

UNITED STATES ATOMIC ENERGY COMMISSION  
**APPLICATION FOR BYPRODUCT MATERIAL LICENSE**

**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.

1. (a) NAME AND STREET ADDRESS OF APPLICANT (Institution, firm, hospital, person, etc. Include ZIP Code.) (b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED (If different from 1 (a). Include ZIP Code.)

The United Illuminating Company  
80 Temple Street  
New Haven, CT 06506

New Haven Harbor Station  
1 Waterfront Street  
New Haven, CT 06510

2. DEPARTMENT TO USE BYPRODUCT MATERIAL  
Environmental Engineering

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.)

Ferdinand G. Maturo  
Environmental Laboratory Supervisor

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.)

None

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

Nickel 63

(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 sources, also state name of manufacturer, model number, number of sources and maximum activity per source.)

Deposited on gold or platinum foil, sealed in Detector Cell, Perkin-Elmer Part No. 330-0119.

Amersham/Searle Corp.  
2637 S. Clearbrook Dr.  
Arling Heights, Ill.  
Foil Model N.B.C. 7020

Foil manufactured by:  
New England Nuclear Corp.  
575 Albany  
Boston, Mass.  
Foil Model NER-002

Foil strength is 10 millicuries. No single detector contains more than 15 millicuries.

or  
Nuclear Radiation Dev. Corp.  
2937 Alt Blvd.  
Grand Island, New York 14070  
Foil Model N1001

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.)

The sealed detector cell containing Nickel 63 foil shall be used in Perkin-Elmer Model SIGMA 4 Gas Chromatograph with Temperature Protection Circuitry which cuts off at 450°C.

Applicant.....  
Check No. *NC 42539*  
Amount/Fee Category *110 (34)*  
Type of Fee *Application*  
Date Check Paid *12/26/79*  
Received By *Jackson*

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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)
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 ( $\mu\text{r/hr}$ )	WINDOW THICKNESS ( $\text{mg/cm}^2$ )	USE (Monitoring, surveying, measuring)
None	—	—	—	—	—

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

N/A

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

None

## 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 20, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

The United Illuminating Co.

Applicant named in item 1

Date November 27, 1979

02 2 84

*Marcus R. McCraven*  
 Marcus R. McCraven, Vice Pres.,  
 Environmental Engineering

Date 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.

13. FACILITIES AND EQUIPMENT.

Laboratory facilities offer complete chemical testing capabilities including fume hood. However, no special laboratory facilities are available for handling radioactive materials, such as remote handling equipment, storage containers or shielding.

14. RADIATION PROTECTION PROGRAM.

Detailed instructions for installing, operating and wipe testing detector cells are contained in the instruction manual supplied with the Model SIGMA 4 Gas Chromatograph.

Wipe tests for radioactivity are required at 6 month intervals. Instructions for conducting the wipe test are included in the manual and in the wipe test kit (P-E Part No. 009-1667) shipped with the detector cell. The wipe test is to be submitted to one of the following for a radiation survey.

Nuclear Sources and Services, Inc.  
5711 Ethridge St.  
Houston, Texas 77017

or

Nuclear Radiation Dev. Corp.  
2937 Alt Blvd.  
Grand Island, New York 14070

Cell cleaning and foil replacement must be performed by one of the above mentioned companies.

15. WASTE DISPOSAL.

The detector cell (330-0119) should be returned to one of the companies mentioned under RADIATION PROTECTION PROGRAM for foil disposal as described in the instrument manual.