

**Veterans  
Administration**

January 6, 1987

In Reply Refer To: 553/115

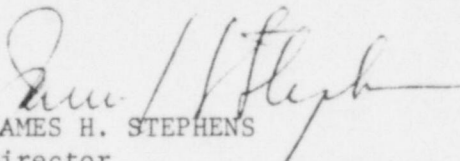
U.S. Nuclear Regulatory Commission  
Region III  
Material Licensing Section  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

SUBJECT: Amendment to NRC License No. 21-04234-01

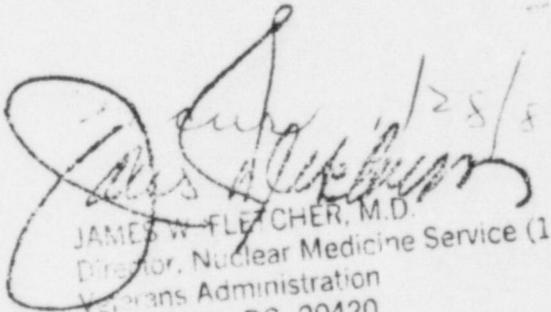
1. The following amendment to our NRC license is requested:

a. Please amend our NRC license to delete Cheryl M. Culver, M.S., as Radiation Safety Officer effective immediately. Subhash Danak, M.S., shall assume responsibility of Radiation Safety Officer. A copy of Mr. Danak's NRC-313M Supplement A Form and Curriculum Vitae are attached for NRC review.

2. For further information, please contact Mr. Subhash Danak, Health Physicist, at (313) 562-6000, Extension 434 or FTS 378-8432 and/or Jai Y. Lee, M.D., Chairman of Radiation Safety Committee, at (313) 562-6000, Extension 580.

  
JAMES H. STEPHENS  
Director

Attachments

  
JAMES W. FLETCHER, M.D.  
Director, Nuclear Medicine Service (115)  
Veterans Administration  
Washington, DC 20420

FEE EXEMPT

RECEIVED

JAN 30 1987

REGION III

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

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

Subhash M. Danak, M.S.

2. STATE OR TERRITORY IN  
WHICH LICENSED TO  
PRACTICE MEDICINE

## 3. CERTIFICATION

SPECIALTY BOARD  
ACATEGORY  
BMONTH AND YEAR CERTIFIED  
CAmerican Board of Science  
in Nuclear Medicine

Radiation Protection

June 1986

Also see Attachment A

## 4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

FIELD OF TRAINING  
ALOCATION AND DATE(S) OF TRAINING  
B

TYPE AND LENGTH OF TRAINING

LECTURE/  
LABORATORY  
COURSES  
(Hours)  
CSUPERVISED  
LABORATORY  
EXPERIENCE  
(Hours)  
Da. RADIATION PHYSICS AND  
INSTRUMENTATION

see Attachment B

b. RADIATION PROTECTION

Detroit Osteopathic Hospital  
Detroit, Michigan  
August 1975 - August 1976

60 hrs.

c. MATHEMATICS PERTAINING TO  
THE USE AND MEASUREMENT  
OF RADIOACTIVITY

see Attachment C

d. RADIATION BIOLOGY

Eastern Michigan University  
Ypsilanti, Michigan  
Physics 597 (independent study)  
January 1973 - April 1973

20 hrs.

e. RADIOPHARMACEUTICAL  
CHEMISTRYDetroit Osteopathic Hospital  
Detroit, Michigan  
August 1975 - August 1976300 hrs.  
(appx.)

## 5. EXPERIENCE WITH RADIATION. (Actual use of Radioisotopes or Equivalent Experience)

ISOTOPE

MAXIMUM AMOUNT

WHERE EXPERIENCE WAS GAINED

DURATION OF EXPERIENCE

TYPE OF USE

see Attachment D

CONTROL NO. 82865

Attachment A

CERTIFICATION

I have passed the written section of the American Board of Radiology examination which includes:

Part I	Physics
Part I	Clinical
Part II	Medical Nuclear Physics

I will be appearing for the oral examination on June 8, 1987 to complete the certification process.

Attachment B

RADIATION PHYSICS AND INSTRUMENTATION

<u>LOCATION AND DATE(S) OF TRAINING</u>	<u>LECTURE/LABORATORY COURSES</u>	<u>SUPERVISED LABORATORY EXPERIENCE</u>
Atomic Physics (Physics 422) Oklahoma Baptist University, Shawnee, Oklahoma September 1969 - January 1970	50 hrs.	
Nuclear Physics (Physics 471) Eastern Michigan University, Ypsilanti, Michigan January 1972 - May 1972	80 hrs.	
Introduction to Quantum Mechanics (Physics 475) Eastern Michigan University, Ypsilanti, Michigan September 1972 - December 1972	50 hrs.	
Quantum Mechanics (Physics 582) Eastern Michigan University, Ypsilanti, Michigan January 1973 - April 1973	64 hrs.	
Advanced Quantum Mechanics (Physics 599) Independent Study - 50 hrs. lecture/guided independent study Eastern Michigan University, Ypsilanti, Michigan September 1973 - December 1973	50 hrs.	
Detroit Osteopathic Hospital, Detroit, Michigan August 1975 - August 1976		200 hrs. (appx.)



Attachment C

MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY

LOCATION AND DATE(S) OF TRAINING	LECTURE/LABORATORY COURSES	SUPERVISED LABORATORY EXPERIENCE
College Algebra and Trigonometry (Math 115)	80 hrs.	
Analytical Geometry and Calculus I (Math 207)	80 hrs.	
Analytical Geometry and Calculus II (Math 208)	80 hrs.	
Analytical Geometry and Calculus III (Math 209)	50 hrs.	
Differential Equations (Math 324)	50 hrs.	
Above 5 courses taken at:		
Oklahoma Baptist University, Shawnee, Oklahoma September 1966 - January 1971		
Differential Equations II (Math 321)	50 hrs.	
Math for Scientists II (Math 426)	50 hrs.	
Above 2 courses taken at:		
Eastern Michigan University, Ypsilanti, Michigan January 1972 - April 1973		
Detroit Osteopathic Hospital, Detroit, Michigan August 1975 - August 1976		50 hrs. (appx.)

Attachment DEXPERIENCE WITH RADIATION

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
Mo99/Tc99m	2.5 Ci	Trail Medical Center	9 yrs. 4 mos.	Elution for Nuclear Medicine Imaging Agent
I-131	150 mCi	Detroit Osteopathic Hospital	1 year	Thyroid therapies
Co-57	5.0 mCi	Trail Medical Center	9 yrs. 4 mos.	Calibration source
Xe-133	64.0 mCi	Trail Medical Center	9 yrs. 4 mos.	Nuclear Medicine Imaging Agent
Tl-201	12.0 mCi	Trail Medical Center	9 yrs. 4 mos.	Nuclear Medicine Imaging Agent
I-123	1.2 mCi	Trail Medical Center	9 yrs. 4 mos.	Nuclear Medicine Imaging Agent
Cs-137	250.0 uCi	Trail Medical Center	9 yrs. 4 mos.	Calibration source
Se-75	300.0 uCi	Trail Medical Center	9 yrs. 4 mos.	Nuclear Medicine Imaging Agent
Tc99m	1300.0 mCi	Trail Medical Center	9 yrs. 4 mos.	Nuclear Medicine Imaging Agent
Yb-169	1.0 mCi	Detroit Osteopathic Hospital	1 year	Nuclear Medicine Imaging Agent
I-125	100.0 uCi	Detroit Osteopathic Hospital	1 month	In-vitro test
Fe-59	50.0 uCi	Detroit Osteopathic Hospital	1 month	In-vitro test
Cr-51	50.0 uCi	Detroit Osteopathic Hospital	1 month	In-vitro test
P-32	5.0 mCi	Detroit Osteopathic Hospital	1 year	Therapy

SUBHASH DANAK

1208 Washtenaw, Apt. #F  
Ypsilanti, Michigan 48197  
(313) 484-4096

AREAS OF KNOWLEDGE AND EXPERIENCE:

All aspects of nuclear medicine physics and technology. Helped my organization to develop two nuclear medicine facilities including nuclear cardiovascular lab with thallium and MUGA stress testing, and Medical Data Systems (MDS) computers.

Set up quality control, record keeping procedures and radiation safety program in accordance with Nuclear Regulatory Commission (NRC) licensing requirements. No violations of rules and regulations were found in three NRC inspections.

EDUCATION AND TRAINING:

1973-1976 Detroit Osteopathic Hospital, Detroit Michigan.  
Nuclear Medicine Physics and Technology Trainee.  
Trained in all areas of nuclear medicine.

1971-1974 Eastern Michigan University, Ypsilanti, Michigan  
Degree: Master of Science  
Major: Physics  
Thesis: Medical Physics  
Thesis Topic: Mathematical Analysis of High and Low Frequency Ballistocardiographic Bed

1966-1971 Oklahoma Baptist University, Shawnee, Oklahoma  
Degree: Bachelor of Science  
Major: Physics  
Minor: Mathematics

WORK EXPERIENCE:

Dec. 1986 - Present VA Medical Center, Allen Park, Detroit, Michigan  
Health Physicist

1976-May, 1986 Trail Medical Centers, Detroit, Michigan  
Clinical Physicist  
Radiation Protection Supervisor

Responsible for all nuclear medicine procedures, quality control of nuclear medicine instrumentation, health physics aspects, radiation safety, radiopharmaceuticals application and quality control, Consultation to Physicians and Technologists.

1973-1974 Eastern Michigan University, Ypsilanti, Michigan  
Graduate Assistant.

Taught freshman and sophomore electromagnetic

**CERTIFICATION:**

American Board of Science in Nuclear Medicine (ABSNM)  
Specialty - Radiation Protection

**CERTIFICATION ELIGIBILITY:**

American Board of Radiology  
Specialty - Medical Nuclear Physics

**PROFESSIONAL SOCIETIES:**

American Association of Physicists in Medicine (Full)  
Great Lakes Chapter of AAPM (Full)  
Society of Nuclear Medicine (Full)  
Local Chapter of Society of Nuclear Medicine (Full)  
Technological Section of Society of Nuclear Medicine (Full)  
American Association for the Advancement of Science (Full)  
New York Academy of Science (Full)  
Great Lake Chapter of Health Physics Society (Full)

**INTERESTS:** Racquetball, Tennis, and Travelling.

**CITIZENSHIP:** United States of America

**REFERENCES:**

Dr. T. Phung, M.D.  
Radiologist - Nuclear Physician  
Department of Radiology  
Oakwood Hospital  
18101 Oakwood Blvd.  
Dearborn, Michigan 48123  
(313) 593-7000

Dr. Sutnin Liptawat, M.D.  
15200 E. Ten Mile  
Detroit, Michigan  
Work: (313) 775-2262  
Answering Service: (313) 567 3933

Dr. Karl Parsons, Ph.D.  
Retired Professor - Nuclear Physicist  
411 N. Adams  
Ypsilanti, Michigan 48197  
Office: (313) 483-6510  
Home: (313) 482-2834

Dr. R. Silver, Ph.D.  
Professor - Nuclear Physicist  
Physics and Astronomy Department  
Eastern Michigan University  
(313) 487-1849  
Ext.: Physics Department

Dr. K. Vibhasiri, M.D.  
18254 Livernois Ave.  
Detroit, Michigan 48221  
Home: (313) 644-3579  
work: (313) 861-4400

Dr. P. Tanswai, M.D.  
2875 Woodcreek Way  
Bloomfield Hills, MI 48013  
Answering Service:  
(313) 644-4714

CONTROL NO. 82865