HQ-9401
(9-66)

# INTERMEDIATE ACTION FORM

REFERENCE NUMBERS

Source & SNM Licenses

| 01. PROG. CODE | 03. DOCKET NO. | 09. TASK NO. | 42. PURPOSE OF TASK | 12. CONTROL NO. | 15. LICENSE NUMBER |
|---|---|---|---|---|---|
| 62 | 40-6940 | 3937 | Amendment | 3937 | SMB-920 |

18. APPLICANT: Kaweck Berylco Industries, Inc.

54. AM. NO. RESULTING FROM TASK:

21. STREET & BUILDING: P. O. Box 60

45. CLASSIFICATION: U

63. ASG. TO:

24. CITY: Boyertown

27. STATE: Penn.

30. ZIP: 19512

| 33. RECEIVED | | | 36. ISSUED | | | 39. EXPIRED | | |
|---|---|---|---|---|---|---|---|---|
| YR. | MO. | DAY | YR. | MO. | DAY | YR. | MO. | DAY |
| 69 | 12 | 22 | | | | | | |

57. APPLICANT'S COMMUNICATION DATED

| YR. | MO. | DAY |
|---|---|---|
| 69 | 12 | 19 |

59. ENCLOSURES

58. DESCRIPTION (MUST BE UNCLASSIFIED)

Ltr. 12/19/69 req. amendment of SMB-920.

60. DISTRIBUTION

1-PDR
1-Compliance (Region)

## INTERMEDIATE ACTIONS

| TYPE | ON YR. | ON MO. | ON DAY | ACTIV. 92 | RETURNED YR. | RETURNED MO. | RETURNED DAY |
|---|---|---|---|---|---|---|---|
| ADDL. INFO. REQUESTED FROM APPLICANT | 91 | | | 1 | 93 | | |
| REFERRED TO: | 94 | | | 95 2 | 96 | | |
| REFERRED TO: | | | | | | | |

OTHER REFERRALS

| DATE YR. | DATE MO. | DATE DAY |
|---|---|---|
| 69 | 12 | 26 |

Nussbaumer
w/file cy. & folder

ACKNOWLEDGED
DO NOT REMOVE

RECEIVED
DEC 22 1969
U.S. ATOMIC ENERGY COMM.
KBI

# KAWECKI BERYLCO INDUSTRIES, INC.

P. O. Box 60, Boyertown, Pennsylvania 19512
*Telephone:* 215 / 367-2181

December 19, 1969

Division of Materials Licensing
U.S. Atomic Energy Commission
Washington, D.C.

Attention: Mr. Don F. Harmon

Re: Amendment of Source Materials License SMB-920: Docket No. 40-6940.

Regulatory File Cy.

Gentlemen:

It has become necessary for us to request an amendment of our license SMB-920 to permit small scale experimental processing of columbium-tantalum ores (e.g. Thaisarco slags) at our Boyertown plant. These slags contain trace quantities (0.08% uranium; 0.3% thorium) as unwanted impurities. We are currently authorized to store these and other slags containing source materials at this plant; however, we need to use certain specialized equipment and facilities at Boyertown in order to perfect processing methods and establish practical procedures for controlling the source materials.

In preparation for pilot plant processing of these slags at Boyertown, we have drawn up the following preliminary plans for the control of the source materials:

1. Storage. Slags containing source materials will be stored within a warehouse at the Boyertown plant and in areas properly designated and restricted for radioactive materials as per 10-CFR-20. Appropriate radiation warnings will be posted. Adequate precautions are taken to prevent unauthorized entry or removal of these materials.

2. Processing of columbium-tantalum slags will be in small batches (up to 100 lbs.) and may involve such operations as grinding, acid treatment, washing and solvent extraction.

DOCKETED
USAEC
DEC 22 1969
REGULATORY
MAIL SECTION
DOCKET CLERK

3. Health physics measures to evaluate and control source materials will include the following:

   (a) radiation surveys of storage, processing and waste treatment operations. Direct measurements will be made of surfaces, air, liquid and settled dust samples will be collected. These samples will be analyzed and reviewed by health physics personnel from Applied Health Physics, Inc.

   (b) Personnel directly involved in the processing operation will wear protective clothing as recommended by the Radiation Safety Officer including respirator protection (Willson ultra filter respirator half-mask or full face); gloves, coveralls, hats and shoe covers. All personnel will receive specific instructions on contamination control, use and care of protective equipment, and be issued radiation monitoring devices if radiation levels are expected to reach 25% or more of the MPC and/or MPE limits. Bioassay samples (urine) will be collected and analyzed as recommended by the consultant health physicist. Film badge monitoring may be provided as determined by the consultant health physicist after initial monitoring of the slag and review of the processes.

4. Waste Disposal. Special attention will be paid to the sampling and evaluation of all wastes produced in the processing of Thaisarco slags. Radioactive wastes will be consolidated on site or at the Reading Plant for possible disposal. All disposal of wastes containing source materials will be in compliance with 10-CFR-20 and conditions of our AEC license.

5. Documentation of all operations involving significant concentrations of natural thorium and/or uranium will include the following records and reports:

   (a) Receiving records will specify the quantity of slag or ore received and date received.

   (b) Assay records will document the concentration of source materials present.

(c) Air sample data will indicate type sample (breathing zone, general room air or environmental) time, date, location and description of process sampled; total volume of air and concentration of uranium or thorium in c/cc.

(d) Surface contamination measurements will be made using an alpha gas proportional survey meter (Eberline PAC-3G). Removable radioactivity will be evaluated using smears (Type WP-1) analyzed for alpha activity as dpm/100 $cm^2$.

(e) Process samples will be taken at various stages of the pilot plant operations as a normal procedure for evaluating recovery efficiencies. Many of these samples will also be analyzed for radioactivity using gamma ray spectroscopy and other valid methods to evaluate concentrations of radioactivity in product and waste streams.

We will prepare a report summarizing the results of a health physics study of the pilot plant operations outlined above. This report will contain such recommendations as may be necessary to provide effective control of radioactive materials and compliance with AEC regulations. A copy of this report will be submitted to you for review and comment.

Your cooperation and assistance in authorizing the necessary amendment of our source materials license is appreciated. We hope you will not hesitate to contact us or our consultant health physicist, R.G. Gallaghar if any additional information is needed.

Sincerely,

KAWECKI BERYLCO INDUSTRIES, INC.

George J. Nessle

George J. Nessle
Technical Manager

/kmt