the detector unit inserted into the device in less than 10 seconds.

3. When changing slides, one slide must be used to displace the other slide.

4. When converting the device from the use condition to the storage condition, the slide must be in the RADIATION OFF position to accept the 3/8 inch rod attached to the removeable lead plug.

16. A shield containing a spent sealed source will be decontaminated for beryllium contamination prior to shipment. Swipe samples will be taken to assure complete beryllium decontamination.

17. The counting equipment will be removed from the restricted area for any maintenance work.

18. The receiving department will arrange to have all shields containing the sealed source delivered immediately to the laboratory following its receipt on plant site. Shields containing sealed sources will not be stored by the receiving department.

19. The shipping department will arrange to have shields containing spent sealed sources picked up from the laboratory and delivered to the shipping department just prior to the pick up by the common carrier. Shields containing sealed sources will not be stored by the shipping department.

20. The Radiation Protection Officer will be notified at once in case of a fire either in the restricted area or in the vicinity of the restricted area during off hours.

F. Personnel monitoring and records:

1. The film badge must be worn at all times when operating the Beryllium Analyzer Model 200. The film badge will be attached to the uniform at chest or neck height.

2. Records will be kept on the monthly dosage to operating personnel as reported by the film badge service. These records will be retained by the Radiation Officer.

3. Records will be kept of the date of receipt of a new source, its strength in mc, the type of source, and the date of last wipe test. Wipe test information will be supplied by Boulder Scientific Co.

4. Records will be kept of surveys performed as outlined in paragraphs E-13, E-14, E-15, G-2, and G-5f of these instructions.

G. The following procedure must be followed in the event of an accident involving the shield containing the sealed radioactive source:

1. Check immediately the condition of the shield containing the sealed source without excessive exposure to radiation.

2. Post a man outside the restricted area to keep unauthorized personnel at a safe distance until the radiation can be checked with the surveying instrument.

3. In the event the shield is damaged the area around the restricted area will be marked in such a way as to restrict the passage of unauthorized personnel to the area until the extent of damage and/or the location of the sealed source is ascertained.

4. In the event the sealed source is freed from the lead shield, the area will be roped off and the source will be found and replaced in the shield or another suitable container by use of a long handled device and shipped back to Boulder Scientific for disposal.

5. In the event that the sealed source is damaged along with the lead shield, the following steps must be taken:

   (a) Follow steps G-1 and G-2 above.

   (b) Using the surveying device, outline the area of radiation levels above 2 mr/hr and mark the area.

   (c) Using the surveying device, locate the by-product material.

   (d) Collect by-product material using equipment such as long handled shovels, etc., to reduce the radiation hazard to personnel collecting material.

   (e) Place collected by-product material in a suitable container for disposing of the radioactive materials by Boulder Scientific Co., 250 Pearl St., Boulder, Colorado.

   (f) Resurvey the area to make sure no radioactive material remains.

6. In the event of an emergency, the following must be notified immediately:

   Radiation Protection Officer, Paul C. Kempchinsky

   and the Manager, Region I, Division of Compliance, USAEC, 970 Broad St., Newark, N.J., 07102 (Phone - 201-645-3960) will be contacted in accordance with the rules and regulations set forth in Title 10, CFR, Sections 20.402 and 20.403.