EASTERN MAINE MEDICAL CENTER
489 STATE STREET BANGOR, MAINE 04401-6674
TEL. (207) 947-3711

May 31, 1985
Control Number: 103641

United States Nuclear Regulatory Commission
Attention: John Glenn, Ph.D.
Region I
631 Park Avenue
King of Prussia, PA 19406

Dear Dr. Glenn:

We have enclosed a check in the amount of $120.00, per 170.31 of 10CFR 170 for an amendment fee to change our Radiation Safety Officer. I have also enclosed a copy of Dr. Alquist's training and experience.

Thank you.

Sincerely,

Gayle Thompson

Gayle Thompson, CNMT
Supervisor, Nuclear Medicine Dept.

GT/rm

Enclosures

Applicant
Check No. 020689
Amount/Fee Category $120 7C
Type of Fee Amd
Date Check Rec'd. 6/10/85
Received By Jacques

RECEIVED BY LFMB
Date 6/10/85
Log Apr-81
By Jacques
Orig. To
Action Compl. 6/13/85

"OFFICIAL RECORD COPY"

ML10 03641

JUN 03 1985

8508050541 850712
REG1 LIC30
18-01577-01 PDR

RESUME

Larry Alquist

31 Spruce Street
Bangor, Maine 04401
Phone: 207-942-7474

Department of Radiation Oncology
Eastern Maine Medical Center
Bangor, Maine 04401
Phone: 207-947-3711

Personal data:

Date of birth: 24-March-1949; married; 177 cm; 68 kg

Education:

Ph.D. degree, May 1975. Iowa State University, Ames, Iowa.
Major: Nuclear Physics. G.P.A.: 3.92/4.00.
Doctoral Thesis: Development of a multi-detector angular correlation apparatus for on-line measurements to determine quantum mechanical properties of levels in ^{90}Sr and ^{140}Ba.

B.A. degree, June 1971. Carleton College, Northfield, Minnesota.
Major: physics. G.P.A.: 2.34/3.00.

Computer language experience:

FORTRAN IV, FOCAL, BASIC, TECO, and PAL8 assembly language.
... revised PAL8 pulse height analysis program.
... developed TECO macro programs for graphics and word processing.
... implemented treatment planning software on VAX 11/750.

Work experience:

a. **Department of Radiation Oncology**, Rhode Island Hospital. June 1982 to March 1985. Physicist responsible for developing and implementing treatment planning software on the **VAX 11/750.**
b. **Institut Laue-Langevin**, Grenoble, France. April 1980 to April 1981. Physicist **co-responsible** for **OSTIS** mass separator.
... calculations of neutron-gamma angular correlations.
c. Alexander von Humboldt Fellow, University of Giessen, West Germany. January 1978 to March 1980.
... alpha-recoil TOF and alpha-gamma spectroscopy of ^{212}Po (GSI, Darmstadt).
... angular correlation studies on $^{92,94,96}Sr$ (ILL, Grenoble).
d. **Battelle Northwest Laboratories**. August 1975 to Septermber 1977. Associate research physicist.
... delayed-neutron studies of fission-product nuclei of ^{235}U.

Interests and hobbies:

Jogging, bi[illegible]iking, classical guitar.

PUBLICATIONS

Refereed Physics Journals

1. "On-line gamma-gamma angular correlations of transitions in ^{140}Ba." L.J. Alquist, W.C. Schick, Jr., W.L. Talbert, Jr., and S.A. Williams, Phys. Rev. C 13, 1277 (1976).

2. "Separation of alkaline earth from alkali metal fission products in the SOLAR on-line mass spectromenter." Paul L. Reeder, Larry J. Alquist, Jung Lin, and James F. Wright, Nucl. Instrum. Methods 133, 501 (1976).

3. "Average neutron energies from separated delayed-neutron precursors." P.L. Reeder, J.F. Wright, and L.J. Alquist, Phys. Rev. C 15, 6 (1977).

4. "Delayed neutron emission probabilities of separated isotopes of Br, Rb, I, and Cs." P.L. Reeder, J.F. Wright, and L.J. Alquist, Phys. Rev. C 15, 6 (1977).

5. "Gamma-gamma angular correlations of transitions in ^{94}Sr and ^{96}Sr." G. Jung, B. Pfeiffer, L.J. Alquist, H. Wollnik, P. Hungerford, S.M. Scott and W.D. Hamilton, Prys. Rev. C 22, 252-263 (1980).

6. "Gamm-gamma angular correlations of transitions in ^{92}Sr." L.J. Alquist, G. Jung, H. Wollnik, P. Hungerford, S.M. Scott and W.D. Hamilton, Nucl. Phys. A338, 1-12 (1980).

7. "Energy spectra of delayed neutrons from separated precursors - $^{93,94,95}Rb$, ^{143}Cs." P.L. Reeder, L.J. Alquist, R.L. Kiefer, F.H. Ruddy, and R.A. Warner, Nucl. Sci. and Eng., Vol. 75, 140-150 (1980).

8. "Studies on Low Yrast States in ^{212m}Po." P. Lemmertz, L.J. Alquist, R. Fass, H. Wollnik, D. Hirdes, H. Jungclas, R. Brandt, D. Schardt, and J. Zylicz, Z. Physik A298, 311-314 (1980).

9. "The level structure of ^{96}Y from the decay of ^{96}Sr." G. Jung, B. Pfeiffer, P. Hungerford, S.M. Scott, F. Schussler, E. Monnand, J.A. Pinston, L.J. Alquist, H. Wollnik, and W.D. Hamilton, Nucl. Phys. A352, 1-12 (1981).

10. "Decay of $^{90}Rb^{g}$ and $^{90}Rb^{m}$." W.L. Talbert, Jr., F.K. Wohn, L.J. Alquist, and C.L. Duke, submitted to Phys. Rev. C.

11. "On-line mass determination of alph-active products from the reaction of $^{nat}U + ^{208}Pb$ with a gas jet time-of-flight mass spectrometer." R. Fass, P. Lemmertz, L.J. Alquist, H. Wollnik, D. Hirdes, and H. Jungclas, Nucl. Instrum. Methods 206, 317 (1983).

12. "Evaluation of Port Film Contrast Enhancement." L.E. Reinstein, L. Alquist, M. Durham, B. Lagueuex, A.S. Glicksman. (in preparation)

13. "Evaluation of Film Screen Systems for 10 MeV Radiotherapy Portal Films." L.E. Reinstein, B.J. Lagueux, L. Alquist, H.I. Amols, M. Durham, A.S. Glicksman. (in preparation)

Technical Reports

1. "Calculational methods for obtaining delayed neutron emission probabilities from SOLAR experiments." Larry J. Alquist, J.F. Wright, P.L. Reeder, report no. BNWL-SA-5900 SUP, Battelle Northwest Laboratories (1976).

2. "A Test of a Delayed-Neutron Recoil TOF Spectrometer at the OSTIS Mass Separator." Larry Alquist, Bernd Pfeiffer, ILL report no. 79AL18T, Grenoble, France (1979).

3. "GGDIS, AFIT and ELLPS: Directional correlation computer programs." L.J. Alquist and G. Jung, ILL report no. 79AL39S, Grenoble, France (1979).

4. "Tests of an apparatus for determining delayed-neutron energies from the TOF of recoiling ions." L.J. Alquist, ILL internal technical report 80AL21T, Grenoble, France (1980).

5. "DIABLO 1620 Graphics: Programs 'DIAPLT.FOR' and 'LJA.TEC'.", II. Physikalisches Institut, Universitaet Justis Liebig, Giessen, West Germany, February 1980.

FORM NRC-313M-SUPPLEMENT B
(8-78)

U. S. NUCLEAR REGULATORY COMMISSION

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

STREET ADDRESS

CITY | STATE | ZIP CODE

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		
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME		
	LIVER FUNCTION STUDIES		
	FAT ABSORPTION STUDIES		
	KIDNEY FUNCTION STUDIES		
	IN VITRO STUDIES		
OTHER			
I-125	DETECTION OF THROMBOSIS		
I-131	THYROID IMAGING		
P-32	EYE TUMOR LOCALIZATION		
Se-75	PANCREAS IMAGING		
Yb-169	CISTERNOGRAPHY		
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES		
OTHER			
Tc-99m	BRAIN IMAGING		
	CARDIAC IMAGING		
	THYROID IMAGING		
	SALIVARY GLAND IMAGING		
	BLOOD POOL IMAGING		
	PLACENTA LOCALIZATION		
	LIVER AND SPLEEN IMAGING		
	LUNG IMAGING		
	BONE IMAGING		
OTHER			

FORM NRC-313M-SUPPLEMENT A
(8-78)

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
Larry Alquist	

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
—	—	—

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	Iowa State University	10	
b. RADIATION PROTECTION	Battelle Northwest Laboratories		5
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	Iowa State University	10	
d. RADIATION BIOLOGY	Rhode Island Hospital	—	10
e. RADIOPHARMACEUTICAL 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
^{90}Sr, ^{144}Ce, ^{106}Ru, ^{137}Cs	5 20 mCi	Iowa State University	1972 - 1975	Sealed sources for calibration of solid state detectors.
^{252}Cf, ^{99}Mo, ^{99}Tc, ^{97}Ru, ^{97}Z, ^{14}C, ^{32}P, ^{125}Sn, ^{125}Sb, ^{125}Te	5 20 mCi	Battelle Northwest Laboratories Richland, Washington	1975 - 1978	Produced by mass separator for research. ^{252}Cf used for calibration of neutron detector.
^{32}P, ^{125}Sn, ^{125}Sb, ^{125}Te	5 10 mCi	University of Cincinnati, Cincinnati	1978 - 1981	Produced by mass separator for research measurements
^{131}Cs	5 10 mCi	Rhode Island Hospital	1982 - 1985	Tubes & needles for patient therapy

FORM NRC-313M Supplement A
(8-78)

BETWEEN: William O. Miller, Chief
License Fee Management Branch
Office of Administration

John E. Glenn, Chief
Nuclear Materials Section B
Division of Engineering and
Technical Programs

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: Eastern Maine Medical Center

Application Dated: 5/31/85

Control No.: 03641

License No.: 18-01577-01

2. FEE ATTACHED

Amount: $120.00

Check No.: 20689

3. COMMENTS

Fee sent for control No. 03641 02120

Signed Brenda P. Latchek

Date 6/4/85

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount: 7C 5/89

2. Correct Fee Paid. Application may be processed for:

Amendment

Renewal

License

see orig fee sheet

Signed

Date

REGION I FORM 213
(MARCH 1983)