

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 _____

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

Oscar Mayer Foods Corp.
Madison, WI 53707

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

Oscar Mayer Foods Corp.
Madison, WI 53707

(910 Mayer Avenue)

30-30266

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Robert (Skip) A. Seward II

TELEPHONE NUMBER

(608) 241-3311

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

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

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

Reference Addendum B

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

Reference Addendum C

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

Reference Addendum D

9. FACILITIES AND EQUIPMENT. Reference Addendum E

10. RADIATION SAFETY PROGRAM. Reference Addendum F

11. WASTE MANAGEMENT. Reference Addendum G

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

FEE CATEGORY New License? AMOUNT
ENCLOSED \$ 230.00

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
PREPARED IN
IS TRUE AND I
WARNING: 18
TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

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REG3 LIC30
48-25828-01 PDR

OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS
RTS 30, 32, 33, 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN.

CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION

SIGNATURE—CERTIFYING OFFICER

John G. Cervený

TYPED/PRINTED NAME

John G. Cervený

TITLE

Microbiology
Section Manager

DATE

8/19/87

14. VOLUNTARY ECONOMIC DATA

a. ANNUAL RECEIPTS

<\$250K	\$1M-5.5M
\$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 JEOS

8. 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

RECEIVED

TYPE OF FEE

FEE LOG

FEE CATEGORY

COMMENTS

APPROVED BY

AMOUNT RECEIVED

CHECK NUMBER

CONTROL NO 84058

AUG 25 1987

REGION III

DATE

8/31

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 (L) 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

Addendum A

Radioactive Material

Element and Mass Number: Phosphorus - 32

Chemical and/or Physical Form: Aqueous nucleotides

Maximum possession: 1 millicurie

CONTROL NO. 84058

RECEIVED
AUG 25 1967
REGION III

Addendum B

Purposes for Which Licensed Material Will be Used

Licensed material used is incorporated in the GENE-TRAK Systems pre-packaged, pre-labelled, and pre-tagged kit for detection of microorganisms in test specimens. The test is an in-vitro diagnostic assay similar to clinical radio-immunoassays. The usual amount of isotope handled at one time will be 75 microcuries or less.

Addendum C
Individual Responsible for Radiation Safety Program and
Their Training and Experience

The Radiation Safety Officer will be:

Robert Skip Seward, II

A copy of Mr. Seward's curriculum vitae is appended.

Personnel will receive training in the performance of the GENE-TRAK assay and its attendant use of phosphorus-32 labelled material. The training will be conducted at GENE-TRAK Systems in Framingham, Massachusetts.

The instruction will be provided over a two day period and will include hands on experience in the performance of the procedure, as well as training on the safe use and handling of phosphorus 32 labelled aqueous material.

The topics of isotope handling, disposal, and record keeping will be covered in the training session.

GENE-TRAK Systems is authorized

to provide training in radioisotope handling and safety procedures to students under NRC license no. 20-19858-01, amendment 05, training to students. (expiration date February 1992)



Robert (Skip) A. Seward II

Oscar Mayer Foods Corp.
Senior Research Scientist
Microbiology

EDUCATION

University of Wisconsin, Ph.D., Food Microbiology, 1982
Oregon State University, M.S., Microbiology, 1976
Colorado State University, B.S., Microbiology, 1974

EXPERIENCE IN ISOTOPIC RESEARCH

1985-present: GENE-TRAK[®] Hybridization Assay for Salmonella
using ³²P-DNA probes.
1980-1981 : Biochemistry research laboratory, University
of Wisconsin using labelled substrates.

INSTRUCTION IN ISOTOPIC HANDLING

1987: Comprehensive course at GENE-TRAK[®] research
laboratory in Framingham, Massachusetts.
1985: Set-up operation of GENE-TRAK[®] system at
Cranbury, New Jersey, for General Foods
Corporation.

Addendum D
Facilities and Equipment

A. FACILITIES

Licensed material will be used at:

Oscar Mayer Foods Corporation
Madison, WI 53707

A diagram of the laboratory is appended.

B. EQUIPMENT

Diagnostic tests are completed on a membrane filter and results are determined by the use of the GENE-TRAK Beta Detector.

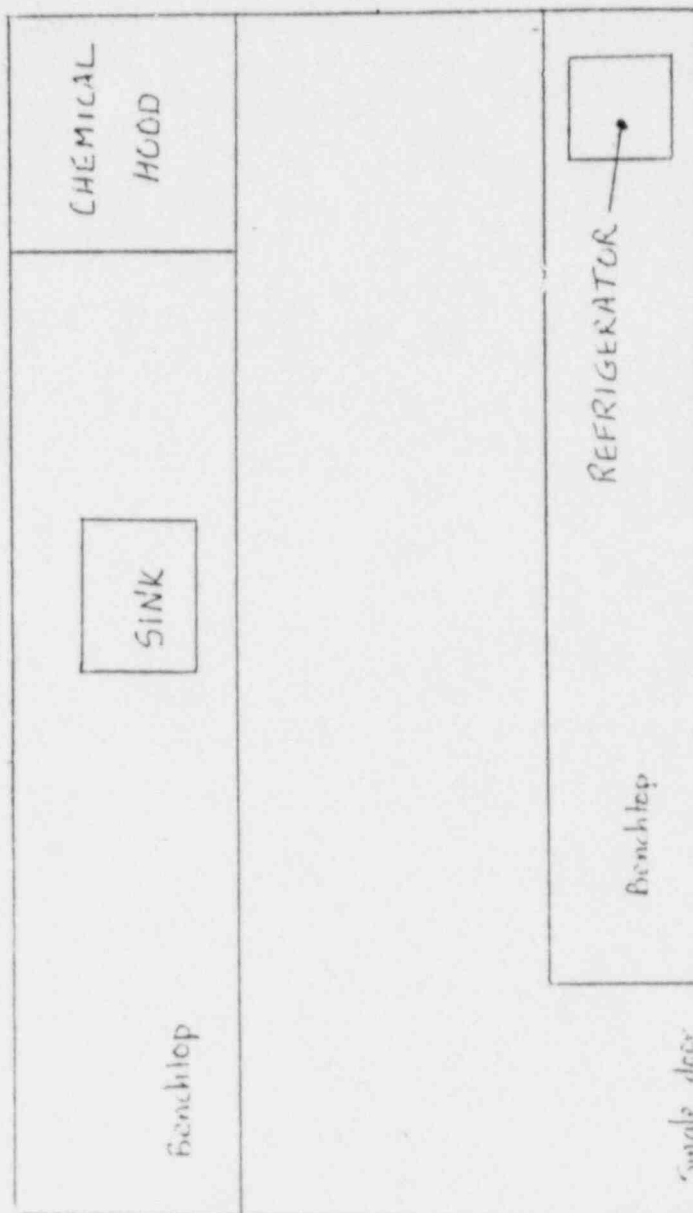
The Detector is model CTC-4 manufactured by Radiation Monitoring Devices, Inc., 44 Hunt Street, Watertown, Massachusetts 02172. Performance of the Detector will be routinely checked in accordance with the GENE-TRAK Systems quality control procedure.

A geiger counter, such as a Ludlum 2 or 3 or equivalent, will be used to survey incoming packages and the work area. Calibration of the survey meter will be performed annually by:

Dr. Goetz
University of Wisconsin
Madison, WI 53706

ANALYTICAL CHEMISTRY LAB. FOR GENE-TRAK[®] SYSTEM

15' 1/2



No windows

16

Contact: Dr. Skip Steward
608 241 3311 x 4634

Oscar Mayer Foods Corp
P.O. Box 7188
Madison, WI 53707-7188

Personnel monitoring devices will be worn when performing the GENE-TRAK assay. Monitoring will include use of a beta-gamma film badge supplied and processed monthly by:

R. S. Landauer, Jr, and Co.

Shielding composed of one-half inch thick lucite, will be used during handling and storage of the isotope.

Addendum E
Radiation Safety Program

The Radiation Safety Officer

The RSO is responsible for the following:

1. Maintaining the NRC license in a compliance state.
2. Providing training of personnel to insure that safe procedures in the laboratory are practiced.
3. Providing consultation to management and radiation workers on all matters relating to radiation safety.
4. Be available to respond to any radiation emergency.
5. Reviewing all proposed procedures to insure that staff personnel will not become unnecessarily exposed to radiation. In addition, the RSO will insure that maximum permissible concentrations in air and water are within acceptable limits as outlined in 10 CFR Part 20 and appropriate state regulations.
6. Insuring that the following documents are properly posted in the laboratory:
 - a. NRC license and /or(Agreement state) and all supporting documents
 - b. 10 CFR Parts 19, 20 or applicable state regulations
 - c. NRC Form 3, Notice to Employees or state Notice
 - d. Emergency Procedures
7. Advising radiation workers of any unusual procedures which they must employ in order to reduce unnecessary exposure. Also, advising workers of the location of radioactive material, and their responsibilities with regard to the safe use of radioactive materials.
8. Preparing any requests for license amendments.
9. Conducting a monthly physical inventory of all radioactive material to insure that possession limits are not exceeded.

B. Health Physics Surveys

On a weekly basis, the RSO will conduct a radiation safety survey of all areas where radioactive materials are used or stored. The surveys will include the following:

1. A survey of the work area by means of wipe tests. Wipe tests will be conducted using 25mm diameter filter paper circles. For each test, a 100 cm^2 area will be wiped, and results determined by counting filters in the Model CTC-4 Beta-Detector. This instrument has a counting efficiency for Phosphorus 32 on dry filters of 0.4. Results will be recorded as disintegrations per minute (DPM). Permissible contamination levels have been established at 500 dpm per 100 cm^2 . Contamination detected in excess of this level will be reported immediately to the responsible user who will insure that appropriate decontamination is achieved. Follow-up reports will be submitted to the RSO accordingly.

A standard pattern of wipe tests will be performed weekly in all areas of possible contamination, including benchtop(s), floors, refrigerator door handle, water bath cover, sink used for disposal of aqueous phosphorus -32 waste.

2. Review radioactive material storage areas to insure that materials are properly shielded, stored in double containers and properly labelled.

C. Authorized Users

The authorized user will be responsible within the department for the daily on-site management of radiation safety. They will report directly to the RSO who has overall responsibility if any of the following occurs:

1. Spill of radioactive material
2. Suspected overexposure of personnel
3. Malfunctioning radiation detection equipment
4. Contaminated shipment of radioactive material
5. Any other conditions that may result in unnecessary radiation exposure.

D. Procedures for Ordering Radioactive Materials

Prior to placing an order, the inventory will be reviewed to insure that possession limits will not be exceeded. The RSO will review these inventories and related procedures on a monthly basis.

During normal working hours, carriers will be instructed to deliver radioactive material packages directly to the receiving department. There will be no after hour deliveries.

Incoming shipments will be examined visually. If the shipment appears wet or damaged, the RSO will be notified immediately.

The RSO will provide their office and home telephone numbers for any authorized user, and the numbers will be available in the laboratory.

E. Procedure for Safely Opening Packages Containing Radioactive Materials

1. Gloves will be worn to prevent hand contamination.
2. Packages will be visually inspected for any sign of damage (i.e. wetness, crushed, etc) If damage is noted, the procedure will be stopped and the RSO notified.
3. The external surface of the outer package will be surveyed with the survey meter and the results recorded. If a surface exposure rate of greater than 10 m REM/hr is obtained, the procedure will be stopped and the RSO notified.
4. The outer package will be opened in a restricted area in accordance with the manufacturer's directions (if supplied), and the packing slip removed. The inner package will be opened and the contents verified by comparing requisition, packing slip and label on the bottle. The final source container will be checked for breakage of seals or vials, loss of liquid, discoloration of packing materials, etc. The possession limits will be checked to insure they are not exceeded.
5. A wipe test will be performed on the outer surface of the final source container and results recorded. Contamination in excess of 500 dpm per 100 cm² will be reported to the RSO.

6. Packing materials will be surveyed with the survey meter and results recorded before disposal.

F. General Rules for the Safe Use of Radioactive Material

1. laboratory coats and other protective clothing will be worn at all times in areas where radioactive materials are used.
2. Disposable gloves will be worn at all times while handling radioactive materials.
3. There will be no eating, drinking, smoking or application of cosmetics in any area where radioactive material is used or stored.
4. There will no storage of food, drink or personal effects with radioactive materials.
5. Radioactive waste will be disposed of only in specially designated receptacles.
6. No pipetting by mouth will be permitted.
7. Radioactive solutions will be confined in covered containers, plainly identified and labelled with name of compound, radionuclide, date, activity and indication level, if applicable.
8. Radioactive materials will be locked when personnel are not present.
9. Emergency notification home telephone numbers will be posted in the laboratory.

G. Personnel Training Program

The personnel training program will be given to all personnel who work with radioactive materials.

The training will be given in the form of lectures and the duration of each session will depend on the extent of applicability to the employees involved.

The training program will be of sufficient scope to insure that all personnel receive proper instruction in the items specified in 10 CFR Part 19, to include:

1. Areas where radioactive materials are used or stored.
2. Potent hazards associated with radioactive materials.
3. Radiological safety procedures appropriate to their respective duties.
4. Pertinent NRC regulations and terms of Radioactive Material License.
5. Rules and regulations of the license.
6. Their obligation to report unsafe conditions.
7. Appropriate responses to emergencies or unsafe conditions.
8. Their right to be informed of their radiation exposure.
9. Locations where the license is posted or made available notices and copies of pertinent licenses and license conditions (including applicable correspondence) as required by 10 CFR Part 19.

Personnel will be properly instructed as follows:

1. Before assuming duties with or in the vicinity of radioactive materials.
2. During annual refresher training.
3. Whenever there is a significant change in duties, regulations or in the terms of the license.

H. Emergency Procedures

1. Radioactive Spills

- a. All persons in the area will be notified when a spill has occurred.
- b. The spill will be covered with absorbent paper to prevent its spread.

- c. Disposable gloves and tongs will be used to clean up the spill. The absorbent paper will be carefully folded, inserted into a plastic bag and disposed of in the radioactive waste container. All other contaminated materials such as disposable gloves will also be inserted into the plastic bag.
- d. The survey will be conducted using a low-range thin-end window G-M survey meter. The area will around the spill, hands and clothing will be checked for contamination.
- e. The incident will be reported to the Radiation Safety Officer.
- f. Decontamination will be accomplished by scrubbing the spill areas with an industrial cleaner using disposable towels until readings on the survey meter indicate background levels have been achieved.
- g. If the spill is on the skin, the area will be flushed thoroughly and washed with mild soap and lukewarm water.

ADDENDUM G
WASTE MANAGEMENT

Management will insure that the volume of waste is minimized to the lowest practical level.

Short-lived radioactive material will be stored for decay until radioactive levels as measured in a low background area with a low-level survey meter with all shielding removed have reached background levels, to insure that radiation levels do not exceed natural background. All radiation labels will be removed or obliterated and the waste will subsequently be disposed of in normal trash.

Liquid radioactive waste may be discharged into sanitary sewerage in accordance with 20.303 of 10 CFR Part 20.

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