THIRD UNITED STATES ARMY MEDICAL LABORATORY
FORT McPHERSON, GEORGIA

ADDRESS REPLY TO
COMMANDING OFFICER

26 May 1964

Mr. Nathan Bassin
Isotopes Branch
Division of Materials Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Sir:

Enclosed are two copies of amended Application for Byproduct Material License as well as revised Standard Operating Procedures for Radioisotope Committee reflecting the changes outlined in your letter of 6 May 1964. All personnel are in receipt of the revised SOP's.

Sincerely,

William C. Butz

WILLIAM C. BUTZ
Colonel, MC
Commanding

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Form AEC-313 (5-58)

ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved. Budget Bureau No. 38-R027.4.

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.)*

Third US Army Medical Laboratory
Fort McPherson, Georgia
and
US Army Hospital
Fort McPherson, Georgia

(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. *(If different from 1 (a).)*

Third US Army Medical Laboratory
Fort McPherson, Georgia
and
US Army Hospital
Fort McPherson, Georgia

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

Pathology Department

3. PREVIOUS LICENSE NUMBER(S). *(If this is an application for renewal of a license, please indicate and give number.)* 10-3997-2 (A1), 10-3997-3 (J61), 10-3997-3 (J63), 10-3997-3 (A64), and 10-3997-3 (D64). Renewal of 10-3997-3 (D64).

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.)*

Users will be approved by the Fort McPherson Medical Radioisotope Committee
Fort McPherson, Georgia

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.)*

As appointed by the Committee

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.)*
A. I-131	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
B. I-125	B. Sodium Iodide - 1 millicurie Radio Iodinated Serum Albumin - 1 millicurie Hippuran - 1 millicurie
C. Cr-51	C. Sodium Chromate - 3 millicuries Chromic Chloride - 1 millicurie
D. Co-57, 58 & 60	D. Cyanocobalamin - 10 microcuries
E. Gold-198	E. Colloidal Gold - 25 millicuries
F. Iron-59	F. Ferric Chloride - 0.5 millicurie

ACKNOWLEDGED

(Cont'd on Pg 2)

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.)*

Isotope	Chemical Form	Use
Iodine 131	Iodide	Diagnosis of thyroid functions and thyroid scans.
Iodine 131	Iodinated Human Serum Albumin	Blood volume determinations and brain tumor localization.
Iodine 131	Hippuran	Ranogram and kidney scans.
Iodine 131	Rose Bengal	Liver function studies and liver scans.
Iodine 131	Labeled Fatty Acids	Fat absorption studies.
Iodine 131	Cholografin	Gall bladder function and bile duct scans.
Iodine 125	Iodide	Diagnosis of thyroid function and thyroid scans.

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(Cont'd on Pg 2)

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(Continued on reverse side)

Form AEC-313 (5-58) Page Two

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)
Training of Radioisotope Comm cont'd	BUTZ, William C., M. D. (See appendages)			
a. Principles and practices of radiation protection	Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tennessee	6 weeks	Yes No	(Yes) No
b. Radioactivity measurement standardization and monitoring techniques and instruments	Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tennessee	6 weeks	Yes No	(Yes) No
c. Mathematics and calculations basic to the use and measurement of radioactivity	Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tennessee	6 weeks	Yes No	(Yes) No
d. Biological effects of radiation	Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tennessee	6 weeks	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
I-131	10 millicuries	Oak Ridge Inst of Nuclear Studies, Oak Ridge, Tenn.	6 weeks	Basic Course in Technique of Using Radioisotopes
Co-57, 58,60	0.05 millicuries	Oak Ridge Inst of Nuclear Studies, Oak Ridge, Tenn.	6 weeks	Same as above.
I-131 Co-57, 58,60	diagnostic	Third US Army Medical Lab dosages Ft McPherson, Ga.	3 years	For Medical Diagnoses.

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/cm²)	USE (Monitoring, surveying, measuring)
All made by Nuclear Institute of Chicago					
Portable Survey Meter-2612M	1	Gamma &	0-20	See Catalog	Measurement of health
Portable Survey Meter-2650A	1	" Beta	0-20	" "	monitoring for all
Fixed Survey Meter-1619A	1	"	0-20	" "	listed
Binary Scaler-183B	1	"	N.A.	N.A.	
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	Gamma	N.A.	N.A.	
Pho-Dot Scanner-1735	1	Gamma	N.A.	N.A.	(To be procured)

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

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 processed by US Army Signal Corps, 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 Supplemental Sheet

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 Supplemental Sheet

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 Supplemental Sheet

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.

RECEIVED MAY 28 1964 U.S. ATOMIC ENERGY COMMISSION Division of Licensing & Regulation

William C Butz
Applicant named in item 1

Date 22 May 1964

By: WILLIAM C. BUTZ, Col, MC, Chairman

Paul B Broome
Title of certifying official

PAUL B. BROOME, Capt, MSC, Asst 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.

U.S. GOVERNMENT PRINTING OFFICE : 1961 OF—615965

UNITED STATES ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

SUPPLEMENT A—HUMAN USE

Form approved. Budget Bureau No. 38-R080.1

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

Item No. 4, AEC-313a 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

Item No. 7, AEC-313 continued:

Iodine 125	Iodinated Human Serum Albumin	Diagnosis thyroid function and thyroid scans.
Iodine 125	Hippuran	Liver function studies, liver scans and kidney function studies.
Chromium 51	Chromate	Red blood cell plasma volume and red blood cell survival.
Cobalt 57, 58 & 60	Labeled Vitamin B-12	Schilling test - diagnosis of pernicious anemia.
Gold 198	Colloidal	Liver scans.
Iron 59	Chloride and/or Citrate	Iron turnover studies.
Mercury 203	Chlormerodrin	Kidney scans and scan for brain tumor.
H3	Tritiated Water	Total body water special studies.
Na24	Sodium Chloride	Total exchangeable sodium
T3	Triiodothyronine	Thyroid function studies and in vitro red blood cell uptake in evaluating thyroid function.

U.S. GOVERNMENT PRINTING OFFICE : 1961 OF—615965

Form AEC-313 a (10-61) 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
Fort McPherson Medical
Radioisotope Committee
Fort McPherson, Georgia

(b) NAME AND ADDRESS OF APPLICANT (If different from 1(a))

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

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

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
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)

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.

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7. THE PROPOSED USE OF BYPRODUCT MATERIAL HAS BEEN, OR WILL BE, APPROVED BY THE MEDICAL ISOTOPE COMMITTEE. CIRCLE ANSWER — (YES) NO

HOSPITAL FACILITIES FOR INDIVIDUAL PRACTICE USE ONLY

8. (a) THE APPLICANT HAS COMPLETED ARRANGEMENTS FOR A HOSPITAL TO ADMIT RADIOACTIVE PATIENTS WHENEVER ADVISABLE. US 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

SUPPLEMENTAL SHEET

Item No. 13 Continued: The pictures of the equipment were submitted with the initial application for byproduct material license, 30 March 1959. The only additional equipment is a 3" sodium iodide crystal and well counter.

Item No. 14 Continued: Radioisotope compounds are received precalibrated from Abbott Laboratories, stored in a lead brick-lined iron safe in a locked room until ready for use. The material is monitored from safe to patient. The Laboratory is monitored each day isotopes are used, for spills or leaks.

Item No. 15 Continued: Waste material is kept in a safe room until it has deteriorated to a safe level, pursuant to provisions of Section 20.303, 10 CFR 20, and then discarded into the sink well, diluted with tap water, into the common sewerage system. In the event that radioisotope-contaminated solid wastes are found to exist, the contaminated material will be held in storage and disposed of in accordance with provisions of AR 755-380.

HEADQUARTERS
THIRD UNITED STATES ARMY MEDICAL LABORATORY
Fort McPherson, Georgia

20 May 1964

STANDARD OPERATING PROCEDURES
Radioisotope Committee

1. REFERENCES:

a. AR 40-37
b. AR 40-400
c. AR 40-403
d. AR 40-414
e. AR 40-431
f. AR 40-500
g. TB Med 249
h. TB Med 254
i. SB 11-200
j. AR 385-30
k. AR 700-323
l. AR 755-380

2. PURPOSE:

a. To establish uniform procedures for the use of radioisotopes in laboratory investigation and clinical diagnosis.

b. To establish adequate administrative procedures for functioning of the committee.

c. To establish adequate safety procedures for the handling, laboratory use, and clinical application of radioisotopes.

3. THE COMMITTEE:

a. Members: The Committee will consist of (1) the Commanding Officer, Third US Army Medical Laboratory, (2) Commanding Officer or a medical officer who has been approved by the Commanding Officer of the U. S. Army Hospital, Fort McPherson, (3) a Radiological Safety Officer, and (4) such other persons deemed necessary to carry out an effective program. Members will be appointed on Special Orders of this headquarters with the concurrence of parent organizations, if applicable.

b. Meetings: The Committee will meet at least once each quarter at the time and place designated by the Chairman and at other times deemed necessary by the Chairman or Safety Officer of the Committee.

c. Functions:

(1) Review and approve or disapprove the use of isotopes for specific uses within this institution and the US Army Hospital, Fort McPherson, Georgia (with the concurrence of CO, USAH, Fort McPherson, Georgia, if applicable).

(2) Prescribe special conditions which are necessary or desirable in connection with the procurement, storage, and use of radioisotopes.

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This SOP supersedes HQ-D-1, 20 Feb 64

(3) Appoint a Radiation Protection Officer. This officer will be the best qualified individual available. His appointment will be by Unit Orders, Third US Army Medical Laboratory, and his specific duties will be as detailed in paragraph 5, this SOP.

(4) Certify medical officers for each individual radioisotope consistent with qualifications and limitations and insure such certification is placed in user's 201 file. Each individual handling a specific isotope, i.e. I-131, will have received training at Oak Ridge Institute of Nuclear Studies, either in the six-week course or short Preclinical I and II courses in the uses of radioisotopes. Where the user has received training in the hospital in connection with residency, the Committee will review certifying statements prepared by the school to insure that a specific number of procedures on each isotope have been performed under supervision by a licensed operator. Before the clinical use of a radioisotope is undertaken, each user will receive didactic instruction and practical diagnostic uses of the particular isotope in question. The committee will submit through channels all changes of the Radioisotope Committee and any change in appointment of Radiation Protection Officer in accordance with AR 40-37.

(5) Review records and receive reports from the Radiological Safety Officer and other individuals using radioactive materials in laboratory or clinical investigation.

(6) Recommend remedial action for persons failing to observe safety procedures established by the Radiological Safety Officer under authority of the Committee.

(7) Maintain complete records of all meetings of the Committee and all official actions taken by the Committee.

(8) Render reports to inspecting agencies as required by law and/or by Army Regulations, and cooperate fully with these agencies when inspections are made by them.

4. SAFETY: The following safety procedures are hereby established for the guidance of the Committee, except when these procedures are contrary to safety procedures established by the Atomic Energy Commission or other competent authority.

a. Dosimetry Requirements:

(1) All persons engaged in the use of ionizing radiation will utilize film packet dosimeters. Other dosimeters which will enhance the completeness of the dosimetry problem will be employed as deemed necessary by competent medical authority.

(2) All persons exposed to ionizing radiation other than therapeutic or diagnostic radiation will utilize dosimeters except when the potential radiation is negligible and exemption from use is authorized by The Surgeon General, US Army.

b. Dosimeters:

(1) Only dosimeters capable of measuring radiation with an accuracy of 10% or better in the average energy ranges normally encountered in the use of sources of ionizing radiation will be used.

(2) The film packet dosimetry service for Army installations is provided by the Signal Corps in accordance with SB 11-206, and will be employed solely except in unusual circumstances as approved by the Chief Signal Officer.

c. Monitoring Period:

(1) Packet chambers and self-reading dosimeters will be charged and read at least every two days.

(2) Film packets will be worn for periods compatible with the potential hazards involved, but in no case longer than 4 weeks. Exposed film packets will be dispatched by the most direct means to the developing and evaluating agency.

d. Records: Dosimetry Records will be maintained in accordance with AR 40-431. All entries in Column "Dose" will be made in "rem" units except for low order exposure for which "rad," "rep" and "roentgen" are considered equivalent. Where the entry in the "Dose" column is greater than 0.1 "rem" in one calendar week, a brief explanation of the probable cause of over-exposure will be attached to DD Form 1141.

e. Storage Area:

(1) Standard radiation warning signs as described in AR 385-30 will be posted in conspicuous places where radiation is present. Radiation levels will be indicated on warning signs.

(2) Storage area will be considered a restricted area.

(3) Only authorized personnel will be allowed to enter the storage area. Individuals will not be permitted to remain in the storage area long enough to exceed the maximum permissible exposure.

(4) Personnel monitoring devices will be used when entering the storage area.

(5) All isotopes on hand will be stored in a locked vault lined with lead bricks. Isotopes in fluid state as concentrates will be handled by remote control and by the use of shielded dose cups. Disposal of isotopes with short half-lives will be through a sanitary sewerage system after ten half-lives have passed. Sealed sources of radioisotope will not be opened.

5. DUTIES AND RESPONSIBILITIES OF THE RADIOLOGICAL SAFETY OFFICER: Operating under the authority of Federal Law, pertinent Army Regulations, and the authority of the Committee, he will:

a. Review all plans for the proposed use of radioisotopes from the standpoint of radiological safety and make appropriate recommendations to the individual users and the Medical Committee on Radioisotopes.

b. Review all requisitions for radioisotopes in order to insure that a suitable storage area exists for the quantities and activities involved.

c. Arrange for procurement, calibration, and maintenance of survey instruments as needed for the performance of his duties.

d. Survey incoming shipments of radioisotopes and supervise the storage and distribution of such shipments.

e. Survey storage and working areas as frequently as he considers necessary. Conduct wipe test and/or leak test when required.

f. Instruct laboratory personnel concerning approved practices in preparing dilutions of radioisotopes and in their storage and detection. Specifies prohibited practices such as use of mouth suction in pipetting solutions, eating, drinking, or smoking in a room where radioisotopes are handled, etc.

g. Require the posting of warning signs in areas in which radioisotopes are stored or used.

h. Determine radiation exposure potentials under working conditions and recommend time limits of personnel exposure and minimum working distances.

i. Supply personnel monitoring devices (film badges, dosimeters, etc.) to individuals engaged in work with radioactive materials in this institution, require wearing of same during all times of potential exposure, collect and forward to the US Army Lexington Signal Depot for evaluation, and have recorded the findings on DD Form 1141 maintained for each such individual.

j. Supervise decontamination of all spills or personnel contamination.

k. Supervise disposal of all radioactive waste.

l. Supervise the maintenance of complete records of the receipt, storage, transfer, and disposal of radioisotopes in this institution.

m. Report any unusual incidents such as overexposure, a spill, a loss of radioactive substance, or other accident.

n. Render a report at each meeting of the Medical Committee on Radioisotopes of all current authorizations to procure isotopes for uses other than in humans and of all pending applications for such authorizations and to render such report at any time upon the request of the Chairman.

o. Examine rate of flow of air in fume hoods used for preparation of solutions of radioactive elements to assure compliance with minimum requirements of the Atomic Energy Commission in this regard.

6. OPERATIONAL PROCEDURES:

a. All medical isotopes will be requisitioned through Supply Section, Third US Army Medical Laboratory, Fort McPherson, Georgia. This requisition will then be processed through the Supply Section, Fort McPherson Army Hospital. Upon arrival of the item requisitioned, it will be taken to the Radiation Protection Officer who will immediately make and record an inventory of the specific isotope or isotopes procured and enter them in the register. The isotopes will then be placed in security.

b. All clinical uses will be under the supervision of medical officers who have been certified by the Radioisotope Committee as an individual user for the procedure involved. Appropriate dosage will be recommended in each case before it is administered.

c. All isotopes which have not been used will be destroyed by washing the same down the sink following the expiration of ten half-lives.

d. The work area will be posted with AEC regulations and secured at all times when not in use.

e. The quarterly report of the activities of the Radioisotope Committee will be submitted on a quarterly basis to The Surgeon General. This report will record the minutes of each Radioisotope Committee meeting, certification of each new member of the Radioisotope Committee, and will include data on the training and experience on all medical officers who are users. It will reflect the quantities of radioisotopes procured and disposed of during the period in storage, list procedures with dosage of each radioisotope used during the period, and provide information on unsolved problems and needed support to be rendered by The Surgeon General.

FOR THE COMMANDER:

Paul B Broome
PAUL B BROOME
Captain, MSC
Asst Adjutant

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