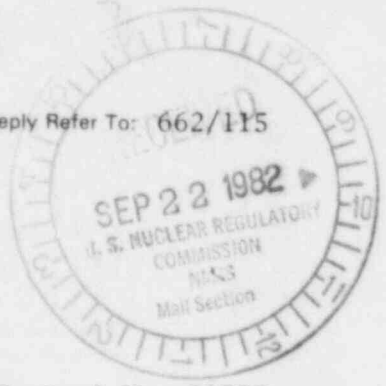
Medical Center

4150 Clement Street
San Francisco CA 94121

Veterans Administration

September 13, 1982

In Reply Refer To: 662/115



Materials Licensing Branch
ATTN: Mrs. Patricia C. Vacca
Division of Fuel Cycle and Material Safety
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Control No. 11757

Dear Mrs. Vacca:

Pursuant to your letter of August 12, 1982, and to telephone conversations held by you and Dr. Cavalieri on August 27, 1982, we are submitting for your approval the following interim solution to the problem of coverage by a radiation safety officer who is acceptable to the Nuclear Regulatory Commission:

1. Walter Wagner will continue to be our on-site, full-time radiation safety officer for a period of six months from the date of this letter.

2. A consultant in health physics has been appointed to advise and assist us in the management of the Radiation Safety Program. He will work closely with Walter Wagner and Dr. Cavalieri and will evaluate the performance of Mr. Wagner during the interim period. This consultant is Raymond Johnson, Ph.D., Radiation Safety Officer at the University of California, San Francisco. A description of his training and experience is enclosed (NRC Form 313M and Curriculum Vitae).

3. A schedule of regular consultant visits by Dr. Johnson has been established. He will spend 4 hours per week (minimum) at our facility. In addition, he will attend all Isotope Committee meetings and will also be available for emergency consultations.

4. Dr. Johnson has agreed to perform the following tasks in his capacity as consultant:

a. Advise Mr. Wagner in all matters concerning laboratory inspections, surveys, decontamination and record-keeping as required by our license.

b. Advise on appropriateness of methods and instrumentation for laboratory and personnel monitoring and bioassay.

c. Review records of such inspections for timeliness and accuracy.

d. Suggest methods for ensuring compliance with the Radiation Safety Manual on the part of laboratory and medical workers.

Materials Licensing Branch
Division of Fuel Cycle and Material Safety

e. Review and recommend improvements in our methods of training laboratory and health workers in the safe use of radioactive materials and in the methods for evaluating the qualifications of workers.

f. Report to the Isotope Committee on the overall effectiveness of our management of the Radiation Safety Committee and make recommendations for improvements.

5. Before the end of the six-month interim period, we will evaluate Walter L. Wagner's performance as radiation safety officer, using in addition to usual standards, the assessment of our consultant, Dr. Johnson. If we find his performance to be unsatisfactory, we will appoint a radiation safety officer who by training and experience meets the standards described in the Nuclear Regulatory Commission Draft Guide dated April 1982. If Mr. Wagner meets all standards of performance to at least a satisfactory level, we will resubmit to your office all pertinent information on his qualifications, together with the evaluation of his performance by our consultant, and ask that you reconsider his acceptability as radiation safety officer for our program.

6. In order to provide continuous coverage of our program by a radiation safety officer, we have contracted for the services of Mr. Ara Tahmassian, whose qualifications are described in enclosed Nuclear Regulatory Commission Form 313M, Supplement A. Mr. Tahmassian will act as our on-site radiation safety officer during Mr. Wagner's scheduled leave or illness.

We are mindful of our obligations to provide for radiation safety and are deeply committed to carry out the terms of our license. We hope that the proposal described above meets with your approval.

Sincerely,

Laurance V. Foye, Jr., M.D.

LAURANCE V. FOYE, JR., M.D.
Medical Center Director

Enclosures: 3

SEP 2 0 1982

JAMES J. SMITH, M.D. (115)
Director, Nuclear Medicine Service
VA Central Office
Washington, D.C. 20420

NRC FORM 313M SUPPLEMENT A (9-81) U.S. NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE
JOHNSON, Raymond M., Ph.D., P.E., Dipl.A.B.H.P.	

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
American Board of Health Physics	General	1962 - recert. 1982
Ill. Board of Professional Engineering	General	1972
CA Bd. of Registration for Pro. Eng.	Nuclear Engineer	1980

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	TYPE AND LENGTH OF TRAINING: SUPERVISED LABORATORY EXPERIENCE (Hours) D
a. RADIATION PHYSICS AND INSTRUMENTATION Taught for 9 years	Knox College, Ill. '48-'52 Vanderbilt Univ. '54-'56 Northwestern Univ. '70-'77 Oak Ridge Natl. Lab. '56 '58-'62	21 q hrs/13 q hrs * 20 q hrs/10 q hrs 9 q hrs/6 q hrs 12 q hrs/540 hrs (4000 hrs)	
b. RADIATION PROTECTION	Vanderbilt Univ. '54-'55 Northwestern Univ. '70-'77 plus, I taught it for a number of years	12 q hrs 9 q hrs/6 q hrs	
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	Knox College, Galesburg, Ill. '48-'52 Vanderbilt University	36 q hrs 9 q hrs	
d. RADIATION BIOLOGY	Northwestern Univ. '70-'71 plus I taught the course for three years.	8 q hrs	
e. RADIOPHARMACEUTICAL CHEMISTRY	Lots of chemistry, physical chemistry; organic chemistry, but no specific radio-pharmaceutical chemistry		

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
Fission Pdts.	Kilo Curies	Oak Ridge Nat'l Lab	3 months	Hlth Physics in Fuel Processing
Pure Beta Emitters	100 mCi	ORNL-Hlth Physics Research	1 year	Spectrometry & Instrument Development
Fission Pdts.	Mega Curies	Nevada Test Site	Various projects 1952 thru 1960	Army & H.P. Research
Cobalt-60	Kilo Curies	Northwestern Univ. Med.Schl	18 years	Radiother.Physics
Mercury 203	Millicuries	" " " "	4 years	Radiolog. Res.
AT#3-83	mCi to Ci	" " " "	9 years	HP Supervision of Res.

* 3 q hr = 1 hr Lecture 3 X a week for 11 weeks

RESUME

1511

RAYMOND M. JOHNSON

Address 2567 - 15th Avenue
San Francisco, California 94127

Telephone Home: (415) 566-5632
Office: (415) 666-1794

Educational Background

Ph.D., Northwestern University, Evanston, Illinois, 1980
Environmental Health Engineering

M.S., Vanderbilt University, Nashville, Tennessee, 1957
Radiological Physics

A.B., Knox College, Galesburg, Illinois, 1952
Major: Physics

Dissertation Research

The Influence of Central Nervous System Irradiation and Mercurialism Upon the Dynamics of the Skeletal Musculature
Dissertation Chairman: Dr. Herman Cember

Experience

1980-Present Radiation Safety Officer - University of California, San Francisco
Responsible for maintenance of Licenses for the Use of Radioisotopes and X-Ray Machines and the safety of employees, patients and students from radiation exposure.

1977-1980 Medical Physicist, Edgewater Hospital, Chicago, Illinois. Head of Medical Physics, which includes Radiation Therapy Physics, Biomedical Engineering, Radiation Safety, and X-Ray Machine Maintenance and Quality Control. I had responsibility for facilities which included diagnostic radiology, nuclear medicine, C.A.T. scanner, ultrasound imaging, and radiation therapy (Cobalt 60 and 10 MEV accelerator).

1976-1980 President, B.R.A.I.N. Laboratories, Arlington Heights, Illinois. This medical biofeedback clinic treats only physician-referred patients. As president, I fulfilled both clinical and management roles.

1976-1980 Associate Professor, University of Health Sciences - Chicago Medical School, joint appointment in Department of Radiology and Department of Medicine, North Chicago, Illinois.

1972-1973 Lecturer, Northwestern University, Department of Civil Engineering, Evanston, Illinois. Taught Radiobiology and Health Physics in the Environmental Health Engineering section of the Civil Engineering Department.

1969-1975 Doctoral student, Northwestern University, Evanston, Illinois

1962-1976 Associate, Northwestern University, Department of Radiology, Chicago, Illinois. Taught Radiobiology and Physics of Radiology.

1962-1969 Head, Radiation Safety Department, Northwestern University, Evanston, Illinois. Radiation safety responsibility for all research and treatment facilities on two campuses, three hospitals, an accelerator, and a small reactor. Radiation Physicist for Northwestern University and its associated group of hospitals, with medical physics responsibilities for two therapy centers.

RAYMOND M. JOHNSON

Experience (cont'd)

1958-1962	Variously, Research Physicist, Radiation Protection Research Physicist, and Consultant to Health Physics Division of Oak Ridge National Laboratory, Oak Ridge, Tennessee, under Dr. K. Z. Morgan.
1956-1958	Engineer and Radiation Safety Officer, Westinghouse Research Laboratories, Pittsburgh, Pennsylvania. Responsibilities for main laboratories and nearby sites.
1954-1956	Student, Vanderbilt University, Nashville, Tennessee.
1952-1954	Lieutenant, U.S. Army, Infantry, assigned to Ordnance for work in Special Weapons project, Sandia, New Mexico.

Certifications

Certified by the American Board of Health Physics (by exam), 1963.

Registered Professional Engineer, State of Illinois (by exam), 1974 & Cal.(198

Honors and Fellowships

Merit Scholarship, Knox College, 1948-1951.
Graduated "with honors" in Physics.

USAEC Fellow in Radiological Physics, Vanderbilt University, 1954-1956.

Elected to Sigma Pi Sigma (Physics Honorary), 1961.

Awarded U.S. Public Health Service Traineeship at Northwestern University, 1969-1971.

Elected to Sigma Xi (Research Honorary), 1971.

Publications

See Attached List.

Patent

Personnel Dosimeter (Patent Number 2875343, February, 1959)

Societies

The Health Physics Society (Charter Member; Board of Directors, Midwest Chapter, 1971-1977).

American Association of Physicists in Medicine (President, Midwest Chapter, 1968-1971)

Radiation Society of North America

American Industrial Hygiene Association

International Radiation Protection Association

American Public Health Association

American Association for the Advancement of Science

Personal

Born December 25, 1930, Chicago, Illinois
Married, 3 children
6 feet, 170 pounds, excellent health
U.S. Citizen
Hobbies: Design, construction, and competition of sports racing cars; skiing; photography; flying, aircraft design and construction.

References

Furnished on request.

RAYMOND M. JOHNSON

PUBLICATIONS

R. D. Birkhoff, H. H. Hubbell, Jr., and R. M. Johnson, "Ionization in a Cavity in a Beta-Radioactive Medium", Bulletin of Amer. Phys. Soc. I, No. 5, 267 (1956).

R. D. Birkhoff, J. S. Cheka, H. H. Hubbell, Jr., R. M. Johnson, and R. H. Ritchie, "Measurement of Electron Flux in a Radioactive Medium", Bull. Amer. Phys. Soc. I, No. 4, 184 (1956).

H. H. Hubbell, Jr., R. M. Johnson, and R. D. Birkhoff, "Design and Calibration of Pocket Personnel Dosimeters for Beta Radiation", Radiology 69, No. 2, 268-273 (1957).

H. H. Hubbell, Jr., R. M. Johnson, and R. D. Birkhoff, "Beta Sensitive Personnel Dosimeter", Nucleonics 15, No. 2, 85-89 (1957).

R. M. Johnson, "Development of Pocket Chambers for Measuring Beta Radiation", MS Thesis, submitted to Vanderbilt University, Nashville, Tennessee, June, 1957.

H. H. Hubbell, Jr., R. D. Birkhoff, and R. M. Johnson, "Pocket Ion Chambers for Beta Radiation Dose", ORNL-2158, 1958.

C. P. Stanford, R. M. Johnson, and H. H. Detar, WRR-5, Hazards Summary Report W, Research Reactor, July, 1956. AEC Class 104 Reactor License Application.

R. M. Johnson, WRR-6 W Research Reactor Specifications, July, 1956.

R. S. Carter, and R. M. Johnson, WRR-7 W Research Report 6-94469-3-R8, Radiation Center.

P. L. Ziemer, R. M. Johnson, and R. D. Birkhoff, "Measurement of Stopping Power of Copper by Calorimetric Methods", ORNL-2775, 1959.

R. M. Johnson, P. L. Ziemer, and R. D. Birkhoff, "Measurement of Stopping Power by Calorimetric Methods, II. Foil Preparation and Results for Al, Cu, and Au", Health Physics 2, 90 (1959).

R. M. Johnson, New Developments in Glass Dosimetry - Summer Seminar, Midwest Chapter, Health Physics Society, 1964.

R. M. Johnson and R. D. Birkhoff, "Response of Anthracene as a Function of L.E.T. and its Use as a L.E.T. Meter", Health Physics, 4, No. 2, 169 (1960).

H. H. Hubbell, Jr., R. M. Johnson, and R. D. Birkhoff, "Performance of the Keplertron, a Spherical Electrostatic Analyzer", Bull. Am. Phys. Soc., Series II, 7 No. 8, 580 (1962).

J. E. Turner, R. M. Johnson and S. M. Whitfield, "An Analysis of Factors Affecting Optimal Axis Placement and 80% Isodose Volume Dimensions in Telecobalt Arc Therapy", Am. Jour. of Roent. XCIV No. 4, 848-864, August, 1965.

J. E. Turner, R. M. Johnson and S. M. Whitfield, "A Fast Moving Field Telecobalt Tissue-Dosage Method for Adding Machine, Tabulating Machine, or Electronic Computor", Amer. Jour. of Roent. XCIV No. 4, 865-879, August 1965.

PUBLICATIONS (cont.)

Raymond A. Berke, Raymond M. Johnson and George C. Henegar, "A Simple Method for Measurement of Mo^{99m} Contamination in Tc^{99m}", Amer. Jour. Roent., C No.4, 844-846, August 1967.

Bryan Westerman, Raymond M. Johnson and James Quinn, "Transmission Scanning as an Aid to the Interpretation of Routine Emission Scans", Jour. of Nuc.Med. 10, No.6, 381, June, 1969.

Raymond M.Johnson""The Influence of CNS Irradiation andMercurialism upon the Dynamics of the Skeletal Musculature" Ph.D. dissertation- Environmental Health Section, Civil Engineering Dept.,Technological Institute, Northwestern University. June 1981.

Raymond M. Johnson, "Seeds of Distruction",Device Techniques, Vol 2, No.2, 15-16 March 1981.

NRC FORM 313M SUPPLEMENT A
(9-81)

U.S. NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE
ARAMAIES Z. TAHMASSIAN	N/A

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
	SEE ATTACHED	

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	SEE ATTACHED		
b. RADIATION PROTECTION	SEE ATTACHED		
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	SEE ATTACHED		
d. RADIATION BIOLOGY	SEE ATTACHED		
e. RADIOPHARMACEUTICAL CHEMISTRY	SEE ATTACHED		

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 ATTACHED		

1. Name: Aramaies Z. Tahmassian

2. Medical Licensing State: Not Applicable

3. Certification:

Specialty Board	Category	Month & Year
National Radiological Protection Board Harwell, United Kingdom	Radiological Protection	May 1981
Radiation Safety Services, Health Physics Consultants Pleasant Hill, California	Health Physicist Qualified Isotope User Licensed Instrument Calibrator	February 1982
American Public Health Association	Full Member	June 1982
Health Physics Society	Full Member	March 1982

4. Training (See also Curriculum Vitae)

Field of Training	Location	Lecture/Lab Course	Supervised Lab Experience
Radiation Physics and Instrumentation	a) Tehran Nuclear Research Center Tehran, Iran 7/75 - 8/75 7/76 - 8/76	30	10
	b) Queen Mary College London, England 9/74 - 6/77	350	150
	c) Salford University England 9/78 - 11/79	160	60
	d) National Radiological Protection Board Harwell, England 3/81 - 4/81	20	10

Field of Training	Location	Lecture/Lab Course	Supervised Lab Experience
Radiation Protection	a) as above	30	10
	b) as above	50	20
	c) as above	300	100
	d) as above	80	20
Mathematics Pertaining to the Use and Measurement of Radioactivity	a) as above	--	--
	b) as above	250	--
	c) as above	50	--
	d) as above	5	--
Radiation Biology	a) as above	3	--
	b) as above	20	2
	c) as above	40	15
	d) as above	10	2
Radiopharmaceutical Chemistry	c) as above	30	15
	d) as above	10	2

5. Experience with Radiation:

A. Location: Queen Mary College (London, England)
Research Reactor and Laboratories

Duration: 1974 to 1977

Isotopes:

mCi Amounts: H-3, C-14, Na-22, S-35, Ca-45, Cr-51, Co-57, Co-60, Fe-55, Ag-102, Ag-103, Xe-131, Cs-137, Au-194, Au-195, Au-196, Po-210, U-233, U-234, Am-241

Ci Amounts: Co-60, Sr-90, Cs-137, Ir-192

Type of Use: Various radiotracer, activation analysis and research uses

B. Location: Nuclear Research Center, (Tehran, Iran)

Duration: 7/75 - 8/75 and 7/76 - 8/76

Isotopes:

mCi Amounts: H-3, C-14, Cr-51, I-125, I-131, Cs-137, Am-241, other reactor isotopes

Ci Amounts: Co-60, Cs-137, Ir-192

Type of Use: Various research and instrument calibration applications.

C. Location: National Radiological Protection Board (Harwell, England)

Duration: 1/80 to 7/81

Isotopes:

mCi Amounts: H-3, C-14, Na-22, P-32, S-35, Ca-45, Cr-51, Fe-55, Ga-67, Kr-81, Sr-90, Tc-99m, In-111, I-125, I-131, Xe-133, Cs-137, Ba-133 (0.5mCi) Tl-204, Po-210, Ra-224, Ra-226, Am-241

Ci Amounts: Co-60, Cs-137, Ir-195

KCi Amounts: Co-60 (750 KCi), Cs-137, Ir-195

Type of Use: Various radiotracer, diagnostic, therapeutic and research uses, sterilization of surgical equipment uses, instrument calibration, industrial radiography.

D. Location: Radiation Safety Services (Pleasant Hill, California)
Health Physics Consultants

Duration: 1982 to present

Isotopes:

nCi Amounts: Co-57, Co-60, Ba-133, Cs-137

mCi Amounts: C-14, Na-22, P-32, S-35, Ca-45, Cr-51, Ga-67, Kr-81, Sr-90, Tc-99m, In-111, I-125, Cs-137

Type of Use: As a Health Physicist for a number of hospitals in California during safety survey inspections I handle the isotopes listed above.

E. I have been extensively involved with the educational programs in Health Physics. Since January 1980 I have developed and presented over 50 lectures and orientation courses for medical, industrial and research users of ionizing radiation and radioactive materials.

Medical Center

4150 Clement Street
San Francisco CA 94121

Veterans Administration

July 15, 1982

In Reply Refer To: 662/115

NRC

James J. Smith, M.D. (115)
Director, Nuclear Medicine Service
Veterans Administration Central Office
Department of Medicine and Surgery
Washington, D.C. 20420

Dear Dr. Smith:

Enclosed please find three copies of a proposed amendment to our NRC Broad License. This will correct a deficiency in our present procedures and was in fact suggested to us by the NRC following the most recent inspection.

Your help in this matter will be greatly appreciated.

Best regards.

Sincerely,

Laurance V. Foye Jr., M.D.

LAURANCE V. FOYE, JR., M.D.
Medical Center Director

Enclosures

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James J. Smith M.D.

JUL 2 1 1982

FEE EXEMPT

[redacted] J. SMITH, M. D. (115)
Director, Nuclear Medicine Service
VA Central Office
Washington, D.C. 20420

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