

614
12

Form AEC-313
8-64
10 CFR 30

UNITED STATES ATOMIC ENERGY COMMISSION
APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved.
Budget Bureau No. 38-R027

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 Commission 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.

<p>1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc. Include ZIP Code.)</p> <p>Tenneco Chemicals, Inc. Heyden Division Research and Development Department 290 River Drive Garfield, New Jersey 07026</p>	<p>(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a). Include ZIP Code.)</p> <p>Same as 1 (a)</p>
---	---

<p>2. DEPARTMENT TO USE BYPRODUCT MATERIAL</p> <p>Research and Development Department</p>	<p>3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)</p> <p>29-9898-1 (Expires April 30, 1966)</p>
---	--

<p>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.)</p> <p>Mr. I. B. Wakeman</p>	<p>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.)</p> <p>Same as (4)</p>
---	--

<p>6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.)</p> <p>Hydrogen (3)</p>	<p>(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.)</p> <p>(1) Electron capture detector: Aerograph Model 02-104 (Titanium tritide coated on 0.001" stainless steel foil. Total activity not to exceed 250 millicuries).</p> <p>(2) To be used in Aerograph Model 600 Chromatograph, with oven assembly Model 550-B.</p>
---	---

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 (Aerograph Model 02-104, and will be used in gas chromatographic analysis in the analytical research group.

A/3

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 attachment.		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 attachment.				

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.					

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

Not required.

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

Not required.

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

See attachment.

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.

See attachment.

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.

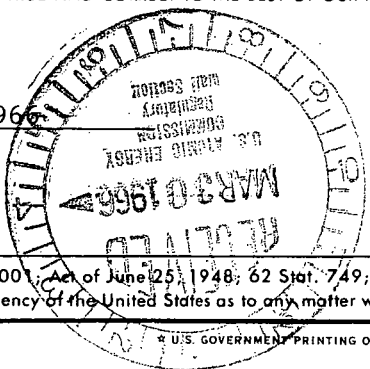
See attachment.

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.

Tenneco Chemicals, Inc.
Heyden Division

Date March 29, 1966



Applicant named in item 1

By: H. R. Johnson
H. R. Johnson, Supervisor
Analytical Research Laboratory
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.

Attachment

Items 8 and 9 - Training and Experience

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 (Aerograph Model 500 with Model 550-B oven assembly) and operated by a trained analytical chemist. He has read the manufacturer's instructions pertaining to this item and understands the operation of this equipment.

Item 13 - Facilities and Equipment

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 the laboratory is very light. No wet chemical analysis is carried out in this laboratory.

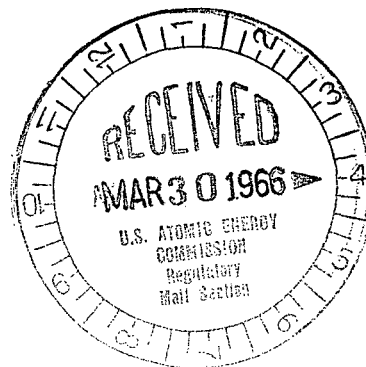
Because the radioactive material requested is part of a detector system in a chromatograph, and because it presents no hazards when used as directed, we have no plans for obtaining remote handling equipment, shielding, special fume hoods, etc., which might be required if synthetic work or chemical testing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

Item 14 - Radiation Protection Program

We understand that the equipment described in this application presents no hazard 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, fire-proof file.

Item 15 - Waste Disposal

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.



79131

TENNECO CHEMICALS, INC.

A Major Component of Tennessee Gas Transmission Company



HEYDEN DIVISION
290 River Drive
Garfield, N. J. 07026

March 28, 1966

U. S. Atomic Energy Commission
Division of Materials Licensing
Washington, D. C. 20545

Gentlemen:

Enclosed are two (2) copies of Form AEC-313 requesting renewal of our by-product material License No. 29-9898-1 (expires April 30, 1966).

The license was granted to Heyden-Newport Chemical Corporation, which is now known as Tenneco Chemicals, Inc.

Very truly yours,

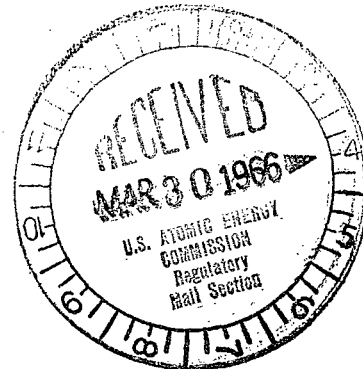
TENNECO CHEMICALS, INC.

A handwritten signature in cursive script that reads "H. R. Johnson".

H. R. Johnson, Supervisor
Analytical Research Laboratory
Heyden Division

HRJ:ves
Enclosures

DUPLICATED
FOR DIVISION USE



70131