

FORM NRC-313M (8-78) 10 CFR 35	U.S. NUCLEAR REGULATORY COMMISSION APPLICATION FOR MATERIALS LICENSE – MEDICAL	Approved: GAO R0557
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INSTRUCTIONS – Complete Items 1 through 26 if this is an initial application or an application for renewal of a license. Use supplemental sheets where necessary. Item 26 must be completed on all applications and signed. Retain one copy. Submit original and one copy of entire application to: Director, Office of Nuclear Materials Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Upon approval of this application, the applicant will receive a Materials License. An NRC Materials 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, Parts 19, 20 and 35 and the license fee provision of Title 10, Code of Federal Regulations, Part 170. The license fee category should be stated in Item 26 and the appropriate fee enclosed.

1.a. NAME AND MAILING ADDRESS OF APPLICANT (institution, firm, clinic, physician, etc.) INCLUDE ZIP CODE Divine Providence Hospital 1004 Arch Street Pittsburgh, Pennsylvania 15212 TELEPHONE NO.: AREA CODE 412) 322 - 0700	1.b. STREET ADDRESS(ES) AT WHICH RADIOACTIVE MATERIAL WILL BE USED (If different from 1.a.) INCLUDE ZIP CODE Same as 1a.
2. PERSON TO CONTACT REGARDING THIS APPLICATION Daniel Lutz R.T.R. Chief Technologist TELEPHONE NO.: AREA CODE (412) 322- 0700	3. THIS IS AN APPLICATION FOR: (Check appropriate item) a. <input type="checkbox"/> NEW LICENSE b. <input checked="" type="checkbox"/> AMENDMENT TO LICENSE NO. 37-16031-01 c. <input checked="" type="checkbox"/> RENEWAL OF LICENSE NO. 37-16031-01
4. INDIVIDUAL USERS (Name individuals who will use or directly supervise use of radioactive material. Complete Supplements A and B for each individual.) A. Peter M. Bonadio, M.D. 2-3 B. Jane Schilling Hughes, M.D. 2-3	5. RADIATION SAFETY OFFICER (RSO) (Name of person designated as radiation safety officer. If other than individual user, complete resume of training and experience as in Supplement A.) Edward D. Durkosh C.H.P.

6.a. RADIOACTIVE MATERIAL FOR MEDICAL USE

RADIOACTIVE MATERIAL LISTED IN:	ITEMS DESIRED "X"	MAXIMUM POSSESSION LIMITS (In millicuries)	ADDITIONAL ITEMS:	MARK ITEMS DESIRED "X"	MAXIMUM POSSESSION LIMITS (In millicuries)
10 CFR 31.11 FOR IN VITRO STUDIES	X	200 m Ci	IODINE-131 AS IODIDE FOR TREATMENT OF HYPERTHYROIDISM		
10 CFR 35.100, SCHEDULE A, GROUP I	X	AS NEEDED	PHOSPHORUS-32 AS SOLUBLE PHOSPHATE FOR TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA AND BONE METASTASES		
10 CFR 35.100, SCHEDULE A, GROUP II	X	AS NEEDED	PHOSPHORUS-32 AS COLLOIDAL CHROMIC PHOSPHATE FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.		
10 CFR 35.100, SCHEDULE A, GROUP III <i>except generators</i>	X	2,000 mCi	GOLD-198 AS COLLOID FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.		
10 CFR 35.100, SCHEDULE A, GROUP IV		AS NEEDED	IODINE-131 AS IODIDE FOR TREATMENT OF THYROID CARCINOMA		
10 CFR 35.100, SCHEDULE A, GROUP V		AS NEEDED	XENON-133 AS GAS OR GAS IN SALINE FOR BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES.		
10 CFR 35.100, SCHEDULE A, GROUP VI					

6.b. RADIOACTIVE MATERIAL FOR USES NOT LISTED IN ITEM 6.a. (Sealed sources up to 3 mCi used for calibration and reference standards are authorized under Section 35.14(d), 10 CFR Part 35, and NEED NOT BE LISTED.)

ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	MAXIMUM NUMBER OF MILLICURIES OF EACH FORM	DESCRIBE PURPOSE OF USE
<p>We will <u>not</u> use any sources above 3mCi</p> <div style="text-align: right; font-size: 2em; font-weight: bold;">99949</div>			

INFORMATION REQUIRED FOR ITEMS 7 THROUGH 23

For Items 7 through 23, check the appropriate box(es) and submit a detailed description of all the requested information. Begin each item on a separate sheet. Identify the item number and the date of the application in the lower right corner of each page. If you indicate that an appendix to the medical licensing guide will be followed, do not submit the pages, but specify the revision number and date of the referenced guide: Regulatory Guide 10.8, Rev. 10.8 Date: January 1979

7. MEDICAL ISOTOPES COMMITTEE		15. GENERAL RULES FOR THE SAFE USE OF RADIOACTIVE MATERIAL (Check One)	
<input checked="" type="checkbox"/>	Names and Specialties Attached; and	<input checked="" type="checkbox"/>	Appendix G Rules Followed; or 10.8-35
<input checked="" type="checkbox"/>	Duties as in Appendix B; or 10.8-19 (Check One)		Equivalent Rules Attached
	Equivalent Duties Attached	16. EMERGENCY PROCEDURES (Check One)	
8. TRAINING AND EXPERIENCE		<input checked="" type="checkbox"/>	Appendix H Procedures Followed; or 10.8-37
<input checked="" type="checkbox"/>	Supplements A & B Attached for Each Individual User; and		Equivalent Procedures Attached
<input checked="" type="checkbox"/>	Supplement A Attached for RSO.	17. AREA SURVEY PROCEDURES (Check One)	
9. INSTRUMENTATION (Check One)		<input checked="" type="checkbox"/>	Appendix I Procedures Followed; or 10.8-39
	Appendix C Form Attached; or		Equivalent Procedures Attached
<input checked="" type="checkbox"/>	List by Name and Model Number	18. WASTE DISPOSAL (Check One)	
10. CALIBRATION OF INSTRUMENTS		<input checked="" type="checkbox"/>	Appendix J Form Attached; or 10.8-41
	Appendix D Procedures Followed for Survey Instruments; or (Check One)		Equivalent Information Attached
<input checked="" type="checkbox"/>	Equivalent Procedures Attached; and	19. THERAPEUTIC USE OF RADIOPHARMACEUTICALS (Check One)	
	Appendix D Procedures Followed for Dose Calibrator; or (Check One)	<input checked="" type="checkbox"/>	Appendix K Procedures Followed; or
<input checked="" type="checkbox"/>	Equivalent Procedures Attached		Equivalent Procedures Attached
11. FACILITIES AND EQUIPMENT		20. THERAPEUTIC USE OF SEALED SOURCES	
<input checked="" type="checkbox"/>	Description and Diagram Attached	<input checked="" type="checkbox"/>	Detailed Information Attached; and
12. PERSONNEL TRAINING PROGRAM			Appendix L Procedures Followed; or (Check One)
<input checked="" type="checkbox"/>	Description of Training Attached		Equivalent Procedures Attached
13. PROCEDURES FOR ORDERING AND RECEIVING RADIOACTIVE MATERIAL		21. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE GASES (e.g., Xenon - 133)	
<input checked="" type="checkbox"/>	Detailed Information Attached	<input checked="" type="checkbox"/>	Detailed Information Attached
14. PROCEDURES FOR SAFELY OPENING PACKAGES CONTAINING RADIOACTIVE MATERIALS (Check One)		22. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL IN ANIMALS	
<input checked="" type="checkbox"/>	Appendix F Procedures Followed; or 10.8-33	<input checked="" type="checkbox"/>	Detailed Information Attached
	Equivalent Procedures Attached	23. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL SPECIFIED IN ITEM 6.b	
		<input checked="" type="checkbox"/>	Detailed Information Attached

24. PERSONNEL MONITORING DEVICES			
TYPE (Check appropriate box)		SUPPLIER	EXCHANGE FREQUENCY
a. WHOLE BODY	FILM	R.S. Landauer	30 days
	TLD		
	OTHER (Specify)		
b. FINGER	FILM		
	TLD	R.S. Landauer	30 days
	OTHER (Specify)		
c. WRIST	FILM		
	TLD		
	OTHER (Specify)		

d. OTHER (Specify)

25. FOR PRIVATE PRACTICE APPLICANTS ONLY

a. HOSPITAL AGREEING TO ACCEPT PATIENTS CONTAINING RADIOACTIVE MATERIAL			
NAME OF HOSPITAL		b. ATTACH A COPY OF THE AGREEMENT LETTER SIGNED BY THE HOSPITAL ADMINISTRATOR.	
MAILING ADDRESS		c. WHEN REQUESTING THERAPY PROCEDURES, ATTACH A COPY OF RADIATION SAFETY PRECAUTIONS TO BE TAKEN AND LIST AVAILABLE RADIATION DETECTION INSTRUMENTS.	
CITY	STATE	ZIP CODE	

26. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 1a certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Parts 30 and 35, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

a. LICENSE FEE REQUIRED (See Section 170.31, 10 CFR 170)	b. APPLICANT OR CERTIFYING OFFICIAL (Signature) <i>Lee B. Youngquist</i>
	(1) NAME (Type or Print) Lee B. Youngquist
(1) LICENSE FEE CATEGORY Amendment & Renewal of License #37-16031-01	(2) TITLE Administrator
(2) LICENSE FEE ENCLOSED: \$ 150.00	c. DATE 5/15/79

PRIVACY ACT STATEMENT

Pursuant to 5 U.S.C. 552a(e)(3), enacted into law by section 3 of the Privacy Act of 1974 (Public Law 93-579), the following statement is furnished to individuals who supply information to the Nuclear Regulatory Commission on Form NRC-313M. This information is maintained in a system of records designated as NRC-3 and described at 40 Federal Register 45334 (October 1, 1975).

1. **AUTHORITY** Sections 81 and 161(b) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2111 and 2201(b)).
2. **PRINCIPAL PURPOSE(S)** The information is evaluated by the NRC staff pursuant to the criteria set forth in 10 CFR Parts 30-36 to determine whether the application meets the requirements of the Atomic Energy Act of 1954, as amended, and the Commission's regulations, for the issuance of a radioactive material license or amendment thereof.
3. **ROUTINE USES** The information may be used: (a) to provide records to State health departments for their information and use; and (b) to provide information to Federal, State, and local health officials and other persons in the event of incident or exposure, for their information, investigation, and protection of the public health and safety. The information may also be disclosed to appropriate Federal, State, and local agencies in the event that the information indicates a violation or potential violation of law and in the course of an administrative or judicial proceeding. In addition, this information may be transferred to an appropriate Federal, State, or local agency to the extent relevant and necessary for a NRC decision or to an appropriate Federal agency to the extent relevant and necessary for that agency's decision about you. A copy of the license issued will routinely be placed in the NRC's Public Document Room, 1717 H Street, N.W., Washington, D.C.
4. **WHETHER DISCLOSURE IS MANDATORY OR VOLUNTARY AND EFFECT ON INDIVIDUAL OF NOT PROVIDING INFORMATION** Disclosure of the requested information is voluntary. If the requested information is not furnished, however, the application for radioactive material license, or amendment thereof, will not be processed.
5. **SYSTEM MANAGER(S) AND ADDRESS** Director, Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

DIVINE PROVIDENCE HOSPITAL

1004 Arch Street, beside the aviary, Pittsburgh, Pennsylvania 15212

412 322 0700

Medial Isotopes Committee

Peter M. Bonadio, M.D.

Director of Radiology

Edward D. Durkosh, C.H.P.

Radiation Safety Officer

Yoon C. Kim, M.D.

Pathologist

Marc Cammarata

Assistant Administrator

Patricia A. Lancaster, RTR-NMT

Nuclear Medicine Technologist

Daniel Lutz R.T.R.

Chief Radiology Technologist

Duties: Appendix B 10.8-19

Item#7 Medical Isotopes Committee
May 1979

29949

UNITED STATES ATOMIC ENERGY COMMISSION
APPLICATION FOR BYPRODUCT MATERIAL LICENSE—MEDICAL
SUPPLEMENT A—PRECEPTOR STATEMENT

This page is to be completed by the applicant physician's preceptor. If more than one preceptor is necessary to document experience, obtain a separate statement from each. Page 2 may be used for comments and additional information.

10. NAME AND ADDRESS OF APPLICANT PHYSICIAN (include ZIP Code)

A. Peter M. Bonadio, M.D.
1004 Arch Street
Pittsburgh, Pa 15212

See previous docket
License # 37-16031-01

11. CLINICAL TRAINING AND EXPERIENCE OF PHYSICIAN NAMED IN ITEM 10 ABOVE

(A) ISOTOPE	(B) CONDITIONS DIAGNOSED OR TREATED	(C) No. Cases Observed (See 1 in key below)	(D) No. Cases Involving Personal Participation (See 2 in key below)
I-131 or I-125	Diagnosis of thyroid function	110	40
	Determination of blood and blood plasma volume	3	2
	Liver function studies	0	0
	Fat absorption studies	0	0
	Kidney function studies	2	1
	In vitro studies	0	0
Cr-51	Gastrointestinal protein loss studies	1	1
	Determination of red blood cell volume and studies of red blood cell survival	1	1
Fe-59	Iron turn over studies	1	1
Co-58or Co-60	Intestinal absorption studies	5	2
K-42	Potassium space determinations	0	0
I-131	Thyroid imaging	110	40
	Brain tumor localization and cardiac imaging	0	0
	Cisternography	0	0
	Lung imaging	0	0
	Liver imaging	0	0
	Kidney imaging	3	2
	Placenta localization	0	0
Cr-51	Placenta localization	0	0
	Spleen imaging	0	0
Au-198	Liver imaging	0	0
Hg-197	Brain imaging	0	0
	Kidney imaging	1	2
Hg-203	Brain imaging	0	0
Sr-85	Bone imaging	0	0
Tc-99m	Brain imaging	180	90
	Thyroid imaging	0	0
	Salivary gland imaging	1	1
	Blood pool imaging	0	0

Item #8

APPLICATION FOR BYPRODUCT MATERIAL LICENSE—MEDICAL

SUPPLEMENT A—HUMAN USE

(A) ISOTOPE	(B) CONDITIONS DIAGNOSED OR TREATED	(C) No. Cases Observed (See 1 in key below)	(D) No. Cases Involving Personal Participation (See 2 in key below)
Tc-99m	Placenta localization	0	0
	Liver and spleen imaging	85	30
	Lung imaging	75	25
	Bone imaging	40	25
Xe-133	Blood flow studies and pulmonary function studies	1	1
Se-75	Pancreas imaging	0	0
P-32	Treatment of polycythemia, leukemia, and Bone metastases	0	0
	Intracavitary treatment	0	0
I-131	Treatment of thyroid carcinoma	1	1
	Treatment of hyperthyroidism and cardiac condition	1	5
Au-198	Intracavitary treatment	0	0
Co-60 or CO-137	Interstitial treatment	0	0
	Intracavitary treatment	0	0
Ir-192	Interstitial treatment	0	0
Co-60 CO-137	Teletherapy treatment	0	0
Sr-90	Treatment of eye disease	0	0

Key to Column (C) and (D) above:

1. Observation should consist of observing radioisotope administration techniques and discussion with preceptor the case histories to establish most appropriate diagnostic and/or therapeutic procedure, limitation, contraindications, etc.
2. Personal participation should consist of (a) supervised examination of patients to determine the suitability for radioisotope diagnosis and/or treatment and recommendation on dosage to be prescribed; (b) collaboration in calibration of the dose and the actual administration of the dose to the patient, including calculation of the radiation dose, related measurements, and plotting of data; and (c) adequate period of training to enable the physician to manage radioactive patients and to follow patients through diagnosis and/or the course of treatment.

(June - Oct., 1974)

12. DATES AND TOTAL NUMBER OF HOURS OF CLINICAL RADIOISOTOPE TRAINING 3 months during diagnostic radiology

residency from 1 July 1972 to 30 June 1974.

13. THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF E. J. Pavsek, M.D.

Mercy Hospital,
Pittsburgh, Pa. 15219

AT

Mercy Hospital Pittsburgh 15219
[Institution] Name and Address

37-01232-02
[Byproduct Material License Number]

E. J. Pavsek M.D.
[Signature of Preceptor]

Peter M. Bonadio, M.D.
3411 Brookdale Drive
Pittsburgh, Pennsylvania 15241

Place & Date of Birth:
Clairton, Pennsylvania April 19, 1941

Education:
Clairton High School, Clairton, Pennsylvania
Washington and Jefferson College, Washington, Pa., AB 1963
University of Pittsburgh, Pittsburgh, Pa. MD 1968

Medical Licensure:
Pennsylvania License # MD 011352E
Issued 1969

Internship:
Mercy Hospital - July 1, 1968 - June 30, 1969

Military Service:
U.S. Army - July 1, 1969 to June 30, 1971

Post-Graduate Education:
General Surgery
West Virginia University
Morgantown, West Virginia
July 1, 1971 to June 30, 1972

Diagnostic Radiology
Mercy Hospital
Fride and Locust Streets
Pittsburgh, Pennsylvania 15219
July 1, 1972 to June 30, 1975
(Including training in Xeroradiography and Ultrasound)

Includes three months training in Nuclear Medicine

Armed Forces Institute of Pathology
Radiology Pathology Correlation Course
July 22, 1974 to September 13, 1974

Past Hospital Affiliations:
Medical Center of Beaver County
July 1975 - June 1977
Active staff-Radiology with part time duties in Nuclear Medicine

Elwood City Hospital
July 1976 - June 1977
Active Staff Radiology

Present Hospital Affiliation:
Divine Providence Hospital
Active Staff - Radiology
Director Department of Radiology

Medical Societies:

Allegheny County Medical Society
Pennsylvania Medical Society
American Medical Association
American College of Radiology
Pennsylvania Radiological Society

SUPERVISED TRAINING IN NUCLEAR MEDICINE

A. Training in radioisotope techniques

- | | |
|--|-------------|
| 1. Radiation physics and instrumentation | (108 hours) |
| *2. Radiation Protection | (30 hours) |
| *3. Mathematics pertaining to the use and measurement of radioactivity | (20 hours) |
| 4. Radiation biology | (27 hours) |
| *5. Radiopharmaceutical chemistry | (55 hours) |

*Integrated into a combined lecture and didactic program

B-C Three months clinical experience and supervision in nuclear medicine during residency in diagnostic radiology

Item # 8

Following completion of residency training:

July 1, 1975 to present

Experience in hospital nuclear medicine division under supervision
of physician licensed to handle byproduct material.

Item #8

UNITED STATES ATOMIC ENERGY COMMISSION
APPLICATION FOR BYPRODUCT MATERIAL LICENSE—MEDICAL
SUPPLEMENT A—PRECEPTOR STATEMENT

This page is to be completed by the applicant physician's preceptor. If more than one preceptor is necessary to document experience, obtain a separate statement from each. Page 2 may be used for comments and additional information.

10. NAME AND ADDRESS OF APPLICANT PHYSICIAN (include ZIP Code)

Jane Schilling Hughes, M.D.
1180 Sunset Dr.
Latrobe, Pennsylvania 15650

11. CLINICAL TRAINING AND EXPERIENCE OF PHYSICIAN NAMED IN ITEM 10 ABOVE

(A) ISOTOPE	(B) CONDITIONS DIAGNOSED OR TREATED	(C) No. Cases Observed (See 1 in Key below)	(D) No. Cases Involving Personal Participation (See 2 in Key below)
I-131 or I-125	Diagnosis of thyroid function	84	104
	Determination of blood and blood plasma volume	0	0
	Liver function studies	0	0
	Fat absorption studies	0	0
	Kidney function studies	0	0
	In vitro studies	0	0
Cr-51	Gastrointestinal protein loss studies	0	0
	Determination of red blood cell volume and studies of red blood cell survival	0	0
Fe-59	Iron turn over studies	0	0
Co-58 or Co-60	Intestinal absorption studies	18	7
K-42	Potassium space determinations	0	0
I-131	Thyroid imaging	64	47
	Brain tumor localization and cardiac imaging	0	0
	Cisternography	3	2
	Lung imaging	0	0
	Liver imaging	0	0
	Kidney imaging	0	0
	Placenta localization	0	0
	Placenta localization	0	0
Cr-51	Placenta localization	0	0
	Spleen imaging	0	0
Au-198	Liver imaging	0	0
Hg-197	Brain imaging	0	0
	Kidney imaging	0	0
Hg-203	Brain imaging	0	0
Sr-85	Bone imaging	0	0
Tc-99m	Brain imaging	0	0
	Thyroid imaging	157	219
	Salivary gland imaging	20	57
	Blood pool imaging	0	0
	Blood pool imaging	2	0

Item #8

APPLICATION FOR BYPRODUCT MATERIAL LICENSE—MEDICAL

SUPPLEMENT A—HUMAN USE

(A) ISOTOPE	(B) CONDITIONS DIAGNOSED OR TREATED	(C) No. Cases Observed (See 1 in key below)	(D) No. Cases Involving Personal Participation (See 2 in key below)
Tc-99m	Placenta localization	0	0
	Liver and spleen imaging	160	218
	Lung imaging	105	156
	Bone imaging	110	135
Xe-133	Blood flow studies and pulmonary function studies	0	17
Se-75	Pancreas imaging	0	0
P-32	Treatment of polycythemia, leukemia, and Bone metastases	1	0
	Intracavitary treatment	0	0
I-131	Treatment of thyroid carcinoma	0	0
	Treatment of hyperthyroidism and cardiac condition	6	4
Au-198	Intracavitary treatment	0	0
Co-60 or Co-137	Interstitial treatment	0	0
	Intracavitary treatment	0	0
Ir-192	Interstitial treatment	0	0
Co-60 Co-137	Teletherapy treatment	0	0
Sr-90	Treatment of eye disease	0	0

Key to Column (C) and (D) above:

1. Observation should consist of observing radioisotope administration techniques and discussion with preceptor the case histories to establish most appropriate diagnostic and/or therapeutic procedure, limitation, contraindications, etc.
2. Personal participation should consist of (a) supervised examination of patients to determine the suitability for radioactive diagnosis and/or treatment and recommendation on dosage to be prescribed; (b) collaboration in calibration of the dose and the actual nominal dose of the dose to the patient, including calculation of administration time, selected measurements, and plotting of data; and (c) adequate period of training to enable the physician to manage radioactive patients and to follow patients through diagnosis and/or the course of treatment.

Diagnostic Radiology Residency

12. DATES AND TOTAL NUMBER OF HOURS OF CLINICAL RADIOISOTOPE TRAINING

April 1976, Oct & Nov 1977, Nov 1-15, 1978

13. THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF

E.J. Pawsek, M.D.
 Mercy Hospital
 Pittsburgh, Pa 15219

AT MERCY HOSPITAL, Pittsburgh, Pa 15219 37-01321-02
 (Institution Name and Address) (Byproduct Material License Number)

E.J. Pawsek M.D.
 (Signature of Preceptor)

Curriculum Vitae - Jane Schilling Hughes, M.D.

Jane Schilling Hughes, M.D.
1180 Sunset Drive
Latrobe, Pennsylvania 15650

Born:

Harrisburg, Pa. June 23, 1941

Education:

Derry Area Joint High School, Derry, Pa.
Smith College, Northampton, Massachusetts BA 1965
Jefferson Medical College, Philadelphia, Pa MD 1966

Medical Licensure:

Pennsylvania Licensure # 009645-E
original issue 1967

Internship:

Harrisburg General Hospital-July 1966 to July 1967

Post Graduate Education:

Psychiatry
Eastern Pennsylvania Psychiatric Institute
Philadelphia, Pa July 1, 1967 to July 1, 1968

Diagnostic Radiology

Mercy Hospital
Pride and Locust Streets,
Pittsburgh, Pennsylvania 15219
January 1, 1976 to December 30, 1978
Including xeroradiography, ultra sound, cat scanning;
Included 3 1/2 months training in nuclear medicine

Past Hospital Affiliations:

1. Eastern Diagnostic and Evaluation Center
Philadelphia Pa.
Part-time psychiatry-April 1969 to July 1970
2. Camden County Psychiatric Hospital
Lakeland, New Jersey
General Physician emphasis on psychiatry May 1969 to July 1970
3. Torrance State Hospital
Torrance, Pa.
General Physician emphasis on psychiatry July 1973 to July 1974

Present Hospital Affiliations

Divine Providence Hospital
Active Staff, Radiology
January 1979

Medical Societies

Allegheny County Medical Society
Pennsylvania Medical Society
American Medical Association

Item # 89949

Supervised Training in Nuclear Medicine

A. Training in radioisotope techniques

1. Radiation physics and instrumentation (129 hours)
2. Radiation Protection (30 hours)
3. Mathematics pertaining to the use and measurement of radioactivity (20 hours)
4. Radiation biology (27 hours)
5. Radiopharmaceutical chemistry (35 hours)

B. Three months clinical experience and supervision in nuclear medicine during radiology residency (490 hours)

180 lecture hours in physics

81 lecture hours in clinical nuclear medicine

Item # 8

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER Jane Schilling Hughes, M.D.	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE Pennsylvania
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3. CERTIFICATION		
SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
American Board of Radiology	Diagnostic Radiology	December 1979

4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES			
FIELD OF TRAINING A	LOCATION AND DATE(S) OF TRAINING B	TYPE AND LENGTH OF TRAINING	
		LECTURE/ LABORATORY COURSES (Hours) C	SUPERVISED LABORATORY EXPERIENCE (Hours) D
a. RADIATION PHYSICS AND INSTRUMENTATION	Mercy Hospital 1/76-12/79	100	30
b. RADIATION PROTECTION	"	25	5
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	"	16	4
d. RADIATION BIOLOGY	"	27	0
e. RADIOPHARMACEUTICAL CHEMISTRY	"	33	22

5. 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 or I-125	155	Mercy Hospital, Pgh., Pa.	3½ months	Diagnostic & Therapy
Tc 99	785	"	"	"
Xe 133	17	"	"	"

PRECEPTOR STATEMENT

Supplement B must be completed by the applicant physician's preceptor. If more than one preceptor is necessary to document experience, obtain a separate statement from each.

1. APPLICANT PHYSICIAN'S NAME AND ADDRESS

FULL NAME

Jane Schilling Hughes, M.D.

STREET ADDRESS

1180 Sunset Drive

CITY

Latrobe

STATE

PA

ZIP CODE

15650

KEY TO COLUMN C

PERSONAL PARTICIPATION SHOULD CONSIST OF:

- 1-Supervised examination of patients to determine the suitability for radioisotope diagnosis and/or treatment and recommendation for prescribed dosage.
- 2-Collaboration in dose calibration and actual administration of dose to the patient including calculation of the radiation dose, related measurements and plotting of data.
- 3-Adequate period of training to enable physician to manage radioactive patients and follow patients through diagnosis and/or course of treatment.

2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN

ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED B	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.) D
I-131 or I-125	DIAGNOSIS OF THYROID FUNCTION	104	
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME	0	
	LIVER FUNCTION STUDIES	0	
	FAT ABSORPTION STUDIES	0	
	KIDNEY FUNCTION STUDIES	0	
	IN VITRO STUDIES	0	
OTHER			
I-125	DETECTION OF THROMBOSIS	0	
I-131	THYROID IMAGING	47	
P-32	EYE TUMOR LOCALIZATION	0	
Se-75	PANCREAS IMAGING	0	
I-131	CISTERNOGRAPHY	2	
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES	17	
OTHER	Intestinal absorbtion studies	7	
Tc-99m	BRAIN IMAGING	219	
	CARDIAC IMAGING	10	
	THYROID IMAGING	57	
	SALIVARY GLAND IMAGING	0	
	BLOOD POOL IMAGING	0	
	PLACENTA LOCALIZATION	0	
	LIVER AND SPLEEN IMAGING	218	
	LUNG IMAGING	156	
	BONE IMAGING	135	
OTHER			

PRECEPTOR STATEMENT (Continued)

2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN (Continued)

ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED B	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.) D
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES	0	
P-32 (Colloidal)	INTRACAVITARY TREATMENT	0	
I-131	TREATMENT OF THYROID CARCINOMA	0	
	TREATMENT OF HYPERTHYROIDISM	4	
Au-198	INTRACAVITARY TREATMENT	0	
Co-60 or Cs-137	INTERSTITIAL TREATMENT	0	
	INTRACAVITARY TREATMENT	0	
I-125 or Ir-192	INTERSTITIAL TREATMENT	0	
Co-60 or Cs-137	TELETHERAPY TREATMENT	0	
Sr-90	TREATMENT OF EYE DISEASE	0	
	RADIOPHARMACEUTICAL PREPARATION	0	
Mo-99/ Tc-99m	GENERATOR	3	
Sn-113/ In-113m	GENERATOR	—	
Tc-99m	REAGENT KITS	10	
Other			

3. DATES AND TOTAL NUMBER OF HOURS RECEIVED IN CLINICAL RADIOISOTOPE TRAINING

April 1976, October 1977, November 1977, November 1978

571 hours—includes 81 lecture hours in Clinical Nuclear Medicine

4. THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF:

a. NAME OF SUPERVISOR

E.J. Parsek, M.D.

b. NAME OF INSTITUTION

Mercy Hospital

c. MAILING ADDRESS

Pride and Locust Streets

d. CITY

Pittsburgh, Pa. 15219

5. MATERIALS LICENSE NUMBER(S)

37-01321-02

6. PRECEPTOR'S SIGNATURE

7. PRECEPTOR'S NAME (Please type or print)

Jane Schilling Hughes, M.D.

8. DATE

May 1979

CURRICULUM VITAE

Name: Edward D. Durkosh

SEE PREVIOUS DOCKET: License #37-16031-01

Date and Place of Birth: July 7, 1923 - Uniontown, Pennsylvania

Social Security Number 198-18-0191

Marital Status: Married - 1953, 3 Children, Born 1954, 1956, 1959

Military Service: U.S. Army 1943-1946 - A.S.T.P. - Lake Forest College 18 months overseas, Honorable Discharge w/rank of Staff Sergeant

Education: B.S. Electrical Engineering, University of Tennessee - 1950

M.S. Health Related Professions, University of Pittsburgh: presently enrolled

Chronology of Professional Employment:

1950-1953: Oak Ridge National Lab, Health Physics Division - Health Physics Supervisor

1953-1968: Westinghouse Electric Corporation, Bettis Atomic Power Laboratory - Supervisor, Radiological Control Engineering

1968-present: University of Pittsburgh - Senior University Health Physicist and Radiation Safety Officer

1969-present: Instructor, Radiation Health Department, Graduate School of Public Health

1968-present: Consultant, Radiological Safety Services, Western Pennsylvania Area

Professional Society Membership:

Health Physics Society and Western Pennsylvania Chapter

American Industrial Hygiene Association and Pittsburgh Section

American Public Health Association - Radiological Health Section

American Association of Physicists in Medicine and Penn-Ohio Chapter

Specialty Certification: American Board of Health Physics - 1961

Professional Appointments:

President: Western Pennsylvania Chapter, Health Physics Society 1964-65

Executive Secretary: Western Pennsylvania Chapter, Health Physics Society

Member and Part-time Chairman: Film Badge Standard Subcommittee, American National Standards Institute, N.13 Committee

U.S. Representative: International Standards Organization
ISO/TC85/SC2/WG2 Committee

Member: Radiological Health Subcommittee, Task Force on Environmental Health, Advisory Council for Comprehensive Health Planning, Pennsylvania Department of Health

Member and Chairman: Health Physics Society Standards Committee

Chairman: Health Physics Society Memorial Foundation Ad-Hoc Committee

Alternate Member: American Public Health Association Representative to ANSI, N.14 Committee

Treasurer: Penn-Ohio Chapter, AAPM

Publications:

"Aerosol Activity for Experimental Low Power Reactor Operation", by E.D. Durkosh, E.C. Barnes, W.D. Small, P.R. Bolton, Health Physics Vol. I, 1958, p. 135-140

"OFFICIAL RECORD COPY"

Item # 8.

99949

DIVINE PROVIDENCE HOSPITAL

1004 Arch Street, beside the aviary, Pittsburgh, Pennsylvania 15212

412 322 0700

#9 Instrumentation

- a) Picker/Nuclear 5" Rectilinear Scanner-1
- b) Picker/Nuclear 2C Dyna Camera-1
- c) Radx Dose Calibrator, Model M1584-1
- d) Victoreen Cutie Pie, Model 740E-1 Date of last calibration 7/12/78
- e) Picker GSM, Model 652-1 " " " " 1/22/79
- f) 1200-5 0-200 MR Self Reading Dosimeter and Charger-1

Item #9 Instrumentation
May 1979

DIVINE PROVIDENCE HOSPITAL

1004 Arch Street, beside the aviary, Pittsburgh, Pennsylvania 15212

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#10 Calibration of Instruments

- a) Picker/Nuclear 5" Rectilinear Scanner-1
daily peaking with Eu
- b) Picker/Nuclear 2C Dyna Camera-1, Daily
Calibration and Flood Fields with Tc
Phantom and Quadrant bar phantom
- c) Radx Dose Calibrator, Daily check with
Co57 source calibrated for Tc 99
- d) Victoreen Cutie Pie
Two points scale using NBS related Ra-226,
Co-60, Cs-137 sources (University of Pittsburgh)
at least annually.
- e) Picker GSM
(same as d)

Item #10 Calibration of Instruments
May 1979

DIVINE PROVIDENCE HOSPITAL

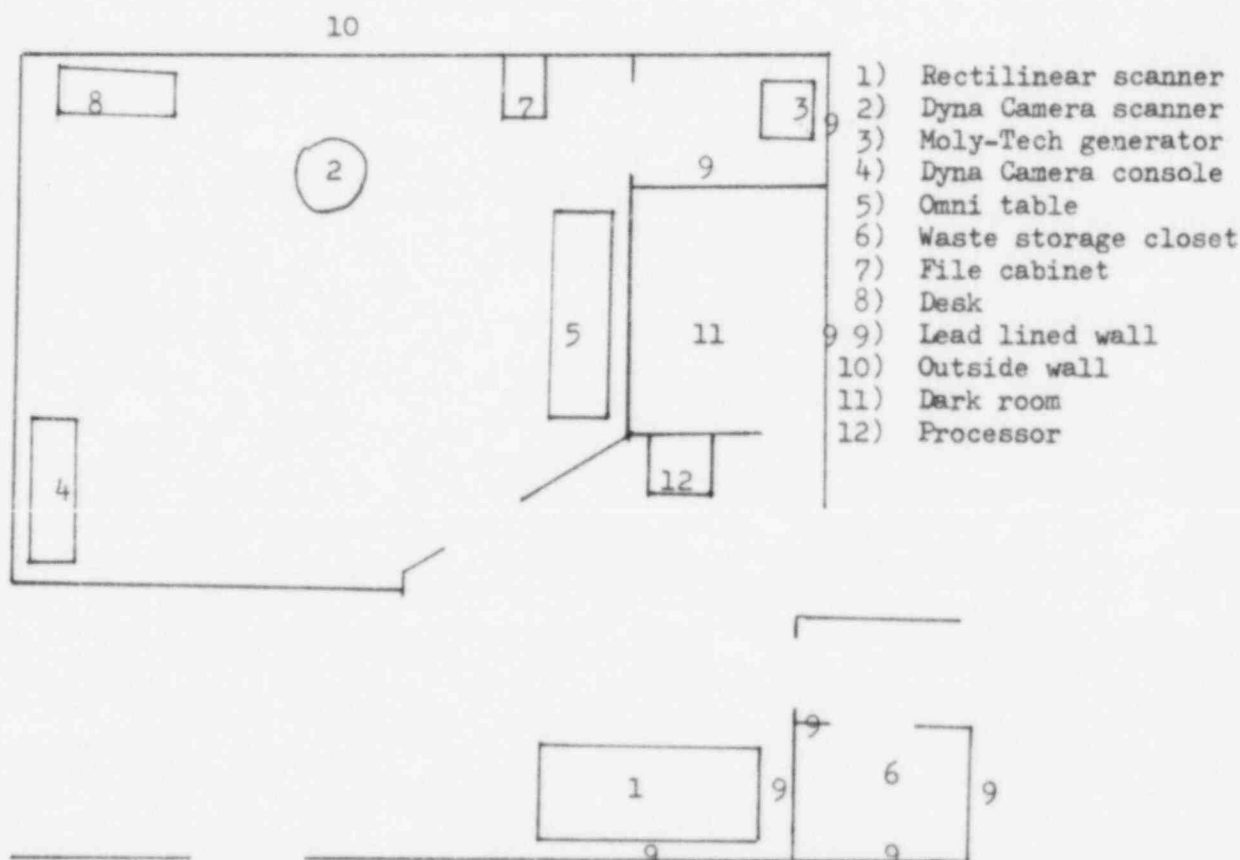
1004 Arch Street, beside the aviary, Pittsburgh, Pennsylvania 15212

412 322 0700

#11 Facilities and Equipment

Lead shielded storage containers, syringe shields, L-block shield for Moly-Tech generator, separate decay storage closet.

Based on the radioactive material used and it's form, no significant airborne or liquid radioactivity is generated.



Item #11 Facilities and Equipment
May 1979

DIVINE PROVIDENCE HOSPITAL

1004 Arch Street, beside the aviary, Pittsburgh, Pennsylvania 15212

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#12 Personnel Training Program

Worker safety training, involving a single full time registered Nuclear Medicine Technologist and a part time back-up radiologic technologist has been performed in the past, and informal discussions are held periodically with the CHP consultant. Emergency telephone numbers and "Instructions to Employees" forms are posted in the area. Technologist attend periodic lecture and workshops at other hospitals, nearby universities and conventions. All inservices, whether internal or external, are recorded.

All areas where radioactive materials are used are labeled with the proper precautionary signs. Any one working in these areas have been instructed concerning the potential hazards and the steps to take in case of an emergency. These include technical, clerical, nursing, housekeeping and security personnel.

If any changes are made in the general procedures or the license, everyone that the changes pertain to are notified at once.

Item #12 Personnel Training Program
May 1979

DIVINE PROVIDENCE HOSPITAL

1004 Arch Street, beside the aviary, Pittsburgh, Pennsylvania 15212

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#13 Procedures for ordering and receiving Radioactive Materials

All orders for radioactive materials are placed by the Nuclear Medicine Technologist. It is this persons responsibility to ensure that the requested materials and quantities are authorized by the license and that possession limits are not exceeded.

During normal working hours, 7:00 am-3:30 pm Monday through Friday, carriers are instructed to deliver radioactive packages directly to the Nuclear Medicine Department. The individual receiving the package must sign a receipt.

During off-duty hours, security personnel escorts the carriers to the Nuclear Medicine Department. The security guard opens the door and signs the receipt. The carrier sets the package inside and to the right of the door. The door is then locked.

Most off duty hour deliveries take place on Sunday about 1:00 am. Security has been instructed on the procedure to follow in case of damage or leakage to the package. Emergency telephone numbers are posted.

Incoming shipments are examined for leakage or damage and the packing material is surveyed for abnormal reading (above twice background). If excessively contaminated packing material is found, it is sealed in a plastic bag and stored in the decay closet. Proper authorities will then be contacted.

Records are maintained on all incoming packages

Item #13 Procedure for ordering and receiving Radioactive Materials.

May 1979

"OFFICIAL RECORD COPY"

DIVINE PROVIDENCE HOSPITAL

1004 Arch Street, beside the aviary, Pittsburgh, Pennsylvania 15212

412 322 0700

TO: Security Personnel

FROM: Daniel Lutz
Department of Radiology

SUBJECT: Receipt of Packages Containing Radioactive Materials

Any packages containing radioactive materials that arrive between 3:00 pm and 7:00 am. or on Sundays, shall be signed for by the Security guard on duty. Please escort the carrier to the Nuclear Medicine Department. Unlock the door, place the package on the floor and to the right of the door, and relock the door.

If the package is wet or appears to be damaged, immediately contact the hospital Radiation Safety Officer. Ask the carrier to remain at the hospital until it can be determined that neither he or the delivery vehicle is contaminated.

Radiation Safety Officer: Ed Durkosh

Office Phone: 624-2728

Home Phone: 655-4883

cc: File
Marc Cammarata

APPENDIX J

WASTE DISPOSAL

1. Liquid waste will be disposed of (check as appropriate)

☒ By commercial waste disposal service (see also item 4 below).

☒ In the sanitary sewer system in accordance with §20.303 of 10 CFR Part 20.

Other (specify): _____

2. Mo-99/Tc-99m generators will be (check as appropriate)

Returned to the manufacturer for disposal.

☒ Held for decay until radiation levels, as measured with a low-level survey meter and with all shielding removed, have reached background levels. All radiation labels will be removed or obliterated and the generators disposed of as normal trash. (Note: This method of disposal may not be practical for generators containing long-lived radioactive contaminants.)

Disposed of by commercial waste disposal service (see also item 4 below).

Other (specify): _____

3. Other solid waste will be (check as appropriate)

Held for decay until radiation levels, as measured with a low-level survey meter and with all shielding removed, have reached background levels. All radiation labels will be removed or obliterated and the waste will be disposed of in normal trash.

☒ Disposed of by commercial waste disposal service (see also item 4 below).

Other (specify): _____

4. The commercial waste disposal service used will be

Interex Corp. Natick Mass.

(Name) (City, State)

NRC/Agreement State License No. 37-1121-1

DIVINE PROVIDENCE HOSPITAL

1004 Arch Street, beside the aviary, Pittsburgh, Pennsylvania 15212

412 322 0700

Enclosed is a copy of the survey done by our C.H.P. on the vacated area after
the relocation of the Nuclear Medicine Department.

DIVINE PROVIDENCE HOSPITAL OF PITTSBURGH
1004 Arch St., Pittsburgh, Pa. 15212

To: Peter Bonadio, M.D.

Survey Date: Dec. 13, 1978 gni gni

Isotopes Used: $Tl - q q^{m}$

Area Smeared $\sim 10^3 \text{ cm}^2$

Counting Instruments: *M/C 4330 Gas Flow (window) Dkgd.* 19 c/m

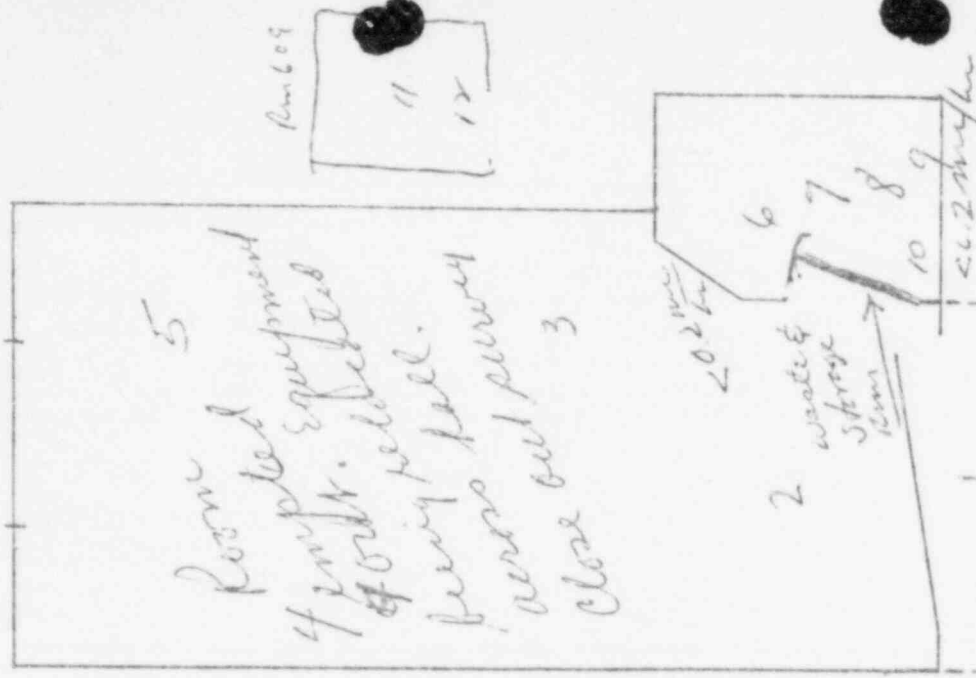
Counting Time: 2 Minute(s) Counter Efficiency: alpha = 0.00 Beta gamma = 0.00 %

REMARKS, RECOMMENDATIONS, ACTIONS: No evidence of any detectable loose surface radioactivity in or around area included by emptied area.

By: S. M. M. M. M. 12/14/18 report date

SHEAR RESULTS (refer to room plan locations)

	Alpha C.P.H.	Beta- Gamma C.P.H.	ITEMS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			



Area probe using Vickers & 6HSA
showed no BS readings in excess
of 0.2 m/yr except from material
in storage where level to 3.8 m/yr
at 2" with a Ave b-y. level of 0.3 m/yr
in center of room