

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 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 20-04490-01

☐ C. RENEWAL OF LICENSE NUMBER _____

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

The Center for Blood Research
800 Huntington Avenue
Boston, MA 02115

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

The Center for Blood Research
800 Huntington Avenue
Boston, MA 02115

8907210295 880915
REG 1 LIC30
20-04490-01 PDR

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Dr. David Bing, RSO

TELEPHONE NUMBER

(617)731-6470 X370

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.

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

3M

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

David Bing

Dr. David Bing

Radiation Safety Officer

7/29/88

14. 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

ML10

109326

APPROVED BY

AMOUNT RECEIVED

CHECK N

"OFFICIAL RECORD COPY"

DATE

01 AUG 1988

HARVARD MEDICAL SCHOOL
DEPARTMENT OF PATHOLOGY

22 SHATTUCK STREET
BOSTON, MASSACHUSETTS 02115

Environmental Health and Safety
75 Mt. Auburn Street
Cambridge, MA 02138

APPLICATION FOR AUTHORIZATION TO USE RADIOISOTOPES

Statement of training and experience

A. I have taken courses in the use of radioisotopes at Harvard in 1971 and HMS 1978 or 1979. I have had training in use of shielding, inverse square law, measurement of doses with geiger and scintillation counters and their calibration, in biological effects, and on monitoring and waste disposal.

B. I have experience in working with the following in unsealed containers: ^{32}P , phospholipid incorporation, nucleotides, phosphorylation, 5 mCi, Berkeley, CA 1970-1971 and Cambridge, MA 1971-1973; ^3H as solid borohydride with decomposition to ^3H gas in a fume hood, weighing on balances, use as reducing agent, Harvard Biolabs 1973-74 and Cambridge, England 1976, and as protein label, up to 1 mCi; ^{14}C as carbohydrate or protein precursor label, 1974-1976 Harvard Biolabs or as acetylating reagent, Cambridge, England, 1976-1977; ^{35}S sulfate uptake into bacteria to produce methionine, 20 mCi, Cambridge, England 1976; ^{35}S methionine, 1 mCi, Harvard Medical School 1977-1979; ^{125}I as protein label, iodination with chloramine-T or lactoperoxidase, 10 mCi, Harvard Biolabs 1971-1976, Cambridge, England 1976-1977, Harvard Medical School 1977-1979; ^{51}Cr as cytoplasmic label for cell lysis experiments, Harvard Biolabs 1971-1976. I have utilized plexiglass and lead shielding, tongs, aprons, sealed containers or fume hoods for volatile isotopes, and liquid scintillation, γ scintillation, and auto- and fluorography, and geiger and scintillation monitoring instrument.

December 22, 1980

Date

Timothy A. Springer
Timothy A. Springer

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

(FOR LFMS USE)
INFORMATION FROM LTS

PROGRAM CODE: 03620
STATUS CODE: 0
FEE CATEGORY: 3M
EXP. DATE: 19890630
FEE COMMENTS:

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: CENTER FOR BLOOD RESEARCH (THE)
RECEIVED DATE: 880801
DOCKET NO: 3004639
CONTROL NO.: 109326
LICENSE NO.: 20-04490-01
ACTION TYPE: AMENDMENT

2. FEE ATTACHED

AMOUNT: \$120.00

CHECK NO.: 854

3. COMMENTS

SIGNED
DATE

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED 1)

1. FEE CATEGORY AND AMOUNT: 3M \$120

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:

AMENDMENT

RENEWAL

LICENSE

3. OTHER

SIGNED
DATE