

MATERIALS LICENSE

Amendment No. 23

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 39, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee 1. Department of the Army Walter Reed Army Medical Center 2. Washington, D.C. 20307-5001		In accordance with the letter dated May 13, 1994, 3. License number 08-01738-03 is amended in its entirety to read as follows:	
		4. Expiration date November 30, 1996	
		5. Docket or Reference No. 030-06895	
6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license	
A. Cesium 137	A. Sealed sources	A. Not to exceed 3500 curies per source and 70,000 curies total	
B. Cesium 137	B. Sealed sources	B. Not to exceed 2,100 curies per source and 8,400 curies total	
C. Cesium 137	C. Sealed sources	C. Not to exceed per source and total	
9. Authorized use			
A. In AECL Gammacell Model 220 Irradiator(s) for the irradiation of material except explosives, flammables, or corrosives.			
B. In AECL Gammacell Model 40 Irradiator(s) for the irradiation of material except explosives, flammables, or corrosives.			
C. In _____ Irradiator(s) for the irradiation of material except explosives, flammables, or corrosives.			

CONDITIONS

- 10. Licensed material may be used only at the licensee's facilities located at Walter Reed Army Medical Center, Washington, D.C.
- 11. A. Licensed material shall only be used by, or under the supervision of, individuals who have received the training described in application dated March 18, 1991 and have been designated in writing by the Radiation Safety Officer.
B. The Radiation Safety Officer for this license is LTC William B. Johnson.
- 12. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.

Information in this record was deleted in accordance with the Freedom of Information Act, exemptions 2 & 6
2006-0238

EX 2
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**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License number:

08-01738-03

Docket or Reference number

030-06895

Amendment No. 23

13. A. Sealed sources and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed three years.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed three months.
- C. In the absence of a certificate from a transferor indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- E. Sealed sources and detector cells need not be leak tested if:
- (i) they contain only hydrogen-3; or
 - (ii) they contain only a radioactive gas; or
 - (iii) the half-life of the isotope is 30 days or less; or
 - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
 - (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- F. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source or detector cell shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within five days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source or detector cell involved, the test results, and corrective action taken.
- G. The licensee is authorized to collect leak test samples for analysis by licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License number

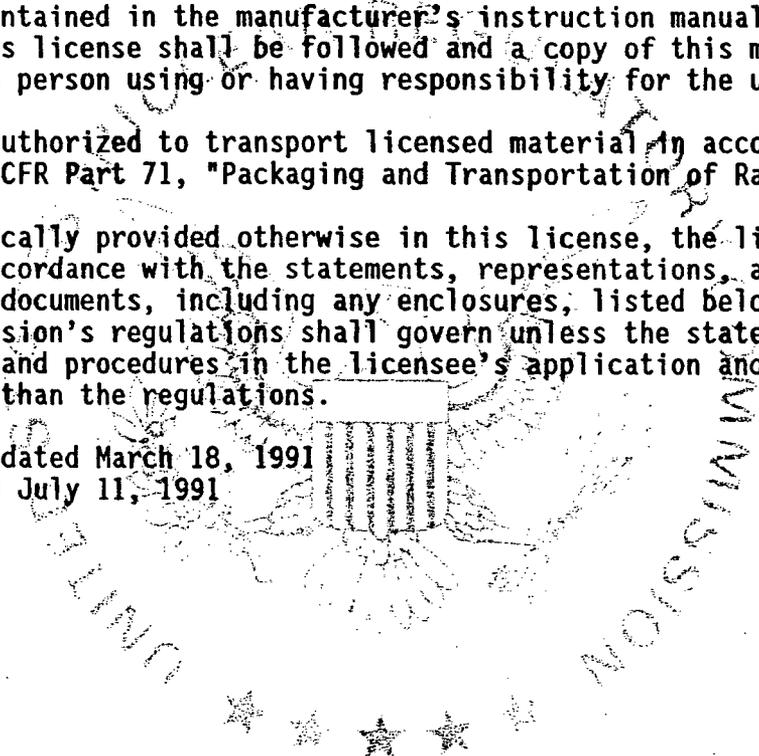
08-01738-03

Docket or Reference number

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14. The licensee shall not perform repairs or alterations of the irradiator involving removal of shielding or access to the licensed material. Removal, replacement, and disposal of sealed sources in the irradiator shall be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
15. The licensee shall conduct a physical inventory every six months to account for all sealed sources and devices containing licensed material received and possessed under the license.
16. The procedures contained in the manufacturer's instruction manual for the irradiator authorized by this license shall be followed and a copy of this manual shall be made available to each person using or having responsibility for the use of the device.
17. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
18. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
 - A. Application dated March 18, 1991
 - B. Letter dated July 11, 1991



For the U.S. Nuclear Regulatory Commission

Original Signed By:

Steve W. Shaffer

By

Nuclear Materials Safety Branch
Region I

King of Prussia, Pennsylvania 19406

Date

JUN 23 1994

JUN 23 1994

License No. 08-01738-03
Docket No. 030-06895
Control No. 119857

Department of the Army
ATTN: Peter H. Myers, Lt. Colonel
HQDA (DASG-PSP)
5109 Leesburg Pike
Falls Church, Virginia 22041-3258

Dear Lt. Colonel:

This refers to your license amendment request. Enclosed with this letter is the amended license.

Please review the enclosed document carefully and be sure that you understand and fully implement all the Conditions incorporated into the amended license. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I office, the Licensing Assistance Section, (610) 337-5093 or 5239, so that we can provide appropriate corrections and answers.

Thank you for your cooperation.

Sincerely,

Original Signed By:
Steve W. Shaffer
Steve W. Shaffer
Nuclear Materials Safety Branch
Division of Radiation Safety
and Safeguards

Enclosure:
Amendment 23
DRSS:RI
Shaffer/sws

SWS
6/23/94

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ML 10



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
OFFICE OF THE SURGEON GENERAL
5109 LEESBURG PIKE
FALLS CHURCH, VA 22041-3258

June 01, 1994

030-06895



Preventive Medicine
Consultants Division

US Nuclear Regulatory Commission
Region I
475 Allendale
King of Prussia, Pennsylvania 19406

Dear Sir:

Enclosed are two copies of a request to amend Byproduct
Material License Number 08-01738-03, Walter Reed Army Medical
Center, Washington, DC, by appointing Lieutenant Colonel William
B. Johnson as Radiation Safety Officer.

Recommend approval.

Sincerely,

Peter H. Myers
Colonel, U.S. Army
Radiological Hygiene Consultant

Enclosure

CF: HQ, USAEHA, ATTN: HSHB-MR-H, APG, MD 21010-5422
HQ, USWRAMC, ATTN: HSHL-HP, Wash, DC 20307-5001 (wo/encls)

119857

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ML 90

JUN - 6 1994



DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, DC 20307-5001



REPLY TO
ATTENTION OF:

HSHL-HP (385-11)

13 May 1994

MEMORANDUM THRU

Commander, U.S. Army Health Services Command, ATTN: HSCL-P, Fort
~~Sam Houston, Texas 78234-6000~~

MWM
26 MAY 94

HQDA (SGPS-PSP-E), 5109 Leesburg Pike, Falls Church, VA 22041-
3258

FOR U.S. Nuclear Regulatory Commission, Region I, Nuclear
Safety Section A, 475 Allendale Road, King of Prussia,
PA 19406

SUBJECT: Amendment of US Nuclear Regulatory Commission Licenses
No. 030-01317 and No. 030-06895

1. Request that NRC Licenses 030-01317 and 030-06896 be amended to reflect a change in the Radiation Safety Officer from CPT Mark A. Melanson to LTC William B. Johnson. LTC Johnson has been assigned as the Chief, Health Physics Office at Walter Reed Army Medical Center since 9 May 1994.
2. A Training and Experience Form and a Curriculum Vitae for LTC Johnson are attached (Enclosures 1 and 2).
3. POC for this matter is Mr. David W. Burton or LTC Johnson @ (301)-427-5104/5107.

FOR THE COMMANDER:

2 Encls

FEE EXEMPT

Earl S. Newsome III
EARL S. NEWSOME III
LTC, MS
Executive Officer

**TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER**

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER WILLIAM B. JOHNSON, Ph.D.		2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE: NOT APPLICABLE		
3. CERTIFICATION				
SPECIALTY BOARD A		CATEGORY B		MONTH & YEAR CERTIFIED C
NOT APPLICABLE		NOT APPLICABLE		NOT APPLICABLE
4. TRAINING RECEIVED IN BASIC RADIOACTIVE HANDLING TECHNIQUES				
FIELD OF TRAINING A	LOCATION AND DATE(S) OF TRAINING B	TYPE & LENGTH OF TRAINING		
		LECTURE/ LABORATORY COURSES (Hours) C	SUPERVISED LABORATORY EXPERIENCE (Hours) D	
a. RADIATION PHYSICS AND INSTRUMENTATION	1) Univ of North Carolina, Chapel Hill, NC, 1980-1983 (3 years) 2) Tulane, New Orleans, LA, 1976 (1 year) 3) Ft. Belvoir, VA, 1970- 1971 (1 year)	80 60 168	92	
b. RADIATION PROTECTION	1) Reference 1 above 2) Reference 3 above	140 80	60 120	
c. MATHEMATICS IN THE USE AND MEASUREMENT OF RADIOACTIVITY	1) Reference 1 above 2) Reference 3 above	125 60		
d. RADIATION BIOLOGY	1) Reference 1 above 2) Reference 3 above	40 40		
e. RADIOPHARMACEUTICAL CHEMISTRY	1) Reference 1 above 2) Reference 3 above	200	60 20	
5. EXPERIENCE WITH RADIATION. (Actual use of Radioisotopes or Equivalent Experience)				
ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE GAINED	DURATION OF EXPERIENCE	TYPE OF USE
SM-1 Nuclear Power Reactor	1000 KW	SM-1, Ft. Belvoir, VA	1971 (1 year)	Health Physics Surveys; Reactor operations; Calibration

5. EXPERIENCE WITH RADIATION.(Actual use of Radioisotopes or Equivalent Experience)				
ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE GAINED	DURATION OF EXPERIENCE	TYPE OF USE
²³⁵ U ²³⁸ U ²³⁹ Pu Pu-Be ²⁴¹ Am ¹³⁷ Cs ³ H	216 gm unsealed & soln. sources 3 gm unsealed source 43 gm, liquid sources 3 Ci, Sealed 600 mCi, Sealed 120 Ci, Sealed 110 Ci, Sealed	U.S. Army Environmental Hygiene Agency Aberdeen Proving Ground, MD NRC Byproduct Material License	1973-1974 (1 year)	Health Physics Surveys; Alternate RSO; Calibration
Atomic No. 3-83 ³ H ¹³¹ I ¹²⁵ I ¹³ C	5 mCi each 10 mCi, liquid 10 mCi, liquid 1 Ci, liquid 1 Ci, liquid	US Army Medical Lab Ft. Sam Houston, TX Radiation Safety Officer NRC Byproduct Material License (Medical)	1974-1975 (1 year)	RSO, RIA kits, Iodinations, Health Physics Surveys; Wet Chemistry procedures
⁹⁹ Mo/ ^{99m} Tc Generator	2 Ci	North Carolina Memorial Hospital Chapel Hill, NC	1982 (1 month)	Clinical Training
Atomic No. 3-83 10 CFR 35 Gp I-II Gp III Gp IV-V ¹³³ Xe ¹³⁷ Cs ¹⁵³ Gd	25 mCi each As needed 3 Ci each As needed 40 mCi 131 Ci 2 Ci	Dwight D. Eisenhower Army Medical Center, Fort Gordon, GA Radiation Safety Officer for Hybrid Broad Scope NRC Materials License (Medical) USNRC No. 10-12044-03	May 1983-June 1989 (6 years)	RSO, Radiation Safety Surveys, Medical Physics Surveys, Calibration
Atomic No. 3-83 ¹⁴ C, ³ H, ⁹⁹ Mo, ^{99m} Tc ³² P, ¹²⁵ I ¹³⁷ Cs	15 Ci total, ≤ 200 mCi each 5 Ci each, any form 1 Ci each, any form 4200 Ci, sealed source	Uniformed Services University of the Health Sciences, Bethesda, MD Radiation Safety Officer for Broad Scope Type A NRC Material License (Medical) USNRC No. 19-23344-01	May 1989-June 1992 (3 years)	RSO, Health Physics Surveys, Calibration

5. EXPERIENCE WITH RADIATION.(Actual use of Radioisotopes or Equivalent Experience)				
ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE GAINED	DURATION OF EXPERIENCE	TYPE OF USE
²³⁵ U	216 gm unsealed & soln. sources	U.S. Army Environmental Hygiene Agency Aberdeen Proving Ground, MD	June 1992 - May 1994 (2 years)	Health Physics Surveys; Principle User, Member of the Radiation Control Committee
²³⁸ U	3 gm unsealed source			
²³⁹ Pu	43 gm, liquid sources	NRC Byproduct Material License		
Pu-Be	3 Ci, Sealed			
²⁴¹ Am	600 mCi, Sealed			
¹³⁷ Cs	120 Ci, Sealed			
³ H	110 Ci, Sealed			

CURRICULUM VITAE

LTC WILLIAM B. JOHNSON, Ph.D, Medical Service Corps, US Army

Address:

Residence:

[]

Work:

[]

Walter Reed Army Medical Center
Chief, Health Physics Office
Washington D.C. 20307-5001
Phone: (301) 427-5104

ACADEMIC AREAS OF INTEREST:

Health Physics, Medical Physics, Optimizing Medical Images, Quality Control in Radiology, Computers, Public Health

EDUCATION AND TRAINING:

CIVILIAN TRAINING:

University of North Carolina, Chapel Hill, NC, Ph.D., Radiological Hygiene, []

Tulane School of Public Health and Tropical Medicine, New Orleans, LA, MPH, Environmental Health, 1976.

Iowa State University, Ames, IA, BS, Mathematics, []

Medical X-Ray Protection Course, USPHS, Rockville, MD, 2 weeks, 1973.

Ionizing and Nonionizing Radiation in Medicine, University of Pennsylvania, Philadelphia, PA, 1 week, 1979.

Electronic Imaging in Medicine, University of Texas at San Antonio, TX, 1 week, 1983.

Health Physics Aspects of Nuclear Attack, Health Physics Summer School, Louisiana University, Hammond, LA, 1 week, 1984.

Health Physics In Radiation Accidents, Oak Ridge Associated Universities, Oak Ridge, TN, 1 week, 1985.

MRI Acceptance Testing and Quality Control, The Bowman Gray School of Medicine, Winston-Salem, NC, 1 week, 1988.

International Society for Optical Engineering Medical Imaging V Meeting, San Jose, CA, 1 week, 1991.

American College of Radiology's Mammographic Image Quality Course: Role of the Medical Physicist, January 1993, 18 CME

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credits awarded.

MILITARY TRAINING:

Nuclear Power Plant Operator Course (Health Physics Specialty), Ft. Belvoir, VA, 1 year, 1971.

AMEDD (MSC) Officer Basic Course, Ft. Sam Houston, TX, 9 weeks, 1972

AMEDD Officer Advanced Course, Ft. Sam Houston, TX, 24 weeks, 1975.

Command and General Staff Officer Course (Correspondence Option), 1 year, 1987.

Faculty Development Course, Academy of Health Sciences, Ft. Sam Houston, TX, 4 weeks, 1976.

Medical Effects of Nuclear Weapons, Armed Forces Radiobiology Research Institute, Bethesda, MD, 1 week, 1983.

Medical Physics and Military Medicine, US Army Environmental Hygiene Agency, Aberdeen Proving Ground, MD, 1 week, 1983, 1985, 1987, 1988, 1989, 1991, 1993.

TEACHING EXPERIENCE:

1990-1993, Assistant Professor of Preventive Medicine and Biometrics, Uniformed Services University of the Health Sciences, Bethesda, MD.

1977-1979, Instructor, Radiological Physics, Academy of Health Sciences, Ft. Sam Houston, TX.

1977-1979, Assistant Professor of Health Sciences, Baylor University at San Antonio, San Antonio, TX.

1969-1970, High School Teacher (Mathematics), Grant Community High School, Fox Lake, IL.

PROFESSIONAL EXPERIENCE:

1. June 1992 to May 1994, Chief, Health Physics Division, U.S. Army Environmental Hygiene Agency, Aberdeen Proving Ground, MD.

Duties: Leads and manages the Health Physics Division composed of the Medical Health Physics Branch, the Industrial Health Physics Branch and an Administrative Section. Directs the activities of some 25 professional health physicists in world wide mission of support of U.S. Army Radiation Protection Programs. Support

includes complete radiation protection program evaluations for compliance with Federal, Army, and Nuclear Regulatory Commission (NRC) Licenses for Medical and Industrial facilities, medical and industrial x-ray surveys, radiation dose assessments from bioassay data, assistance in preparation of documents to terminate NRC licenses, and conducting verification surveys for NRC License termination. Radiation protection policies are developed for the Army Surgeon General for implementation Army wide. Act as principle user of radioactive materials, supervisor of ¹³⁷Cs irradiator for calibration, and member of the Radiation Control Committee.

2. June 1989 to June 1992, Deputy Director, Environmental Health and Occupational Safety; Chief, Radiation Safety and Radiation Protection Officer, Uniformed Service University of the Health Sciences (USUHS), Bethesda, MD.

Duties: Responsible for the supervision and management of broad scope US Nuclear Regulatory Byproduct Materials License No. 19-23344-01. Supervises health physics personnel in the performance of laboratory radiation protection surveys, personnel dosimetry program, laboratory analysis, and radioactive material control. Provides technical advice to some 350 radiation workers working in about 150 radioisotope laboratories. Teaches in various graduate level courses in Preventive Medicine and Radiology. Provides technical consultation to Director and other Branch Chiefs. Acts as the Director when the Director is absent. Has been designated the Medical Physics Consultant on acquisition and acceptance testing of Computerized Tomography (CT) Systems and Magnetic Resonance Imaging (MRI) Systems for the Army Surgeon General. This CT and MRI mission is world wide.

3. June 1983-June 1989, Chief, Health Physics, Dwight D. Eisenhower Army Medical Center, Ft. Gordon, GA.

Duties: Served as Chief, Health Physics, and Radiation Protection Officer. Responsible for supervision and management of broad scope radiation protection program including management of US Nuclear Regulatory Byproduct Materials License No. 10-12044-03 and Department of Army Radioactive Materials Authorization No. 10-07-81. Served as Regional Consultant to DOD Health Region 10, which includes 9 Army Community Hospitals, and clinics in Panama and Puerto Rico. Performs Technical Surveys of radioactive materials and radiation producing devices to evaluate health hazards and performs medical physics evaluations to optimize imaging. Provides education support to professional staff. Supervises the personnel dosimetry program and performs dosimetry analysis of both radiation workers and patients. Is the Medical Physics Consultant on acquisition and acceptance testing of Computerized Tomography (CT) Systems and Magnetic Resonance Imaging (MRI) Systems for the Army Surgeon General. This CT and MRI mission is world wide.

4. September 1976 - June 1980, Chief, X-Ray Branch, Academy of Health Sciences, Ft. Sam Houston, TX.

Duties: Programs, plans and supervises overall operation of branch, including performance of 36 instructors and about 430 students annually. Branch is responsible for teaching the x-ray technologist program (radiographic) for the US Army. Also coordinates, plans, and supervises clinical training. Serves as Chairman of X-Ray Specialist Curriculum Committee, and Chairman of Medicine and Surgery Division Physics and Biophysics Committee. Serves as subject matter expert in radiology for Combat Development and Health Care Systems.

5. January 1975 - July 1975, Chief, Health Physics Branch, US Army Environmental Hygiene Agency Regional Activity South, Ft. Sam Houston, TX.

Duties: Conducts radiation protection surveys of US Army installations containing or generating ionizing radiation. Geographical area of support is all states west of the Mississippi River. Also reviews NRC license and DA Authorization applications. Performs technical consultation on radiation safety hazards.

6. March 1974 - December 1974, Chief, Department of Nuclear Medical Sciences, US Army Medical Laboratory, Ft. Sam Houston, TX.

Duties: Supervises laboratory procedures and techniques of radiation biology, radiochemistry, and biophysics for regional reference laboratory. Geographic area of support includes United States, Pacific Region, Korea, and Panama. Supervises radiation detection measurements, preparation and analysis of radioisotopes in support of diagnostic and other clinical procedures. Provides support on environmental surveillance. Advises on radiological hygiene matters to prevent unnecessary exposure of personnel to ionizing radiation. Performs duty of Chairman, Radioisotope Committee, and Radiological Protection Officer. Manages all aspects of AEC License No. 42-06316-01, and Department of Army Authorization for Radioactive Materials. Performs Health Physics surveys and overall monitoring of all Laboratory Departments engaged in work involving radioactive material.

7. January 1973 - February 1974, Survey Officer, Health Physics Division, US Army Environmental Hygiene Agency, Aberdeen Proving Ground, MD.

Duties: Reviews AEC license and Department of Army Authorizations applications as well as drafts Army directives and technical publications pertaining to radiological health; evaluates proposed in-system items containing or generating ionizing radiation; makes on-site surveys of Army diagnostic, industrial, and therapeutic x-ray facilities, radioactive sources, accelerators, human use of

radioisotopes and other sources of ionizing radiation; prepares reports with recommendations for corrective action; assists in training activities. Performs as Alternate Radiological Protection Officer. This requires preparation and maintenance of records and reports on receipt, issue, use, inventory, storage, and disposal of radioactive materials. Performs health physics surveys of all agency divisions engaged in working with radioactive materials.

8. September 1972 - October 1972, Health Physics Technician, SM1 Nuclear Power Plant, Ft. Belvoir, VA.

Duties: Conducts radiological surveys, performs treatment to maintain proper process fluid conditions of nuclear power plant. Operates nuclear power plant controls and equipment. Assists in refueling operations and preparing spent fuel elements and demineralizers for storage and shipment. Monitors process fluids for radioactivity and performs chemical separations. Conducts radiological surveys of nuclear power plant personnel, equipment, work areas and reactor elements.

MEMBERSHIPS, PAPERS, PRESENTATIONS AND AWARDS:

Member, Health Physics Society (1973)

Member, Eta Chapter, Delta Omega Society (1977)

"The Final Step in Decommissioning of the SM-1A Nuclear Power Plant: A Closeout Survey," AEHA Report No. 43-001-74, Health Physics National Meeting, 1974.

"A Data Base Management System For Real-Time Monitoring of Operating Parameters of A Diagnostic X-Ray System," Ph.D. Dissertation, University of North Carolina, Chapel Hill, NC, 1983.

"Computerized Quality Assurance in Diagnostic Radiology," Health Physics National Meeting, Baltimore, MD, 1983.

"Acceptance Testing of Computerized Tomography Systems," Savannah River Chapter Health Physics Society Meeting, September 1985.

"Operational Problems for a Radiation Protection Program at A Major Medical Institution," Medical Physics in Military Medicine Course, AEHA, MD, September 1987.

"A Protocol to Comply With The Joint Commission of Accreditation of Health Care Organizations Requirements in Diagnostic Radiology," Medical Physics In Military Medicine Course, AEHA, MD, October 1988.