



Michigan Heart

a Professional Corporation

5/11/06

UNITED STATES NUCLEAR REGULATORY COMMISSION
Region III, Office of Materials Licensing
2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352

RE: License Amendment in Entirety

NRC License #21-26399-01

Dear Sir/Madam:

Please find the enclosed NRC Byproduct materials license amendment in entirety for our license.

Michigan Heart P. C.
5325 Elliott Drive
Suite 203
Ypsilanti, MI 48197

If you have any questions or require additional information, please contact our physicist, James Botti at 734-662-3197 or by email at jbotti@mpcphysics.com.

Sincerely,

Dave Thomas
CEO
Michigan Heart P. C.

Cardiologists

Frank A. Smith, M.D.
Bruce Genovese, M.D.
Stephen E. Rosenblum, M.D.
Robert L. Steele, M.D.
Stuart A. Winston, D.O.
Kurt J. Holland, M.D.
Mark L. Zande, M.D.
Sunil Bhatia, M.D.
Syam B. Zampani, M.D.
Cathy Lisa Glick, M.D.
Daniel A. Weller, M.D.
Barbara A. Kong, M.D.
Benjamin D. McCallister, Jr., M.D.
Arthur M. Szyniszewski, M.D.
Michael J. O'Donnell, M.D.
James R. Bengtson, M.D.
Bradley L. Hubbard, M.D.
James H. Kappler, M.D.
Richard M. Byler, M.D.
Mark L. Bernstein, M.D.
Sanjeev G. Vaishampayan, M.D.
Roy H. Misurliyan, M.D.
Arvind S. Prabhu, M.D.
Timothy Shinn, M.D.
James E. Wilks, M.D.
Marlo F. Leonen, M.D.
Maurice D. Jones, M.D.
G. Alfred Dodds III, M.D.
Mumtaz A. Memon, M.D.
Mansoor A. Qureshi, M.D.
Giridhar Vedala, M.D.
Steven Girard, M.D.
Tauqir Goraya, M.D., PhD
Elizabeth Pielsticker, M.D.
Radmira Greenstein, M.D.
Herbert D. Aronow, M.D., M.P.H., EA.C.C.
Jiho D. Han, M.D.

Ron J. Vanden Belt, M.D.
(1972-1997)

Emeritus

Ralph L. Brandt, M.D.

Ann Arbor

P.O. Box 971
Ann Arbor, MI 48106-0971
734-712-8000
734-712-8010 fax

Adrian

1548 W. Maumee St., Suite C
Adrian, MI 49221
517-266-1042
517-266-1344 fax

Brighton

7575 W. Grand River Rd., Suite 206
Brighton, MI 48114
810-844-7750
810-844-7751 fax

Canton

1600 Canton Center Rd., Suite 345
Canton, MI 48188
734-398-7515
734-398-8606 fax

Jackson

309 Page Ave.
Jackson, MI 49201
517-787-1234
517-787-9140 fax

Livonia

Marian Pavilion
14555 Levan Rd., Suite 203
Livonia, MI 48154
734-462-3233
734-462-3653 fax

Ypsilanti

200 Arnett, Suite 110
Ypsilanti, MI 48198
734-483-5000
734-483-0010 fax

Satellite Offices

Chelsea
Saline

RECEIVED MAY 26 2006

affiliated with Michigan Heart and Vascular Institute

NRC FORM 313
(10-2005)
10 CFR 30, 32, 33,
34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 10/31/2008

Estimated burden per response to comply with this mandatory collection request: 4.4 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE0B-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
811 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-4005

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- A. NEW LICENSE
- B. AMENDMENT TO LICENSE NUMBER 21-26399-01
- C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)

Michigan Heart, P.C.
5325 Elliot Drive, Suite 203
Ypsilanti, MI 48197

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Please see application page (8.3 Item 3)

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

James M. Botti, M.S., Medical Physics Consultants, Inc.

TELEPHONE NUMBER

(734) 662-3197

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY 7C AMOUNT ENCLOSED \$ 0.00

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

SIGNATURE

DATE

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	

Applicability Table

8.1	License Action Type	Enclosed
8.2	Applicant's Name and Mailing Address	Enclosed
8.3	Address where Material Used or Possessed	Enclosed
8.4	Person to Be Contacted	Enclosed
8.5	Radioactive Material	Enclosed
8.6	Sealed Sources and Devices	Enclosed
8.7	Recordkeeping for Decommissioning	N/A
8.8	Purpose for which Licensed Material is Used	Enclosed
8.9	Responsibility for Radiation Safety Program	Enclosed
8.10	Radiation Safety Officer	Enclosed
8.11	Authorized Users	Enclosed
8.12	Authorized Nuclear Pharmacist	N/A
8.13	Authorized Medical Physicist	N/A
8.14	Facilities and Equipment	Enclosed
8.15	Facility Diagram	Enclosed
8.16	Radiation Monitoring Instruments	Enclosed
8.17	Equipment to Measure Dosages	Enclosed
8.18	Dosimetry Equipment Calibration and Use	N/A
8.19	Other Equipment and Facilities	N/A
8.20	Radiation Protection Program	Enclosed
8.21	Safety Procedures and Instructions	Enclosed
8.22	Occupational Dose	Enclosed
8.23	Area Survey Procedures	Enclosed
8.24	Safe Use of Unsealed Licensed Material	N/A
8.25	Spill Procedures	N/A
8.26	Therapy Devices With Sealed Sources	N/A
8.27	Minimization of Contamination	Enclosed
8.28	Waste Management	Enclosed
8.29	Fees	Enclosed
8.30	Certification	Enclosed

LICENSE ACTION TYPE

8.1 Item 1

Amendment of a NRC License in entirety:

LICENSEES NAME AND MAILING ADDRESS

8.2 Item 2

Michigan Heart P.C.
5325 Elliot Drive
Suite 203
Ypsilanti, MI 48197

ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

8.3 Item 3

5325 Elliot Drive, Suite 202
Ypsilanti, Michigan

14555 Levan Road, Suite 203
Livonia, Michigan

1600 South Canton Center Road, Suite 350
Canton, Michigan

7575 Grand River Avenue, Suite 110
Brighton, Michigan

1548 West Maumee Street, Suite C
Adrian, Michigan

309 Page
Jackson, MI

PERSON TO BE CONTACTED ABOUT THIS APPLICATION

8.4 Item 4

James M. Botti, MS
Radiological Physicist
Phone: 734-662-3197
Fax: 734-662-9224

RADIOACTIVE MATERIAL AND USE

Byproduct Material	<i>Item 5</i> Amount	<i>Item 6</i> Purpose
Material in 35.200	As Needed	Imaging and localization studies (Cardiac Procedures Only)
Gadolinium-153	4 sources 300 mCi per / source	

RADIATION SAFETY PROGRAM RESPONSIBILITY

Item 7.1

Authorized Users	Materials
Barbara Abrahams Kong, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans
Benjamin Dee McCallister, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans
Bradley L. Hubbard, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans
Mario G. Leonen, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans
Sanjeev G. Vaishampayan, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans

Roy H. Misirliyan, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans
Arvid S. Prabhu, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans
Mumtaz A. MMemon, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans
Steven E. Girard, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans
G. Alfred Dodds, III, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans
Tauqir Y. Goraya, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans
Giridhar Vedela, M.D.	35.200 (Cardiac Procedures Only) Gd-153 medical radiography in humans

Item 7.3

Radiation Safety Officer

Tauqir Y. Goraya, M.D.

FACILITIES AND EQUIPMENT LIST

Item 9.1

Imaging Equipment

Spect Gamma Camera x 7

Well Counters

Ludlum 2200 Well Counter

Capintec Caprac x 5

Dose Calibrator

Capintec CRC-15R Dose Calibrator x 6

Survey Meters

Ludlum 14-C GM Survey Meter x 12

High Range (0-2000 mR/hr)

Low Range (0-0.02 mR/hr)

Other

Lead Glass Face Shields

Leaded Syringe Shields

Remote Handling Tools

Lead Bricks

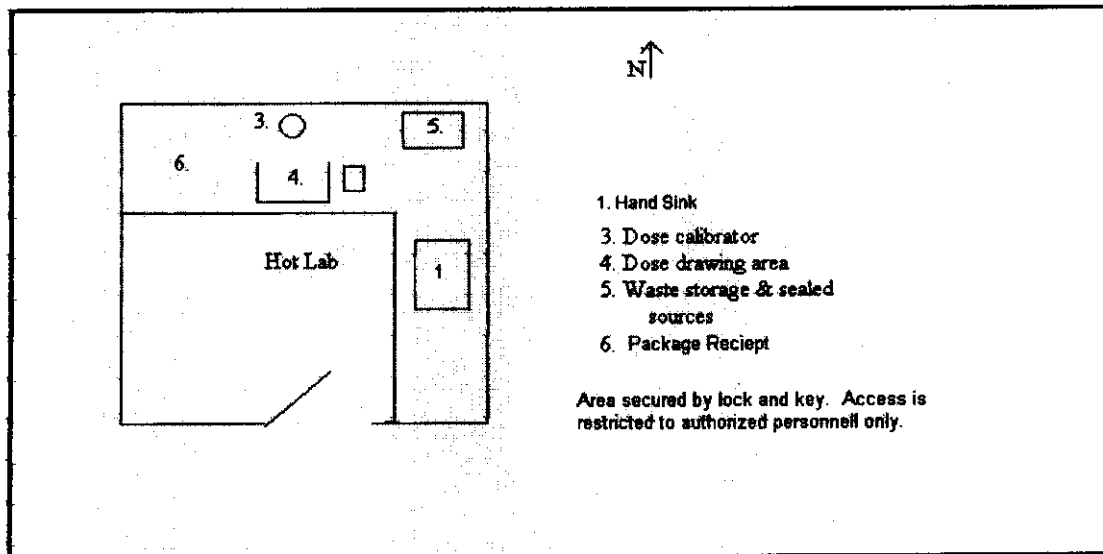
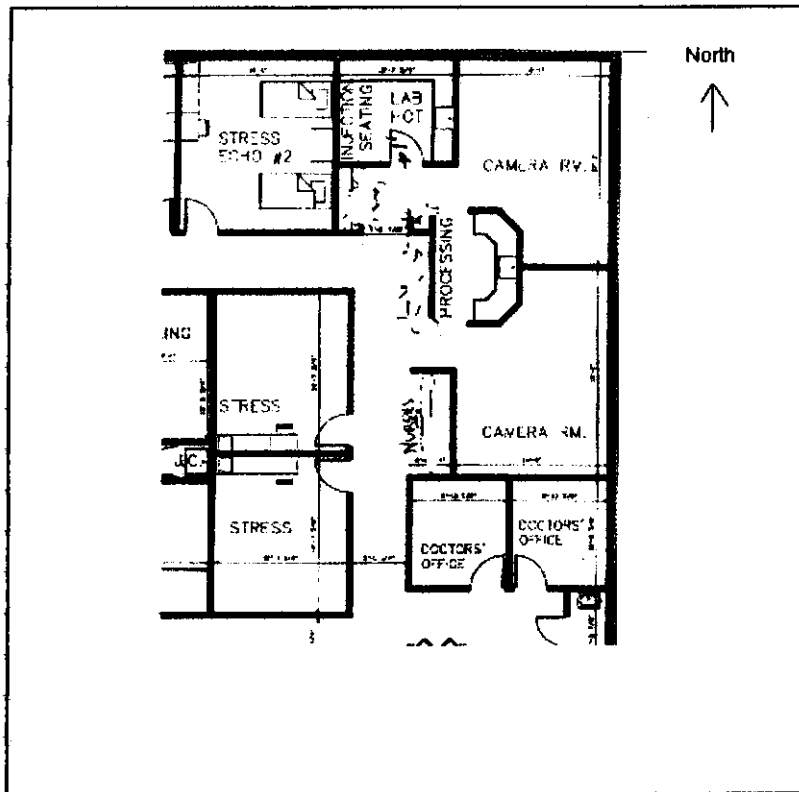
RadiacWash

Absorbent Pads

FACILITY DIAGRAM

8.15 Item 9

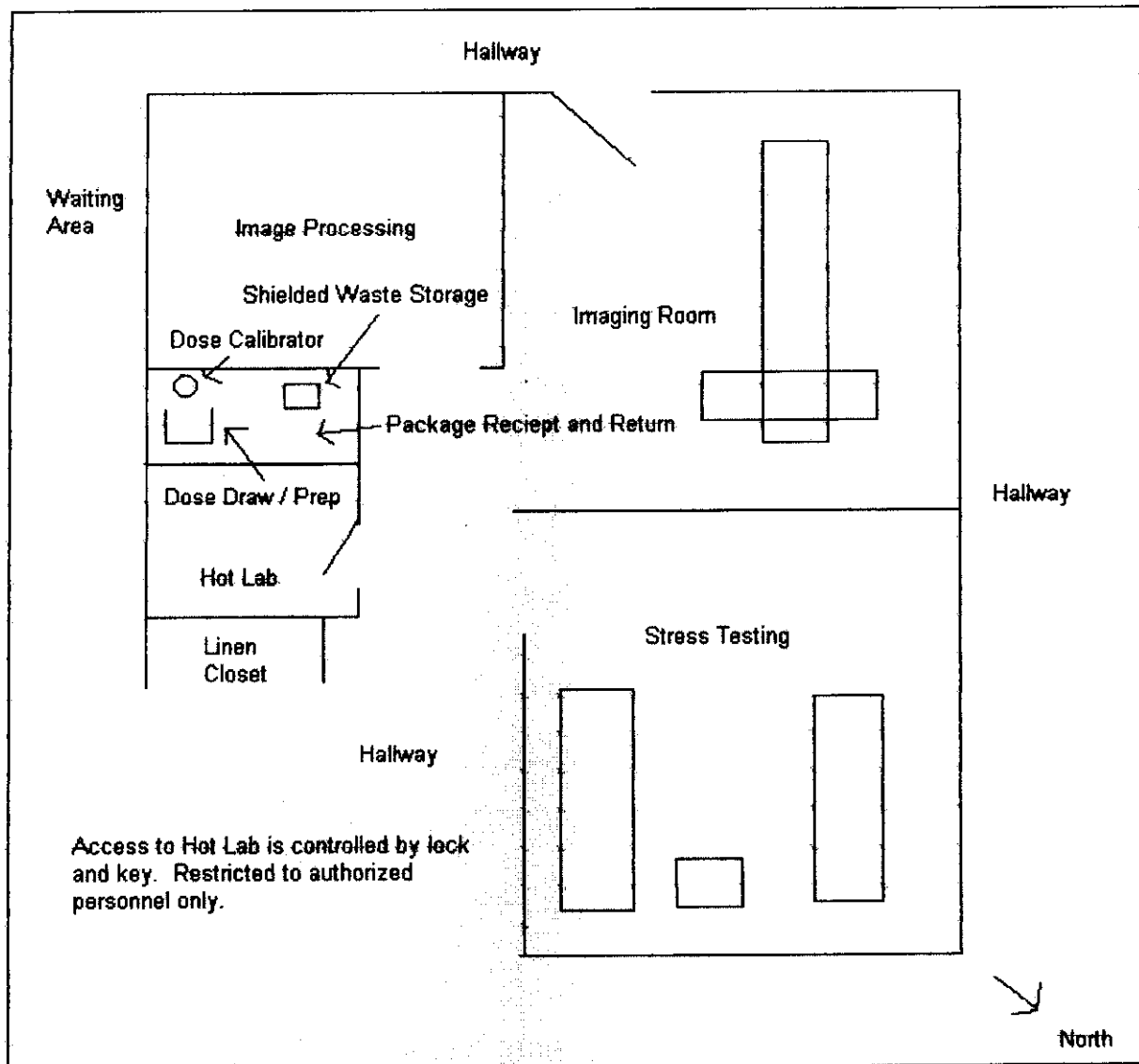
900 East Michigan Avenue, Suite 110
Jackson, Michigan
49201



FACILITY DIAGRAM

8.15 Item 9

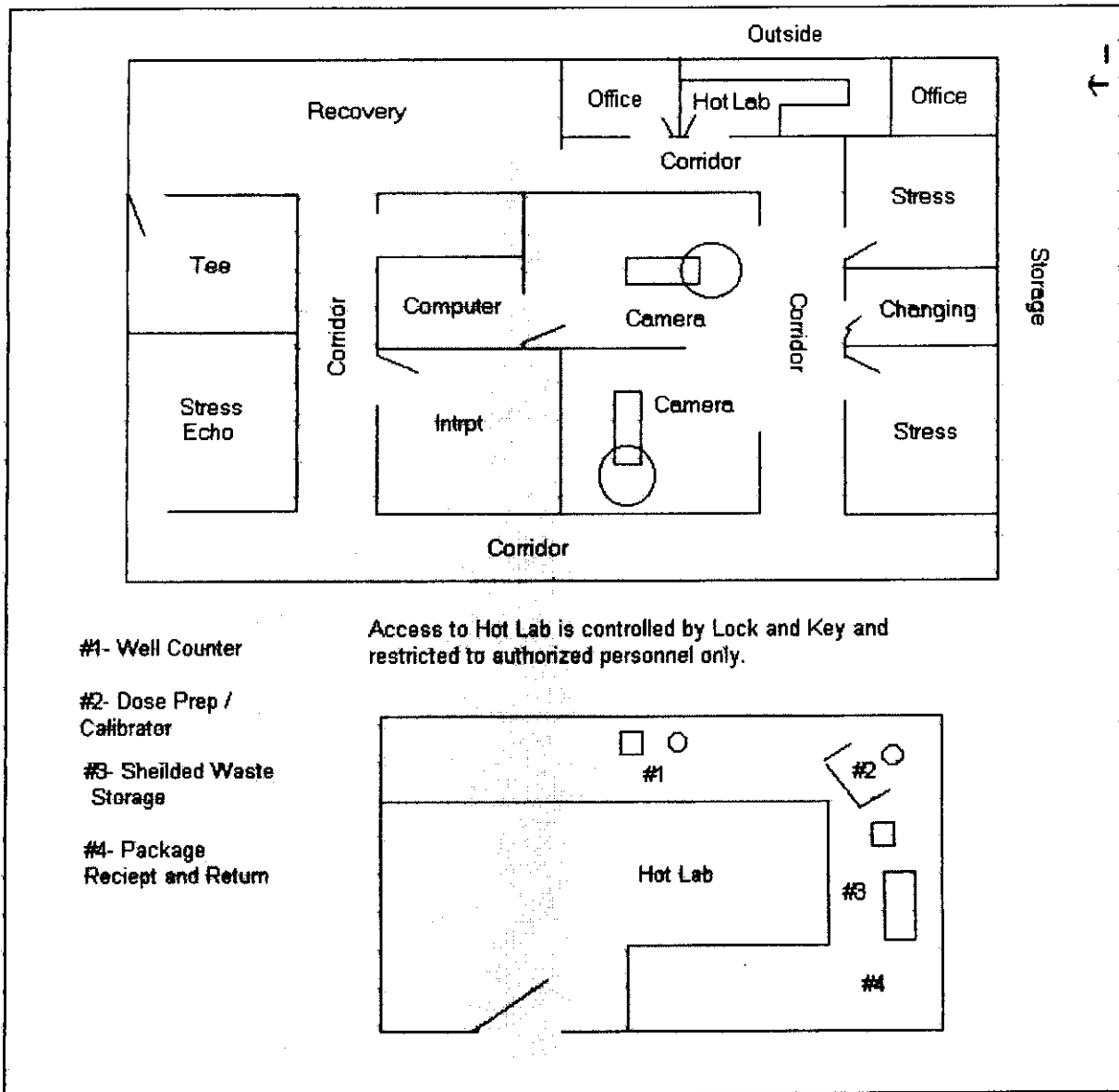
14555 Levan Road
Suite 203
Livonia, Michigan
48154



FACILITY DIAGRAM

8.15 Item 9

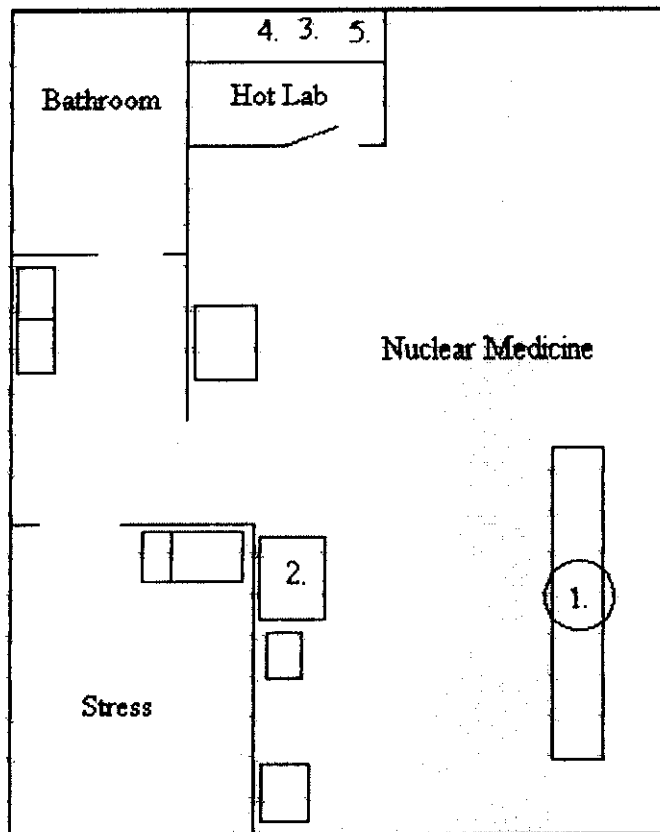
5325 Elliot Drive
Suite 202
Ypsilanti, Michigan



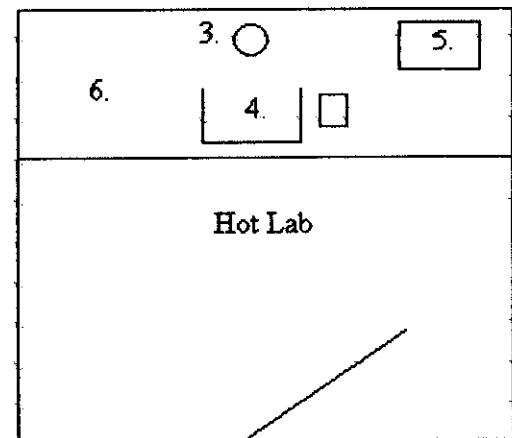
FACILITY DIAGRAM

8.15 Item 9

1600 South Canton Center Road
Suite 350
Canton, Michigan



1. Imaging table
2. Computer console
3. Dose calibrator
4. Dose drawing area
5. Waste storage & sealed sources
6. Package Receipt

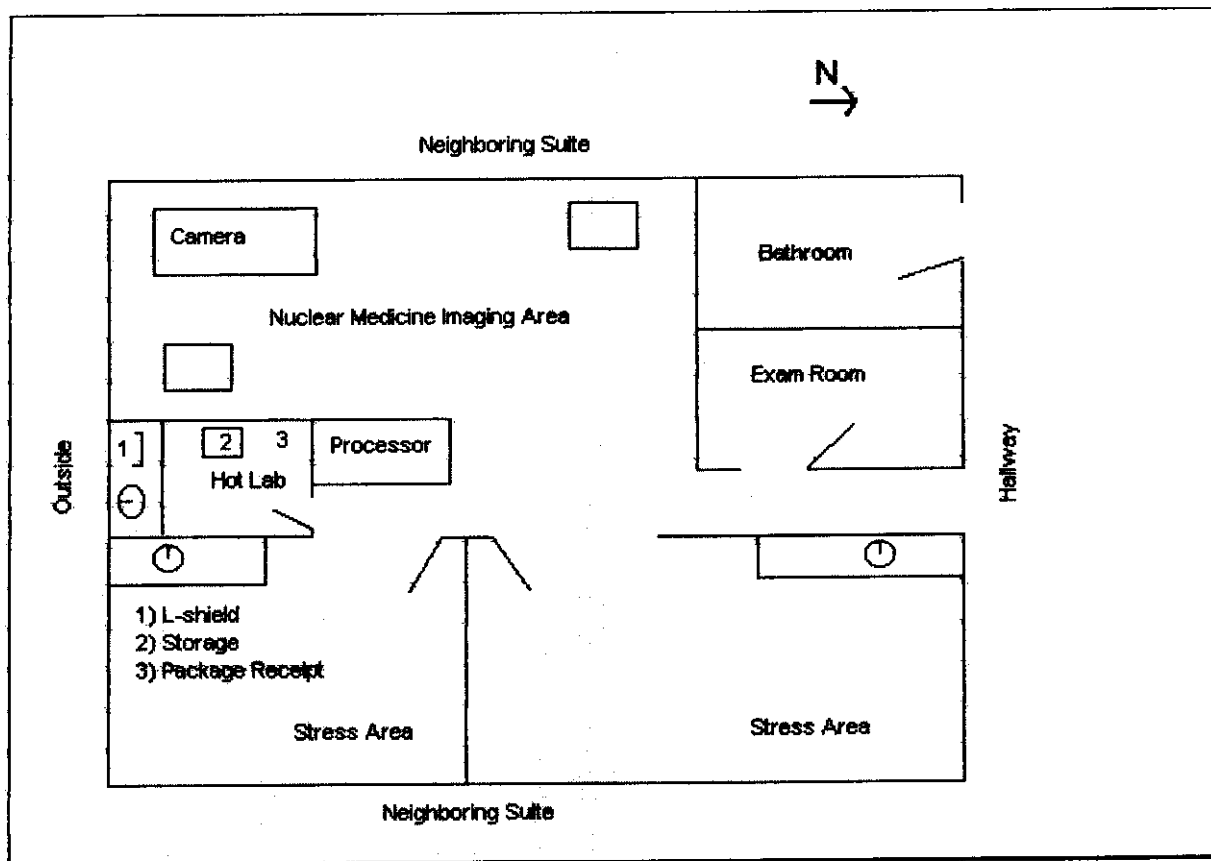


Area secured by lock and key. Access is restricted to authorized personnel only.

FACILITY DIAGRAM

8.15 Item 9

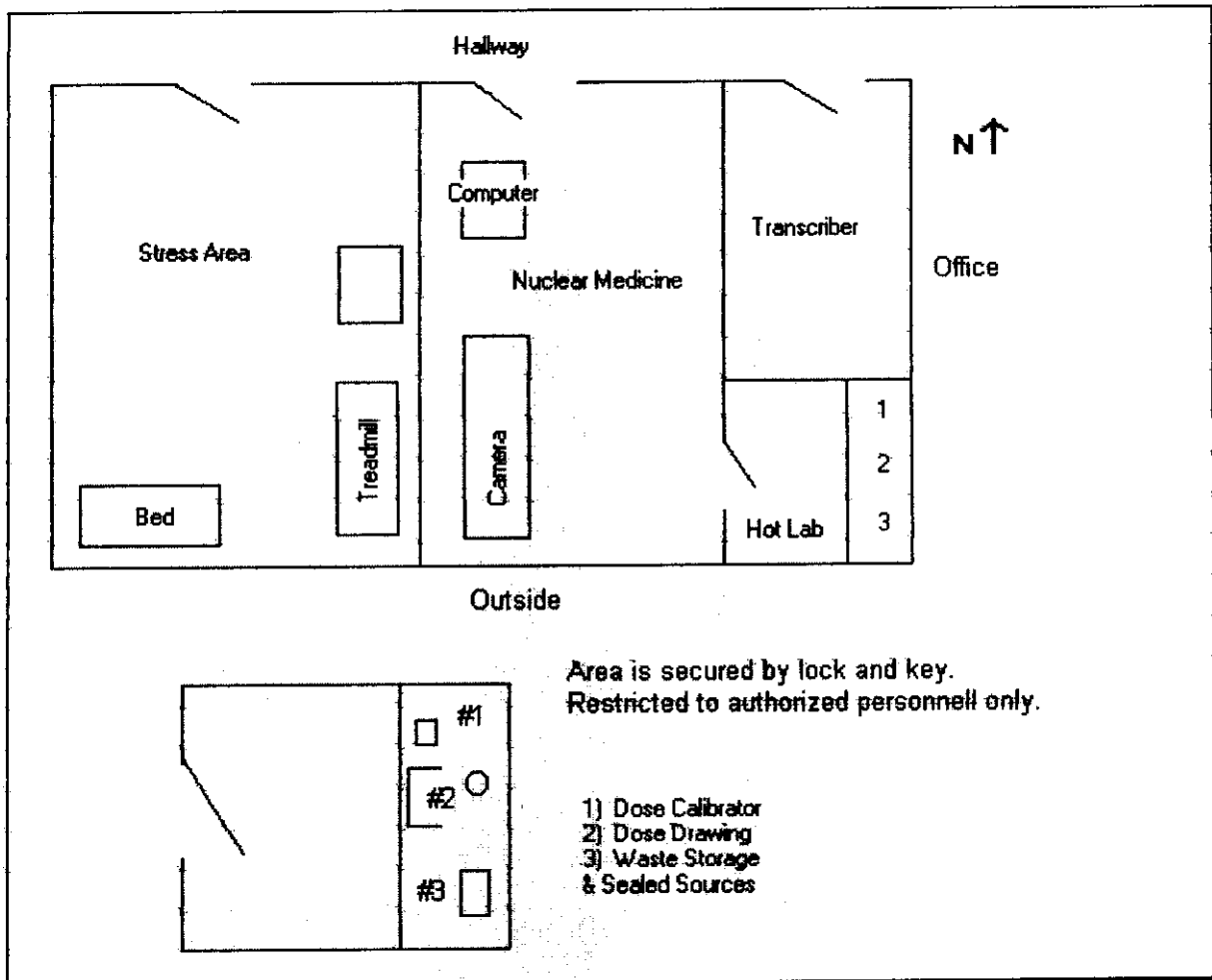
7575 Grand River Avenue
Suite 110
Brighton, Michigan



FACILITY DIAGRAM

8.15 Item 9

1548 West Maumee Street
Suite C
Adrian, Michigan



RADIATION MONITORING INSTRUMENTS

8.16 Item 9

The licensee shall possess calibrated radiation detection and measuring instruments that will be used for radiation protection, including survey and monitoring instruments and quantitative measuring instruments needed to monitor the adequacy of radioactive materials containment and contamination control.

“Radiation monitoring instruments will be calibrated by a person qualified to perform survey meter calibrations.”

1. The manufacturer:
2. Medical Physics Consultants: (NRC License # 21-20153-01)
3. Any authorized user licensed to perform survey meter calibrations as a service.

DOSE CALIBRATOR AND OTHER EQUIPMENT USED TO MEASURE DOSAGES OF UNSEALED BYPRODUCT MATERIAL

8.17 Item 9

Equipment used to measure dosages will be calibrated in accordance with nationally recognized standards (e.g., ANSI) or the manufacturer's instructions.

RADIATION PROTECTION PROGRAM

8.20 Item 10

1. The RSO or delegate will promptly review all film or TLD exposure reports to look for workers or groups of workers whose reported exposures are unusual.
2. All individuals who are occupationally exposed to radiation on a regular basis will be issued a film or TLD whole body monitor.
3. All individuals who handle radioactive material on a regular basis will be issued a film or TLD finger monitor.
4. All individuals who are occupationally exposed to significant radiation levels on an occasional basis, such as nurses caring for radiopharmaceutical therapy or implant patients, will be issued a whole body monitor when caring for those patients.
5. Other individuals who are exposed to radiation on an occasional basis such as security personnel who deliver packages, secretarial personnel who work in the nuclear medicine clinic but do not work with patients, and nurses who occasionally care for patients who have received diagnostic dosages will not normally be issued exposure monitors.
6. All film and TLD badges will be changed on a monthly or quarterly basis.
7. We will use a NVLAP accredited dosimetry processor.

OCCUPATIONAL DOSE

8.22 Item 10

"Either we will perform a prospective evaluation demonstrating that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits in 10 CFR Part 20 or we will provide dosimetry that meets the requirements listed under "Criteria in NUREG-1556, Vol. 9, Consolidated Guidance about Materials Licenses: Program specific Guidance About Medical Licensees.

AREA SURVEYS

8.23 Item 10

"We have developed and will implement and maintain written procedures for area surveys in accordance with 10 CFR 20.1101 that meet the requirements of 10 CFR 20.1501 and 10 CFR 35.70"

SAFE USE OF UNSEALED LICENSED MATERIAL

8.24 Item 10

"We have developed and will implement and maintain procedures for safe use of unsealed byproduct material that meet the requirements of 10 CFR 20.1101 and 10 CFR 20.1301"

SPILL PROCEDURES

8.25 Item 10

"We have developed and will implement and maintain written procedures for safe response to spills of licensed material in accordance with 10 CFR 20.1101"

MINIMIZATION OF CONTAMINATION

8.27 Item 10

WASTE MANAGEMENT

8.28 Item 11

"We have developed and will implement and maintain written waste disposal procedures for licensed material in accordance with 10 CFR 20.1101, that also meet the requirements of the applicable section of Subpart K to 10 CFR Part 20 and 10 CFR 35.92."

FEES

8.29 Item 12

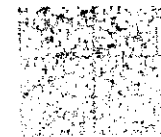
Refer to NRC Form 313

CERTIFICATION

8.30 Item 13

Refer to NRC Form 313

MICHIGAN HEART
5325 Elliott Drive
Suite 202
Ypsilanti, MI 48197



POSTNET
\$ 01.830
U.S. MAIL

United States Nuclear Regulatory Commission
Region III, Office of Materials Licensing
2443 Warrenville Rd.
Suite 210
Lisle, IL 60532-4352

