

APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

FEDERAL AGENCIES FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF FUEL CYCLE AND MATERIAL SAFETY, NMSS
WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS, IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION I
NUCLEAR MATERIAL SECTION B
631 PARK AVENUE
KING OF PRUSSIA, PA 19406

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
MATERIAL RADIATION PROTECTION SECTION
101 MARIETTA STREET, SUITE 2900
ATLANTA, GA 30323

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION III
MATERIALS LICENSING SECTION
799 ROOSEVELT ROAD
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
MATERIAL RADIATION PROTECTION SECTION
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V
MATERIAL RADIATION PROTECTION SECTION
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CA 94596

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTION.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

☐ A. NEW LICENSE

☐ B. AMENDMENT TO LICENSE NUMBER

☒ C. RENEWAL OF LICENSE NUMBER 21-02335-11

2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip Code)

Detroit Edison
2000 Second Avenue
Detroit, MI 48226
ATTN: Director-Engineering Research

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Connors Creek Power Plant
200 Lycaste Avenue
Detroit, MI

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

David W. Dumas, Radiation Safety Officer

TELEPHONE NUMBER

(313) 897-1325

SUBMIT ITEMS 5 THROUGH 11 ON 8 1/2 x 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL (see attached)

a. Element and mass number, b. chemical and/or physical form, and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

9. FACILITIES AND EQUIPMENT

10. RADIATION SAFETY PROGRAM

11. WASTE MANAGEMENT

12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY 3P

AMOUNT

ENCLOSED \$120.00

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN, IS TRUE AND CORRECT TO THE BEST OF THEIR 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.

SIGNATURE—CERTIFYING OFFICER

TYPED/PRINTED NAME

TITLE

DATE

Willard R. Holland
Willard R. Holland

Vice President-
Power System and Services

07-29-87

14. VOLUNTARY ECONOMIC DATA

A. ANNUAL RECEIPTS

<input type="checkbox"/> <\$250K	<input type="checkbox"/> \$1M-3.5M
<input type="checkbox"/> \$250K-500K	<input type="checkbox"/> \$3.5M-7M
<input type="checkbox"/> \$500K-750K	<input type="checkbox"/> \$7M-10M
<input type="checkbox"/> \$750K-1M	<input type="checkbox"/> >\$10M

B. NUMBER OF EMPLOYEES (Total for entire facility excluding outside contractors)

C. NUMBER OF BEDS

d. WOULD YOU BE WILLING TO FURNISH COST INFORMATION (Dollar and/or staff hours) ON THE ECONOMIC IMPACT OF CURRENT NRC REGULATIONS OR ANY FUTURE PROPOSED NRC REGULATIONS THAT MAY AFFECT YOU? (NRC regulations permit it to protect confidential commercial or financial—proprietary—information furnished to the agency in confidence)

☐ YES ☐ NO

FOR NRC USE ONLY

TYPE OF FEE

FEE LOG

FEE CATEGORY

COMMENTS

APPROVED BY

AMOUNT RECEIVED

CHECK NUMBER

CONTROL NO 83923

DATE

8804140164 870911

REG3 LIC30

21-02335-11

DCD

RECEIVED

JUL 31 1987

REGION III

CPD

8/6/87

PRIVACY ACT STATEMENT

Pursuant to 5 U.S.C. 552a(e)(3), enacted into law by section 3 of the Privacy Act of 1974 (Public Law 93-579), the following statement is furnished to individuals who supply information to the Nuclear Regulatory Commission on NRC Form 313. This information is maintained in a system of records designated as NRC-3 and described at 40 Federal Register 45334 (October 1, 1975).

1. **AUTHORITY:** Sections 81 and 161(b) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2111 and 2201(b)).
2. **PRINCIPAL PURPOSE(S):** The information is evaluated by the NRC staff pursuant to the criteria set forth in 10 CFR Parts 30, 32, 33, 34, 35 and 40 to determine whether the application meets the requirements of the Atomic Energy Act of 1954, as amended, and the Commission's regulations, for the issuance of a radioactive material license or amendment thereof.
3. **ROUTINE USES:** The information may be (a) provided to State health departments for their information and use; and (b) provided to Federal, State, and local health officials and other persons in the event of incident or exposure, for their information, investigation, and protection of the public health and safety. The information may also be disclosed to appropriate Federal, State, and local agencies in the event that the information indicates a violation or potential violation of law and in the course of an administrative or judicial proceeding. In addition, this information may be transferred to an appropriate Federal, State, or local agency to the extent relevant and necessary for an NRC decision or to an appropriate Federal agency to the extent relevant and necessary for that agency's decision about you.
4. **WHETHER DISCLOSURE IS MANDATORY OR VOLUNTARY AND EFFECT ON INDIVIDUAL OF NOT PROVIDING INFORMATION:** Disclosure of the requested information is voluntary. If the requested information is not furnished, however, the application for radioactive material license, or amendment thereof, will not be processed. A request that information be held from public inspection must be in accordance with the provisions of 10 CFR 2.790. Withholding from public inspection shall not affect the right, if any, of persons properly and directly concerned need to inspect the document.
5. **SYSTEM MANAGER(S) AND ADDRESS:** U.S. Nuclear Regulatory Commission
Director, Division of Fuel Cycle and Material Safety
Office of Nuclear Material Safety and Safeguards
Washington, D.C. 20555

Attachment NRC Form 313

Items 5-11

Item 5 Radioactive Material

Cesium-137, Sealed Source Texas Nuclear 570-57157C. No source to exceed 20 millicuries.

Item 6 Purpose

Material is used in Texas Nuclear Model 5192 source holders for water detection.

Item 7 Individual Responsible for Radiation Safety
Program/Training and Experience

David W. Dumas - A resume summarizing the training and experience of Mr. Dumas is included.

Item 8 Training for Individuals Working
in or Frequenting Restricted Areas

The Technical Engineer (Plant Radiation Safety Coordinator) and the Instrument Repair Foreman are located at Conners Creek and they administer the Conners Creek program under the guidance and direction of the Radiation Safety Officer whose normal work location is Detroit Edison's Warren Service Center. These individuals have received instructions from the Radiation Safety Officer concerning safe working practices and personnel safety specific to the non-portable devices.

The non-portable gauging devices are considered a permanent installation in the power plant. Occasionally, however, the structural member (pipe or plate) on which a gauging device is installed must be repaired or replaced. On these occasions, the removal and re-installation of a gauging device is initiated with a written request. The work is done by Detroit Edison personnel under the direct supervision of the Radiation Safety Officer.

Item 9 Facilities and Equipment

Presently, Conners Creek possesses two non-portable gauging devices which are used to detect the presence of water in the steam lines to the low pressure turbines. The sources are located on the 200 and 400 lines in the 1st Walkway Reducing Station Area of the plant. This source location is a low pedestrian traffic area. The non-portable gauging devices are not subjected to extreme environmental/industrial conditions.

In the event of an accident involving damage to a gauge, the Technical Engineer and the Instrument Repair Foreman have been instructed to immediately notify the Radiation Safety Officer who will initiate and direct corrective action in accordance with safe radiological practices. The Radiation Safety Officer is responsible for notification to state and federal authorities.

Item 10 Radiation Safety Program

- a) The radiation levels, as measured at contact with the 20 millicurie, Cesium-137 devices in the installed configuration are less than 2.0 mr/hr (RO-2 ion chamber).
- b) No maintenance or repair of the source holder is performed by Detroit Edison personnel. When required, such work is performed by the device manufacturer:

Texas Nuclear Division
Ramsey Engineering Company
Box 9267
Austin, Texas 78766

License No. Texas 6-3524

- c) The gauge shutter is normally locked in the "Operate" position. If any maintenance work is to be performed in the area of the attenuated beam, the gauge shutter is locked-out in the "Safe" position prior to the start of work.
- d) Personnel Monitoring Equipment - Film badges are not routinely issued to Conners Creek personnel. To date, no personnel at the Conners Creek plant have worked in a restricted area where an exposure in excess of 25% of that specified in 10 CFR 20.101(a) has been likely to occur. The Radiation Safety Officer maintains a monthly film badge program (Siemens Gammasonics, Inc.) at the Warren Service Center for Detroit Edison personnel. This service could be used for emergency situations involving radioactive materials at Conners Creek.

The Radiation Safety Officer has acquired two Eberline Model RO-2 ion chamber survey meters (0-5000 mr/hr) to perform radiation surveys as required by Paragraph 20.201(b) of 10 CFR 20. The RO-2 survey meters were calibrated by Eberline on April 14, 1987, and are scheduled for re-calibration on an annual basis. Instrument calibration criteria is as follows:

- 1) $\pm 10\%$ of actual values over the range of the instrument or $\pm 20\%$ of actual values when a calibration chart is used.
- 2) the date of calibration, and due date for next calibration are specified on a label affixed to each instrument.

Detroit Edison's Byproduct Materials Instrument Calibrations have been performed under NRC License No. 20-02335-02. Detroit Edison is preparing to amend this license to include procedures for utilizing a J. L. Shepard, Cesium-137 Beam Calibrator for instrument calibrations.

- e) Leak Testing - It is Detroit Edison's understanding that Texas Nuclear Corp. Model 570-57157C sealed sources (5192 and 5193 source holders) are authorized a 3 year leak-test interval, and Detroit Edison, therefore, requests a 3 year leak-test interval be specified for the devices licensed at Conners Creek.

Leak tests are performed on the gauging devices in accordance with the manufacturer's recommendations. The wipe is performed using moistened filter paper. The wipe is counted using an Eberline Model BC-4 Beta Counter (GM), calibrated using an 18.1 nanocurie Cesium-137 calibration source (Isotope Products Laboratory) to determine the Beta, Gamma counting efficiency. This wipe test method is capable of detecting 0.005 microcuries of Cesium-137 as required by license condition.

Item 11 Waste Management

Disposal will be by transfer to a licensee specifically authorized to possess the radioactive material.

DAVID W. DUMAS

Education and Training

1967: Edsel Ford High, Dearborn, MI

1967-68: Recruit Training, Basic Electricity, Electrician's Mate "A" School, U.S. Navy, Great Lakes, IL

1968-69: Nuclear Power School, classroom training, Bainbridge, MD; practical training, West Milton, NY

1972-75: Associate of Science, Henry Ford Community College, Dearborn, MI

1975-78: Bachelor of General Studies (B.G.S.) with concentrations in mathematics, physics, and sociology, University of Michigan - Dearborn Campus, Dearborn, MI

1979: "Energy Engineering," University of Wisconsin - Madison, WI, five days

1980: "Ice Maker Heat Pumps," University of Wisconsin - Madison, WI, two days

1981: "Air Conditioning Design-Equipment and Components," University of Wisconsin - Madison, WI, five days

1983: "In-Processing," Fermi 2 Nuclear Power Plant

1983: "Respiratory Protection at Nuclear Power Plants," Central Connecticut State University and Radiation Safety Associates, Inc., five days

1984: "Radioactive Waste Packaging and Shipping," Quadrex Corporation, two days

1984: On-the-job training in health physics procedures and activities at the Monticello Nuclear Power Plant of Northern States Power, five days

1983-85: Numerous other equipment specific, vendor sponsored training, pertaining to decontamination and respiratory protection at the Fermi 2 Nuclear Power Plant

1985: "Radiation Safety Aspects of Isotope Radiography," Tech/Ops, Inc., five days

1986: "Radiation Safety Officers Course," University of Texas Health Science Center at San Antonio, five days

1986: "Lead Auditor Training," GA Technologies, Inc., five days

DAVID W. DUMAS

Experience

- 1969-72: Nuclear Electrical Operator, U.S.S. Truxton DLGN-35; Electrician, U.S.S. John S. McCain DD-36; U.S. Navy
- 1977-79: Co-op Student, Planning Department, Detroit Edison; developed an historical model of energy consumption in the automotive industry, prepared a ten year forecast of auto industry energy use, and updated the nuclear generation section of the annual "Technology Assessment Report."
- 1979-83: Associate Engineer, Engineering Research, Detroit Edison; worked closely with the Marketing Department and the Planning Department in performing laboratory and field evaluations of various alternate energy technologies and energy conservation technologies with focus given to innovative uses of commercially available heat pumps, to the development of advanced heat pump designs, and to the load leveling capabilities of thermal energy storage devices.
- 1983-85: Acting Radwaste Supervisor-Contamination Control, Fermi 2 Nuclear Power Plant, Detroit Edison; joined the Radwaste Group during its infancy; developed, staffed, and equipped the Contamination Control Work Force which had responsibility for facility housekeeping and decontamination, tool and equipment decontamination, consumable material control (radwaste volume reduction), protective clothing, respirator maintenance, breathing air, and respirator fit testing.
- Present: Regulation and Compliance Specialist, Engineering Research, Detroit Edison; responsible for departmental "Policies and Procedures," departmental "Quality Assurance Program," and for the corporate "Radiation Safety Program" as it applies to all Company facilities except Nuclear Power Plants.

CONTROL NO 83923