



HEADQUARTERS
DEPARTMENT OF THE ARMY
OFFICE OF THE SURGEON GENERAL
WASHINGTON, D.C. 20315

IN REPLY REFER TO
MEDPS-PO

16 September 1964

Isotopes Branch
Division of Licensing and Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545

Gentlemen:

Recommend approval of inclosed application, in its entirety, for renewal of Byproduct Material License No. 10-3997-3 (D64) for Third United States Army Medical Laboratory, Fort McPherson, Georgia.

Previous applications or correspondence on this license should be discarded.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "R. G. Daniels".

ROSWELL G. DANIELS
Lt Colonel, MC
Preventive Medicine Division

1 Incl
AEC-313 (in trip)

00/24

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 Fort McPherson Medical Radioisotope Committee Fort McPherson, Georgia	(b) NAME AND ADDRESS OF APPLICANT (if different from 1(a))
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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 (YES) NO
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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) NO
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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): **Sodium Iodide (thyroid uptake; thyroid scan; checking metastases, thyroid cancer), Radio Iodinated Serum Albumin (plasma volume, brain tumor localization, cardiac output)** (Cont'd on Pg 2)

(b) CHEMICAL FORM ADMINISTERED:

(c) DESCRIBE PROCEDURES WHICH WILL BE OBSERVED TO MINIMIZE HAZARD FROM HANDLING, STORAGE, AND DISPOSAL OF THE BYPRODUCT MATERIAL:
Radioactive materials are secured with a locked safe surrounded by lead bricks.

(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 (NO)
(2) ON FILE WITH THE ISOTOPES EXTENSION REFER TO APPLICATION NO _____	CIRCLE ANSWER YES NO

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):

**Sodium Iodide (thyroid uptake) - 0.01 to 0.015 millicurie
(thyroid scan) - 0.03 to 0.1 millicurie
(checking metastases, thyroid cancer) - 0.25 to 0.5 millicurie
RISA (plasma volume) - 0.005 to 0.01 millicurie
(brain tumor localization) - 0.2 to 0.25 millicurie
(cardiac output) - 0.02 millicurie
Hippuran (ranogram) - 0.005 to 0.01 millicurie**
(cont'd on Pg #2)

(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 (NO)
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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:
Material will be obtained precalibrated and sterilized.

7. THE PROPOSED USE OF BYPRODUCT MATERIAL HAS BEEN, OR WILL BE, APPROVED BY THE MEDICAL ISOTOPE COMMITTEE.	CIRCLE ANSWER (YES) NO
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HOSPITAL FACILITIES FOR INDIVIDUAL PRACTICE USE ONLY

(a) THE APPLICANT HAS COMPLETED ARRANGEMENTS FOR A HOSPITAL TO ADMIT RADIOACTIVE PATIENTS WHENEVER ADVISABLE. U. S. Army Hospital, Fort McPherson, Georgia	CIRCLE ANSWER (YES) NO
(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) NO

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

8. TYPE OF TRAINING Radioisotope Comm con't in Incl 1.	WHERE TRAINED See Tab 3	DURATION OF TRAINING	ON THE JOB (Circle answer)		FORMAL COURSE (Circle answer)	
			Yes	No	Yes	No
a. Principles and practices of radiation protection			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
			See Tab 3	

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)
11 made by Nuclear Institute of Chicago					
Portable Survey Meter-2612M	1	Gamma & Beta	0-20	See Catalog	Measurement of Health monitoring for all listed
Portable Survey Meter-2650A	1	"	0-20	"	
Fixed Survey Meter-1619A	1	"	0-20	"	
Binary Scaler-183B	1	"	N.A.	N.A.	(to be procured)
Pulse Height Analyzer-1810	1	"	N.A.	N.A.	
1" Scintillation Probe-DS5-2	1	Gamma	N.A.	N.A.	
2" Crystal Well Counter-DS5-5	1	"	N.A.	N.A.	
Pho/Dot Scanner-1735	1	"	N.A.	N.A.	

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE. Calibrations are done every six months and after maintenance by Wills Scientific, Inc., Atlanta, Ga. Use of Standard Iodine or Cesium; standardize daily.

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

Film Badges are processed by Lexington Army Depot, Lexington, Ky.

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 See Tab 4

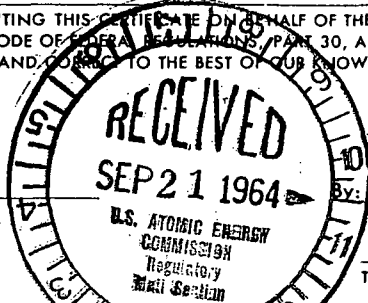
14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source. See Tab 5

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. See Tab 5

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 11 September 1964



Applicant named in item 1 WILLIAM C. BUTZ, CoP, MC Chairman

Title of certifying official WILLIAM P. THOMPSON, CWO, USA Adjutant

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

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>Third US Army Medical Laboratory Fort McPherson, Georgia and US Army Hospital Fort McPherson, Georgia</p>	<p>(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a).)</p> <p>Third US Army Medical Laboratory Fort McPherson, Georgia and US Army Hospital Fort McPherson, Georgia</p>
<p>2. DEPARTMENT TO USE BYPRODUCT MATERIAL</p> <p>Pathology Department ()</p>	<p>3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)</p> <p>Renewal of 10-3997-3 (D64) in its entirety.</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>Users will be approved by the Radioisotope Committee. See Tabs 1 & 1A</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>As appointed by the Committee</p>
<p>6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.)</p> <p>A. I-131</p> <p>B. I-125</p> <p>C. Cr-51</p> <p>D. Co-57, 58 & 60</p> <p>E. Gold-198</p> <p>F. Iron-59</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>A. Sodium Iodide - 10 millicuries Radio Iodinated Serum Albumin - .5 millicuries Hippuran - 2 millicuries Rose Bengal - 2 millicuries Oleic Acid - 1 millicurie Triolein - 1 millicurie Cholografin (Iodipamide Sodium) - 2 millicuries</p> <p>B. Sodium Iodide - 1 millicurie Radio Iodinated Serum Albumin - 1 millicurie Hippuran - 1 millicurie</p> <p>C. Sodium Chromate - 3 millicuries Chromic Chloride - 1 millicurie</p> <p>D. Cyanocobalamin - 10 microcuries</p> <p>E. Colloidal Gold - 25 millicuries</p> <p>F. Ferric Chloride - 0.5 millicurie (Con'd on Pg 2)</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.)

Iodine, Cobalt, Chromium, Iron and Mercury will be employed in human use.
Tritium will be used in vitro studies only.

*Analysis of food submitted from WRAIR to be analyzed for possible radioisotope contamination in continuing proficiency programs. See Tab 2.

62648

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

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<p>1. (a) USING PHYSICIAN'S NAME Fort McPherson Medical Radioisotope Committee Fort McPherson, Georgia</p>	<p>(b) NAME AND ADDRESS OF APPLICANT (If different from 1(a))</p>		
<p>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.</p> <p style="text-align: right;">CIRCLE ANSWER</p>		(YES)	NO
<p>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.</p> <p style="text-align: right;">CIRCLE ANSWER</p>		(YES)	NO
<p>PROPOSED DIAGNOSIS OR TREATMENT</p>			
<p>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): Sodium Iodide (thyroid uptake; thyroid scan; checking metastases, thyroid cancer), Radio Iodinated Serum Albumin (plasma volume, brain tumor localization, cardiac output) (Cont'd on Pg 2)</p> <p>(b) CHEMICAL FORM ADMINISTERED:</p> <p>(c) DESCRIBE PROCEDURES WHICH WILL BE OBSERVED TO MINIMIZE HAZARD FROM HANDLING, STORAGE, AND DISPOSAL OF THE BYPRODUCT MATERIAL: Radioactive materials are secured with a locked safe surrounded by lead bricks.</p> <p>(d) DESCRIPTION AND SKETCHES OF SPECIAL DEVICES TO BE USED FOR ADMINISTERING BYPRODUCT MATERIAL TO HUMAN BEINGS ARE</p> <p>(1) ATTACHED (LITERATURE REFERENCES WILL SUFFICE) CIRCLE ANSWER</p> <p>(2) ON FILE WITH THE ISOTOPES EXTENSION REFER TO APPLICATION NO CIRCLE ANSWER</p>			
		YES	(NO)
		YES	NO
<p>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):</p> <p>Sodium Iodide (thyroid uptake) - 0.01 to 0.015 millicurie (thyroid scan) - 0.03 to 0.1 millicurie (checking metastases, thyroid cancer) - 0.25 to 0.5 millicurie RISA (plasma volume) - 0.005 to 0.01 millicurie (brain tumor localization) - 0.2 to 0.25 millicurie (cardiac output) - 0.02 millicurie Hippuran (ranogram) - 0.005 to 0.01 millicurie (cont'd on Pg #2)</p> <p>(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</p>			
		YES	(NO)
<p>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.</p> <p>Material will be obtained precalibrated and sterilized.</p>			
<p>7. THE PROPOSED USE OF BYPRODUCT MATERIAL HAS BEEN, OR WILL BE, APPROVED BY THE MEDICAL ISOTOPE COMMITTEE.</p> <p style="text-align: right;">CIRCLE ANSWER</p>		(YES)	NO
<p>HOSPITAL FACILITIES FOR INDIVIDUAL PRACTICE USE ONLY</p>			
<p>8. (a) THE APPLICANT HAS COMPLETED ARRANGEMENTS FOR A HOSPITAL TO ADMIT RADIOACTIVE PATIENTS WHENEVER ADVISABLE. U. S. Army Hospital, Fort McPherson, Georgia</p> <p>(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.</p> <p style="text-align: right;">CIRCLE ANSWER</p>		(YES)	NO
		(YES)	NO

APPLICATION FOR BYPRODUCT MATERIAL LICENSE
SUPPLEMENT A—HUMAN USE

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

Item No. 6, AEC-313 continued:

- | | |
|--------------|---|
| F. Iron-59 | F. Ferrous Citrate - 0.5 millicurie |
| G. Hg-203 | G. Chlormerodrin - 10 millicuries |
| H. H3 | H. Tritiated Water - 25 millicuries |
| I. Na-24 | I. Sodium Chloride - 1 millicurie |
| J. T-3 | J. Triiodothyronine - 1 millicurie |
| K. 3 thru 83 | The form will be food products. Each isotope will not exceed 100 uc. Total activity at any one time will not exceed 500 uc. |

Item No. 4, AEC-313a continued: (continued)

Hippuran (ranogram). Rose Bengal (liver scan, liver function). Oleic Acid (fat absorption). Triolein (fat absorption). Cholografin (Iodipamide Sodium) (gallbladder function). Sodium Chromate (red cell mass, GI bleeding, red cell survival). Chromic Chloride (plasma volume). Cyanocobalamin (Schilling test). Colloidal Gold (liver scan). Ferric Chloride (iron turnover study). Ferrous Citrate (iron turnover study). Chlormerodrin (kidney scan). Tritiated Water (total body water). Sodium Chloride (total exchangeable sodium). Triiodothyronine (in vitro RBC uptake).

Item No. 5, AEC-313a continued:

- Rose Bengal (liver scan) - 0.35 to 0.5 millicurie
(liver function) - 0.01 to 0.02 millicurie
- Oleic Acid (fat absorption) - 0.025 millicurie
- Triolein (fat absorption) - 0.025 millicurie
- Cholografin (gallbladder function) - 0.025 millicurie
- Sodium Chromate (red cell mass) - 0.025 to 0.035 millicurie
(GI bleeding) - 0.05 to 0.075 millicurie
(red cell survival) - 0.05 to 0.075 millicurie
- Chromic Chloride (plasma volume) - 0.01 millicurie
- Cyanocobalamin (Schilling test) - 0.0005 millicurie
- Colloidal Gold (liver scan) - 0.07 to 0.1 millicurie
- Ferric Chloride (iron turnover study) - 0.01 to 0.015 millicurie
- Ferrous Citrate (iron turnover study) - 0.01 to 0.015 millicurie
- Chlormerodrin (kidney scan) - 0.1 to 0.15 millicurie
- Tritiated Water (total body water) - 1 to 2 millicuries
- Sodium Chloride (total exchangeable sodium) - 0.05 to 0.1 millicurie
- Triiodothyronine (in vitro RBC uptake) - 0.00025 to 0.0005 millicurie