



October 29, 2009

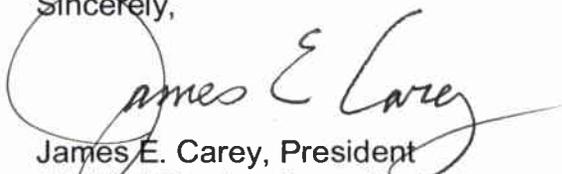
UNITED STATES NUCLEAR REGULATORY COMMISSION
Region III, Materials Licensing Section
2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352

**Re: Medical Physics Consultants, Inc., No. 21-20153-01
Control Number: 317754**

1. Please add the following individuals:
 - a. Robert M. Allman, BS,
Training and Experience documentation is enclosed for your review.
 - b. Adam E. Arndt, MS,
Training and Experience documentation is enclosed for your review.
 - c. Lisa M. Bosworth, MS
Ms. Bosworth is currently listed as the Radiation Safety Officer on Utah License UT0600514. A copy is enclosed for your review.
 - d. Sharon A. Updike, BA
Ms. Updike is currently listed as the Radiation Safety Officer on NRC License 13-32478-01. A copy is enclosed for your review.

If you have any questions or require additional information, please contact me at 734-662-3197.

Sincerely,


James E. Carey, President
Medical Physics Consultants, Inc

2309 Shelby Avenue
Ann Arbor, MI 48103
(734) 662-9224 Fax
(734) 662-3197



70 E. 91st Street, Suite 106
Indianapolis, IN 46240
(317) 581-1931 Fax
(317) 581-1911



4806 Mile High Drive
Salt Lake City, UT 84124
(801) 272-2952 Office & Fax



N7375 Crystal Ridge Drive
Beaver Dam, WI 53916
(920) 885-9872 Fax
(920) 885-9870

Name: Adam E. Arndt, MS,

Training and Experience

Description of Training	Location of Training	Clock Hours	Dates of Training
Radiation physics and instrumentation	Idaho Sate University Eastern ID College HPS (PEP course)	192 8 3	98-2000 2006 2004
Radiation Protection	Idaho State University	496	99-2004
Mathematics pertaining to the use and measurement of radioactivity	Idaho State University	224	98-2002
Chemistry of radioactive material for medical use	Idaho State University HPS (PEP)	224 3	98-2001 2004
Radiation Biology	Idaho State University	96	2000-03
Total Hours of Training: 1246			

Supervised Radiation Safety Experience

Description of Experience	Location of Training/License or Permit Number of Facility	Dates of Training
Shipping, receiving, and performing related radiation surveys		
Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides	University of Utah: UT1800001	June 2004-July 2007
Securing and controlling radioactive material	University of Utah: UT1800001	June 2004-July 2007
Using administrative controls to avoid mistakes in administration of radioactive material	University of Utah: UT1800001	June 2004-July 2007
Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedure	University of Utah: UT1800001	June 2004- July 2007
Using emergency procedures to control radioactive material	University of Utah:UT1800001	June 2004- July 2007
Disposing of radioactive material	University of Utah: UT1800001	June 2004- July 2007
Licensed Material Used 35.100 – as needed, 35.200 – as needed, 35.300 – I-131 – 2 Ci 35.600 – Ir-192 – 13 Ci	University of Utah: UT1800001	June 2004- July 2007

Instrument Calibration:

Classroom Education (1997-2004): Idaho State University Health Physics Instrumentation Lecture and Laboratory (3 credit hours done in 1999): Operation and Calibration of Pressurized Ion Chamber, GM, Gas Flow Proportional Counter, LSC, NaI(Tl), HPGe, Alpha spectrometer (PIPS), TLD, and BF3 Neutron detector. Calibrations included exposure rate calibration, efficiency calibration, and energy calibration. Also covered in various courses in Bachelor and Masters program.

Internship (2000-2004): Idaho State University Environmental Assessment Lab: Operation and Calibration of Gas Flow proportional counter, HPGe, LSC,
Full time (2004-2007):

University of Utah (License # UT1800001) RSO Karen Langley:
Exposure Rate Calibration using 50 Ci Cs-137 source, point source efficiency calibration for GM and NaI(Tl) survey meters.

Sealed Source Leak Test:

Internship (2000-2004): Idaho State University Environmental Assessment Lab: Sealed source leak tests for calibration standards used for HPGe and Gas Flow proportional counters

Full time (2004-2007): University of Utah (License # UT1800001) RSO Karen Langley:
Leak tests of sealed sources used for Blood Irradiation, Instrument calibration, and Brachytherapy.

Current MPC duties (2007 to current) RSO James Carey
Leak tests of sealed sources

Generator Elution, Kit Prep, Linearity, Geometry:

Full time (2004-2007): Compliance oversight for all items inquired about for University of Utah Nuclear Medicine Department (License # UT1800001) RSO Karen Langley,
Compliance oversight for all items Intermountain Radiopharmacy (License # UT 1800145) RSO Karen Langley.

Current MPC duties (2007 to current). RSO James Carey

Name: Robert M. Allman, BS

Training and Experience

Description of Training	Location of Training	Clock Hours	Dates of Training
Radiation physics and instrumentation	Purdue University	154	2004-2006
	Oregon State University	69	2008-2009
Radiation Protection	Purdue University	120	2005
	Oregon State University	77	2008-2009
Mathematics	Purdue University	153	2001-2003
Chemistry	Purdue University	425	2002-2006
Radiation Biology	Purdue University	34	2005
	Oregon State University	44	2008
Total Hours of Training: 1076			

Supervised Radiation Safety Experience

Description of Experience	Location of Training/License or Permit Number of Facility	Dates of Training
Shipping, receiving, and performing related radiation surveys	Purdue University / NRC 13-02812-04	June 2005 - Sept. 2006
Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides	Purdue University / NRC 13-02812-04 Medical Physics Consultants / NRC 21-20153-01	June 2005 - Sept. 2006 Sept. 2006 – July 2009
Securing and controlling radioactive material	Purdue University / NRC 13-02812-04	June 2005 - Sept. 2006
Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedure	Purdue University / NRC 13-02812-04 Medical Physics Consultants / NRC 21-20153-01	June 2005 - Sept. 2006 Sept. 2006 – July 2009
Using emergency procedures to control radioactive material	Purdue University / NRC 13-02812-04	June 2005 - Sept. 2006
Disposing of radioactive material	Purdue University / NRC 13-02812-04 Medical Physics Consultants / NRC 21-20153-01	June 2005 - Sept. 2006 Sept. 2006 – July 2009
Licensed Material Used 35.100 – as needed, 35.200 – as needed, 35.300 – I-131 – 2 Ci	Medical Physics Consultants / NRC 21-20153-01	Sept. 2006 – July 2009

**Environmental Technician; Radiological and Environmental Management;
Purdue University, West Lafayette, IN (Summer '05 – Fall '06)**

Meters:

- Calibrated and checked efficiency of GMs
- Adjusted RAM and CAM settings
- Experience with: Ion Chamber, NaI, LSC, Ge(Li), Neutron Detection

Waste Management:

- Monitored disposal, storage, and shipment of liquid, solid, and hazardous mixed and low level wastes

Other:

- Trained new staff
- Participated in radiation staff meetings
- Assisted with implementation of laser safety program
- Ordering/Check-in/Delivery of radioisotopes
- Decontamination/Decommissioning Laboratories
- Analytical and diagnostic X-ray compliance auditing
- Lab surveys, Leak tests, Reactor water sampling, and Bioassays
- Giving EME, X-ray, Laser, Irradiator, and Ionizing radiation training

Official Use Only – Security-Related Information

NRC FORM 374

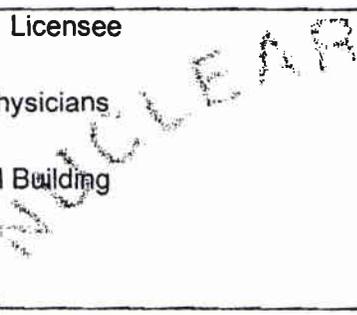
PAGE 1 OF 2 PAGES

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 06

MATERIALS LICENSE

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.



<p>Licensee</p> <p>1. Heart & Vascular Physicians</p> <p>2. Harper Professional Building 4160 John R. Suite 510 Detroit, MI 48201</p>	<p>In accordance with letter dated August 22, 2008.</p> <p>3. License number 21-32562-01 is amended in its entirety to read as follows:</p> <p>4. Expiration date April 30, 2015</p> <p>5. Docket No. 030-36892 Reference No.</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Any byproduct material permitted by 10 CFR 35.200</p>	<p>7. Chemical and/or physical form</p> <p>A. Any</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. As needed</p>
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9. Authorized use:

A. Any imaging and localization study permitted by 10 CFR 35.200.

CONDITIONS

- 10. Licensed material may be used or stored only at the licensee's facilities located at Harper Professional Building, 4160 John R., Suite 510, Detroit, Michigan and 2021 Monroe Street, Suites 202-203, Dearborn, Michigan.
- 11. The Radiation Safety Officer for this license is **Aarti H. Patel, M.S.**
- 12. Licensed material is only authorized for use by, or under the supervision of:
 - A. Individuals permitted to work as an authorized user, authorized nuclear pharmacist, and/or authorized medical physicist in accordance with 10 CFR 35.13 and 35.14.
 - B. The following individuals are authorized users for medical use as indicated:

Official Use Only – Security-Related Information

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

PAGE 2 of 2 PAGES

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number
21-32562-01

Docket or Reference Number
030-36892

Amendment No. 06

Authorized Users Material and Use

Won Chae, M.D. 10 CFR 35.200.

Delair O. Gardi, M.D. 10 CFR 35.200.

Mahir Elder, M.D. 10 CFR 35.200.

13. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d) for establishing decommissioning financial assurance.
14. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
15. 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. This license condition applies only to those procedures that are required to be submitted in accordance with the regulations. Additionally, this license condition does not limit the licensee's ability to make changes to the radiation protection program as provided for in 10 CFR 35.26. 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 February 18, 2005, and
 - B. Letters dated March 1, 2006, May 8, 2006, April 13, 2007, July 16, 2007 (received July 25, 2007), July 16, 2007 (received July 31, 2007), October 2, 2007 and August 23, 2007; and
 - C. Facsimile letter dated May 19, 2006,

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date OCT 10 2008

By James R. Mullauer
James R. Mullauer M.H.S.
Materials Licensing Branch
Region III

**UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF RADIATION CONTROL
RADIOACTIVE MATERIAL LICENSE**

Pursuant to Utah Code Ann. Title 19, Chapter 3 and the Radiation Control Rules, Utah Administrative Code R313, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material designated below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This licensee is subject to all applicable rules and orders now or hereafter in effect and to any conditions specified below.

LICENSEE)	3. License Number UT 0600514
)	Amendment # 02
1. Name Perspectives Imaging)	*****
)	4. Expiration Date
2. Address 91 West 1750 North)	June 30, 2013
Centerville, Utah 84014)	*****
)	5. License Category - 7-b
)	In accordance with letter dated
)	December 19, 2008 this license is
)	amended in its entirety.

6. Radioactive material (element and mass number)	7. Chemical and/or physical form	8. Maximum quantity licensee may possess at any one time
A. Any Positron Emission Tomography (PET) material identified in R313-32 [incorporating 10 CFR 35.200 by reference]	A. Any Positron Emission Tomography (PET) radiopharmaceutical identified in R313-32 [incorporating 10 CFR 35.200 by reference]	A. As needed
B. Strontium-82	B. Strontium-82 to Rubidium-82 generator	B. 7.4 gigabecquerels (200 mCi)
C. Rubidium-82	C. Strontium-82 to Rubidium-82 generator	C. 7.4 gigabecquerels (200 mCi)
D. Strontium-85	D. Strontium-82 to Rubidium-82 generator	D. 37 gigabecquerels (1000 mCi)
E. Depleted Uranium	E. Shielding	E. 999 kg

9. AUTHORIZED USE

A. Medical use described in R313-32 [incorporating 10 CFR 35.200 by reference].

B. through D. For receipt, possession and elution of a Strontium-82 to Rubidium-82 generator. Use of radiopharmaceuticals from elution limited to uses listed in License Condition 9.A of this license.

**UTAH DIVISION OF RADIATION CONTROL
RADIOACTIVE MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License # UT 0600514
Amendment # 02

E. Shielding of Strontium-82 to Rubidium-82 generator.

CONDITIONS

10. Locations of Use:
 - A. Perspectives Imaging's PET/CT Trailer located at Ogden Regional Medical Center, 5475 South 500 East, Ogden, Utah;
 - B. Perspectives Imaging's PET/CT Trailer located at LDS Hospital, 8th Avenue and C Street, Salt Lake City, Utah; and
 - C. Licensed material may be used at temporary job sites of the licensee anywhere in the State of Utah where the Division maintains jurisdiction provided that the licensee has met the requirements of R313-32 [incorporating 10 CFR 35.80 by reference] prior to first use at the temporary job site.
11.
 - A. The Mobile Positron Emission Tomography (PET) Trailer shall be parked, for use or storage, on a trailer pad meeting the specific weight requirements of the trailer.
 - B. Parking of the Mobile PET Trailer for use or storage, as required by Condition A. of this License Condition, shall be in secured off-street parking under licensee control. Public rights-of-way are not considered part of the address of the client.
12. The licensee shall notify the Executive Secretary within 30 days of the first day use occurs at each temporary job site and within 30 days of the last contracted day of use at each temporary job site. The notifications to the Executive Secretary for each new temporary job site shall include a copy of the letter meeting the requirements of R313-32 [incorporating 10 CFR 35.80(a)(1) by reference] and shall state that the notification is for informational purposes only.
13. Installation, removal and/or replacement of the Germanium-68 sealed source(s) installed in the Licensee's Mobile PET Trailer, and any servicing or calibration testing shall only be performed by the manufacturer's representatives or persons specifically authorized by the Executive Secretary, the U.S. Nuclear Regulatory Commission, or an Agreement State to perform such services.
14.
 - A. Consultant Radiation Safety Officer: Lisa Bosworth, M.S.
 - B. Facility Contact: Charles Neil, Chief Operating Officer
15. Lisa Bosworth, M.S., may make commitments for the licensee in accordance with licensee's letter dated December 29, 2008.

UTAH DIVISION OF RADIATION CONTROL
RADIOACTIVE MATERIALS LICENSE
SUPPLEMENTARY SHEET

License # UT 0600514
Amendment # 02

16. Licensed material is only authorized for use by, or under the supervision of:

- A. Individuals permitted to work as an authorized user in accordance with R313-32 [incorporating 10 CFR 35.13 and 35.14 by reference].
- B. The following individuals are authorized users for medical use:

<u>Authorized Users</u>	<u>Material and Use</u>
Sandra J. Althaus, M.D.	R313-32 [incorporating 10 CFR 35.200 by reference]
John Vincent Catasca, M.D.	R313-32 [incorporating 10 CFR 35.200 by reference]
Hannah Lim Chung, M.D.	R313-32 [incorporating 10 CFR 35.200 by reference]
David Ray Dedrickson, M.D.	R313-32 [incorporating 10 CFR 35.200 by reference]
Paul Russell Jensen, M.D.	R313-32 [incorporating 10 CFR 35.200 by reference]

<u>Authorized Users</u>	<u>Authorized Users</u>
James Neldon Jones, M.D.	R313-32 [incorporating 10 CFR 35.200 by reference]
Jason A. Kirkham, M.D.	R313-32 [incorporating 10 CFR 35.200 by reference]
Cole Joseph Panushka, M.D.	R313-32 [incorporating 10 CFR 35.200 by reference]
Christopher J. Parr, M.D.	R313-32 [incorporating 10 CFR 35.200 by reference]
Trenton McNeil Wright, M.D.	R313-32 [incorporating 10 CFR 35.200 by reference]

17. A. The licensee shall not administer to humans any radiopharmaceutical that contains more than 0.02 kilobecquerel of strontium-82 per megabecquerel of rubidium-82 chloride injection (0.02 microcurie of strontium-82 per millicurie of rubidium-82 chloride); or more than 0.2 kilobecquerel of strontium-85 per megabecquerel of rubidium-82 chloride injection (0.2 microcurie of strontium-85 per millicurie of rubidium-82).
- B. Prior to each patient use, the licensee shall measure the elution concentrations of strontium-82 and strontium-85 to demonstrate compliance with part A of this License Condition.

**UTAH DIVISION OF RADIATION CONTROL
RADIOACTIVE MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License # UT 0600514
Amendment # 02

- C. The licensee shall retain a record of each measurement in accordance with R313-32 [incorporating 10 CFR 35.2204 by reference].
18. The licensee may transport licensed material or deliver licensed material to a carrier for transport in accordance with the provisions of R313-19-100 "Transportation."
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. Additionally, this license condition does not limit the licensee's ability to make changes to the radiation protection program as provided for in R313-32 [incorporating 10 CFR 35.26 by reference.] The Utah Radiation Control Rules shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the rules.
- A. Application dated April 15, 2008 [LA# 139-2008]
 - B. Electronic mail dated June 19, 2008 [LA# 139-2008]
 - C. Facsimile transmittal received June 24, 2008 [LA# 139-2008]
 - D. Letter dated July 18, 2008 [LA# 247-2008]
 - E. Letter dated July 21, 2008 [LA# 247-2008]
 - F. Letter dated December 19, 2008 [LA# 416-2008]
 - G. Letter dated December 29, 2008 (allows Lisa Bosworth to make simple changes to license) [LA# 416-2008]

UTAH RADIATION CONTROL BOARD

Date Jan. 5, 2009


Dane L. Finerfrock, Executive Secretary

MATERIALS LICENSE

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.

<p style="text-align: center;">Licensee</p> <p>1. Portage Heart Care, P.C. Southlake Business Care</p> <p>2. One Tower Plaza 103 E. 89th Avenue Merrillville, IN 46410</p>	<p>In accordance with letter dated April 2, 2009,</p> <p>3. License number 13-32478-01 is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration date October 31, 2013</p> <hr/> <p>5. Docket No. 030-36408 Reference No.</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Any byproduct material permitted by 10 CFR 35.100</p> <p>B. Any byproduct material permitted by 10 CFR 35.200</p>	<p>7. Chemical and/or physical form</p> <p>A. Any</p> <p>B. Any</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. As needed</p> <p>B. As needed</p>
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9. Authorized Use:
- A. Any uptake, dilution and excretion study permitted by 10CFR 35.100.
 - B. Any imaging and localization study permitted by 10CFR 35.200.

CONDITIONS

- 10. Licensed material shall be used only at the licensee's facilities located at Southlake Business Care, 103 East 89th Avenue, One Tower Plaza, Merrillville, Indiana and 6375 US HWY 6, Suite B, Portage, Indiana.
- 11. The Radiation Safety Officer for this license is **Sharon A. Updike**.
- 12. Licensed material is only authorized for use by, or under the supervision of:
 - A. Individuals permitted to work as an authorized user in accordance with 10CFR 35.13 and 35.14.
 - B. The following individuals are authorized users for medical use as indicated:

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number
13-32478-01

Docket or Reference Number
030-36408

Amendment No. 02

Authorized Users

Material and Use

Kais J. Yehyaw, M.D.

10 CFR 35.100, 35.200

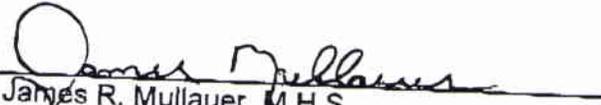
Abdul Kawamleh, M.D.

10 CFR 35.100, 35.200

13. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10CFR 30.35(d) for establishing decommissioning financial assurance.
14. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
15. 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. This license condition applies only to those procedures that are required to be submitted in accordance with the regulations. Additionally, this license condition does not limit the licensee's ability to make changes to the radiation protection program as provided for in 10 CFR 35.26. 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 September 5, 2003; and
 - B. Letters dated October 6, 2003, February 17, 2005 and March 24, 2005.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date MAY 01 2009

By 
James R. Mullauer, M.H.S.
Materials Licensing Branch
Region III

FROM:
MEDICAL PHYSICS CONSULTANTS
(734) 662-3197
2309 SHELBY AVE.
ANN ARBOR MI 48103

1 LBS 1 OF 1  **FOR UPS SHIPPING ONLY**



IL 603 9-03

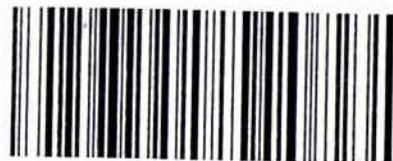


SHIP TO:

REGION III, MATERIALS LICENSING SEC
UNITED STATES NUCLEAR REG COMMISSIO
2443 WARRENVILLE ROAD, SUITE 210
LISLE IL 60532-4352

UPS GROUND

TRACKING #: 1Z 454 212 03 4715 6235



REF 1:amendment

BILLING: P/P

UNITED STATES NUCLEAR REG COMMISSIO
2443 WARRENVILLE RD
STE 210
LISLE IL 60532-3673

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0407 - 8380

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