NRC FORM 313
(7-81)
10 CFR 30, 32, 33, 34, 35 and 40

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED BY OMB
3150-0120
Expires: 8-30-82

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.

APPLICATIONS FOR DISTRIBUTION OF EXEMPT PRODUCTS 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 MATERIALS SAFETY SECTION B
631 PARK AVENUE
KING OF PRUSSIA, PA 19406

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
NUCLEAR MATERIALS SAFETY 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
NUCLEAR MATERIALS SAFETY 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 UNITS 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 _____
- [X] C. RENEWAL OF LICENSE NUMBER 46-09750-01

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

Dept. Health & Human Services/Public Health Service
U.S. Food and Drug Administration
Rm. 5009 Federal Office Building
909 1st Avenue, Seattle, WA 98174

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

Same as No. 2
Science Branch and Seafood Products Research Center laboratories

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

John Wiskerchen, Director, Science Branch

TELEPHONE NUMBER: (206) 442-5302

SUBMIT ITEMS 5 THROUGH 11 ON 8½ 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: see attached

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

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

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS: see attached

9. FACILITIES AND EQUIPMENT: see attached

10. RADIATION SAFETY PROGRAM: see attached

11. WASTE MANAGEMENT: see attached

12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)
FEE CATEGORY: exempted
AMOUNT ENCLOSED: $ N/A

13. CERTIFICATION (Must be signed 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 20, 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
Lloyd E. Johnson	Lloyd E. Johnson	Acting Director, Sci. Br.	7/1/88

8809150061 880829
REGS LIC30
46-09750-01 PNU

FOR NRC USE ONLY

FEE EXEMPT

TYPE OF FEE	FEE LOG	FEE CATEGORY	COMMENTS	APPROVED BY
AMOUNT RECEIVED	CHECK NUMBER			DATE

Application for Material License

No. 5 Radioactive Material

(a) Element and mass number; (b) Chemical and/or physical form.

(a) Nickel 63; (b) Foil or plated source in detector cells.

(a) Phosphorus 32; (b) As 32P-Cytosine triphosphate in liquid.

(c) Maximum amount possessed at any one time.

(c) Nickel 63 - As detector cells used in the following gas chromatographs:

Instrument	No. of each	Maximum Activity per source
Hewlett-Packard 5736	2 ea	15 millicuries
Hewlett-Packard 5830	1 ea	15 millicuries
Hewlett-Packard 5880	1 ea	15 millicuries
Tracor 565	1 ea	15 millicuries

On occasion, may have on hand one replacement cell (detector) for any of the above instruments.

Phosphorus 32 - Maximum amount on hand would be 500 microcuries (changed from previous 5 millicurie amount).

6. Purposes for which licensed material used:

Nickel 63 - Use as detectors in gas chromatographs for the analysis of samples.

Phosphorus 32 - Use for microbiological research and development as defined in 20 CFR 30.4(g).

7. Individuals responsible for safety program:

The Nickel 63 detector cells shall be handled by, or under the supervision of, individuals designated by the FDA Radiation Safety Officer (RSO), Edmond J. Baratta, FDA Winchester Engineering and Analytical Center (WEAC), Winchester, Massachusetts.

Phosphorus 32 shall be used by, or under the supervison of Stephen D. Weagant, microbiologist and/or Charles A. Kaysner, Research Microbiologist, District RSO's. Both have received on-the-job training plus a one week course entitled "Principles of Immunoassay and Radiological Safety" by FDA Office of Regulatory Affairs, Division of Field Science and Bureau of Foods at Washington, D.C. (copy of course outline attached). Wilbur F. Van Pelt, RRHR, Pacific Region will be available for advice and consultation to the District RSO's.

8. Training for individuals:

Nickel 63 - Curriculum Vitae of E. J. Baratta, FDA RSO, WEAC, should be on file with NRC.

Other individuals who may work under the supervision of Mr. Weagant and/or Mr. Kaysner (training and experience covered under No. 7) could be as follows:

Marleen M. Wekell
Carlos Abeyta, Jr.
Frederick A. Stanley
Sue C. Shields

All have received on-the-job training and attended a one week microbiology course which included radioimmunoassay techniques.

9. Facilities and equipment:

Licensed materials shall be used at the Licensee's facilities at the Federal Office Building, 909 First Avenue, Seattle, Washington. Nickel 63 is used as detectors that are integral parts of gas chromatographs. These instruments are located in special instrument rooms, have limited access by other than the users (chemists) and are locked when not in used.

The facilities and use of Phosphorus 32 will be as described in FDA/NRC letter dated April 14, 1987 (copy attached), paragraph 4.

10. Radiation Safety Program:

Nickel 63 (1) Analysts (instrument users) at the Seattle laboratory will not have direct access to the Nickel 63 in the detectors. When necessary the entire detector cell will be removed from instrument and sent to E. J Baratta, RSO, WEAC, for replacement or repair. (2) Leak tests will be made twice each year for each detector cell and sent to RSO, WEAC for evidence of activity.

Phosphorus 32: Personnel using Phosphorus 32 will be monitored for exposure by whole body, and ring badges using TLD's provided by E. J. Baratta, RSO, WEAC. The company providing services is:

Radiation Detection Company
P.O. Box 1414
Sunnyvale, CA 94088
Telephone (408) 735-8700

Other procedures to be followed will be as described in our FDA/NRC Lette dated August 10, 1987 (copy attached). Disposable latex gloves will be worn by the handlers during all procedures.

11. Waste Management:

Nickel 63: All disposals will be done by forwarding entire detector cell to RSO, WEAC for proper disposal. No disposal will be done by licensee.

Phosphorus 32: Waste management procedures as described in FDA/NRC letter of August 10, 1987 will be followed. See attached copy.

Principles of Immunoassay
and
Radiological Safety

Office of Regulatory Affairs
Division of Field Science
and
Bureau of Foods
Division of Chemistry and Physics

September 12-15, 1983
Federal Building 8, Room 1409
200 C Street, SW
Washington, DC

Monday, 12 September 1983

8:00 am - 9:00 am:	
Orientation and Basic Theoretical Concepts in Immunoassay	J. O'Rangers, Ph.D.
9:00 am - 10:00 am	
Overview of the Basic Laboratory Procedures in Immunoassay	G. Yang, Ph.D.
10:00 am - 10:15 am	
Coffee Break	
10:15 - 12:00	
Detailed discussion of the fundamental elements in immunoassay. This discussion will be a point by point consideration of reagent and assay development.	J. O'Rangers, Ph.D. G. Yang, Ph.D.
12:00 - 1:00 pm	
Lunch	
1:00 pm - 2:00 pm	
Phase Separation Procedures	J. O'Rangers, Ph.D.
2:00 - 3:00 pm	
Immunochemical Techniques in purification and clean-up technology affinity chromatography	J. O'Rangers, Ph.D.
3:00 - 3:15 pm	
Coffee Break	
3:15 - 4:30	
Introduction to the laboratory . Description of Equipment . Demonstration of Separation	G. Yang, Ph.D.

Tuesday, 13 September 1983

Measurement of Radiation and
Radiological Safety in the Laboratory

8:00 - 9:00 am

Fundamentals of Radiation	N. Gaeta, M.S.

9:00 - 9:50 am

Radioactivity/Decay Schemes	N. Gaeta, M.S.

9:50 - 10:05

Coffee Break

10:05 - 10:55

Radiation Interactions	N. Gaeta, M.S.

11:00 - 11:50

Gamma Scintillation Spectroscopy	N. Gaeta, M.S.

12:00 - 1:00 pm

Lunch

1:00 - 1:45

Liquid Scintillation Counting	N. Gaeta, M.S.

1:50 - 2:30

Liquid Scintillation Counting Demonstration	N. Gaeta, M.S.

2:30 - 3:00

Personnel Dosimetry	N. Gaeta, M.S.

3:00 - 3:15

Coffee Break

3:15 - 3:50

Fundamentals of Radiation Protection	N. Gaeta, M.S.

3:50 - 4:30

Waste Disposal	N. Gaeta, M.S.

4:30 - 5:00

Review	Staff

Wednesday, 14 September 1983 LAB

Laboratory Room 1030

8:00 - 9:00	
Orientation: Discussion of RIA Experiment	G. Yang, Ph.D.
9:00 - 12:00	
Student experiment with radio-immunoassay using liquid scintillation technique	G. Yang, Ph.D. J. O'Rangers, Ph.D.
12:00 - 1:00 pm	
Lunch	
1:00 - 1:30 pm	
Orientation to RIA in Aflatoxin analysis	G. Yang, Ph.D.
1:30 - 4:30 pm	
Student experiment with Aflatoxin B1 RIA	G. Yang, Ph.D.

Thursday, 15 September 1983

8:00 - 10:00	
Data analysis methods and evaluation of laboratory data	J. O'Rangers, Ph.D. G. Yang, Ph.D.
10:00 - 10:15	
Coffee Break	
10:15 - 12:00	
Recent Developments in Immunoassay: Demonstration of Enzyme linked assay for Aflatoxin B_1	G. Yang, Ph.D.
12:00 - 1:00 pm	
Lunch	
1:00 - 3:00 pm	
Quality Control in Immunoassays	J. O'Rangers, Ph.D. G. Yang, Ph.D.
3:00 - 3:15 pm	
Coffee Break	
3:15 - 4:00	
Review and Wrap-Up	J. O'Rangers, Ph.D. G. Yang, Ph.D.

DEPARTMENT OF HEAL [illegible] & HUMAN SERVICES

Public Health Service

Food and Drug Administration
Seattle Field Office
5009 Federal Office Building
909 First Avenue
Seattle WA 98174

Telephone: 206-442-5300

April 14, 1987

Control No.: 70532

Nuclear Regulatory Commission
1450 Maria Lane, Suite 210
Walnut Creek, California 94596

RE: Additional Information For
License No.: 46-09750-01
Amendments

Attention: R. D. Thomas, Chief
Nuclear Materials Safety Section

Gentlemen:

1. A. Microbiologists Stephen D. Weagant and Charles A. Kaysner attended an FDA sponsored "Principles of Immunoassay and Radiological Safety" course in Washington, D.C. September 12-15, 1987. Copy of training course agenda is attached. Both microbiologists have performed ^{32}P radiolabeled DNA probe analyses of regulatory and research samples since this time.

B. S.D. Weagant and C.A. Kaysner will share on-site R.S.O. duties. Their training and experience is noted in the above section. These two individuals are the only analysts that handle radiolabeled DNA probes. They are responsible for documenting shipments, usage, and disposal of ^{32P} probes. They will monitor the secured work and storage areas after analyses are completed.

70532

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2. Personnel Monitoring Devices

   a. Radiation Detection Co.
   Sunnyvale, CA (supplied by FDA-WEAC)

   b. T.L.D. badges.

   c. Badges will be changed quarterly, as probed analysis is not done on a day-to-day basis. A 10 microcurie shipment has been the maximum amount that has been handled by the laboratory at any one time. The license amendment is to handle no more than a 500 microcurie amount at any shipment. See Sec 4 for procedure used in laboratory.

3. Routine radiation level and contamination wipe surveys are conducted after each DNA analysis is completed. Survey instrument is detailed in Sec 5 of this letter. The two work benches in FDA microbiology designated for radiolabeled probe work will be surveyed on an as use basis. The frequency of the survey depends upon the shipments of radiolabeled probe, an average of six (6) shipments per calendar year. The action level for decontamination will be 500 microcuries.

4. Radiolabeled probe is ordered from and shipped by FDA, MCMI, Minneapolis, MN laboratory. Shipments of radiolabeled probe are received on an as-needed basis.

Shipment amount and date received is recorded in log book. Use of probe is not a daily analysis. Probe is received at FDA laboratory, FOB, Seattle, stored in a lead container in a low temperature freezer, marked with radiation sticker, until use. DNA probe analysis is performed in one of two sections of the microbiology laboratory secure from general public. Two of 10 work benches are used for DNA analysis. Waste is placed in plastic containers, marked with date and radiation stickers and stored in 20 in. dia. by 30 in. tall steel cans in secured storage area on second floor of FOB. Documentation of storage dates of waste is made, a minimum of 6 months storage required. At disposal, waste is surveyed with survey meter, placed in biohazard bags, autoclaved to melt plastic, etc., and then disposed of in routine garbage system.

Other FDA personnel have received basic training in radiolabeled probe analyses. In case of spill, all employees will be notified and R.S.O.(s) will handle clean-up and survey, with assistance and/or advice of Regional Radiological Health Officer (see Sec 6).

5. Survey Meter
OCLM Item No. CD V-700
Model 6b
Electro-Neutronics, Inc.
Oakland, CA
Serial No. 20940

6. W.F. Van Pelt, PHS
Regional Radiological Health Officer
Dept. Health and Human Services
Food and Drug Administration
909 1st Avenue, Room 5009
Seattle, WA 98174
206-442-7020

The RRHO calibrates the survey instrument and develops and evaluates the monitoring devices (quarterly). He will calibrate survey instrument annually. He also is the advisor to the two K50s.

7. FDA laboratory area is secured during non-business hours. This includes the work benches and freezer used for storage. The waste disposal storage area, adjacent to laboratory is secured by a separate lock, no master key is available to building janitorial personnel, only to FDA employees.

Sincerely,

John E. Wiskerchen
Director, Science Branch

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Office of the Regional Director
Food and Drug Administration
Room 5009, Federal Office Building
909 1st Avenue
Seattle, Washington 98174

Telephone: 206-442-5304

F.

August 10, 1987

Control No.: 70532

Nuclear Regulatory Commission
1450 Maria Lane, Suite 210
Walnut Creek, California 94596

RE: Additional Information For
License No.: 46-09750-01
Amendments

Attention: R. D. Thomas, Chief
Nuclear Materials Safety Section

Gentlemen:

This is in reference to your letter of July 16, 1987, requesting further information to complete processing of our request for the by-product material license.

1. Stephen Weagant and Charles Kaysner attended the course "Principles of Immunoassay and Radiological Safety" given in Washington, D.C., on September 12-15, 1983.

   We understand that larger quantities of Phosphorous 32 should not be ordered until the license is amended.

2. We accept the five millicurie limit for this amendment and will not exceed this amount.

3. A. Radiation level surveys will be conducted on a daily basis (while the P-32 is being stored for use).

   Radiation level surveys will be conducted on a daily basis in the radiation use area when the P-32 is in actual use. Following each use, the area will be surveyed to check for contamination of work surfaces, and a radiation level survey done on the exterior of the containment vessel for the P-32.

70532

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When P-32 is not in use, the vessel containing stored P-32 will be given a radiation level survey on a weekly basis.

The waste storage area will also be checked on a weekly basis when licensed material is in use.

B. A proposed survey procedure is attached.

4. The instrument to be used will be a Ludlum Instrument Model 12 with end window, G.M. detector, model 44-7. A copy of the Ludlum catalog page for the probe is attached. The meter is equipped with a zero-500 cpm dial.

5. Calibration of the survey instrument will be done by the Northwest Regional Instrument Calibration Facility at the University of Washington (certified by the Conference of Radiation Control Program Directors and traceable to NBS) on an annual basis. listed on the face of W. License # WN-C001-01

6. An emergency spill procedure is attached.

7. Licensed materials will be stored and used in a restricted area at all times following receipt. The restricted area is so designated based upon its being a microbiological laboratory originally, but the procedures used to control access (warning signs, locked doors) serve well for radioactive materials as well. Doors are always locked after hours or when the laboratory is unattended. The waste disposal area is secured by separate lock, no master key is available to janitorial personnel, and the freezer used to store the unused P-32 is also separately locked when the licensed material is in use.

Bill Van Pelt

Bill Van Pelt
Regional Radiological Health
Representative, Pacific Region, FDA

Attachments

Emergency Response Procedures for Phosphorous-32 Spills

1. Notify: Notify persons in the area that a spill has occurred. Warn them not to enter the immediate area.

2. Prevent the Spread: Cover the spill with absorbent paper.

3. Notify the RSO: Have someone notify the RSO's and the RRHP.

	Office	Home
RSO Steve Weagant	442-5302	598-4168
RSO Charles Kaysner	442-5302	481-1337
RRHR Bill Van Pelt	442-7020	329-9476

4. Clean Up the Area: Using disposable latex gloves, carefully fold absorbent paper and pad the spill. Place the absorbent paper in a plastic bag and then in the radioactive waste container. Continue to pad the area until all liquid is absorbed. If a survey shows remaining contamination, carefully clean the area with absorbent paper and Radiac Wash until below the action level of 200 dpm/100 cm^2.

5. Survey the Area: Survey the area using the Ludlum/G.M. system. The action level for further decontamination actions is 200 dpm/100 cm^2.

6. Personnel Decontamination: Survey the personnel involved. If clothing is contaminated, remove and place in a plastic bag for further evaluations. If contamination is on the skin, flush it thoroughly and wash with mild soap and lukewarm water.

Area Survey Procedures

1. All preparation and incubation areas will be surveyed daily, using the Ludlum/GM system, following any use of radioactive material in that area. Any area found contaminated will be cleaned to a level of 200 dpm/100 cm^2 or less.

2. All material being placed in or returned to storage will be checked for surface contamination before being placed in storage.

3. Waste storage areas will be surveyed on a weekly basis when licensed material is in use.

4. The daily and weekly surveys will consist of a measurement of radiation levels in the area. The action level shall be 200 dpm/100 cm^2.

5. A permanent record will be kept of all survey results which will include:

   A. Location, date, and ID of equipment being used, including SN of the survey meter detector.

   B. Name of person doing survey.

   C. Drawing of area surveyed, including preparation, storage, incubation, and waste storage areas.

   D. Measured contamination levels in CPM keyed on the location drawing.

   E. Corrective action taken to reduce the contamination and measured levels in dpm/100 cm^2 of areas cleaned.

U.S. NUCLEAR REGULATORY COMMISSION

PAGE ___ OF ___ PAGES

MATERIALS LICENSE

Amendment No. 9

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Department of Health & Human Services Food and Drug Administration 2. Federal Office Building 909 1st Avenue, Room 5009 Seattle, Washington 98174	In accordance with application dated February 12, 1987 3. License number 46-09750-01 is amended in its entirety to read as follows:
	4. Expiration date May 31, 1988
	5. Docket or Reference No. 030-06644

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
~~A. Hydrogen-3~~ DELETE	~~A. Foils in detector cells~~ DELETE	~~A. Not to exceed 300 millicuries per foil~~ DELETE
C. Nickel 63	B. Foils or plated sources in detector cells	B. Not to exceed 15 millicuries per source
C. Phosphorus 32	Liquid	C. 500 microcuries 5 millicuries

9. Authorized use

A. ~~and B~~. For use in gas chromatographs for sample analysis.

C. Research and development as defined in 10 CFR 30.4(q).

CONDITIONS

10. Licensed material shall be used only at the licensee's facilities at the Federal Office Building, Room 5009, 909 1st Avenue, Seattle, Washington.

11. A. Licensed material described in Items A. ~~and B~~. shall be used by, or under the supervision of, individuals designated by the Radiation Protection Officer, ~~Neil Goetz~~. Edmund J. Bangerter

B. Licensed material described in Item C. shall be used by, or under the supervision of, Stephen D. Weagant or Charles A. Kaysner, District RSOs.

12. A. ~~Detector cells containing titanium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 225 degrees Centigrade.~~ DELETE.

B. ~~Detector cells containing scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 325 degrees Centigrade.~~

46-09750-01 SP

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
46-09750-01

Docket or Reference number
030-06644

Amendment No. 9

11

CONDITIONS

(continued)

12
23. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in 10 CFR 20.203(a)(1), the licensee is hereby authorized to label detector cells and cell baths, containing licensed material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols without a color requirement. (supplied by instrument vendors).

13
24. A. The source(s) specified in Item(s) 7.B. shall be tested for leakage and/or contamination at intervals not to exceed 6 months. Any source received from another person which is not accompanied by a certificate indicating that a test was performed within 6 months before the transfer shall not be put into use until tested.

B. Any source in storage and not being used need not be tested. When the source is removed from storage for use or transfer to another person, it shall be tested before use or transfer.

C. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the source shall be removed from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the date the leak test result is known with the U. S. Nuclear Regulatory Commission, Region V; Nuclear Materials Safety and Safeguards Branch; 1450 Maria Lane, Suite 210; Walnut Creek, California 94596. The report shall specify the source involved, the test results, and corrective action taken. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. Records may be disposed of following Commission inspection.

D. The licensee is authorized to collect leak test samples for analysis by the Food and Drug Administration (License No. 20-08361-01) or tests for leakage and/or contamination shall be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.

14
25. The licensee shall conduct a physical inventory every six (6) months to account for all sources and/or devices received and possessed under the license. Records of the inventories shall be maintained for two (2) years from the date of each inventory.

15
26. Detector cells containing licensed material shall not be opened or the sources removed from the detector cell by the licensee.

16
27. The licensee may transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material".

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 46-09750-01
Docket or Reference number: 030-06644
Amendment No. 9

CONDITIONS

(continued)

17
~~18~~. The licensee is authorized to hold radioactive material with a physical half-life of less than 65 days for decay-in-storage before disposal in ordinary trash provided:

A. Radioactive waste to be disposed of in this manner shall be held for decay a minimum of ten (10) half-lives.

B. Prior to disposal as normal waste, radioactive waste shall be surveyed to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.

18
~~19~~. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

~~A. Application dated December 30, 1977~~ DELETE
~~B. Letter dated March 11, 1980~~ DELETE
~~C. Letter dated May 6, 1985~~ DELETE
~~D. Application dated February 12, 1987~~ DELETE

These correspondence No longer applicable. They are either obsolete references or are updated in new applications. JHJ

B E. Letter dated April 14, 1987
C E. Letter dated August 10, 1987
A. Application dated ___ 1988.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date _____ 1987

By Beth A. Riedlinger
Beth A. Riedlinger
Health Physicist (Licensing)
Nuclear Materials Safety Section
Region V

-MS-15

NRC FORM 218 (4-76) NRCM 0240

U.S. NUCLEAR REGULATORY COMMISSION

TELEPHONE OR VERBAL CONVERSATION RECORD

DATE: 6/2/88

TIME: ☒ A.M. ☐ P.M.

☐ INCOMING CALL ☐ OUTGOING CALL ☐ VISIT

PERSON CALLING	OFFICE/ADDRESS	PHONE NUMBER / EXTENSION
Lloyd Johnson + Bill Van Pelt	[redacted] Science Branch Director + Regional RSO	FTS: 399-5302
PERSON CALLED	OFFICE/ADDRESS	PHONE NUMBER / EXTENSION

CONVERSATION

SUBJECT: Renewal of License 46-09750-01

SUMMARY

1) There is confusion regarding your survey instrument, calibration procedures, dosimetry use, etc. between your renewal application and documents which were submitted previously.

It would be best to completely resubmit so that only one document needs to be referenced in "Condition 19." when the license is renewed. The application should stand on its own.

Agreed. Will resubmit by July 5, 1988.

2) It would be highly advisable to do 2 things:

- Make sure users wear surgeon's gloves when handling P-32 due to ease of absorption through the skin
- Switch from TLD's to monthly film rings.

OR. They will check to see that this is done.

3) Please send last amendment + backup to Attn: Alice Fairweather. File has been misplaced. ✓ Copied license + backup. Posted on 6/2/88.

—B.A. Ruddlinge

REFERRED TO:

ACTION REQUESTED

☐ ADVISE ME OF ACTION TAKEN.

INITIALS

DATE

ACTION TAKEN

INITIALS

DATE

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