

MATERIALS LICENSE

Amendment No. 106

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, 36, 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.

301850

Licensee

1. Hurley Medical Center
Department of Radiology
2. One Hurley Plaza
Flint, MI 48502

In accordance with letter dated
September 17, 1996

3. License Number 21-00338-02 is amended in
its entirety to read as follows:

4. Expiration Date August 31, 2005

5. Docket or
Reference No. 030-01993

6. Byproduct, Source, and/or
Special Nuclear Material

- A. Any byproduct
material identified
in 10 CFR 35.100
- B. Any byproduct
material identified
in 10 CFR 35.200
- C. Any byproduct
material identified
in 10 CFR 35.300
- D. Any byproduct
material identified
in 10 CFR 35.400
- E. Any byproduct
material identified
in 10 CFR 35.500
- F. Any byproduct
material identified
in 10 CFR 31.11

7. Chemical and/or Physical
Form

- A. Any
radiopharmaceutical
identified in 10 CFR
35.100
- B. Any
radiopharmaceutical
identified in 10 CFR
35.200
- C. Any
radiopharmaceutical
identified in 10 CFR
35.300
- D. Any brachytherapy
sources identified
in 10 CFR 35.400
- E. Sealed sources
identified in 10 CFR
35.500
- F. Prepackaged Kits

8. Maximum Amount that Licensee
May Possess at Any One Time
Under This License

- A. As needed
- B. As needed
- C. As needed
(not to exceed 1
curie of I-131)
- D. 1.5 curies
- E. As needed
- F. As needed

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PDR ADOCK 03001193
C PDR

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**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number

21-00338-02

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- | | | |
|---|--|---|
| 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 |
| G. Iridium-192 | G. Sealed sources (BYK Mallinckrodt Model Ci L BV) | G. 2 sources, 1 source not to exceed 444 gigabecquerels (GBq) (12 curies (Ci)), and 1 source not to exceed 370 GBq (10 Ci). |
| H. Uranium depleted in uranium-235 | H. Solid Metal | H. Not to exceed 999 kilograms total possession limit |

9. Authorized Use:

- A. Medical use described in 10 CFR 35.100.
- B. Medical use described in 10 CFR 35.200.
- C. Medical use described in 10 CFR 35.300.
- D. Medical use described in 10 CFR 35.400.
- E. Medical use described in 10 CFR 35.500 in devices which have been evaluated and approved for licensing purposes by the U.S. Nuclear Regulatory Commission or an Agreement State.
- F. In vitro studies.
- G. One source to be used in a Nucletron-Oldelft Corporation MicroSelectron HDR remote afterloading brachytherapy device for interstitial, intraluminal, intracavitary, and topical radiotherapy in humans. The source activity may not exceed 370 GBq (10 Ci) at the time of installation. One source in its shipping container for source replacement.
- H. For shielding in a clinic linear accelerator.

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CONDITIONS

10. Location of Use: Hurley Medical Center, One Hurley Plaza, Flint, Michigan.
11. Radiation Safety Officers:
 - A. V. Jayabalan, M.D., for materials as listed in 10 CFR 35.100, 35.200, 35.300, 35.500, 31.11.
 - B. Hui Li, Ph.D., for materials in 10 CFR 35.400 and iridium-192 in HDR remote afterloading brachytherapy unit.
 - C. Hossein Haghighi, D.Sc., may serve as the Alternate Radiation Safety Officer for materials in 10 CFR 35.400 and iridium-192 in HDR remote afterloading brachytherapy unit during the physical absence of Hui Li, Ph.D.
12. Licensed material listed in Item 6 above is only authorized for use by, or under the supervision of, the following individuals for the materials and uses indicated:

Authorized Users

Material and Use

- | | |
|-----------------------------|--|
| A. V. Jayabalan, M.D. | 10 CFR 35.100, 35.200, 35.300, 35.400, 35.500 and 31.11. |
| B. Appa Rao Mukkamala, M.D. | 10 CFR 35.100, 35.200, 35.300, 35.400, 35.500, 31.11, and iridium-192 in remote afterloading brachytherapy unit. |
| C. M. Rao Tummala, M.D. | 10 CFR 35.100, 35.200, and iodine-131 for treatment of hyperthyroidism and cardiac dysfunction. |
| D. Willys F. Mueller, M.D. | 10 CFR 31.11 and iodine-125 for in-vitro research. |
| E. Harland L. Verrill, M.D. | 10 CFR 31.11, Hydrogen-3, Carbon-14, phosphorus-32 and iodine-125 for in-vitro research. |
| F. Sadda Sarala Reddy, M.D. | 10 CFR 35.100, 35.200, 35.300, 35.400, 35.500 and 31.11. |

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Authorized Users

Material and Use

G. Ahmed M. Akl, M.D.

10 CFR 35.300, 35.400, and iridium-192 in remote afterloading brachytherapy unit.

H. Mark Weiss, M.D.

10 CFR 35.100 and 35.200.

I. P. B. Lauber, M.D.

10 CFR 35.100, 35.200 and 35.300.

13. The high dose rate brachytherapy physicist is Hui Li, Ph.D.
14. A. Access to the rooms housing the Nucletron-Oldelft MicroSelectron-HDR remote afterloading brachytherapy unit shall be controlled by a door at each entrance.
- B. The entrance to the irradiation room shall be equipped with an electrical interlock system that will cause the source to return to the shielded position immediately upon opening of the entrance door. The interlock system shall be connected in such a manner that the source cannot be placed in the irradiation position until the entrance door is closed and the source "on-off" control is reset at the control panel.
- C. Electrical interlocks on the entrance door to the irradiator room shall be tested for proper operation at least once a month. Records of test results shall be maintained for inspection by the Commission.
- D. In the event of malfunction of the door interlock, the irradiation device shall be locked in the "off" position and not used, except as may be necessary for repair or replacement of the interlock system, until the interlock system is shown to be functioning properly.
15. Prior to initiation of a treatment program, and subsequent to each source exchange for the Nucletron-Oldelft MicroSelectron-HDR remote afterloading brachytherapy units, radiation surveys and tests shall be performed in accordance with the following:
- A. A radiation survey shall be made of:
- (1) The irradiator source housing, with the source in the shielded position. The maximum radiation levels at 100 centimeters from the surface of the main source safe shall not exceed 0.25 milliroentgen per hour.
 - (2) All areas adjacent to the treatment room with the source in the "irradiation" position. The survey shall clearly establish:

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- (a) That radiation levels in restricted areas are not likely to cause personnel exposure in excess of the limits specified in 10 CFR 20.1201.
 - (b) That quantities of radiation in unrestricted areas do not exceed the limits specified in 10 CFR 20.1301.
- B. Records of the survey results shall be maintained for inspection by the Commission for the duration of the license.
16. The following shall be performed only by persons specifically authorized by the Commission or an Agreement State to perform such services:
- A. Installation and replacement of the sealed sources contained in the Nucletron-Oldelft MicroSelectron-HDR remote afterloading brachytherapy unit.
 - B. Any maintenance or repair operations on the Nucletron-Oldelft MicroSelectron-HDR remote afterloading brachytherapy unit listed in Item 9., Subitem G. involving work on the source safe, the source driving unit, or other mechanism that could expose the source, reduce the shielding around the source, or compromise the safety of the unit and result in increased radiation levels.
17. In lieu of 10 CFR 35.404(a), immediately after retracting the source from the patient into its shielded position in the remote afterloading device, a radiation survey shall be made of the patient and the remote afterloading device with a portable radiation detection survey instrument to confirm that the source has been removed from the patient. Records of the survey shall be maintained in lieu of the record required in 10 CFR 35.404(b).
18. In lieu of the source inventory required in 10 CFR 35.406, the licensee shall:
- A. Promptly determine that all sources have returned to the safe, shielded position at the conclusion of each remote afterloading brachytherapy procedure.
 - B. Promptly make a survey of the area of use to confirm that no sources have been misplaced.
 - C. Make a record of the survey including the survey instrument used, dose rate expressed in mrem/hr (μ Sieverts/hr), time, date and name of the individual making the survey.
 - D. Retain the record of the survey in lieu of the record required in 10 CFR 35.406(d).

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19. 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, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. The U.S. 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 November 17, 1994; and
- B. Letters dated June 21, 1995, July 19, 1995, March 6, 1996, October 7, 1996 (excluding item 6) and October 18, 1996.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date

October 21, 1996

By

Colleen C. Casey
Nuclear Materials Licensing Branch, Region III

COPY

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

(FOR LFMS USE)
INFORMATION FROM LTS

Program Code: 02230
Status Code: 0
Fee Category: 7C 2B
Exp. Date: 20050831
Fee Comments: CODE 14
Decom Fin Assur Req'd: N

56
15

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: HURLEY MEDICAL CENTER
Received Date: 960920
Docket No: 3001993
Control No.: 301850
License No.: 21-00338-02
Action Type: Amendment

2. FEE ATTACHED

Amount: 440
Check No.: 002293

3. COMMENTS

Signed
Date

D. Hersey
7-22-96

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /)

1. Fee Category and Amount:

CC 2B 4440

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

Amendment
Renewal
License

3. OTHER

Signed
Date

SC 9/30/96

OCT 03 1996

Log	3ep 10 7U
Remitter	
Check No.	1273
Amount	4440
Fee Category	CC 2B
Type of Fee	AmD
Date Check Rec'd	9/27/96
Date Completed	9/30/96
By	SC



Clinical Excellence. Service to People.

Cancer Center
R. Roderic Abbott, M.D., FACP
Director
Danita Simmons, Coordinator

Internal Medicine
Hematology/Oncology
R. Roderic Abbott, M.D., FACP
Samuel Chan, M.D.
Rizwan Danish, M.D.
Joyce Renick Fahrner, M.D.
Diane Welker, R.N., M.S.
Donna Fonger, R.N., M.S.N., D.C.N.

Surgical Oncology
Raouf Mikhail, M.D., FACS, FRCSC
Harris H. Dabideen, M.D., FACS

Radiation Oncology
Ahmed M. Akl, M.D.
Tewfik J. Bichay, M.S., Ph.D.
K.P. Joel Ho, D.C.R.T., B.A., C.M.D.
Edward B. Aribisala, M.S., R.T.T., A.H.R.A.

Ambulatory Oncology
Sharon L. Dowd, M.D.
Donna Fonger, R.N., M.S.N., D.C.N.
Patricia Zink, R.N., D.C.N.

Pediatric Hematology/
Oncology
Susumu Inoue, M.D.
Timur Sumer, M.D.
Mary Mitchell-Beren, R.N., M.S.
Jo Ann Ruff, R.N.

Gynecologic Oncology
Guy M. Bolke, M.D.
James E. Graham, Jr., M.D., FACS, FAC, DpGyn
Doris Ethier, R.N., B.S.N.

Home Care/Hospice
Sue Wilson, R.N., B.S., CPNP

Hurley Medical Center
One Hurley Plaza
Flint, Michigan 48503-5993
Cancer Care Line (810) 257-9585
or 1-800-237-9585

September 17, 1996

US NRC
Region 3, Medical Licensing
801 Warrenville Rd.
Lisle, Illinois 60532

RE: Addition of Physicist for HDR unit
License #: 21-00338-02

To Whom It May Concern:

Please expedite this request; Dr. Hui Li, our physicist went onto maternity leave earlier than planned and we are unable to treatment with our HDR unit until this request is approved even though we have a fully booked schedule.

Dr. Hossein Haghighi is the physicist newly hired and his credentials attached. Please add him as a second physicist on our license.

Enclosed is the fee of \$440.00 for the amendment, payable to United States Nuclear Regulatory Commission.

Respectfully,

Jack Dagenais
Vice President of Operations

TA/rad
usnrc

RECEIVED

SEP 20 1996

REGION III

301850

Hurley Medical Center is an
affiliated teaching hospital of
Michigan State University
College of Human Medicine.



SEP 20 1996

Pm: 9-19-96



Methodist Medical Center

1441 N. Beckley Avenue P.O. Box 655999 Dallas, Texas 75265-5999 Phone: 214/947-8181

To whom it may concern:

Dr. Hossein Haghighi has been providing therapeutic and diagnostic support to our hospital for approximately two years, on a consulting basis. Our license covers a wide spectrum of radionuclides including but not limited to Cs-137, Co-60, Co-57, Sr-90 and Ir-192.

I had the opportunity of supervising Hossein while he was working for Engineering and Radiation Physics, and was impressed by his knowledge of Medical Physics. In my professional opinion, Dr. Haghighi has provided an outstanding service to our institution and is fully qualified to be included in radioactive and teletherapy licenses. His academic achievements are also outstanding as you are well aware.

If I could be of further assistance, please do not hesitate to contact me.

Sincerely,

Fotis Papanicolaou

Licensed Medical Physicist

Radioactive Material License # L00659 (Texas)

NRC FORM 313M SUPPLEMENT A
(8-86)

U.S. NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICERApproved by NRC
3150-0041
Expires 6-30-88

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

HOSSEIN HAGHIGHI

2. STATE OR TERRITORY IN
WHICH LICENSED TO
PRACTICE MEDICINE

3. CERTIFICATION

SPECIALTY BOARD
ACATEGORY
BMONTH AND YEAR CERTIFIED
CDiagnostic Radiological
Physics

June 1996

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 COURSE (Hours) C	SUPERVISED LABORATORY EXPERIENCE (Hours) D
a. RADIATION PHYSICS AND INSTRUMENTATION	University of Texas at Arlington Arlington, TX 1985-1991	50 hrs	5 years
b. RADIATION PROTECTION	University of Texas Southwestern Medical School 1990-1994	10 hrs	4 years
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	University of Texas at Arlington 1985-1991	200 hrs	30 hrs
d. RADIATION BIOLOGY	University of Texas Southwestern Medical School 1990-1994	50 hrs	-
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
CS-137	50 mCi	Engineering and Radiat. in Phys. Associated, Inc. (Physics Consulting Company)	2 years	Brachytherapy
Ir-192	50 mCi	" " "	2 years	Brachytherapy
Sr-90	10 mCi	" " "	2 years	Eye Treatment
Co-60	50 mCi	" " "	2 years	Instrument Calibration
Na-22	50 mCi	University of Texas at Arlington	5 years	Physics Research

NRC FORM 313M Supplement A
(8-86)

NRC FORM 313M SUPPLEMENT B
(9-81)

U. S. NUCLEAR REGULATORY COMMISSION

PRECEPTOR STATEMENT

Approved by OMB
3150-0041
Expires 9-30-86

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

HOSSAIN HAGHIGHI (Physicist)

STREET ADDRESS

Hurley Medical Center
One Hurley Plaza

CITY

Flint

STATE

MI

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		
Sr-76	PANCREAS IMAGING		
Yb-169	CISTERNOGRAPHY		
Xb-123	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			

PRECEPTOR STATEMENT (Continued)

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

ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.)
A	B	C	D
P-32 (Solu-Wo)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 (Colloid)	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Au-198	INTRACAVITARY TREATMENT		
Co-60 or Cs-137	INTERSTITIAL TREATMENT		
	INTRACAVITARY TREATMENT	20	
I-125 or Ir-192	INTERSTITIAL TREATMENT		
Co-60 or Cs-137	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE	3	
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS		
Other			

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

1994-1996

100 hrs

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

a. NAME OF SUPERVISOR

FOTIS PAPANICOLAOU, LMP

b. NAME OF INSTITUTION

METHODIST MED. CTR.
1441 N. Beckley

c. MAILING ADDRESS

CANCER CENTER - RAD. ONCOLOGY

d. CITY

DALLAS, TX. 75203

5. MATERIALS LICENSE NUMBER(S)

L00659

6. PRECEPTOR'S SIGNATURE

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

8. DATE

The American Board of Radiology

Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society,
the American Radium Society, the Radiological Society of North America,
the Section on Radiology of the American Medical Association,
the American Society for Therapeutic Radiology and Oncology, the Association of
University Radiologists, and American Association of Physicians in Medicine
Hereby certifies that

Hossein Haghighi, D.Sc

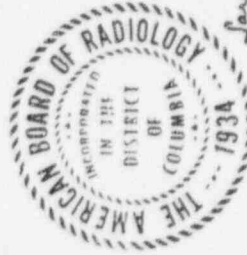
Has pursued an accepted course of graduate study
and clinical work, has met certain standards and qualifications and
has passed the examinations conducted under the authority of

The American Board of Radiology

On this twelfth day of June, 1936

Thereby demonstrating to the satisfaction of the Board
that he is qualified to practice the specialty of

Diagnostic Radiologic Physics



Samuel S. Greenman, MD Robert R. Harkness MD M. Paul Capp, M.D.
President Secretary Treasurer Executive Director

Hossein Haghighi

6221 Gould Place
Texarkana, Texas 75503
903-838-7249
800-511-9914

Objective

To be associated with a dynamic organization that will fully utilize my academic education and clinical experience and provide potential for increased responsibilities and achievements.

Summary of qualifications

With a doctorate degree in Physics, American Board of Radiology Certificate, and over five years of progressively responsible assignments, I have established a record as a substantive contributor to my employers in the areas of therapeutic, diagnostic, and medical nuclear physics. Some of my main clinical responsibilities have been routine calibration and quality assurance of wide range of medical linear accelerators and diagnostic imaging equipment, external and brachytherapy treatment planning with various treatment planning computers, patient dosimetry and safety, supervision and assistance of dosimetrists and radiation therapists with quality control procedures and treatment strategies, radiation protection shielding design and survey of therapeutic and diagnostic facilities, assistance of hospital administrators with the selection and purchase of new medical equipment and service contracts, development of computer software in clinical and research environments, development of radiation protection and quality control policies and procedures to enhance quality of patient care and maintain hospital compliance with JCAHO, FDA, ACR, MQSA, NRC, and state radiation protection regulations and quality control standards.

Work experience

1994 - Present

Engineering & Radiation Physics Associates, Inc.

Arlington, Texas

- Provide therapeutic, diagnostic, and medical nuclear physics support to hospitals and free standing clinics in the state of Texas and adjacent states.
- Acceptance testing, commissioning, and routine calibration of wide range of medical linear accelerators and treatment simulators, external beam data acquisition, beam data entry into treatment planning computers, and patient dosimetry chart development.
- External beam and brachytherapy treatment planning with ADAC, ROCS, Theraplan, and Modulex treatment planning computers, patient dosimetry calculations, assistance and supervision of therapists with special treatment set ups and quality control procedures, and patient treatment chart review.
- Radiation survey and inspection of diagnostic radiology and nuclear medicine imaging equipment in accordance with MQSA, JCAHO, NRC, ACR, and state radiation protection regulations, accreditation, and quality control standards.
- Structural shielding design and radiation protection survey of therapeutic and diagnostic facilities, technical assistance with the selection and performance specification of medical equipment, and assistance with x-ray equipment registration and radionuclide licensing.
- In addition to supporting different hospitals, for more than a year, I have been assigned to a hospital on full time basis and have supported this hospital in radiation therapy, diagnostic radiology, and nuclear medicine departments.

1990 - 1994

UTSouthwestern Medical Center
Dallas, Texas

- Developed and implemented quality control programs and procedures in diagnostic radiology department to maintain optimum image quality, patient radiation exposure, and compliance with FDA, ACR, JCAHO, MQSA, and state radiation protection regulations and quality control standards.
- Provided technical assistance with performance specifications and selection of new imaging equipment and performed final acceptance testing and verification of the specifications.
- Negotiated with vendors in purchasing medical equipment and service contracts, scheduled and supervised preventive maintenance, and documented all relevant informations for regulatory agencies inspection.
- Designed radiation protection shielding of new and renovated x-ray facilities, calculated fetal dose resulting from diagnostic procedures, participated in radiation safety committee meetings, and developed radiation protection policies and procedures in line with ALARA's principles.
- Assisted in acceptance testing, commissioning, and annual calibration of therapeutic equipment, patient treatment planning, patient dosimetry, and patient treatment chart review.
- Participated in research grant proposal development, conducted clinical research in characterization of the mechanical properties of bone in osteoporotic patients.
- As a member of a team, designed and constructed an ultrasound machine to be used clinically in our investigation of osteoporosis disease.
- Developed computer routines and implemented these routines in the design and construction of a novel fiber optic Positron Emission Tomography (PET) detector, and Picture Archiving and Communication Systems (PACS).

1991 - 1995

Mountain View Junior College (Evenings)
Dallas, Texas

Taught physics, mathematics, and electrical and electronics circuit theory.

Education

- **Ph.D.** Physics-- University of Texas at Arlington, Arlington, Texas (1991)
- **M.S.** Electrical Engineering-- University of Texas at Arlington, Arlington, Texas (1985)
- **B.S.** Electrical Engineering-- University of Texas at Arlington, Arlington, Texas (1983)

License & Certificates

- American Board of Radiology Certificate in Diagnostic Radiological Physics
- Texas Professional Medical Physicist License in Therapeutic and Diagnostic Radiological Physics and Medical Nuclear Physics.
- External beam dosimetry- Principles and calibration- M.D. Anderson
- Digital imaging- American Association of physicist in Medicine
- Advanced Helical Computed Tomography Scanning- GE medical system

Professional memberships

- American Association of Physicist in medicine
- American Physical Society
- Institute of Electrical and Electronic Engineers

Publications

A Positron Study of the Electronic Structure of $\text{YBa}_2\text{Cu}_3\text{O}_7$

H. Haghghi, J.H. Kaiser, S. Rayner, R.N. West, M.J. Fluss, R.H. Howell, P.E.A. Turchi, A.L. Wachs, Y.C. Jean, and Z.Z. Wang, *J. Phys. Condens. Matter* **2**, 1511 (1990).

A Direct Observation of Fermi Surface in $\text{YBa}_2\text{Cu}_3\text{O}_7$

H. Haghghi, J.H. Kaiser, S. Rayner, R.N. West, J.Z. Liu, R. Shelton, M.J. Fluss, R.H. Howell, and F. Solal, *Phys. Rev. Lett.* **67**, 382 (1991).

Electron-Positron P- and K- Space Densities in $\text{YBa}_2\text{Cu}_3\text{O}_7$

H. Haghghi, J.H. Kaiser, S. Rayner, R.N. West, J.Z. Liu, R. Shelton, M.J. Fluss, R.H. Howell, F. Solal, and P.A. Sterne, *J. Phys. Chem. Solids* **52**, 1535 (1991).

Direct Experimental Evidence of the Fermi Surface in $\text{YBa}_2\text{Cu}_3\text{O}_{7.8}$

H. Haghghi, J.H. Kaiser, S. Rayner, J.Z. Liu, R. Shelton, R.H. Howell, F. Solal, P.A. Sterne, and M.J. Fluss, Workshop on Electronic Structure and Mechanism for High Temperature Superconductivity, Ed. J. Ashkenazi, *J. Phys. Chem. Solids* **52**, 1550 (1991).

Electron-Positron Momentum Distribution Measurement of High T_c Superconductors and Related Systems

H. Haghghi, J.H. Kaiser, S. Rayner, A.L. Wachs, P.E.A. Turchi, R.H. Howell, Y.C. Jean, M.J. Fluss, and K.L. Merkle, *Physica C* **162**, 1375 (1989).

The Electron-Positron Momentum Density and Fermi Surface of $\text{YBa}_2\text{Cu}_3\text{O}_{7.8}$

R.N. West, **H. Haghghi**, J.H. Kaiser, S. Rayner, J.Z. Liu, R. Shelton, R.H. Howell, F. Solal, P.A. Sterne, and M.J. Fluss, *Materials Science Forum*, **105-110**, 249-259 (1992).

Fermi Surface Measurements in $\text{YBa}_2\text{Cu}_3\text{O}_{7.8}$ and $\text{La}_{1.87}\text{Sr}_{0.126}\text{CuO}_4$

R.H. Howell, F. Solal, P.A. Sterne, M.J. Fluss, **H. Haghghi**, J.H. Kaiser, S. Rayner, J.Z. Liu, R. Shelton, H. Kojima, and K. Kitazawa, Proceeding of the 3rd International Conference on Materials and Mechanism of Superconductivity of High-Temperature Superconductors, *Physica C* **185**, 735 (1991).

Positron Annihilation Studies in High Temperature Superconductors

R.H. Howell, P.A. Sterne, F. Solal, J. Tobin, J. O'Brien, H.B. Radousky, **H. Haghghi**, J.H. Kaiser, S. Rayner, J.Z. Liu, R. Shelton, C.G. Olsen, C. Gu, K. Kitazawa, and H. Kojima, (Proceedings of the 9th International Conference on positron annihilation 1991).

Electronic Structure in High-Temperature Superconducting Oxides

R.N. West, R.H. Howell, P.A. Sterne, F. Solal, M.J. Tobin, J. O'Brien, H.B. Radousky, **H. Haghghi**, J.H. Kaiser, S. Rayner, J.Z. Liu, R. Shelton, C.G. Olsen, C. Gu, K. Kitazawa, and H. Kojima, *Materials Science Forum*, **105-110**, 265-272 (1992).

References

References available upon request

OCT 21 1996

Jack Dagenais
Vice President of Operations
Hurley Medical Center
Department of Radiology
One Hurley Plaza
Flint, MI 48502

Dear Mr. Dagenais:

Enclosed is Amendment No. 106 to your NRC Material License No. 21-00338-02 in accordance with your request.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region III office at (630) 829-9887 so that we can provide appropriate corrections and answers.

- A. Please note that we were unable to authorize Hossein Haghighi, D.Sc., as your high dose rate (HDR) remote afterloading brachytherapy physicist at this time because the information submitted in your letters dated September 17, 1996 and October 7, 1996 was insufficient for us to complete our review. If you wish to pursue this authorization, please address the information requested below and submit it to us as additional information to Control No. 301850. We will then continue our review, without an additional fee, limited to this authorization.

Be advised that, if you request anything other than this authorization, an amendment fee will be required.

Please provide the following:

In support of your request to authorize Dr. Haghighi as your HDR physicist, please submit evidence of the training and experience required in 10 CFR 35.961 (enclosed) by providing one of the following:

1. A completed Supplement A form (enclosed). The Supplement A must address the required training and experience specified in 10 CFR 35.961(b). (Supplement A is not required if the physicist is currently listed on a license as specified in b. below or has received board certification as specified in c. below); or

301850

2. A copy of an NRC or Agreement State license that authorizes Dr. Haghighi as an HDR physicist; or
3. A copy of Dr. Haghighi's board certification from the American Board of Medical Physics in Radiation Oncology or the American Board of Radiology in one of the therapy specialties specified in 10 CFR 35.961(a).

Please note that if any of the documents in A.1., A.2. or A.3. above reference training and experience that was received more than 7 years ago, evidence of "recentness of training," in accordance with 10 CFR 35.972, must also be submitted.

- B. Please note that, at this time, we changed the expiration date in item no. 4 of your license to reflect the one-time extension of your license, in accordance with 10 CFR 30.36(a)(2), copy enclosed. You should have received additional correspondence from us concerning this regulation and its effects on your license.
- C. Please be advised that your license expires at the end of the day, in the month, and year stated in the license. Unless your license has been terminated, you must conduct your program involving byproduct materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, note that you must:
 1. Operate in accordance with NRC regulations 10 CFR Part 19, "Notices, Instructions and Reports to Workers; Inspections," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
 2. Notify NRC, in writing, within 30 days:
 - a. When an authorized user or Radiation Safety Officer permanently discontinues performance of duties under the license or has a name change; or
 - b. When the licensee's mailing address changes (no fee is required if the location of byproduct material remains the same).
 3. In accordance with 10 CFR 30.36(b) and/or license condition, notify NRC, promptly, in writing, and request termination of the license when you decide to terminate all activities involving materials authorized under the license.

4. Request and obtain a license amendment before you:
 - a. Receive or use byproduct material for a clinical procedure permitted under Part 35 but not permitted by your license issued pursuant to this Part;
 - b. Permit anyone, except individuals described in 10 CFR 35.13(b), to work as an authorized user under the license;
 - c. Change Radiation Safety Officers;
 - d. Order byproduct material in excess of the amount, or radionuclide, or form different than authorized on the license;
 - e. Add or change the areas of use or address or addresses of use identified in the license application or on the license; or
 - f. Change ownership of your organization.
5. Submit a complete renewal application with proper fee or termination request at least 30 days before the expiration date of your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of byproduct material after your license expires is a violation of NRC regulations. A license will not normally be renewed, except on a case-by-case basis, in instances where licensed material has never been possessed or used.

In addition, please note that NRC Form 313 requires the applicant, by his/her signature, to verify that the applicant understands that all statements contained in the application are true and correct to the best of the applicant's knowledge. The signatory for the application should be the licensee or certifying official rather than a consultant.

You will be periodically inspected by NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a notice of violation, or imposition of a civil penalty, or an order suspending, modifying or revoking your license as specified in the General Policy and Procedures for NRC Enforcement Actions. Since serious consequences to employees and the public can result from failure to comply with NRC requirements,

J. Dagenais

-4-

prompt and vigorous enforcement action will be taken when dealing with licensees who do not achieve the necessary meticulous attention to detail and the high standard of compliance which NRC expects of its licensees.

Sincerely,

Original Signed By
Colleen C. Casey
Nuclear Materials Licensing Branch

License No.: 21-00338-02

Docket No.: 030-01993

Enclosures: 1. Amendment No. 106
2. 10 CFR Part 30
3. 10 CFR Part 35
4. NRC Form 313
5. Supplement A form

DOCUMENT NAME: M:\03001993.CL6

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	DNMS/RIII <i>CC</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NAME	CCASEY:jaw							
DATE	10/21/96							

OFFICIAL RECORD COPY

HURLEY MEDICAL CENTER

One Hurley Plaza
Flint, MI 48503-5993
Phone: (810) 257-9422
Fax: (810) 762-7240

RADIATION ONCOLOGY DEPARTMENT

FAX TRANSMITTAL

Date: OCT. 18TH. 1996.

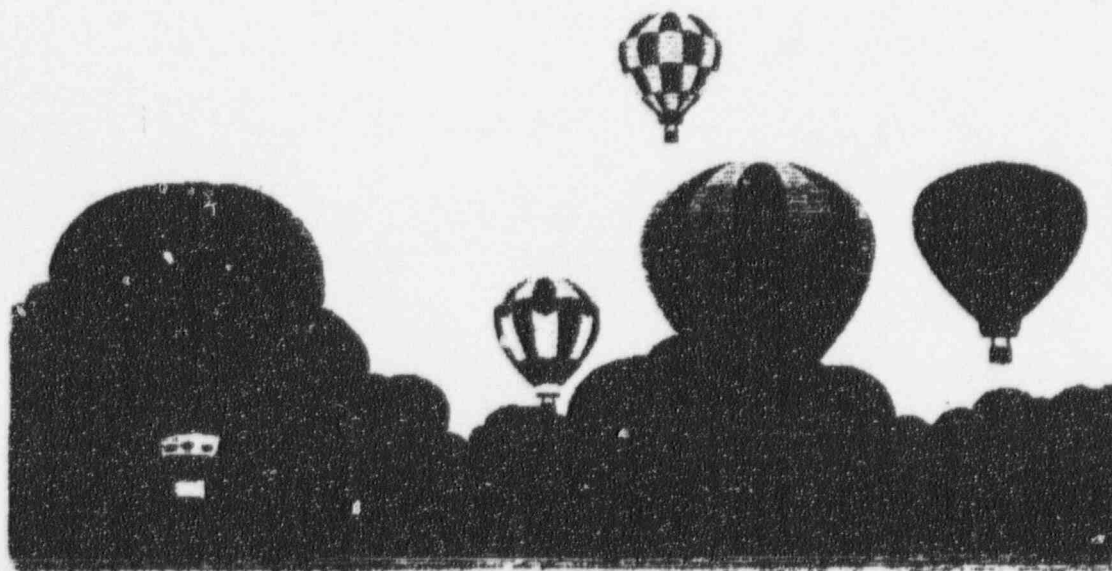
To: Ms. COLLEEN STACEY
NRC

From: TEDDY ARIBISALA

Message: I will call to CONFIRM RECEIPT
THIS AFTERNOON (1400 HR).

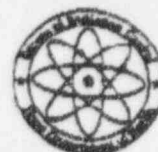
Number of pages including cover sheet: 17 pages.

Please call to verify receipt of fax: Yes ☒ No





Texas Department of Health
Bureau of Radiation Control



RADIOACTIVE-MATERIAL LICENSE

LICENSE NUMBER	AMENDMENT NUMBER
L00659	33

12. Radioactive material shall only be used by, or under the supervision of, individuals designated by the Radiation Safety Committee, Robert R. Burns, M.D., the chair. Individuals authorized to serve on this committee are:

Chairman: Robert R. Burns, M.D., Nuclear Medicine/Radiology
Alan A. Slomowitz, M.D., Radiation Oncology, Alternate Chairman

Nuclear Medicine: James Tate, RT(R)(N), Manager, Nuclear Medicine,
Radiation Safety Officer (RSO)
Sharon Perry, R.T.(N)
Karl Braunsky, C.N.M.T., M.R.T.
Steve Litzenberger, C.N.M.T

Radiation Therapy: Terry Melvin, RT(R) (T), Manager, Radiation Therapy
Fotis Papanicolaou, L.M.P

Breast Services: D. Daboub, M.S., RN, Manager, Breast Health Services

Cardiology: Marianne Rataj, Director, Heart Center
Linda Johnson, RN, Supervisor, Card. Cath. Lab.

Nursing: D. Radaford, M.S. RN, Dir., Oncology Nursing
Stephanie A. Hepner, RN, Radiotherapy Nurse

Radiology Admin: M. Frederick, RT(R), Director, Radiology, CMH

MHD Administration: Candace Ogle, M.S., RN, Associate Executive Director
Jeanne Reardon, R.N., M.S., Admin. Dir. Cancer Center,
Alternate Administrator

Safety Director: Charles Shoup, Safety Director

Biomed. Eng.: Scott Sovocool, BMET, Director, Biomedical Engineering

For Laser Safety Add:

Ophthalmologist: Jeannne R. Manning, M.D., Ophthalmologist

Laser Surgeon: James A. Moody, M.D., Neurosurgeon

Laser Surgery: Aurora Naranjo, RN
(Nursing) Sandi Fisk, RN

13. The use of radioactive material in or on humans shall be by a licensed physician.
14. The individual designated to perform the functions of RSO for activities covered by this license is James N. Tate.

PRECEPTOR STATEMENT (Continued)

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

ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION	COMMENTS <small>(Additional information or comments may be written in Supplement on separate sheets.)</small>
A	B	C	D
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 (Colloid)	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Sr-90	INTRACAVITARY TREATMENT		
Co-60	INTERSTITIAL TREATMENT		
Co-137	INTRACAVITARY TREATMENT	20	
I-125 or I-123	INTERSTITIAL TREATMENT		
Co-60 or Co-137	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE	3	
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sr-90/ Y-90	GENERATOR		
Tc-99m	REAGENT KITS		
Other			

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

1994-1996

100 hrs

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

1. NAME OF SUPERVISOR

FOTIS PAPANICOLAOU, LMP

2. NAME OF INSTITUTION

METHODIST MED. CTR.
1441 N. Beckley

3. MAILING ADDRESS

CANCER CENTER - RAD. ONCOLOGY

4. CITY

DALLAS, TX. 75203

5. PHYSICIAN'S LICENSE NUMBER (S)

LO0659

6. PRECEPTOR'S SIGNATURE

Fotis Papanicolaou

7. PRECEPTOR'S NAME (Print type or initials)

FOTIS PAPANICOLAOU

8. DATE

10/4/96

NRC FORM 313M SUPPLEMENT A
(8-88)

U.S. NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

Approved by OMER
3150-0041
Expires 6-30-90

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

HOSSEIN HAGHIGHI

2. STATE OR TERRITORY IN
WHICH LICENSED TO
PRACTICE MEDICINE

3. CERTIFICATION

SPECIALTY BOARD
A

CATEGORY
B

MONTH AND YEAR CERTIFIED
C

Diagnostic Radiological
Physics

June 1996

4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

FIELD OF TRAINING A	LOCATION AND DATES OF TRAINING B	TYPE AND LENGTH OF TRAINING	
		LECTURE/ LABORATORY COURSES (Hours) C	SUPERVISOR LABORATORY EXPERIENCE (Hours) D
a. RADIATION PHYSICS AND INSTRUMENTATION	University of Texas at Arlington Arlington, TX 1985-1991	50 hrs	5 years
b. RADIATION PROTECTION	University of Texas Southwestern Medical School 1990-1994	10 hrs	4 years
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	University of Texas at Arlington 1985-1991	200 hrs	30 hrs
d. RADIATION BIOLOGY	University of Texas Southwestern Medical School 1990-1994	50 hrs	-
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
CS-137	50 mCi	Engineering and Radiation Phys. Associated, Inc. (Physics Consulting Company)	2 years	Brachytherapy
Ir-192	50 mCi	" " "	2 years	Brachytherapy
SR-90	10 mCi	" " "	2 years	Eye Treatment
CO-60	50 mCi	" " "	2 years	Instrument Calibration
Na-22	50 mCi	University of Texas at Arlington	5 years	Physics Research

NRC FORM 313M Supplement A
(8-88)

09-17-1996 11:14AM FROM HURLEY Radiation Oncology TO

812145471790 P.04

PRECEPTOR STATEMENT (Continued)

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

ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.)
A	B	C	D
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 (Colloidal)	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Au-198	INTRACAVITARY TREATMENT		
Co-60 or Cs-137	INTERSTITIAL TREATMENT		
	INTRACAVITARY TREATMENT	20	
I-125 or Ir-192 Co-60 or Cs-137	INTERSTITIAL TREATMENT		
	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE	3	
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sr-90/ Ir-192m	GENERATOR		
Tc-99m	REAGENT KITS		
Other			

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

1994-1996

100 hrs

4. THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF:		6. PRECEPTOR'S SIGNATURE	
a. NAME OF SUPERVISOR FOTIS PAPANICOLAOU, LMP			
b. NAME OF INSTITUTION METHODIST MED. CTR.			
c. MAILING ADDRESS 1441 N. Beckley			
d. CITY DALLAS, TX. 75203		7. PRECEPTOR'S NAME (Please type or print)	
e. MATERIALS LICENSE NUMBER(S) LO0659		8. DATE	

NAC FORM 313M SUPPLEMENT B
(9-81)

CPG 850-0-2

Page 7

TOTAL P.04

(11) Radiation Protection and Instrumentation. (10 hrs.)

Hurley Medical Center • One Hurley Plaza • Flint, MI 48503-5993 • (313) 257-9422
Hurley Medical Center is an affiliated teaching hospital of Michigan State University College of Human Medicine

Methodist Medical Center and University Methodist Hospital
are part of the nonprofit METHODIST HOSPITALS OF DALLAS system.

TOTAL P.05

HURLEY MEDICAL CENTER

One Hurley Plaza
Flint, MI 48503-5993
Phone: (810) 257-9422
Fax: (810) 762-7240

RADIATION ONCOLOGY DEPARTMENT

FAX TRANSMITTAL

Date: Oct. 18TH. 1996.

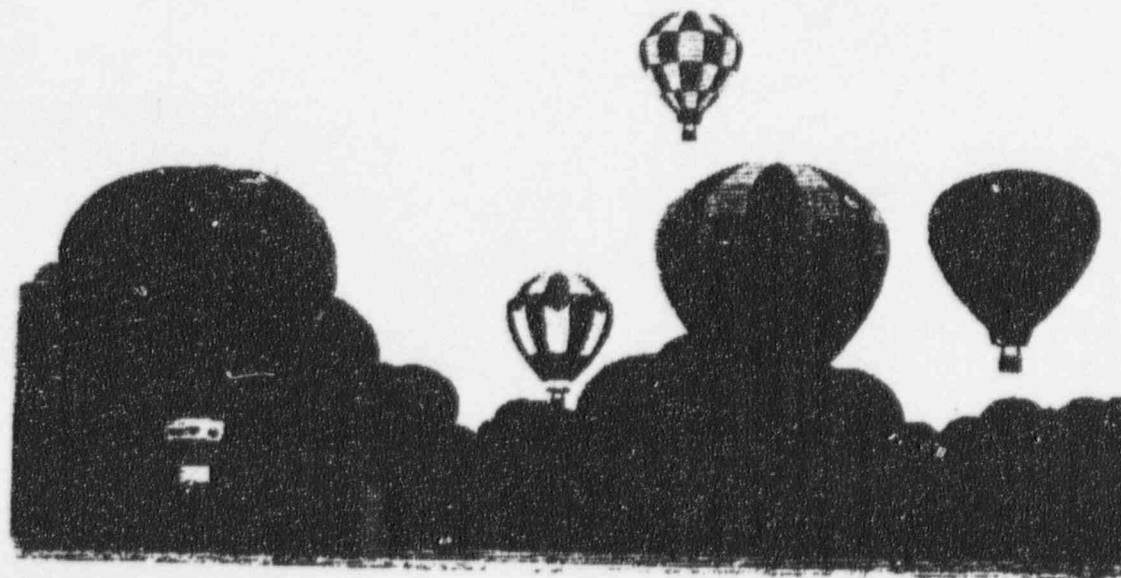
To: Ms. COLLEEN STACEY
NRC

From: TEDDY ARIBISALA.

Message: I will call to CONFIRM RECEIPT
THIS AFTERNOON (1400 HR).

Number of pages including cover sheet: 17 pages.

Please call to verify receipt of fax: Yes ☒ No





Texas Department of Health
Bureau of Radiation Control



RADIOACTIVE-MATERIAL LICENSE

LICENSE NUMBER
L00659

AMENDMENT NUMBER
33

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Chairman: Robert R. Burns, M.D., Nuclear Medicine/Radiology
Alan A. Slomowitz, M.D., Radiation Oncology, Alternate Chairman

Nuclear Medicine: James Tate, RT(R)(N), Manager, Nuclear Medicine,
Radiation Safety Officer (RSO)
Sharon Perry, R.T.(N)
Karl Braunsky, C.N.M.T., M.R.T.
Steve Litszenberger, C.N.M.T

Radiation Therapy: Terry Melvin, RT(R) (T), Manager, Radiation Therapy
Fotis Papanicolaou, L.M.P

Breast Services: D. Daboub, M.S., RN, Manager, Breast Health Services

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Linda Johnson, RN, Supervisor, Card. Cath. Lab.

Nursing: D. Radaford, M.S. RN, Dir., Oncology Nursing
Stephanie A. Hepner, RN, Radiotherapy Nurse

Radiology Admin: M. Frederick, RT(R), Director, Radiology, CMH

MHD Administration: Candace Ogle, M.S., RN, Associate Executive Director
Jeanne Reardon, R.N., M.S., Admin. Dir. Cancer Center,
Alternate Administrator

Safety Director: Charles Shoup, Safety Director

Biomed. Eng.: Scott Sovocool, BMET, Director, Biomedical Engineering

For Laser Safety Add:

Ophthalmologist: Jeannne R. Manning, M.D., Ophthalmologist

Laser Surgeon: James A. Moody, M.D., Neurosurgeon

Laser Surgery: Aurora Naranjo, RN
(Nursing) Sandi Fisk, RN

13. The use of radioactive material in or on humans shall be by a licensed physician.
14. The individual designated to perform the functions of RSO for activities covered by this license is James N. Tate.

TRANSMIT CONFIRMATION REPORT

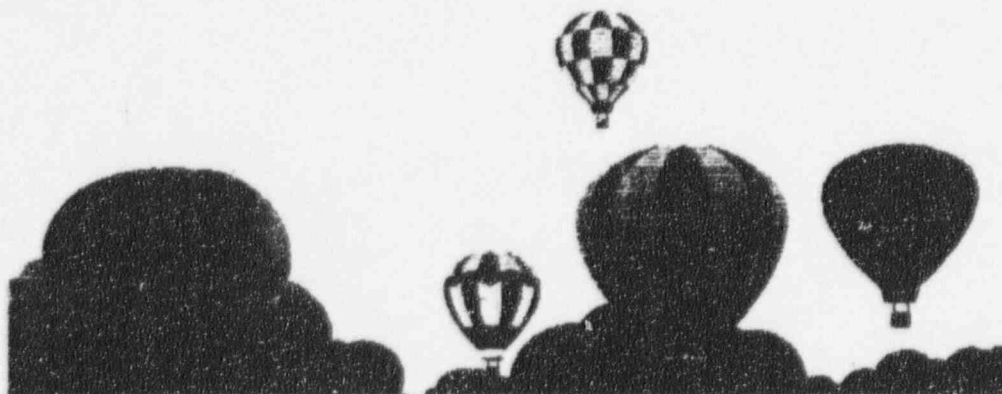
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DATE	:	OCT 18'96 10:44
DURATION	:	00'42
MODE	:	STD
PAGES	:	01
RESULT	:	OK

HURLEY MEDICAL CENTER

One Hurley Plaza
Flint, MI 48503-5993
Phone: (810) 257-9422
Fax: (810) 762-7240

RADIATION ONCOLOGY DEPARTMENT

FAX TRANSMITTAL

Date: OCT. 18TH. 1996.To: Ms. COLLEEN STACEY
NRCFrom: TEDDY ARIBISALAMessage: I will call to confirm receipt
this afternoon (1400 HR).Number of pages including cover sheet: 17 pages.Please call to verify receipt of fax: Yes ☒ No

PRECEPTOR STATEMENT (Continued)

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

ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION	COMMENTS (If additional information or comments may be required, it is suggested on separate sheet(s).)
A	B	C	D
P-32 (Colloid)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 (Colloid)	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Au-198	INTRACAVITARY TREATMENT		
Co-60 or Cs-137	INTERSTITIAL TREATMENT		
	INTRACAVITARY TREATMENT	20	
I-125 or Ir-192 or Cs-60 or Co-137	INTERSTITIAL TREATMENT		
	TELETHERAPY TREATMENT		
Si-30	TREATMENT OF EYE DISEASE	3	
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sr-90/ Y-90	GENERATOR		
Tc-99m	REAGENT KITS		
Other			

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

1994-1996

100 hrs

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

1. NAME OF SUPERVISOR

FOTIS PAPANICOLAOU, LMP

2. NAME OF INSTITUTION METHODIST MED. CTR.

1441 N. Beckley

3. MAILING ADDRESS

CANCER CENTER - RAD. ONCOLOGY

4. CITY

DALLAS, TX 75203

5. MATERIALS LICENSE NUMBER(S)

LO0659

6. PRECEPTOR'S SIGNATURE

Fotis Papanicolaou

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

FOTIS PAPANICOLAOU

8. DATE

10/4/96

NRC FORM 313M SUPPLEMENT A
(8-88)

U.S. NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICERApproved by OARL
3150-0041
Expires 6-30-88

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

HOSSEIN HAGHIGHI

7. STATE OR TERRITORY IN
WHICH LICENSED TO
PRACTICE MEDICINE

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
Diagnostic Radiological Physics		June 1996

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	SUPERVISOR LABORATORY EXPERIENCE (Hours) D
a. RADIATION PHYSICS AND INSTRUMENTATION	University of Texas at Arlington Arlington, TX 1985-1991	50 hrs	5 years
b. RADIATION PROTECTION	University of Texas Southwestern Medical School 1990-1994	10 hrs	4 years
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	University of Texas at Arlington 1985-1991	200 hrs	30 hrs
d. RADIATION BIOLOGY	University of Texas Southwestern Medical School 1990-1994	50 hrs	-
e. RADIOPHARMACEUTICAL CHEMISTRY			

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
CS-137	50 mCi	Engineering and Radiation Phys. Associated, Inc. (Physics Consulting Company)	2 years	Brachytherapy
Ir-192	50 mCi	" " "	2 years	Brachytherapy
Si-90	10 mCi	" " "	2 years	Eye Treatment
Co-60	50 mCi	" " "	2 years	Instrument Calibration
Na-22	50 mCi	University of Texas at Arlington	5 years	Physics Research

NRC FORM 313M Supplement A
(8-88)

Page 5

NRC FORM 312M SUPPLEMENT B
(9-81)

U. S. NUCLEAR REGULATORY COMMISSION

PRECEPTOR STATEMENT

Approved by OMB
3150-0041
Expires 9-30-86

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

HOSSEIN HAGHIGHI (Physicist)

STREET ADDRESS

Hurley Medical Center
One Hurley Plaza

CITY

Flint

STATE

MI

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 THROMBOSES		
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			

NRC FORM 312M SUPPLEMENT B
(9-81)

Page 6

PRECEPTOR STATEMENT (Continued)

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

ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheet.)
A	B	C	D
P-32 (Sodium)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 (Colloid)	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Au-198	INTRACAVITARY TREATMENT		
Co-60 or Co-137	INTERSTITIAL TREATMENT		
	INTRACAVITARY TREATMENT	20	
I-125 or I-127 or Co-60 or Co-137	INTERSTITIAL TREATMENT		
	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE	3	
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sr-90/ Y-90	GENERATOR		
Tc-99m	REAGENT KITS		
Other			

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

1994-1996

100 hrs

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

a. NAME OF SUPERVISOR

FOTIS PAPANICOLAOU, LMP

b. NAME OF INSTITUTION METHODIST MED. CTR.

1441 N. Beckley

c. MAILING ADDRESS

CANCER CENTER - RAD. ONCOLOGY

d. CITY

DALLAS, TX 75203

e. MATERIALS LICENSE NUMBER(S)

L00659

5. PRECEPTOR'S SIGNATURE

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

8. DATE



Radiation Therapy

Clinical Excellence. Service to People.

HURLEY
MEDICAL CENTER

October 7, 1996

NRC, Region III
801 Warrenville Rd.
Lisle, Illinois 60532
ATT: Ms. Colleen Casey
REF: # 301850

Dear Ms. Casey:

Thank you for your call of 09-26-96 and subsequent mailing of the list of deficiencies in Dr. Hossein Haghighi's application as a user of the HDR unit. Neath are steps taken so far to rectify the deficiencies.

1. The preceptor physicist for Dr. H. Haghighi, Fotis Papanicolaov is being urged to fill another form out with his signature. This form will be forthcoming very soon.
2. True, Dr. H. Haghighi did not process C060 or HDR training with 4000 hours, he had more than 100 clinically supervised hours as the documentation shows. It is my plan to arrange for him to put in more hours while working under the supervision of both Dr. Ahmed Akl, Chairman and Dr. Li (Physicist) both licensees.

Also arrangements are underway to send Dr. Haghighi to the Nucletron School in December, 96 or January, 97, this I believe will accelerate his competence with the exposure and help him qualify sometime next year to be included on our license as a user.

3. Enclosed is a copy of the document attesting the preceptor, Fotis Papanicolaov as the Medical Physicist on Methodist Medical Center's license as a user.
4. The 10CFR35.961(2) specification is not met in as much as Dr. Haghighi is credentialed in Diagnostic Radiology by ABR. He has since applied for his certificate in Therapeutic Radiology.
5. Dr. Haghighi is not operating the HDR at present. Even though he had:
(i) Radiation Protection and instrumentation. (10 hrs.)

Hurley Medical Center • One Hurley Plaza • Flint, MI 48503-5993 • (313) 257-9422

Hurley Medical Center is an affiliated teaching hospital of Michigan State University College of Human Medicine

10-18-1996 11:40AM FROM HURLEY Radiation Oncology TO 82015151878 P.06

- (ii) Operating and emergency procedure. (50 hrs.)
- (iii) The design, use and function of the device, including the safety systems. (200 hrs.)
- (iv) "Hands-on" training under the direct supervision of experienced device users which includes "dry-runs" using dummy sources for routine patient set-up and treatment, as well as the implementation of an emergency procedure. (50 hrs.)

His active role in the therapeutic has been, doing the daily QA, doing the treatment plan optimization and calculations while the therapist actually turns the key and push the button with the Medical Chairman, Ahmed Akl, M.D. (A licensee and alternate RSO) literally at the therapist's shoulder and in presence all through the process of treatment in case of any emergency or questions.

6. I shall adopt your advice of reclassifying Dr. Ahmed Akl as the Alternate RSO. I discussed it with him and pointed out that his role will take a backseat in the presence of Dr. Hui Li the designated RSO, and he concurs with me. Also I am glad to notice that this process extends the life of our license till 2005.
7. The Administrator, Vice-President and Chairman of the Radiation Safety Committee are all abreasted of continuing dialogue between your office and me for continuity of process and stability.

Once more I want to express my appreciation of your cooperation and pieces of advice during this process. Dr. Haghighi is not operating the HDR and will not do so on a patient until we get your approval; we are all in accord on this subject here at Hurley. I will do my best to help him merit the privilege within a reasonable time though.

Please feel free to call me at (810) 257-9422 if you have any concerns or clarification.

Respectfully yours,



Teddy Aribisala, RTY, MSc, AHRA

cc: Dr. Ahmed Akl, Chairman, Radiation Oncology
 Ms. D. Standridge, Administrator
 Mr. J. Dagenais, Vice-President of Operations
 Dr. A. Mukkamala, Chairman, Radiation Safety Committee

TA/rad
 NRC2

HURLEY One Hurley Plaza
 Flint, Michigan 48503-5993
 MEDICAL CENTER
 Clinical Excellence. Service to People.

VLB

09/19/96
 TYPD

001273
 U72033

1996 PREPAY #74523

Licensing/Maintenance Contract

440.00

TOTAL ▶

440.00

ATTACHED CHECK IS IN PAYMENT FOR ITEMS DESCRIBED ABOVE

HURLEY Accounts Payable
 One Hurley Plaza
 MEDICAL CENTER Flint, Michigan 48503-5993
 Clinical Excellence. Service to People.

74-1297
 724

CHECK NO

M001273

PAY FOUR HUNDRED AND FORTY DOLLARS*****

TO THE ORDER OF

U.S. NUCLEAR REGULATORY
 LICENSE FEE AND DEBT COL.
 P.O. BOX 954514
 st. louis, mo 63195

DATE

09/19/96

CHECK AMOUNT

\$440.00*****

Louise A. Podolsky
 Authorized Signature

ATIONAL BANK OF DETROIT - DEARBORN

⑈001273⑈ ⑆072412927⑆

495416⑈

HURLEY MEDICAL CENTER
RADIATION ONCOLOGY DEPARTMENT
MEMORANDUM

TO: Jack Dagenais, Vice President of Operations
Dr. Apparao Mukkamala, Chairman, Radiation-Safety Committee

FROM: Teddy Aribisala, Manager, Radiation Oncology

DATE: September 19, 1996

SUBJECT: Treatment of HDR Patients

As a result of Dr. Hui Li going on maternity leave earlier than anticipated, the Radiation Safety Officer (RSO) responsibility is defaulted to Dr. Ahmed Akl. Also, the treatment of HDR scheduled patient shall continue.

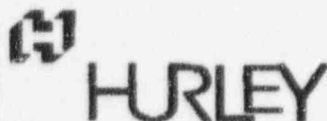
Having consulted with Ms. Tracy King, Radiology Consultant, and Mr. John Madeira and his advice that I could do so on the merit that an RSO and a licensee are represented. At my mentioning of the unique situation of one person occupying both roles, Mr. Madeira said it does not matter as long as the attending physicist works under the direct supervision of the licensed physician and the physicist is oriented on the intricacies of the emergency procedure.

The credentials of Dr Hossein Haghighi has been sent by overnight express mail along with the required \$440.00 fee for license amendment to include him on the license in Dr. Bichay's stead.

Mr. Madeira strongly advice that this not be made a permanent situation. He also took my name and number with a promise to expedite our application due to the extenuating circumstances. I hope to again speak with Mr. Madeira after he receives this package #EH521932902US containing the documents on September 19th (Thursday).

Please be advised I will be available if you need any information pertinent to this case at (810) 257-9422.

cc: Dr. Ahmed Akl, Chairman, Radiation Oncology
Ms. Debbie Standridge, Administrator
Mr. John Madeira, Head, NRC Medical Licensing, Region 3



Clinical Excellence. Service to People.

Cancer Center
R. Roderic Abbott, M.D., FACP
Director
Dante Simmons, Coordinator

Internal Medicine
Hematology/Oncology
R. Roderic Abbott, M.D., FACP
Samuel Chan, M.D.
Kewan Danish, M.D.
Joyce Rendi Hahner, M.D.
Diane Welker, RN, MS
Donna Fonger, RN, MSN, CCR

Surgical Oncology
Roderic Abbott, M.D., FACS, FRCSC
Harold K. Baidoo, M.D., FACS

Radiation Oncology
Ahmed M. Akl, M.D.
Tawfik J. Bichay, M.S., M.D.
K.P. Joel Ho, D.CAT, BA, C.M.D.
Edward B. Arbibala, M.S., RTT, ABRRA

Ambulatory Oncology
Sharon L. Dowd, M.D.
Donna Fonger, RN, MSN, CCR
Patricia Zink, RN, CCR

Pediatric Hematology/
Oncology
Kashim Inoue, M.D.
Timothy Sumner, M.D.
Mary Mitchell-Soren, RN, MS
Jo Ann Ruff, RN

Gynecologic Oncology
Gey M. Bolka, M.D.
James E. Graham, Jr., M.D., FACS, FRCOG
Doris Edler, RN, BSN

Horne Care/Hospice
Sue Wilson, RN, BS, CPHN

September 17, 1996

US NRC
Region 3, Medical Licensing
801 Warrenville Rd.
Lisle, Illinois 60532

RE: Addition of Physicist for HDR unit
License #: 21-00338-02

To Whom It May Concern:

Please expedite this request; Dr. Hui Li, our physicist went onto maternity leave earlier than planned and we are unable to treatment with our HDR unit until this request is approved even though we have a fully booked schedule.

Dr. Hossein Haghighi is the physicist newly hired and his credentials attached. Please add him as a second physicist on our license.

Enclosed is the fee of \$440.00 for the amendment, payable to United States Nuclear Regulatory Commission.

Respectfully,

Jack Dagenais
Vice President of Operations

TA/rad
usnrc

Hurley Medical Center
One Hurley Plaza
Flint, Michigan 48503-5993
Cancer Care Line (810) 257-9585
or 1-800-237-9585

Hurley Medical Center is an
affiliated teaching hospital of
Michigan State University
College of Human Medicine





Methodist Medical Center

1411 N. Beckley Avenue P.O. Box 055000 Dallas, Texas 75205-5000 Phone: 214-947-8181

To whom it may concern:

Dr. Hossein Haghighi has been providing therapeutic and diagnostic support to our hospital for approximately two years, on a consulting basis. Our license covers a wide spectrum of radionuclides including but not limited to Cs-137, Co-60, Co-57, Sr-90 and Ir-192.

I had the opportunity of supervising Hossein while he was working for Engineering and Radiation Physics, and was impressed by his knowledge of Medical Physics. In my professional opinion, Dr. Haghighi has provided an outstanding service to our institution and is fully qualified to be included in radioactive and teletherapy licenses. His academic achievements are also outstanding as you are well aware.

If I could be of further assistance, please do not hesitate to contact me.

Sincerely,

Fotis Papanicolaou

Licensed Medical Physicist

Radioactive Material License # L00659 (Texas)

Hossein Haghighi

6221 Gould Place
Texarkana, Texas 75503
903-838-7249
800-511-9914

Objective

To be associated with a dynamic organization that will fully utilize my academic education and clinical experience and provide potential for increased responsibilities and achievements.

Summary of qualifications

With a doctorate degree in Physics, American Board of Radiology Certificate, and over five years of progressively responsible assignments, I have established a record as a substantive contributor to my employers in the areas of therapeutic, diagnostic, and medical nuclear physics. Some of my main clinical responsibilities have been routine calibration and quality assurance of wide range of medical linear accelerators and diagnostic imaging equipment, external and brachytherapy treatment planning with various treatment planning computers, patient dosimetry and safety supervision and assistance in dosimetry and radiation therapy, quality control procedures and treatment strategies, radiation protection shielding design survey of therapeutic and diagnostic facilities, assistance of hospital administrators with selection and purchase of new medical equipment and service contracts, development of policies and procedures in clinical and research environments, development of radiation protection and control policies and procedures to enhance quality of patient care and maintain compliance with JCAHO, FDA, ACR, MQSA, NRC, and state radiation protection regulations and quality control standards.

Work experience

1994 - Present

Engineering & Radiation Physics Associates, Inc.

Responsibilities

- Provide therapeutic, diagnostic, and medical nuclear physics support to hospitals and free standing clinics in the state of Texas and adjacent states.
- Acceptance testing, commissioning, and routine calibration of wide range of medical linear accelerators and treatment simulators, external beam data acquisition, beam verification into treatment planning computers, and patient dosimetry chart development.
- External beam and brachytherapy treatment planning with ADAC, ROC, Theraplan, and Modrak treatment planning computers, patient dosimetry calculations, assistance and supervision of therapists with special treatment set ups and quality control procedures, and patient treatment chart review.
- Radiation survey and inspection of diagnostic radiology and nuclear medicine imaging equipment in accordance with MQSA, JCAHO, NRC, ACR, and state radiation protection regulations, accreditation, and quality control standards.
- Structural shielding design and radiation protection survey of therapeutic and diagnostic facilities, technical assistance with the selection and performance specification of medical equipment, and assistance with x-ray equipment registration and radionuclide licensing.
- In addition to supporting different hospitals, for more than a year, I have been assigned to a hospital on full time basis and have supported this hospital in radiation therapy, diagnostic radiology, and nuclear medicine departments.

[REDACTED]

----- Egan, M.S., RN, Associate Executive Director
Jeanne Reardon, R.N., M.S., Admin. Dir. Cancer Center,
Alternate Administrator

Safety Director: Charles Shoup, Safety Director

Biomed. Eng.: Scott Sovocool, BMET, Director, Biomedical Engineering

For Laser Safety Add:

Ophthalmologist: Jeannne R. Manning, M.D., Ophthalmologist

Laser Surgeon: James A. Moody, M.D., Neurosurgeon

Laser Surgery: Aurora Naranjo, RN
(Nursing) Sandi Fisk, RN

13. The use of radioactive material in or on humans shall be by a licensed physician.
 14. The individual designated to perform the functions of RSO for activities covered by this license is James N. Tate.
-

[REDACTED]

-----, M.S., RN, Associate Executive Director
Jeanne Reardon, R.N., M.S., Admin. Dir. Cancer Center,
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-

Publications

1990 - 1994

UTSouthwestern Medical Center Dallas, Texas

- Developed and implemented quality control programs and procedures in diagnostic radiology department to maintain optimum image quality, patient radiation exposure, and compliance with FDA, ACR, JCAHO, MQSA, and state radiation protection regulations and quality control standards.
- Provided technical assistance with performance specifications and selection of new imaging equipment and performed final acceptance testing and verification of the specifications.
- Negotiated with vendors in purchasing medical equipment and service contracts, scheduled and supervised preventive maintenance, and documented all relevant information for regulatory agencies inspection.
- Designed radiation protection shielding of new and renovated x-ray facilities, calculated fetal dose resulting from diagnostic procedures, participated in radiation safety committee meetings, and developed radiation protection policies and procedures in line with ALARA's principles.
- Assisted in acceptance testing, commissioning, and annual calibration of therapeutic equipment, patient treatment planning, patient dosimetry, and patient treatment chart review.
- Participated in research grant proposal development, conducted clinical research in characterization of the mechanical properties of bone in osteoporosis patients.
- As a member of a team, designed and constructed an ultrasound machine to be used clinically in our investigation of osteoporosis disease.
- Developed computer routines and implemented these routines in the design and construction of a novel fiber optic Positron Emission Tomography (PET) detector and PET/CT Imaging and Communication System (PACS).

1991 - 1995

Mountain View Junior College (Evangelical) Dallas, Texas

Taught physics, mathematics, and electrical and electronics circuit theory.

Education

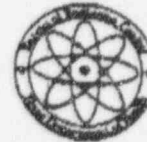
- Ph.D. Physics—University of Texas at Arlington, Arlington, Texas (1991)
- M.S. Electrical Engineering—University of Texas at Arlington, Arlington, Texas (1985)
- B.S. Electrical Engineering—University of Texas at Arlington, Arlington, Texas (1983)

License & Certificates

- American Board of Radiology Certificate in Diagnostic Radiological Physics
- Texas Professional Medical Physicist License in Therapeutic and Diagnostic Radiological Physics and Medical Nuclear Physics
- External beam dosimetry- Principles and calibration- M.D. Anderson
- Digital imaging- American Association of physicist in Medicine
- Advanced Helical Computed Tomography Scanning- GE medical system

Professional memberships

- American Association of Physicist in medicine
- American Physical Society
- Institute of Electrical and Electronic Engineers

RC Form 12-1
7/90)Texas Department of Health
Bureau of Radiation Control

Page 3 of 5

RADIOACTIVE-MATERIAL LICENSE

LICENSE NUMBER	AMENDMENT NUMBER
L00659	33

12. Radioactive material shall only be used by, or under the supervision of, individuals designated by the Radiation Safety Committee, Robert R. Burns, M.D., the chair. Individuals authorized to serve on this committee are:

Chairman: Robert R. Burns, M.D., Nuclear Medicine/Radiology
Alan A. Slomowitz, M.D., Radiation Oncology, Alternate Chairman

Nuclear Medicine: James Tate, RT(R)(N), Manager, Nuclear Medicine,
Radiation Safety Officer (RSO)
Sharon Perry, R.T.(N)
Karl Braunsky, C.N.M.T., M.R.T.
Steve Litzenberger, C.N.M.T.

Radiation Therapy: Terry Melvin, RT(R)(T), Manager, Radiation Therapy
Fotis Papanicolaou, L.M.P.

Breast Services: D. Daboub, M.S., RN, Manager, Breast Health Services

Cardiology: Marianne Rataj, Director, Heart Center
Linda Johnson, RN, Supervisor, Card. Cath. Lab.

Nursing: D. Radaford, M.S. RN, Dir., Oncology Nursing
Stephanie A. Hepner, RN, Radiotherapy Nurse

Radiology Admin: M. Frederick, RT(R), Director, Radiology, CMH

MHD Administration: Candace Ogle, M.S., RN, Associate Executive Director
Jeanne Reardon, R.N., M.S., Admin. Dir. Cancer Center,
Alternate Administrator

Safety Director: Charles Shoup, Safety Director

Biomed. Eng.: Scott Sovocool, BMET, Director, Biomedical Engineering

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Laser Surgery: Aurora Naranjo, RN
(Nursing) Sandi Fisk, RN

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14. The individual designated to perform the functions of RSO for activities covered by this license is James N. Tate.



Methodist Medical Center

1401 N. Beckley Avenue P.O. Box 655992 Dallas, Texas 75205-5992 Phone: (214) 757-8181

To whom it may concern:

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Sincerely,

Fotis Papanicolaou
Licensed Medical Physicist
Radioactive Material License # L00659 (Texas)

The American Board of Indimology
Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society
and the American Society of Roentgenology

Organized through the cooperation of the
 American College of Radiology, the American Roentgen Ray Society,
 the American Radiology Society, the Radiological Society of North America,
 the Section on Radiology of the American Medical Association,
 the American Society for Therapeutic Radiology and Oncology, the Association of
 University Radiologists, and American Association of Physicians in Medicine
 It is hereby called that

Marcelin Thuythi, D.Sc

That, indeed, an accepted course of graduate study and clinical work, has met certain standards and qualifications and has passed the examinations conducted under the authority of

The American Board of Radiology

On this Month's Day of June, 1996

Powerfully demonstrating to the satisfaction of the Board that he is qualified to practice the specialty of

Diagnostic Radiologic Physics



James T. Anderson, MD
Fellow
Secting Surgeon
D. L. Camp, M.D.
Resident Surgeon



1990 - 1994

UTSouthwestern Medical Center**Dallas, Texas**

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- As a member of a team, designed and constructed an ultrasound machine to be used clinically in our investigation of osteoporosis disease.
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- American Physical Society
- Institute of Electrical and Electronic Engineers



Radiation Therapy

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HURLEY
MEDICAL CENTER

October 18, 1996

NRC, Region III
801 Warrenville Rd.
Lisle, Illinois 60532
Attn: Ms. Colleen Casey
Ref #: 301850

Dear Ms. Casey:

It is under advisement that we designate Dr. Hui Li as the Radiation Safety Officer (RSO) with Dr. Hossein Haghighi as the immediate Alternate RSO. This request superceeds the earlier request for Dr. Ahmed Akl to be the Alternate RSO, he will remain a licensee though.

The Alternate RSO position is only expected and allowed to function as the RSO when Dr. Hui Li is not physically present in the department. It is by arrangement that Dr. Hui Li will be available by telephone in case her counsel is needed or in case of an emergency.

These designations are open to change in future with the consultation of your office for guidance of course.

Please feel free to call if you have any questions or clarification, my direct phone number is 810-257-9424.

Respectfully yours,

Debby Standridge, Administrator
Corporate Health & Cardiac Services

cc: Teddy Aribisala, Manager, Radiation Oncology
Dr. Hui Li, RSO
Mr. J. Dagenais, Vice President of Operations
Dr. Apparao Mukkamala, Chairman, Radiation Safety Committee
Dr. Ahmed Akl, Chairman, Radiation Oncology

TA/rad
NRC3

RECEIVED
OCT 22 1996
REGION III

OCT 22 1996

PM: 10-19-96

CONVERSATION RECORD

TIME

VARIOUS

DATE

10/17/18/96

TYPE

☐ VISIT

☐ CONFERENCE

☒ TELEPHONE

☒ INCOMING

☒ OUTGOING

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

Hui Li, Ph.D. / Teddy Arbisala

ORGANIZATION (Office, dept., bureau, etc.)

Harley Med. Center

TELEPHONE NO.

810-2579422

SUBJECT

C/N 301850

L/N 21-00338-02

ROUTING

NAME/SYMBOL

INT

SUMMARY (Abbreviated)

I have not yet received response to deficiency telecon record dtd 9/26/96, faxed same date to Teddy A. Dr. Li expressed concerns about the continued use of HDR with only Dr. Akl present for ~ the past month (i.e., a second person (RSO or physicist) has not been authorized to be present). Although Dr. Mukkamala is authorized for HDR on license he is not working in oncology anymore, he's in Radiology & he cannot be present for HDR treatments. Dr. Hagighi does not qualify as HDR physicist but he does qualify as RSO-alternate, while Dr. Li is physically absent. Shall I name Dr. H. in this manner?

- yes, they will fax & mail a letter to me.

- Note - Teddy A. thought that J. Madera had told him it was OK for Dr. Akl to be both RSO & auth. user, until Dr. Li returns, for HDR treatments.

→ Misunderstanding (apparently) - this violates license commitments.

ACTION REQUIRED

Expedite amendment processing upon receipt of fax so licensees can resume treatments w/HDR this Monday.

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

DATE

Colleen C. Casey

10/18/96

ACTION TAKEN

Fax andmt. 106 when ready - fee has cleared. - Brief Holt.

SIGNATURE

TITLE

DATE



Radiation Therapy

Clinical Excellence. Service to People.

HURLEY
MEDICAL CENTER

October 7, 1996

NRC, Region III
801 Warrenville Rd.
Lisle, Illinois 60532
ATT: Ms. Colleen Casey
REF: # 301850

Dear Ms. Casey:

Thank you for your call of 09-26-96 and subsequent mailing of the list of deficiencies in Dr. Hossein Haghighi's application as a user of the HDR unit. Neath are steps taken so far to rectify the deficiencies.

1. The preceptor physicist for Dr. H. Haghighi, Fotis Papanicolaov is being urged to fill another form out with his signature. This form will be forthcoming very soon.
2. True, Dr. H. Haghighi did not process C060 or HDR training with 4000 hours, he had more than 100 clinically supervised hours as the documentation shows. It is my plan to arrange for him to put in more hours while working under the supervision of both Dr. Ahmed Akl, Chairman and Dr. Li (Physicist) both licensees.

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3. Enclosed is a copy of the document attesting the preceptor, Fotis Papanicolaov as the Medical Physicist on Methodist Medical Center's license as a user.
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5. Dr. Haghighi is not operating the HDR at present. Even though he had:
(i) Radiation Protection and instrumentation. (10 hrs.)

Pm: 10-14-96

RECEIVED

OCT 21 1996

REGION III

Hurley Medical Center • One Hurley Plaza • Flint, MI 48503-5993 • (313) 257-9400

Hurley Medical Center is an affiliated teaching hospital of Michigan State University College of Human Medicine

- (ii) Operating and emergency procedure. (50 hrs.)
- (iii) The design, use and function of the device, including the safety systems. (200 hrs.)
- (iv) "Hands-on" training under the direct supervision of experienced device users which includes "dry-runs" using dummy sources for routine patient set-up and treatment, as well as the implementation of an emergency procedure. (50 hrs.)

His active role in the therapeutic has been, doing the daily QA, doing the treatment plan optimization and calculations while the therapist actually turns the key and push the button with the Medical Chairman, Ahmed Akl, M.D. (A licensee and alternate RSO) literally at the therapist's shoulder and in presence all through the process of treatment in case of any emergency or questions.

- 6. I shall adopt your advice of reclassifying Dr. Ahmed Akl as the Alternate RSO. I discussed it with him and pointed out that his role will take a backseat in the presence of Dr. Hui Li the designated RSO, and he concurs with me. Also I am glad to notice that this process extends the life of our license till 2005.
- 7. The Administrator, Vice-President and Chairman of the Radiation Safety Committee are all abreasted of continuing dialogue between your office and me for continuity of process and stability.

Once more I want to express my appreciation of your cooperation and pieces of advice during this process. Dr. Haghighi is not operating the HDR and will not do so on a patient until we get your approval; we are all in accord on this subject here at Hurley. I will do my best to help him merit the privilege within a reasonable time though.

Please feel free to call me at (810) 257-9422 if you have any concerns or clarification.

Respectfully yours,



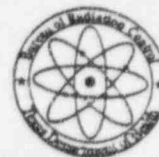
Teddy Aribisala, RTY, MSc, AHRA

cc: Dr. Ahmed Akl, Chairman, Radiation Oncology
Ms. D. Standridge, Administrator
Mr. J. Dagenais, Vice-President of Operations
Dr. A. Mukkamala, Chairman, Radiation Safety Committee

TA/rad
NRC2



Texas Department of Health
Bureau of Radiation Control



RADIOACTIVE MATERIAL LICENSE

LICENSE NUMBER	AMENDMENT NUMBER
L00659	33

12. Radioactive material shall only be used by, or under the supervision of, individuals designated by the Radiation Safety Committee, Robert R. Burns, M.D., the chair. Individuals authorized to serve on this committee are:

Chairman: Robert R. Burns, M.D., Nuclear Medicine/Radiology
Alan A. Slomowitz, M.D., Radiation Oncology, Alternate Chairman

Nuclear Medicine: James Tate, RT(R)(N), Manager, Nuclear Medicine, Radiation Safety Officer (RSO)
Sharon Perry, R.T.(N)
Karl Braunsky, C.N.M.T., M.R.T.
Steve Litzenberger, C.N.M.T

Radiation Therapy: Terry Melvin, RT(R) (T), Manager, Radiation Therapy
Fotis Papanicolaou, L.M.P

Breast Services: D. Daboub, M.S., RN, Manager, Breast Health Services

Cardiology: Marianne Rataj, Director, Heart Center
Linda Johnson, RN, Supervisor, Card. Cath. Lab.

Nursing: D. Radaford, M.S. RN, Dir., Oncology Nursing
Stephanie A. Hepner, RN, Radiotherapy Nurse

Radiology Admin: M. Frederick, RT(R), Director, Radiology, CMH

MHD Administration: Candace Ogle, M.S., RN, Associate Executive Director
Jeanne Reardon, R.N., M.S., Admin. Dir. Cancer Center, Alternate Administrator

Safety Director: Charles Shoup, Safety Director

Biomed. Eng.: Scott Sovocool, BMET, Director, Biomedical Engineering

For Laser Safety Add:

Ophthalmologist: Jeannne R. Manning, M.D., Ophthalmologist

Laser Surgeon: James A. Moody, M.D., Neurosurgeon

Laser Surgery: Aurora Naranjo, RN
(Nursing) Sandi Fisk, RN

13. The use of radioactive material in or on humans shall be by a licensed physician.

14. The individual designated to perform the functions of RSO for activities covered by this license is James N. Tate.

PRECEPTOR STATEMENT (Continued)

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

ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.)
A	B	C	D
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 (Colloidal)	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Au-198	INTRACAVITARY TREATMENT		
Co-60 or Cs-137	INTERSTITIAL TREATMENT		
	INTRACAVITARY TREATMENT	20	
I-125 or Ir-192 Cs-60 or Cs-137	INTERSTITIAL TREATMENT		
	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE	3	
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sr-90/ Y-90	GENERATOR		
Tc-99m	REAGENT KITS		
Other			

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

1994-1996

100 hrs

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

A. NAME OF SUPERVISOR

FOTIS PAPANICOLAOU, LMP

B. NAME OF INSTITUTION METHODIST MED. CTR.

1441 N. Beckley

C. MAILING ADDRESS

CANCER CENTER - RAD. ONCOLOGY

D. CITY

DALLAS, TX. 75203

E. MATERIALS LICENSE NUMBER(S)

LO0659

5. PRECEPTOR'S SIGNATURE

Fotis Papanicolaou

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

FOTIS PAPANICOLAOU

8. DATE

10/4/96

CONVERSATION RECORD

TIME

DATE

12:35pm (DT)

9/26/96

1:00pm (DT)

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL

of pages ▶ 3

XX TELEPHONE

To TEDDY ARIBISALA	From COLLEEN CASEY
Dept./Agency HURLEY MED CNTR	Phone # 630-829-9841
Fax # 810-762-7240	Fax # 630-575-1078/1259

☐ INCOMING☒ OUTGOING

NAME OF PERSON(S) CONTACTED OR IN CONTACT

ORGANIZATION (OFFICE, DEPT. ETC.)

TELEPHONE NO.

(~~Hossein Haghighi~~) **TEDDY ARIBISALA**
Hurley Medical Center **DEPT. MGR.**

~~810-257-9585~~**810-257-9422**

SUBJECT

C/N 301850 L/N 21-00338-02 Telephone Deficiency Call

SUMMARY

A. In support of your request to authorize Hossein Haghighi, D.Sc., as your Medical Physicist, please submit evidence of the training and experience required by 10 CFR 35.961 by providing one of the following:

1. A completed Supplement A form (to be mailed). Note that the Supplement A form we received with your letter dated 9/17/96 was not signed by the preceptor physicist- please correct this deficiency and have the form currently dated and signed.

Further, the form already submitted did not document any previous HDR brachytherapy or cobalt-60 teletherapy use for Dr. Haghighi. The regulation in Part 35.961(b) requires, in part, that the applicant physicist complete one year of full time training in therapeutic radiological physics and an additional year of full time work experience under the supervision of a teletherapy physicist at a medical institution that included the tasks listed in 35.59, 35.632, 35.634 and 35.641. The form submitted showed that Dr. Haghighi only worked approximately 100 hours on clinically supervised activities, instead of the 2 full time years (or 4000 hours) required.

We also need to see proof that the preceptor, Fotis Papanicolaou, is named as a medical physicist on the Methodist Medical Center license, please send a current copy of the license.

The Supplement A must address the required training and experience specified in 10 CFR 35.961(b). (to be mailed). This information was not completely addressed in your letter dated September 17, 1996- refer to regulation and pattern response closely to 35.961(b), as appropriate. (Note that the Supplement

A is not required if the physicist is currently listed on a license as specified in b. below or has received board certification as specified in c. below); or

2. A copy of an NRC or Agreement State license that authorizes Dr. Haghighi as a Medical Physicist; or
3. A copy of Hossein Haghighi's board certification from the American Board of Medical Physics in Radiation Oncology or the American Board of Radiology in one of the specialties specified in 10 CFR 35.961(a). Please be reminded that, although Dr. Haghighi has ABR certification in Diagnostic Radiology, this specialty is not recognized in 10 CFR 35.961(a).

In addition, NRC does not recognize licensure by the state of Texas as an acceptable credential for medical physicists. If Dr. Haghighi is also currently named as a medical physicist on an Agreement state license, that is an acceptable credential.

Please note that if any of the documents in 1., 2. or 3. above reference training and experience which was received more than 7 years ago, evidence of recentness of training in accordance with 10 CFR 35.972 must also be submitted.

N/A B. Please confirm or deny whether Dr. Haghighi will be operating the HDR device. It is our understanding that most, if not all, HDR physicists operate the device itself. If so, please provide an outline of the training given to Dr. Haghighi as an authorized device operator, including a description of the didactic portion of the training and the practical or "hands-on" device operation training. Specify the number of hours of didactic training and the number of hours of "hands-on" training received. This training must include:

1. radiation protection and instrumentation, including the proper use of personnel dosimeters, survey instruments, and radiation monitors;
2. your operating and emergency procedures;
3. the design, use and function of the device, including the safety systems;
4. "hands-on" training, under the direct supervision of experienced device users, which includes "dry runs" using dummy sources for routine patient set-up and treatment, as well as the implementation of your emergency procedures.

Note: Any operation of the device must be under the direct supervision of an experienced device user (i.e. physically present).

N/A C. Specify the name, affiliation, and minimum qualifications of the

instructor(s) conducting the training discussed above. This information must include the trainer's minimum experience in the use of the specific device for which training will be provided.

D. It appears that you may benefit from naming an Alternate RSO for your manual and remote afterloading brachytherapy program areas. We suggest that you consider naming a current authorized physician user for material in 35.400 and Ir-192 in the HDR unit as your Alternate RSO, and specify that this individual will act only in the physical absence of the RSO (Dr. Li) for these program areas. Please also advise us if you elect to disregard this suggestion.

E. 15 days to respond. PLEASE REFERENCE RESPONSE AS ADDITIONAL INFORMATION TO CONTROL NUMBER 301850 AND SEND TO USNKC, REGION III, ATTN: COLLEEN CASEY, NUCLEAR MATERIALS LICENSING BRANCH, 801 WARRENVILLE ROAD, Lisle, ILLINOIS 60532-4351.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

Colleen C. Casey

SIGNATURE

NMLB Reviewer

DATE

ACTION TAKEN

SIGNATURE

TITLE

DATE



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

September 25, 1996

V. Jayabalan, M.D.
Radiation Safety Officer
Hurley Medical Center
Department of Radiology
One Hurley Plaza
Flint, MI 48502

SUBJECT: ACKNOWLEDGEMENT OF CORRESPONDENCE
(Letter Dated 09/17/96)

Dear Licensee:

In response to your request, we have completed the initial processing, which is an administrative review of your application for a(n):

☐ New License ☒ Amendment ☐ Renewal
☐ Termination ☐ Auth User (Amendment not required)
☐ Other _____

No administrative deficiencies were identified during this initial review. However, it should be noted that a technical review may identify omissions in the submitted information.

It appears that your request is nonroutine and has been assigned to Colleen Casey for an expedited review. If you should have any questions please contact Ms. Casey at (630) 829-9887.

1. New and amendment actions are normally processed within 90 days, unless we find major deficiencies, or policy issues requiring central program office assistance.
2. Renewal actions are normally processed within 180 days, however, under timely filing (before expiration), you may continue to operate under your existing license.
3. Termination actions are normally processed within 90 days, unless confirmatory surveys following decontamination/decommissioning activities are involved.

A copy of your correspondence has been forwarded to our Licensing Fee and Debt Collection Branch (301/415-6097) for approval of the fee category and amount, if required.

If you have a compelling safety or business-related reason for requesting expedited review, please contact the Materials Licensing Branch at (630) 829-9887. We will try to complete your request as soon as practicable. Any correspondence about this request should reference the control number.

Nuclear Materials Support Branch

Mail Control No. 301850
License No. 21-00338-02