

National Physics Consultants

1296 Russell Drive
Bolivar, OH 44612
Telephone 1-888-456-5255

Facsimile (330)878-9021
E-mail: Sharon@npc-link.com
www.npc-link.com

12/6/05

Anthony McFarlane, MD
1830 Harper Road
Beckley, WV 25801

RE: New License Application

Dear Dr McFarlane:

Attached please find an application for your NRC license. In order for the application to be complete, it must be supported with the information below:

Read the application carefully for completeness and accuracy. If any changes are made, please be sure we have a copy of the changes as submitted.

Have the certifying official of your organization sign and date Item #13 toward the bottom of form NRC 313.

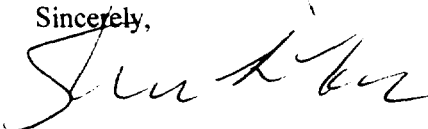
Attach a check for \$2100.00 payable to: U.S. Nuclear Regulatory Commission.

Retain one "copy" for your files and send as registered mail two copies to the address below:

U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

It is likely that you will receive from the commission routine questions regarding the application. Please fax these questions to my office at 330-878-9021 and I will prepare the response. If you have any questions on the enclosed document, please do not hesitate to contact me.

Sincerely,



Sharon L. Long, LMP
Physicist

Br. 1

LL 31113

03037106

02220

(47-31113-01)

RECEIVED
DEC 13 11:22

NRC FORM 313

(6-93)

10 CFR 30, 32, 33
34, 35, 36, 39 and 40

U. S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0120

EXPIRES 6-30-96

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 9 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. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0120), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503

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 WITH

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS

IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND,
MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA,
RHODE ISLAND, OR VERMONT. SEND APPLICATIONS TO

LICENSING ASSISTANT SECTION
NUCLEAR MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO
RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA,
SEND APPLICATIONS TO

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION II
61 Forsyth Street NW, SUITE 23 T 85
ATLANTA, GA 30303-3415

IF YOU ARE LOCATED IN:

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

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION
REGION III
801 WARRENVILLE ROAD
LISLE, IL 60532-4351

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW
MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING,
SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-8064

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND U.S.
TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS TO

RADIOACTIVE MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION V
1450 MARIA LANE
WALNUT CREEK, CA 94596-5368

630371106

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 _____
☐ C. RENEWAL OF LICENSE NUMBER _____

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

Medical Imaging Technologies
1830 Harper Road
Beckley, WV 25801

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Mobile Service

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Sharon L. Long
National Physics Consultants

TELEPHONE NUMBER 330-878-8057

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	INDIVIDUALS 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 \$ 2300.00
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

Anthony E. Farlane 12/12/05

FOR NRC USE ONLY

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

DATE

138104

NMSS/RGNI MATERIALS-002

Medical Imaging Technologies

Item #5 and #6, RADIOACTIVE MATERIAL, AMOUNT AND PURPOSE: Refer to Attachment 5.

Item #7 RADIATION SAFETY OFFICER: Refer to Attachment #7.1

Item #7 AUTHORIZED USERS: Refer to Attachment 7.1.

Item #8.1, TRAINING PROGRAM: We will establish and implement the training program that is enclosed as Attachment 8.1.

Item #9 FACILITIES AND EQUIPMENT:

- a. Our facilities and equipment diagram is enclosed as Attachment 9.1
- b. Radiation monitoring instruments will be calibrated by a person qualified to perform survey meter calibrations.
- c. A list of equipment is attached as item 9.2 We reserve the right to upgrade our survey instruments as necessary as long as they are adequate to measure the type and level of radiation for which they are used.
- d. Equipment used to measure dosages will be calibrated in accordance with nationally recognized standards or the manufacturer's instructions.

Item #9.1 THERAPY UNIT CALIBRATION AND USE : NA

Item #9.2 OTHER EQUIPMENT AND FACILITIES: NA

Item # 10 RADIATION PROTECTION PROGRAM:

- a. Either we will perform a prospective evaluation demonstrating that unmonitored individuals are not likely to receive, in any 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 Use Licenses" dated October 2002.
- b. 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.
- c. We have developed and will implement and maintain procedures for the safe use of unsealed byproduct material that meet the requirements of 10 CFR 20.1101 and 20.1301.

- d. We have developed and will implement and maintain procedures for the safe responses to spills of licensed materials in accordance with 10 CFR 20.1101

Item # 10.1 SAFETY PROCEDURES AND INSTRUCTIONS FOR REMOTE AFTERLOADING UNITS: NA

Item #10.2 INSTALLATION, MAINTENANCE, ADJUSTMENT, REPAIR, AND INSPECTION OF THERAPY DEVICES CONTAINING SEALED SOURCES: NA

Item #11.1, WASTE MANAGEMENT: 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 Support K to 10 CFR Part 20 and 10 CFR 35.92

Item #12, Mobile Service: Refer to Attachment 12

Attachment 5

Name of Corporation/Individual Applying for License: Medical Imaging Technologies

BYPRODUCT MATERIAL	AMOUNT	PURPOSE
Material in 10 CFR 35.200	As needed	Medical use

Att.5

Page 1 of 1

Prepared: 12/6/2005

Lic. # New

Attachment 7.1

AUTHORIZED USERS FOR MEDICAL USE

Name of Corporation/Individual Applying for License: **Medical Imaging Technologies**

AUTHORIZED USER

AUTHORIZATION

Anthony McFarlane, MD

10 CFR 35.200

The Radiation Safety Officer for this license is: Anthony McFarlane, MD

Please refer the Raleigh Cardiology Clinic's NRC license #47-30903-01 for verification of training and experience for the above noted physician

Att.7.1

Page 1 of 1

Prepared: 12/6/2005

Lic. # New

Attachment 8.1

Training Program

Name of Corporation/Individual Applying for License: **Medical Imaging Technologies**

The following identifies the groups of workers who will receive training and the method and frequency of training. Records of training will include a list of attendees, dates, and topics and will be retained for three years.

<u>INDIVIDUALS</u>	<u>FREQUENCY</u>	<u>METHOD</u>
Chief Nuclear Medicine Technologist	Per the model program	Review by RSO, authorized user and/or as provided by our visiting consultants.
Nuclear Medicine Technologist	Per the model program	Review by RSO, authorized user, Chief Nuclear Medicine Technologist and/or as provided by our visiting consultants.
Other staff as appropriate	At orientation and annually thereafter	Review by RSO, authorized user, Chief Nuclear Medicine Technologist and/or participation in health physics consultations or review of the consulting reports as provided by our visiting consultants.

It may not be assumed that safety instruction has been adequately covered by prior occupational training, board certification, etc. Site-specific training will be provided for all workers. Ancillary personnel (e.g., nursing, clerical, housekeeping, security) whose duties may require them to work in the vicinity of radioactive material (whether escorted or not) need to be informed about radiation hazards and appropriate precautions. All training will be tailored to meet the needs of the individuals in attendance.

Personnel will be instructed:

1. Before assuming duties with, or in the vicinity of, radioactive materials.
2. During annual refresher training.
3. Whenever there is a significant change in duties, regulations, or the terms of the license.

Instruction for individuals in attendance will include the following subjects:

- Basic radiation biology, e.g., interaction of ionizing radiation with cells and tissues (10 CFR 19.12)
- Basic radiation protection to include concepts of time, distance, and shielding (10 CFR 19.12)
- Concept of maintaining exposure ALARA (10 CFR 20.1101)
- Risk estimates, including comparison with other health risks (10 CFR 19.12)
- Posting requirements (10 CFR 20.1902)
- Proper use of personnel dosimetry (when applicable) (10 CFR 20.1201)
- Access control procedures (10 CFR 20.1601, 10 CFR 20.1802)
- Proper use of radiation shielding, if used (10 CFR 19.12)
- Patient release procedures (10 CFR 35.75)
- Instruction in procedures for notification of the RSO and AU, when responding to patient emergencies or death, to ensure that radiation protection issues are identified and addressed in a timely manner. The intent of these procedures should in no way interfere with or be in lieu of appropriate patient care. (10 CFR 19.12)
- Occupational dose limits and their significance (10 CFR 20.1201)
- Dose limits to the embryo/fetus, including instruction on declaration of pregnancy (10 CFR 20.1208)

- Workers right to be informed of occupational radiation exposure (10 CFR 19.13)
- Each individual's obligation to report unsafe conditions to the RSO (10 CFR 19.12)
- Applicable regulations, license conditions, information notices, bulletins, etc. (10 CFR 19.12)
- Where copies of the applicable regulations, the NRC license, and its application are posted or made available for examination (10 CFR 19.11)
- Proper recordkeeping required by NRC regulations (10 CFR 19.12, 10 CFR 35.27)
- Appropriate surveys to be conducted, including surveys of all material leaving radioactive material areas (10 CFR 20.1501)
- Proper use of required survey instruments (10 CFR 20.1501)
- Emergency procedures (10 CFR 19.12)
- Decontamination and release of facilities and equipment (10 CFR 20.1406, 10 CFR 30.36)
- Dose to individual members of the public (10 CFR 20.1301)
- Licensee's operating procedures (e.g., survey requirements, instrument calibration, waste management, sealed source leak testing) (10 CFR 35.27)

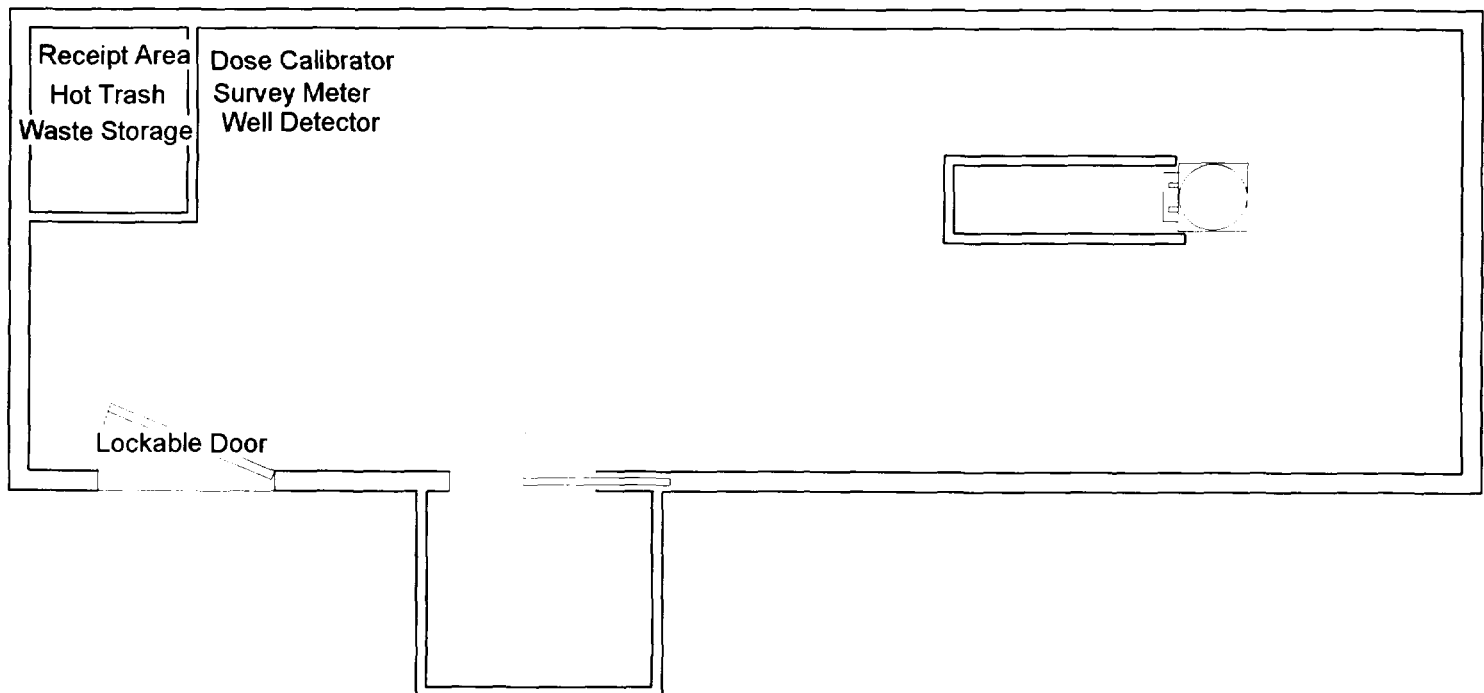
A Question and answer period will be provided.

Att
#9.1

Medical Imaging Technologies

2005

Shielding is adequate to assure
that no individual receives
exosures in wxcess of those
identified in 10 CFR Part 20



Attachment 9.2

Equipment

Name of Corporation/Individual Applying for License: Medical Imaging Technologies

Survey Meter	Ludlum 14 C or equivalent
Wipe Test Counter	Ludlum 2200 or CRC 15W or Equivalent
Dose Calibrator	Capintec 127R or CRC 15W or Equivalent

Attachment 12

Mobile Service Use

Name of Corporation Applying for License: **Medical Imaging Technologies**

Provisions of the mobile service

1. We confirm that we will obtain a letter signed by the management of each client permitting the use of byproduct materials at the client address. This document will clearly delineate the authority and responsibility of the licensee and the client.
2. Radioactive materials will be delivered to the occupied mobile coach .
3. The radiation safety training program will include training for the coach driver.
4. A survey meter with a range of 1 mRem to 1000 mRem will be available on the coach. (ex-Ludlum 14c) This unit will be checked for proper operation at the beginning of each day of use.
5. A well detector with the capability of measuring removable contamination in DPM will be available of the coach. (ex-Ludlum 2200)
6. Prior to leaving a client address, surveys will be performed to assure that contamination is not present.
7. Only unit doses of materials will be used for patient doses. Dose amounts will be verified in accordance with 10 CFR 35.63.
8. Residual radioactive materials will be decayed on the coach. The material decayed on the coach it will be placed in a leaded trash receptacle, decayed until radiation measurements of the material cannot be distinguished from background radiation, and discarded as required.
9. We will develop and implement transportation emergency procedures. These procedures will be readily available to the driver of the mobile coach. These procedures will include the provisions identified in appendix V of NUREG 1556, Volume 9.
10. Radiation measurements will be made exterior to the coach to assure that no member of the general public will receive exposures in excess of 100 mRem/yr. Additionally, in the event that it would be likely that exterior measurements exceed 2 mr/hr, a caution sign will be placed on the exterior of the coach instructing members of the general public to stay back at least 6 feet.

EMERGENCY~ INVOLVING MOTOR VEHICLES ACTING AS CARRIERS OF RADIOACTIVE MATERIALS

Driver is to take the following immediate action:

Do not touch any open or broken containers.

Notify the Radiation Safety Officer immediately. If you must use a telephone to notify the Radiation Safety Officer, if possible, have someone maintain security over the vehicle and radioactive material and keep bystanders away while calls are being made.

Keep all people away from the radioactive material.

Stay at the scene until The Radiation Safety Officer provides explicit instructions specific to the incident and/or arrives on the scene.

If the accident involves a spill, the Radiation Safety Officer will determine if the spill meets the criteria in CFR Title 10 Section 20.2202 and notify the NRC Region I Office immediately otherwise the regional NRC office will be notified as soon as possible.

All traffic should be detoured around the scene of an accident. If this is not possible, vehicles should be moved the shortest distance necessary to clear the right-of-way. If radioactive material is spilled, passage through areas should be prevented unless absolutely necessary. If the right-of-way must be cleared before assistance has arrived; the spill should be washed to shoulders or right-of-way with minimum dispersal or wash water, or covered with at least four inches of earth or sand.

If the accident involves wreckage and a person is believed to be alive and entrapped, every possible effort should be made to rescue him/her.

The area of the accident should be restricted. The public should be kept as far from the scene as is practical. Local authorities should make only necessary entries and investigations into the accident area. No attempt should be made to open or examine contained material. No attempt should be made to clean up any debris or material involved in the accident prior to the arrival of experienced help.

Any persons who have had possible contact with the radioactive material should be segregated and confined until they can be examined further. The names and addresses of those involved should be obtained.

The injured should be removed from the area of the accident with as little contact as possible and held at a transfer point. All life-saving measures should be performed promptly, but elective first aid and surgical procedures should be delayed until advice or help can be obtained from a physician familiar with radiation medicine. Except in extreme emergency, patients should not be moved to local hospital or doctor's office before a radiological survey has been made.

If the accident involves fire, attempts to extinguish it should be made from as great a distance as possible. The fire should be treated as one involving toxic chemicals. Suspected material should not be handled until it has been monitored and released by monitoring personnel. Clothing and tools used at the fire should be segregated until they can be checked by the monitoring teams.

Eating, drinking, or smoking in the area of the accident should be prohibited. Food or drinking water which may have been in contact with material from the accident should not be used.

Emergency Contact Telephone Numbers

Primary

Secondary

RSO 304-253-6227 -

Technologist 304-253-6227 -

NRC Safety Hotline 1-800-7403

This is to acknowledge the receipt of your letter/application dated

12/6/2005, and to inform you that the initial processing which includes an administrative review has been performed.

☒ New License Application (02037106)
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 138104.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

BETWEEN: : (FOR LFMS USE)
: INFORMATION FROM LTS
: -----
:
License Fee Management Branch, ARM : Program Code: 02220
and : Status Code: 3
Regional Licensing Sections : Fee Category: _____
: Exp. Date: 0
: Fee Comments: _____
: Decom Fin Assur Req'd: _
: ::::::::::::::::::::::::::::::::::::::

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: MEDICAL IMAGING TECHNOLOGIES
Received Date: 20051215
Docket No: 3037106
Control No.: 138104
License No.: 47-31113-01
Action Type: New Licensee

2. FEE ATTACHED

Amount: 82,100.00
Check No.: 799990

3. COMMENTS

Signed *[Signature]*
Date 12/21/07

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

1. Fee Category and Amount: _____

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

Amendment _____
Renewal _____
License _____

3. OTHER _____

Signed _____
Date _____