

Form AEC-313
(5-58)

ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved.
Budget Bureau No. 38-RO27.4.

INSTRUCTIONS.—Complete Items 1 through 16 if this is an initial application. If application is for renewal of a license, complete only Items 1 through 7 and indicate new information or changes in the program as requested in Items 8 through 15. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail three copies to: U. S. Atomic Energy Commission, Washington 25, D. C. Attention: Isotopes Branch, Division of Licensing and Regulation. 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.) Heyden Newport Chemical Corp. 290-300 River Drive Garfield, New Jersey	(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a).) Same as 1 (a)
2. DEPARTMENT TO USE BYPRODUCT MATERIAL Research Department	3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.) None
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.) See attachment (Page 1)	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.) See attachment (Page 1)

6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.) Hydrogen (3)	(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.) Titanium Tritide coated on .001 thick stainless steel foil. Total activity not to exceed 250 millicuries.
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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.)

Foils or sources are incorporated in an electron capture detector manufactured by Wilkens Instrument and Research, Inc., and will be used in gas chromatographic analysis in the analytical research group.

RECEIVED
FOR DIV. OF COMPLIANCE
ACKNOWLEDGED

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

B. TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING	ON THE JOB (Circle answer)	FORMAL COURSE (Circle answer)
See attachment (Page 1)				
a. Principles and practices of radiation protection			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

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/cm ²)	USE (Monitoring, surveying, measuring)
Not required due to type of material being requested.					

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

Not required due to type of material being requested.

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

Not applicable

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

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

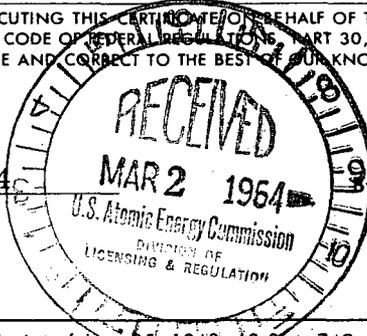
14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation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

Date February 25, 1964



Heyden Newport Chemical Corp.

Applicant named in item 1

H.R. Johnson

GROUP LEADER - ANALYTICAL

Title of certifying official

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.

- Item 4 - Individual Users
- Item 5 - Radiation Protection Officer
- Item 8 - Training

The equipment described in this application [Item 6(a), 6(b)] does not constitute a hazard when used as directed in the manufacturer's instructions, and personnel specially trained in the use of by-product material are not required for its operation. This equipment will be installed in a gas chromatograph and operated by trained analytical chemists. They have read the manufacturer's instructions pertaining to this item, and understand the operation of this equipment.

FACILITIES AND EQUIPMENT

- Item 13 The electron capture detector, containing the Titanium Tritide coated foil, will be used in a gas chromatograph for chlorinated pesticide analysis. This will be carried out in a laboratory set aside for instrumental analysis, and staffed by two chemists. Traffic in and out of this laboratory is very light. No wet chemical analysis is carried out in this laboratory.

Because the radioactive material requested is part of a detector system in a chromatograph, and because it presents no hazards when used as directed, we have no plans for obtaining remote handling equipment, shielding, special fume hoods, etc., which might be required if synthetic work or chemical testing were performed with radioactive materials.

RADIATION PROTECTION PROGRAM

- Item 14 We understand that the equipment described in this application presents no hazards when used as directed in the manufacturer's instructions. Normally, it will be affixed to the gas chromatograph. If other detectors are employed, the electron capture unit will be stored in a locked, fireproof file.

WASTE DISPOSAL

- Item 15 No waste is anticipated for the equipment described in this application. If it is necessary to dispose of the detector, it will be returned to the vendor, Wilkens Instrument and Research, Inc., or to a commercial waste disposal organization operating in this area.

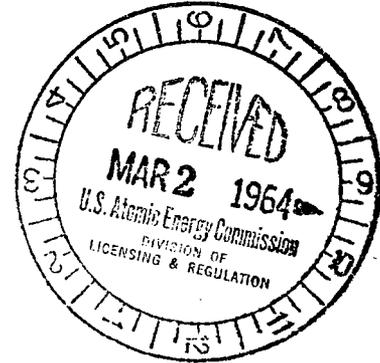
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HEYDEN NEWPORT CHEMICAL CORPORATION



HEYDEN DIVISION
290 RIVER DRIVE
GARFIELD, NEW JERSEY

February 26, 1964



Isotopes Branch
Division of Licensing and Regulation
U. S. AEC
Washington 25, D. C.

Gentlemen:

We are enclosing three copies of Form AEC-313, requesting a license for handling byproduct material in the form of an electron capture detector attachment for a gas chromatograph.

Your early consideration of this application will be appreciated.

Very truly yours,

HEYDEN NEWPORT CHEMICAL CORPORATION

H. R. Johnson
Group Leader
Analytical Research Laboratory

HRJ:eak

