

FORM NRC-313 I U.S. NUCLEAR REGULATORY COMMISSION
 (1-79) 10 CFR 30
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL

1. APPLICATION FOR:
 (Check and/or complete as appropriate)

a. NEW LICENSE

b. AMENDMENT TO:
 LICENSE NUMBER

c. RENEWAL OF:
 LICENSE NUMBER
 X 24-16206-01

See attached instructions for details.

Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear, Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.

2. APPLICANT'S NAME (Institution, firm, person, etc.)
 Combustion Engineering, Inc.
 TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION
 314/296-5640

3. NAME OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION
 H. E. Eskridge
 TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION
 314/296-5640

4. APPLICANT'S MAILING ADDRESS (Include Zip Code)
 P.O. Box 107
 Hematite, Missouri 63047

5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED (Include Zip Code)
 Route 21-A
 Hematite, Missouri 63047

(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES)

6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL
 (See Items 16 and 17 for required training and experience of each individual named below)

FULL NAME	TITLE
a. Harold E. Eskridge	NLS&A Supervisor
b. Louis J. Swallow	Quality Control Manager
c.	

7. RADIATION PROTECTION OFFICER
 H. E. Eskridge

Attach a resume of person's training and experience as outlined in items 16 and 17 and describe his responsibilities under Item 15.

Applicant's Application No. 24-16206-01
 Check No. 119 (32)
 Amount/Fee Category 119 (32)
 Type of Fee Renewal
 Date Check Rec'd AUG 6 1979
 Received By: [Signature]

8. LICENSED MATERIAL

L I N E N O.	ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	NAME OF MANUFACTURER AND MODEL NUMBER (If Sealed Source)	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME
A	B	C	D	
(1)	Cobalt - 60	Sealed Source	Tracer Lab R-31	10 mc
(2)	Cobalt - 60	Sealed Source	ICN 375	30 mc
(3)	Californium-252	Sealed Source	SR-CF-100	2 mc
(4)				

RECEIVED BY LFMB

Date AUG 6 1979

Log. Aug Pg. 2 Pen.

By. [Signature]

Orig. To.....

Action Compl 8/8/79

DESCRIBE USE OF LICENSED MATERIAL

E
(1) Calibration and testing.
(2) Calibration and testing.
(3) Storage only, awaiting disposal to licensed recipient.
(4) Information in this record was deleted in accordance with the Freedom of Information Act, exemptions 6

INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:

- 15. **RADIATION PROTECTION PROGRAM.** Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures (if needed), day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.
- 16. **FORMAL TRAINING IN RADIATION SAFETY.** Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.
 - a. Principles and practices of radiation protection.
 - b. Radioactivity measurement standardization and monitoring techniques and instruments.
 - c. Mathematics and calculations basic to the use and measurement of radioactivity.
 - d. Biological effects of radiation.
- 17. **EXPERIENCE.** Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

18. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 2, 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.

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.

a. **LICENSE FEE REQUIRED**
(See Section 170.31, 10 CFR 170)

\$110.00

(1) **LICENSE FEE CATEGORY:**

3-L

(2) **LICENSE FEE ENCLOSED: \$**

110.00

b. **CERTIFYING OFFICIAL** *(Signature)*

H. E. Eskridge

c. **NAME** *(Type or print)*

H. E. Eskridge

d. **TITLE**

Supervisor, Nuclear Licensing, Safety & Acct.

e. **DATE**

July 30, 1979

HAROLD E. ESKRIDGE - SUPERVISOR, NUCLEAR AND INDUSTRIAL SAFETY AND NUCLEAR MATERIALS MANAGEMENT

B.S., Physics, North Carolina State University, []
M.S., Physics, North Carolina State University, 1963

PROFESSIONAL EXPERIENCE:

Combustion Engineering, Inc. 1974 to Present
Supervisor, Nuclear and Industrial Safety and Nuclear Materials Management

Responsible for all aspects of licensing, safety, and safeguards at Nuclear Fuel Manufacturing - Hematite. Develops and implements the health physics, criticality and industrial safety, and accountability programs for the Hematite facility. Audits manufacturing operations and supervises safety and safeguards personnel in day-to-day operations.

General Electric Company 1972-1974
Nuclear Safety Engineer

Analyzed changes and specified requirements for Wilmington nuclear fuel manufacturing processes, facilities and procedures to assure compliance with regulatory, license and GE conditions. Audited manufacturing operations and radiation protection programs. Planned and conducted development programs in dosimetry, radiation monitoring and environmental sampling.

Salisbury Metal Products Company 1971-1972
Co-Manager

Managed operations for manufacturer of precision components; including sales, finance, production control and quality assurance.

Also served as consultant to Institute for Resources Management on decontamination and radioactive waste disposal projects, and was member of Rowan Technical Institute Advisory Committee.

Environonics, Inc. 1970-1971
Vice President - Nuclear Applications

Performed variety of functions, including market research, proposal preparation, and technical analyses relating to remote sensing, environmental surveys, and health physics services. Contacted potential customers, including government agencies and utility companies with power reactors.

HAROLD E. ESKRIDGE (continued)

EG&G, Inc. 1967-1970
Senior Scientist and Scientific Executive

As head, Radiological Sciences Section and Senior Health Physicist, was responsible for all aspects of radiation and nuclear safety and regulatory compliance for Las Vegas Operations. Provided consultation to other divisions of the company and technical direction for Nuclear Counting Laboratory, Nevada Aerial Tracking System and Aerial Radiation Measuring Surveys Programs. Served as Acting Manager, Environmental Measurements Department, which included above activities, as well as High Energy Neutron Reactions Experiment and Metrology Sections.

North Carolina State Board of Health 1962-1967
Public Health Physicist

Technical, policy, and procedural consultation in all aspects of health physics, environmental surveillance and radiological health. Functioned as administrator of Radioactive Materials Licensing and Regulation. Served as Team Chief of State Radiological Emergency Team in several radiation incidents and one major radiation accident. Also established and equipped a complete laboratory for radiological and chemical analysis of environmental samples.

Astra, Inc. 1960-1961
Nuclear Engineering Assistant

Participated in neutron flux and activation dose rate calculations for Nuclear Aircraft Program.

U.S. Air Force 1954-1957
Nuclear Specialist

Responsible for criticality and radiological safety for nuclear weapon systems and components. Also was instructor in nuclear safety and weapons systems.

LOUIS J. SWALLOW - QUALITY ASSURANCE MANAGER - HEMATITE

M.S., Mechanical Engineering, Washington University, 1955
B.S., Mechanical Engineering, Washington University, 1955
Nuclear Safety School, Oak Ridge National Laboratory, 1959

PROFESSIONAL EXPERIENCE:

Combustion Engineering, Inc., 1974 to Present
Quality Assurance Manager - Hematite

Responsible for all Quality Assurance activities in Nuclear Fuel Manufacturing-Hematite. Supervises Quality Control Engineering, Quality Assurance Engineering, and Chemical and Physical Test and Inspection.

Gulf United Nuclear Fuels Corporation 1970-1974
Engineering Manager, Chemical Operations

Responsible for Process Engineering, Facilities & Equipment Engineering, Capital budgets. Assigned as Acting Plant Manager during extended absences of the Plant Manager.

During this period, the plant produced 200 MTM of pellets for light water reactor fuel and several thousand kgs of special naval reactor fuel.

United Nuclear Corporation 1968-1970
Nuclear & Industrial Safety Manager, Commercial Products Division

Responsible for establishing the overall safety program for the three manufacturing plants operated by the division. Including AEC license applications and approval.

United Nuclear Corporation 1967-1968
Construction Manager, SWOPP Task Force, Chemical Operations

Responsible for design, planning, scheduling and contracting the construction of the UF₆ conversion plant and UO₂ pellet plant.

United Nuclear Corporation 1964-1967
Operations Control Manager, Chemical Operations

Responsible for Quality Control, Nuclear Safety & Health Physics Program, Special Nuclear Materials Licensing, Special Nuclear Materials Accountability, Scrap Recovery.

LOUIS J. SWALLOW (continued)

United Nuclear Corporation 1958-1964
Research & Development Engineer, Chemical Operations

Responsible for UO₂ pellet encapsulation, Quality Control, Nuclear Safety and Health Physics.

Mallinckrodt Chemical Works 1955-1958
Project Engineer, Uranium Division

Responsible for design and installation of uranium metal production equipment in the Feed Materials Plant.