

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

INSTRUCTIONS.—Complete Items 1 through 16 if this is an initial application. If application is for renewal of a license, complete only Items 1 through 7 and indicate new information or changes in the program as requested in Items 8 through 15. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail three copies to: U. S. Atomic Energy Commission, Washington 25, D. C. Attention: Isotopes Branch, Division of Licensing and Regulation. Upon approval of this application, the applicant will receive an AEC Byproduct Material License. An AEC Byproduct Material License is issued in accordance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30 and the Licensee is subject to Title 10, Code of Federal Regulations, Part 20.

| | | | |
|--|--|--|--|
| <p>1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc.)</p> <p>U. S. Army Medical Rsch & Nutr Lab Fitzsimons General Hospital Denver 40, Colorado</p> | | <p>(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a).)</p> <p>Same as License No. 5-46-12(L63)</p> | |
| <p>2. DEPARTMENT TO USE BYPRODUCT MATERIAL</p> <p>Same as License No. 5-46-12(L63)</p> | | <p>3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)</p> <p>5-46-12(L63) Renewal</p> | |
| <p>4. INDIVIDUAL USER(S). (Name and title of individual(s) who will use or directly supervise use of byproduct material. Give training and experience in Items 8 and 9.)</p> <p>Same as License No. 5-46-12(L63)</p> | | <p>5. RADIATION PROTECTION OFFICER (Name of person designated as radiation protection officer if other than individual user. Attach resume of his training and experience as in Items 8 and 9.)</p> <p>Captain Kenneth E. Kinnamon</p> | |
| <p>6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.)</p> <p>Same as License No. 5-46-12(L63)</p> | | <p>(b) CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM NUMBER OF MILLICURIES OF EACH CHEMICAL AND/OR PHYSICAL FORM THAT YOU WILL POSSESS AT ANY ONE TIME. (If sealed source(s), also state name of manufacturer, model number, number of sources and maximum activity per source.)</p> <p>Same as License No. 5-46-12(L63)</p> | |
| <p>7. DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED. (If byproduct material is for "human use," supplement A (Form AEC-313a) must be completed in lieu of this item. If byproduct material is in the form of a sealed source, include the make and model number of the storage container and/or device in which the source will be stored and/or used.)</p> <p>See supplement A for human use</p> | | | |

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(Continued on reverse side)

TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)

| B. TYPE OF TRAINING | WHERE TRAINED | DURATION OF TRAINING | ON THE JOB (Circle answer) | FORMAL COURSE (Circle answer) |
|--|----------------------------------|----------------------|-------------------------------|----------------------------------|
| a. Principles and practices of radiation protection | Same as License No. 5-46-12(L63) | | Yes No | Yes No |
| b. Radioactivity measurement standardization and monitoring techniques and instruments | | | Yes No | Yes No |
| c. Mathematics and calculations basic to the use and measurement of radioactivity | | | Yes No | Yes No |
| d. Biological effects of radiation | | | Yes No | Yes No |

9. EXPERIENCE WITH RADIATION. (Actual use of radioisotopes or equivalent experience.)

| ISOTOPE | MAXIMUM AMOUNT | WHERE EXPERIENCE WAS GAINED | DURATION OF EXPERIENCE | TYPE OF USE |
|-----------------------------------|----------------|-----------------------------|------------------------|-------------|
| Same As License No. 5-46-12 (L63) | | | | |

10. RADIATION DETECTION INSTRUMENTS. (Use supplemental sheets if necessary.)

| TYPE OF INSTRUMENTS (Include make and model number of each) | NUMBER AVAILABLE | RADIATION DETECTED | SENSITIVITY RANGE (mv/hr) | WINDOW THICKNESS (mg/cm ²) | USE (Monitoring, surveying, measuring) |
|--|------------------|--------------------|------------------------------|---|---|
| Same as License No. 5-46-12(L63) | | | | | |

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE.

Same As License No. 5-46-12(L63)

12. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED. (For film badges, specify method of calibrating and processing, or name of supplier.)

Same As License No. 5-46-12(L63)

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

| | |
|---|----------------------------------|
| 13. FACILITIES AND EQUIPMENT. Describe laboratory facilities and remote handling equipment, storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached. (Circle answer) Yes No | Same as License No. 5-46-12(L63) |
| 14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source. | Same as License No. 5-46-12(L63) |
| 15. WASTE DISPOSAL. If a commercial waste disposal service is employed, specify name of company. Otherwise, submit detailed description of methods which will be used for disposing of radioactive wastes and estimates of the type and amount of activity involved. | Same As License No. 5-46-12(L63) |

CERTIFICATE (This item must be completed by applicant)

16. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART 30, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

Date 24 May 1963



USA Med Rsch & Nutr Lab, FGH
Denver 40, Colorado

Applicant named in item 1

by: Marion E. McDowell
MARION E. McDOWELL, Lt Col, MC
Commanding

Title of certifying official

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 or to defraud within its jurisdiction.

| Form AEC-313 a (3-56) PAGE 1 | | UNITED STATES ATOMIC ENERGY COMMISSION APPLICATION FOR BYPRODUCT MATERIAL LICENSE SUPPLEMENT A—HUMAN USE | | Form approved. Budget Bureau No. 38-R080.1 | |
|--|--|---|--|---|--|
| If byproduct material is for "human use" (internal administration of byproduct material, or the radiation therefrom to human beings), complete this supplement and attach to the application for byproduct material license. | | | | | |
| 1. (a) USING PHYSICIAN'S NAME Same as in License No. 5-46-12(L63) | | (b) NAME AND ADDRESS OF APPLICANT (If different from 1(a)) No Change | | | |
| 2. THE USING PHYSICIAN INDICATED ABOVE IS LICENSED TO DISPENSE DRUGS IN THE PRACTICE OF MEDICINE BY A STATE OR TERRITORY OF THE UNITED STATES, THE DISTRICT OF COLUMBIA, OR THE COMMONWEALTH OF PUERTO RICO. | | | | CIRCLE ANSWER | <input checked="" type="radio"/> YES <input type="radio"/> NO |
| 3. A STATEMENT OF USING PHYSICIAN'S CLINICAL RADIOISOTOPE EXPERIENCE (PAGE 3 OF THIS SUPPLEMENT) IS SUBMITTED IN SUPPORT OF THIS APPLICATION. IF ANSWER IS NO, USE PAGE 2 OF THIS SUPPLEMENT TO EXPLAIN OR REFER TO OTHER APPLICATION OR RELATED DOCUMENTS ON WHICH THIS INFORMATION APPEARS. | | | | CIRCLE ANSWER | YES <input type="radio"/> <input checked="" type="radio"/> NO |
| PROPOSED DIAGNOSIS OR TREATMENT | | | | | |
| 4. (a) DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED INCLUDING SPECIFIC CONDITIONS OR DISEASES TO BE DIAGNOSED OR TREATED (Use page 2 if necessary): | | | | | |
| (b) CHEMICAL FORM ADMINISTERED: Same As License No. 5-46-12(L63) | | | | | |
| (c) DESCRIBE PROCEDURES WHICH WILL BE OBSERVED TO MINIMIZE HAZARD FROM HANDLING, STORAGE, AND DISPOSAL OF THE BYPRODUCT MATERIAL: | | | | | |
| (d) DESCRIPTION AND SKETCHES OF SPECIAL DEVICES TO BE USED FOR ADMINISTERING BYPRODUCT MATERIAL TO HUMAN BEINGS ARE | | | | | |
| (1) ATTACHED (LITERATURE REFERENCES WILL SUFFICE) | | | | CIRCLE ANSWER | YES <input type="radio"/> NO <input type="radio"/> |
| (2) ON FILE WITH THE ISOTOPES EXTENSION REFER TO APPLICATION NO _____ | | | | CIRCLE ANSWER | YES <input type="radio"/> NO <input type="radio"/> |
| 5. PROPOSED DOSAGE SCHEDULE | | | | | |
| (a) In millicuries for internally administered byproduct material other than discrete fixed sources; and in roentgens or rads, as appropriate, for internal or external irradiation from discrete fixed sources (gold seeds, cobalt needles, etc.) state separately for each condition or disease (use page 2 if necessary): | | | | | |
| Same As License No. 5-46-12(L63) | | | | | |
| (b) INVESTIGATIVE PROPOSAL FOR EXPERIMENTAL, NEW OR UNUSUAL HUMAN USES IS ATTACHED. (Attachment should include outline of conditions to be evaluated, including data from animal studies and/or abstract of literature reference if any, number and type of patients (i. e. age group, moribund, etc.)) | | | | CIRCLE ANSWER | YES <input type="radio"/> NO <input type="radio"/> |
| 6. IF BYPRODUCT MATERIAL WILL NOT BE OBTAINED IN PRECALIBRATED FORM FOR ORAL ADMINISTRATION OR IN PRECALIBRATED AND STERILIZED FORM FOR PARENTERAL ADMINISTRATION, DESCRIBE IDENTIFICATION, PROCESSING, AND STANDARDIZATION PROCEDURES: | | | | | |
| No change | | | | | |
| 7. THE PROPOSED USE OF BYPRODUCT MATERIAL HAS BEEN, OR WILL BE, APPROVED BY THE MEDICAL ISOTOPE COMMITTEE. | | | | NA | CIRCLE ANSWER YES <input type="radio"/> NO <input type="radio"/> |
| HOSPITAL FACILITIES FOR INDIVIDUAL PRACTICE USE ONLY | | | | | |
| 8. (a) THE APPLICANT HAS COMPLETED ARRANGEMENTS FOR A HOSPITAL TO ADMIT RADIOACTIVE PATIENTS WHENEVER ADVISABLE. | | | | NA | CIRCLE ANSWER YES <input type="radio"/> NO <input type="radio"/> |
| (b) A COPY OF INSTRUCTIONS TO BE FURNISHED TO THE HOSPITAL AS TO RADIOLOGICAL SAFETY PRECAUTIONS TO BE TAKEN AND AVAILABLE RADIATION INSTRUMENTATION IS ATTACHED. | | | | CIRCLE ANSWER | YES <input type="radio"/> NO <input type="radio"/> |

UNITED STATES ATOMIC ENERGY COMMISSION
APPLICATION FOR BYPRODUCT MATERIAL LICENSE
SUPPLEMENT A—HUMAN USE

This page may be used for providing additional information. Please cross reference to specific items.

Physicians' Radioisotope experience has previously been submitted in connection with License 5-46-12(L63)

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

INSTRUCTIONS.—Complete Items 1 through 16 if this is an initial application. If application is for renewal of a license, complete only Items 1 through 7 and indicate new information or changes in the program as requested in Items 8 through 15. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail three copies to: U. S. Atomic Energy Commission, Washington 25, D. C. Attention: Isotopes Branch, Division of Licensing and Regulation. Upon approval of this application, the applicant will receive an AEC Byproduct Material License. An AEC Byproduct Material License is issued in accordance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30 and the Licensee is subject to Title 10, Code of Federal Regulations, Part 20.

| | | | |
|---|--|---|--|
| 1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc.) | | (b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a).) | |
| U. S. Army Medical Resch & Nutr Lab Fitzsimons General Hospital Denver 40, Colorado | | Same as License No. 1-46-12(L43) | |
| 2. DEPARTMENT TO USE BYPRODUCT MATERIAL | | 3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.) | |
| Same as License No. 1-46-12(L43) | | 1-46-12(L43) Renewal | |
| 4. INDIVIDUAL USER(S). (Name and title of individual(s) who will use or directly supervise use of byproduct material. Give training and experience in Items 8 and 9.) | | 5. RADIATION PROTECTION OFFICER (Name of person designated as radiation protection officer if other than individual user. Attach resume of his training and experience as in Items 8 and 9.) | |
| Same as License No. 1-46-12(L43) | | Captain Kenneth E. Kinnaman | |
| 6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.) | | (b) CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM NUMBER OF MILLICURIES OF EACH CHEMICAL AND/OR PHYSICAL FORM THAT YOU WILL POSSESS AT ANY ONE TIME. (If sealed source(s), also state name of manufacturer, model number, number of sources and maximum activity per source.) | |
| Same as License No. 1-46-12(L43) | | Same as License No. 1-46-12(L43) | |
| 7. DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED. (If byproduct material is for "human use," supplement A (Form AEC-313a) must be completed in lieu of this item. If byproduct material is in the form of a sealed source, include the make and model number of the storage container and/or device in which the source will be stored and/or used.) | | | |
| See supplement A for human use | | | |

TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)

| 8. TYPE OF TRAINING | WHERE TRAINED | DURATION OF TRAINING | ON THE JOB (Circle answer) | FORMAL COURSE (Circle answer) |
|--|---|----------------------|-------------------------------|----------------------------------|
| a. Principles and practices of radiation protection | Same as License No. 1-46-12(L43) | | Yes No | Yes No |
| b. Radioactivity measurement standardization and monitoring techniques and instruments | | | Yes No | Yes No |
| c. Mathematics and calculations basic to the use and measurement of radioactivity | | | Yes No | Yes No |
| d. Biological effects of radiation | | | Yes No | Yes No |

9. EXPERIENCE WITH RADIATION. (Actual use of radionuclides or equivalent experience.)

| ISOTOPE | MAXIMUM AMOUNT | WHERE EXPERIENCE WAS GAINED | DURATION OF EXPERIENCE | TYPE OF USE |
|--|----------------|-----------------------------|------------------------|-------------|
| Same as License No. 1-46-12 (L43) | | | | |

10. RADIATION DETECTION INSTRUMENTS. (Use supplemental sheets if necessary.)

| TYPE OF INSTRUMENTS (Include make and model number of each) | NUMBER AVAILABLE | RADIATION DETECTED | SENSITIVITY RANGE (mr/hr) | WINDOW THICKNESS (mg/cm ²) | USE (Monitoring, surveying, measuring) |
|--|------------------|--------------------|------------------------------|---|---|
| Same as License No. 1-46-12(L43) | | | | | |

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE.

Same as License No. 1-46-12(L43)

12. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED. (For film badges, specify method of calibrating and processing, or name of supplier.)

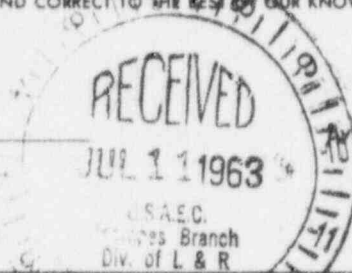
Same as License No. 1-46-12(L43)

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

| | |
|---|---|
| 13. FACILITIES AND EQUIPMENT. Describe laboratory facilities and remote handling equipment, storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached. (Circle answer) Yes No | Same as License No. 1-46-12(L43) |
| 14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source. | Same as License No. 1-46-12(L43) |
| 15. WASTE DISPOSAL. If a commercial waste disposal service is employed, specify name of company. Otherwise, submit detailed description of methods which will be used for disposing of radioactive wastes and estimates of the type and amount of activity involved. | Same as License No. 1-46-12(L43) |

CERTIFICATE (This item must be completed by applicant)

16. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART 30, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

Date **24 May 1963**

**USA Med Res & Mater Lab, FGI
Denver 40, Colorado**
Applicant named in item 1

Marion E. McDowell
MARION E. McDOWELL, Lt Col, MC
Commanding
Title of certifying official

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.

APPLICATION FOR BYPRODUCT MATERIAL LICENSE
SUPPLEMENT A—HUMAN USE

If byproduct material is for "human use" (internal administration of byproduct material, or the radiation therefrom to human beings), complete this supplement and attach to the application for byproduct material license.

| | | | |
|--|--|--|-----------------------------|
| 1. (a) USING PHYSICIAN'S NAME Same as in License No. 3-44-12(L63) | | (b) NAME AND ADDRESS OF APPLICANT (If different from 1(a)) No change | |
| 2. THE USING PHYSICIAN INDICATED ABOVE IS LICENSED TO DISPENSE DRUGS IN THE PRACTICE OF MEDICINE BY A STATE OR TERRITORY OF THE UNITED STATES, THE DISTRICT OF COLUMBIA, OR THE COMMONWEALTH OF PUERTO RICO. <div style="text-align: right;">CIRCLE ANSWER</div> | | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| 3. A STATEMENT OF USING PHYSICIAN'S CLINICAL RADIOISOTOPE EXPERIENCE (PAGE 3 OF THIS SUPPLEMENT) IS SUBMITTED IN SUPPORT OF THIS APPLICATION. IF ANSWER IS NO, USE PAGE 2 OF THIS SUPPLEMENT TO EXPLAIN OR REFER TO OTHER APPLICATION OR RELATED DOCUMENTS ON WHICH THIS INFORMATION APPEARS. <div style="text-align: right;">CIRCLE ANSWER</div> | | YES <input type="checkbox"/> | NO <input type="checkbox"/> |

PROPOSED DIAGNOSIS OR TREATMENT

| | | | |
|---|--|------------------------------|-----------------------------|
| 4. (a) DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED INCLUDING SPECIFIC CONDITIONS OR DISEASES TO BE DIAGNOSED OR TREATED (Use page 2 if necessary): Same As License No. 3-44-12(L63) | | | |
| (b) CHEMICAL FORM ADMINISTERED: Same As License No. 3-44-12(L63) | | | |
| (c) DESCRIBE PROCEDURES WHICH WILL BE OBSERVED TO MINIMIZE HAZARD FROM HANDLING, STORAGE, AND DISPOSAL OF THE BYPRODUCT MATERIAL: | | | |
| (d) DESCRIPTION AND SKETCHES OF SPECIAL DEVICES TO BE USED FOR ADMINISTERING BYPRODUCT MATERIAL TO HUMAN BEINGS ARE (1) ATTACHED (LITERATURE REFERENCES WILL SUFFICE) <div style="text-align: right;">CIRCLE ANSWER</div> | | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| (2) ON FILE WITH THE ISOTOPE'S EXTENSION REFER TO APPLICATION NO. _____ <div style="text-align: right;">CIRCLE ANSWER</div> | | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| 5. (a) PROPOSED DOSAGE SCHEDULE. —In millicuries for internally administered byproduct material other than discrete fixed sources; and in roentgens or rads, as appropriate, for internal or external irradiation from discrete fixed sources (gold seeds, cobalt needles, etc.) state separately for each condition or disease (use page 2 if necessary): Same As License No. 3-44-12(L63) | | | |
| (b) INVESTIGATIVE PROPOSAL FOR EXPERIMENTAL, NEW OR UNUSUAL HUMAN USES IS ATTACHED. (Attachment should include outline of conditions to be evaluated, including data from animal studies and/or abstract of literature reference if any, number and type of patients (i. e. age group, moribund, etc.)) <div style="text-align: right;">CIRCLE ANSWER</div> | | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| 6. IF BYPRODUCT MATERIAL WILL NOT BE OBTAINED IN PRECALIBRATED FORM FOR ORAL ADMINISTRATION OR IN PRECALIBRATED AND STERILIZED FORM FOR PARENTERAL ADMINISTRATION, DESCRIBE IDENTIFICATION, PROCESSING, AND STANDARDIZATION PROCEDURES: No change | | | |
| 7. THE PROPOSED USE OF BYPRODUCT MATERIAL HAS BEEN, OR WILL BE, APPROVED BY THE MEDICAL ISOTOPE COMMITTEE. <div style="text-align: right;">CIRCLE ANSWER</div> | | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| HOSPITAL FACILITIES FOR INDIVIDUAL PRACTICE USE ONLY | | | |
| (a) THE APPLICANT HAS COMPLETED ARRANGEMENTS FOR A HOSPITAL TO ADMIT RADIOACTIVE PATIENTS WHENEVER ADVISABLE <div style="text-align: right;">CIRCLE ANSWER</div> | | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| (b) A COPY OF INSTRUCTIONS TO BE FURNISHED TO THE HOSPITAL AS TO RADIOLOGICAL SAFETY PRECAUTIONS TO BE TAKEN AND AVAILABLE RADIATION INSTRUMENTATION IS ATTACHED. <div style="text-align: right;">CIRCLE ANSWER</div> | | YES <input type="checkbox"/> | NO <input type="checkbox"/> |

APPLICATION FOR BYPRODUCT MATERIAL LICENSE
SUPPLEMENT A—HUMAN USE

This page may be used for providing additional information. Please cross reference to specific items.

Physicians' Radioisotope experience has previously been submitted in connection with License 3-44-12(L43)

**U. S. ARMY MEDICAL RESEARCH AND NUTRITION LABORATORY
FITZSIMONS GENERAL HOSPITAL
Denver 40, Colorado**

24 May 1963

CHANGES IN USAMRNL RADIOISOTOPE COMMITTEE

Dr. John R. Handy has been appointed to replace Dr. William T. Nanes on the Radioisotope Committee for AEC License No. 5-46-11. In addition, Dr. James E. Hansen and Capt. Miller Smith have been appointed as members of the Committee.

Dr. Handy's qualifications have been previously submitted and is now a named user of radioisotopes on our Human AEC License No. 5-46-12.

Dr. Hansen is a Medical Corps officer licensed to practice medicine in the State of California. He has had formal and on-the-job training at Brooke Army Medical Center and the U. S. Army Medical Research and Nutrition Laboratory, Fitzsimons General Hospital, in the principles and practices of radiation protection, radioactivity measurements, monitoring techniques, instruments, etc. Dr. Hansen's primary interests have been infectious disease and pulmonary physiology. He is certified by the Board of Internal Medicine in Medicine and Pulmonary Disease. He is a fellow of the American College of Physicians and a member of the American Thoracic Society.

Capt. Smith is a non-voting member of Supply and Service.

Form AEC-313
(5-58)

ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved
Budget Bureau No. 38-R027.3.

INSTRUCTIONS.—Complete Items 1 through 16 if this is an initial application. If application is for renewal of a license, complete only Items 1 through 7 and indicate new information or changes in the program as requested in Items 8 through 15. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail three copies to: U. S. Atomic Energy Commission, Washington 25, D. C. Attention: Isotopes Branch, Division of Licensing and Regulation. Upon approval of this application, the applicant will receive an AEC Byproduct Material License. An AEC Byproduct Material License is issued in accordance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30 and the Licensee is subject to Title 10, Code of Federal Regulations, Part 20.

| | |
|--|---|
| <p>1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc.)</p> <p>W. S. Army Med Resch & Mater Lab Fitzsimons General Hospital Denver 48, Colorado</p> | <p>(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a).)</p> <p>Same as item 1(a)</p> |
| <p>2. DEPARTMENT TO USE BYPRODUCT MATERIAL</p> <p>as specified in License No. 3-46-11</p> | <p>3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)</p> <p>3-46-11 (NS) Renewal</p> |
| <p>4. INDIVIDUAL USER(S). (Name and title of individual(s) who will use or directly supervise use of byproduct material. Give training and experience in Items 8 and 9.)</p> <p>As specified in license No. 3-46-11</p> | <p>5. RADIATION PROTECTION OFFICER (Name of person designated as radiation protection officer if other than individual user. Attach resume of his training and experience as in Items 8 and 9.)</p> <p>Captain Kenneth E. Kinnaman</p> |
| <p>6. (a) BYPRODUCT MATERIAL (Elements and mass number of each.)</p> <p>See License No 3-46-11</p> | <p>(b) CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM NUMBER OF MILLICURIES OF EACH CHEMICAL AND/OR PHYSICAL FORM THAT YOU WILL POSSESS AT ANY ONE TIME. (If sealed source(s), also state name of manufacturer, model number, number of sources and maximum activity per source.)</p> <p>License No 3-46-11</p> |
| <p>7. DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED. (If byproduct material is for "human use," supplement A (Form AEC-313a) must be completed in lieu of this item. If byproduct material is in the form of a sealed source, include the make and model number of the storage container and/or device in which the source will be stored and/or used.)</p> <p>As specified in license No. 3-46-11</p> | |

52608

U. S. ARMY MEDICAL RESEARCH AND NUTRITION LABORATORY
FITZSIMONS GENERAL HOSPITAL
Denver 40, Colorado

SPECIAL ORDERS
NUMBER 29

23 May 1963

TC 350. Fol indiv this station APPOINTED.

| | | | | |
|------------------------|------------|--------|--------|---------------------|
| HANSEN, JAMES E. | 062 926 | Lt Col | MC | Chairman |
| HANDY, JOHN R. | 04 032 496 | Capt | MC | |
| KINNAMON, Kenneth E. | 092 080 | Capt | VC | |
| SMITH, MILLER | 02 284 890 | Capt | MSC | (Non-voting member) |
| SAUBERLICH, HOWERDE E. | | DAC | PL-313 | |
| HARDING, RICHARD S. | | DAC | GS-13 | |

Apt to: Isotope Committee Eff Date: 1 Jun 63 Pd: Indef

Purpose: This committee will be responsible for the procurement and proper handling, storage and disposal of radioactive isotopes.

Auth: AR 711-16

Sp Instr: Par 2 SO 60 this Hqs dtd 14 Nov 61 is RESCINDED.

FOR THE COMMANDER:

H. A. Hotsepiller

H. A. HOTSENPILLER
Lt Col, MSC
Adjutant

DISTRIBUTION:

- 1 - Ea indiv conc
- 1 - Ea Div USAMRNL
- 1 - CO, USAMRNL
- 1 - CG, FGH
- 1 - Radioisotope Lab FGH
- 1 - Rec Set
- 1 - Ref Set

TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)

| B. TYPE OF TRAINING | WHERE TRAINED | DURATION OF TRAINING | ON THE JOB (Circle answer) | FORMAL COURSE (Circle answer) |
|--|---------------|----------------------|-------------------------------|----------------------------------|
| a. Principles and practices of radiation protection | NA | | Yes No | Yes No |
| b. Radioactivity measurement standardization and monitoring techniques and instruments | | | Yes No | Yes No |
| c. Mathematics and calculations basic to the use and measurement of radioactivity | | | Yes No | Yes No |
| d. Biological effects of radiation | | | Yes No | Yes No |

9. EXPERIENCE WITH RADIATION. (Actual use of radioisotopes or equivalent experience.)

| ISOTOPE | MAXIMUM AMOUNT | WHERE EXPERIENCE WAS GAINED | DURATION OF EXPERIENCE | TYPE OF USE |
|---------|----------------|-----------------------------|------------------------|-------------|
| | | NA | | |

10. RADIATION DETECTION INSTRUMENTS. (Use supplemental sheets if necessary.)

| TYPE OF INSTRUMENTS (Include make and model number of each) | NUMBER AVAILABLE | RADIATION DETECTED | SENSITIVITY RANGE (mr/hr) | WINDOW THICKNESS (mg/cm ²) | USE (Monitoring, surveying, measuring) |
|--|------------------|--------------------|------------------------------|---|---|
| | | NA | | | |

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE.

| |
|----|
| NA |
|----|

12. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED. (For film badges, specify method of calibrating and processing, or name of supplier.)

| |
|----|
| NA |
|----|

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

| | |
|---|----|
| 13. FACILITIES AND EQUIPMENT. Describe laboratory facilities and remote handling equipment, storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached. (Circle answer) Yes No | NA |
| 14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source. | NA |
| 15. WASTE DISPOSAL. If a commercial waste disposal service is employed, specify name of company. Otherwise, submit detailed description of methods which will be used for disposing of radioactive wastes and estimates of the type and amount of activity involved. | NA |

CERTIFICATE (This item must be completed by applicant)

| | |
|---|---|
| 16. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART 30, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF. | |
| Date 24 May 1963 | <p>U.S. AEC. Isotopes Branch</p> <p>RECEIVED</p> <p>JUL 1 1963</p> <p>U.S. A.E.C. Isotopes Branch</p> <p>By: Marion E. McDowell</p> <p>MARION E. McDOWELL, Lt Col, US</p> <p>Commanding</p> <p>Applicant named in item 1</p> <p>Title of certifying official</p> |

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 or to any matter within its jurisdiction.

**U. S. ARMY MEDICAL RESEARCH AND NUTRITION LABORATORY
FITZSIMONS GENERAL HOSPITAL
Denver 43, Colorado**

24 May 1968

CHANGES IN USAMRNL RADIOISOTOPE COMMITTEE

Dr. John R. Handy has been appointed to replace Dr. William T. Nanes on the Radioisotope Committee for AEC License No. 5-46-11. In addition, Dr. James E. Hansen and Capt. Miller Smith have been appointed as members of the Committee.

Dr. Handy's qualifications have been previously submitted and is now a named user of radioisotopes on our Human AEC License No. 5-46-12.

Dr. Hansen is a Medical Corps officer licensed to practice medicine in the State of California. He has had formal and on-the-job training at Brooke Army Medical Center and the U. S. Army Medical Research and Nutrition Laboratory, Fitzsimons General Hospital, in the principles and practices of radiation protection, radioactivity measurements, monitoring techniques, instruments, etc. Dr. Hansen's primary interests have been infectious disease and pulmonary physiology. He is certified by the Board of Internal Medicine in Medicine and Pulmonary Disease. He is a fellow of the American College of Physicians and a member of the American Thoracic Society.

Capt. Smith is a non-voting member of Supply and Service.