

EXXON CHEMICAL AMERICAS



P.O. Box 23, Linden, New Jersey 07036

BAYWAY CHEMICAL PLANT

July 24, 1985

Application for Renewal of NRC
License No. 29-03044-04

U.S. Nuclear Regulatory commission
Nuclear Material Section 8
631 Park Avenue
King of Prussia, PA 19406

Attached are duplicate applications and a \$170 fee for renewal of our Nuclear Regulatory Commission License.

We wish to continue to operate under our current license with the following exception:

Item 7

- o William S. Smith, currently Alternate Radiation Protection Officer, will become Radiation Protection Officer.
- o Peter S. DeFao, currently Radiation Protection Officer, will become Alternate Radiation Protection Officer.

All other conditions remain the same.

The application for Material License has been completed in its entirety to afford a document summarizing our status in each of the item categories.

Very truly yours,

W. S. Smith, Jr.

WSS/sm

cc: J. B. Case, MD
P. S. DeFao
D. R. LaJeunesse

8603060354 860218
REG1 LIC30
29-03044-04 PDR

22-2-1-10-700-000

"OFFICIAL RECORD COPY"

ML10 04186

7/31/85

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 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 78011

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 94696

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 29-03044-04

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

Exxon Chemical Americas
Bayway Chemical Plant
P. O. Box 23
Linden, NJ 07036

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

Bayway Chemical Plant (and)
Bayway Refinery
1400 Park Ave.
Linden, NJ 07036

Bayonne Chemical Plant (and)
Bayway Plant
250 East 22nd St.
Bayonne, NJ

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

William S. Smith, Jr.

TELEPHONE NUMBER

(201) 474-7685

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.

6. RADIOACTIVE MATERIAL

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 170.31.3E AMOUNT
ENCLOSED \$ 170.00

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 USC, 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

SW Dedman (for OR) Stephen W. Dedman

Plant Manager

7/25/85

14. VOLUNTARY ECONOMIC DATA

a. ANNUAL RECEIPTS

<\$250K	\$1M-3.5M
\$250K-500K	\$3.5M-7M
\$500K-750K	\$7M-10M
\$750K-1M	>\$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

"OFFICIAL RECORD COPY"

APPROVED BY

AMOUNT RECEIVED

CHECK NUMBER

8603060360 860218

REG1 LIC30

29-03044-04

PDR

04186

DATE

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 USC. 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

ITEM 5 - MATERIAL TO BE POSSESSED (AND)

ITEM 6 - PURPOSE FOR WHICH LICENSED MATERIAL WILL BE USED

-----SEALED SOURCE-----				-----DEVICE-----		
<u>ISOTOPE</u>	<u>MFG.</u>	<u>MODEL NO.</u>	<u>MAX.</u> <u>AMOUNT</u>	<u>MFG.</u>	<u>MODEL NO.</u>	<u>PURPOSE</u>
Cesium 137	Texas Nuclear	570-5715C	500mC	Texas Nuclear	5180 5206 5207 5183A	Level gauge Level gauge Level gauge Specific Gravity
Cesium 137	Kay-Ray	7050B	500mCi	Kay-Ray	3600F	Specific Gravity
Americium Beryllium 241	Monsanto	MRC2723C	500mCi	Kay-Ray	7100B	Foam Gauge

ITEM 7 - INDIVIDUALS RESPONSIBLE FOR RADIATION SAFETY PROGRAM -

THEIR TRAINING AND EXPERIENCE

All services such as installation, relocation, maintenance, and initial radiation survey will be performed by the gauge manufacturer, distributor or designer. Training and instruction in the use and operation of **the** gauges will be provided to employees at the time of installation. The gauges will not be operated until the training **has** been received, and training records will be maintained for 5 years.

The following pages list the training and experience of **the** Radiation Protection Officer and the Alternate Radiation Protection Officer.

WILLIAM S. SMITH (RADIATION PROTECTION OFFICER)

7. Type of Training:

- o Master of Health Science Degree, Johns Hopkins School of Hygiene and Public Health, Baltimore, Maryland (1981). This included a radiation protection course.

Experience:

- o March 1984 - Present: Assistant Radiation Protection Officer at **Bayway/Bayonne** facility of Exxon Chemical Americas and Exxon Company U.S.A. Duties include: Coordinating radiation protection program, regulatory compliance, radiation monitoring, wipe testing, and film badge program.
- o Industrial radiography, Aruba, Netherlands Antilles, **100mCi/1R** 192 (2 days).
- o Industrial radiography, Campana, Argentina, 24 **Ci/Co** 60 (1 day).

PETER S. DEFAO (ALTERNATE RADIATION PROTECTION OFFICER)

7. **Type of Training:**

The following courses have been successfully completed:

- o Industrial Hygiene **Engineering** (2 weeks, 1969) USPHS.
- o -Fundamentals of **non-Ionizing** Radiation Protection (1 week, 1970) USPHS.
- o Industrial Hygiene **Training** Course (2 weeks, 1968) PA **Dept.** of Health.
- o Industrial Hygiene Certification Review (1 week, 1974) **INA.**
- o Ionizing Radiation (1 week, 1979) NIOSH.

Experience:

- o February 1980 - Present:: **Radiation** Protection Officer at **Bayway** Facility of **Exxon** Company, U.S.A. (including responsibilities for **Exxon** Chemical Company, U.S.A.).
- o September 1977 - February 1980: Assistant Radiation protection Officer at **Exxon's Bayway** Facility.
- o Experience has included wipe testing, monitoring, regulatory compliance and coordinating Film Badge Program within facility. Radioisotopes include Ce 137 (100 **mCi**), Ra 226 (6.5 **nCi**), Ca 109 (3 **mCi**), Fe **55** (50 **mCi**), Tritium (200 **mCi**), Am 241 (0.5 **mCi**), **Pn** 238 (30 **mCi**).

ITEM 8 - TRAINING PROVIDED TO OTHER USERS

Gauges will be operated by persons other than the Radiation Protection Officer and Alternate Radiation Protection Officer. **Supervisors**, Operators, Assistant Operators, and Technicians will operate the devices. They will attend the training and instructions given at the time of **installation**, or will receive equivalent training and instruction using information provided by the device installer. The instructor shall be the RPO or **ARPO**.

ITEM 9 - FACILITIES AND EQUIPMENT

9.1 Sketch or description of the location of each gauge within our facilities.

The NRC has previously **reviewed** and approved all current gauge locations based **upon** the current licenses and/or amendments. The following is a summary of those locations:

-----LOCATION-----						
<u>DEVICE</u>	<u>MODEL NO.</u>	<u>NO.</u>	<u>SITE</u>	<u>AREA</u>	<u>UNIT</u>	<u>EQUIP.</u>
Texas Nuclear	5180A	2	Bayway	West Side	LM Vistanex	LUWA Stripper
Texas Nuclear	5206	2	Bayway	West Side	Reactor Bldg.	10R
Texas Nuclear	5207	2	Bayway	West Side	Reactor Bldg.	10R
Kay-Ray	7701	1	Bayway	West Side	Reactor Bldg.	10R
Kay-Ray	3600F	1	Bayway	West Side	NP	Tk 101 Line
Texas Nuclear	5183A	1	Bayway	East Side	Butylene Extraction	D-610
Texas Nuclear	5183A	1	Bayway	East Side	SMBW	Between AC680 & Lead Acid Cooler

9.2 The environmental conditions of use have been reviewed with each device supplier, and no unsafe environmental conditions exist. Each gauge location is reviewed for acceptability by our Engineering Department before funds are allocated for purchase.

9.3-4 No cooling systems are used or needed to maintain the temperature below the maximum operating temperature specified by the manufacturer.

9.5 Gauges are checked daily for proper shutter operation by unit personnel. Checks for label **legibility/visibility**, corrosion, high temperatures are performed during **leak-tests**, periodic unit reviews by RPO or **ARPO**, and as part of an annual safety review by a safety committee.

9.6 The attached emergency **procedure** is established for our facilities:

EMERGENCY MANUAL - BAYWAY REFINERY

DATE:

2. Procedure

- In the event of fire, theft, explosion, or other emergency which could involve the above listed radioactive sources, one of the following personnel is to be notified immediately:

<u>Name</u>	<u>Extension</u>	<u>Nights/Weekends</u>
W. S. Smith, Rad. Protection Officer	7685	201/431-2031
P. S. DeFao, Alt. Rad. Protection Officer	7589	201/780-4732

- Until the R.P.O. or the alternate arrives, the area immediately adjacent to the sealed source equipment should be roped off, and no unauthorized personnel allowed to enter.
- If it is necessary to handle any of the equipment or containers with radioactive materials, gloves shall be worn, the handling time minimized, and the hands thoroughly washed immediately afterward with soap and water. Personnel handling equipment will remain in the area to be checked for radioactive contamination by the R.P.O. or alternate before leaving the area.
- If a fire or other emergency occurs in the vicinity of a portable radioactive source while it is in use, the source will be returned to its container and removed from the area.

If a fire occurs in the vicinity of radioactive material, every effort will be made to keep the fire away from the radioactive material. Until the fire actually reaches the source, water will be sprayed on the source container to prevent overheating. If the fire does get to the radioactive material, every effort will be made to confine the fire and water spread to prevent the spread of radioactive materials. The minimum quantity of water will be used. Personnel involved in the actual fire fighting will be checked for radioactive contamination before leaving the scene. Fire fighting equipment used will be checked for contamination, and, if contaminated, will be cleaned before being returned to the Fire Department.

- Subsequent to any of the above emergencies, the R.P.O. or alternate will:
 - + Conduct a survey with a radiation survey meter to determine whether the source enclosure is still intact.
 - + Determine the necessary steps to be taken, including decontamination if required.
 - + Notify the Nuclear Regulatory Commission and the New Jersey State Department of Health, if required, in accordance with their respective regulations.

ITEM 10 - RADIATION SAFETY PROGRAM

10.1 Performance of Service Operations by Others

All services such as installlation, relocation, maintenance, and initial radiation **survey** will be performed by the gauge manufacturer, distributor or designer.

These currently are:

<u>NAME</u>	<u>ADDRESS</u>	<u>NRC LICENSE #</u>
King Equipment Co.	140 Smith St.. Keasby, NJ 08832	29-21065-01
Kay-Ray Inc.	516 West Campus Dr. Arlington Heights, Illinois 60004	12-11184-02

10.2 Personal Monitoring **Equipment** (and)

10.3 Radiation Detection Instruments

Equipment and instruments are not needed as per 10.1 instructions.

10.4 Leak - Testing

Leak - testing will be performed with a commercial leak - test kit provided by: Texas Nuclear, Ramsey Engineering Co., P. O. Box 9267, **Austin**, TX 78766, NRC License No. (Texas) 6-3524 - Kit No. **TQ/IK** and **QT/2F**.

Test samples will be taken by the RPO or ARPO.

10.5 Loak-out Procedures

Lock-out procedures have been established for preventing personnel from being exposed to unnecessary radiation. These procedures are documented in the Operating Manual for each unit, and employees have been **instructed/trained** about these procedures.

10.6 Performance of **Services**

Not applicable.

ITEM 11 Waste Manaaement

Disposal of licensed material will be through transfer of the material to the device manufacturer or distributor.