

14 March 2006

J-3

Richard McKinley  
USNRC Region I  
475 Allendale Road  
King of Prussia, Pennsylvania

**License # 45-09207-01**  
**Docket # 03003333**  
**Control No. 137935**

**Re: Request for Additional Information for License Renewal**

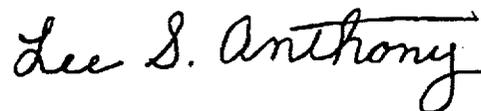
Mr. McKinley,

Below please find responses to your questions of 3/9/2006.

1. I have attached a new floor layout for the 6<sup>th</sup> floor where the patients undergoing Cs-137 low dose Brachytherapy are sequestered. Both of the test boxes were intended to point to room 664. I have moved the text box on the floor plan to indicate this.
2. Please find attached USNRC form 313A for Mr. James P. Nunn, MS to be added to our license application.

We hope this information is helpful to in the renewal of our USNRC materials license. If you should need any further information, please do not hesitate to contact me.

Sincerely,



Lee S. Anthony, Ph.D.  
C.H.P., C.R.P., C.M.P.  
Radiation Safety Officer/  
Authorized Medical Physicist  
Lewis-Gale Medical Center

Cc: James W. Thweatt, CEO

Lewis-Gale Medical Center Request for Additional Information  
14 Mach 2006 USNRC License #45-09207-01 Control #137935 Docket 03003333  
Ver 1.1

Page 1 of 1

137935  
NMS/RONI MATERIALS-002

Item 9  
Floor Plans

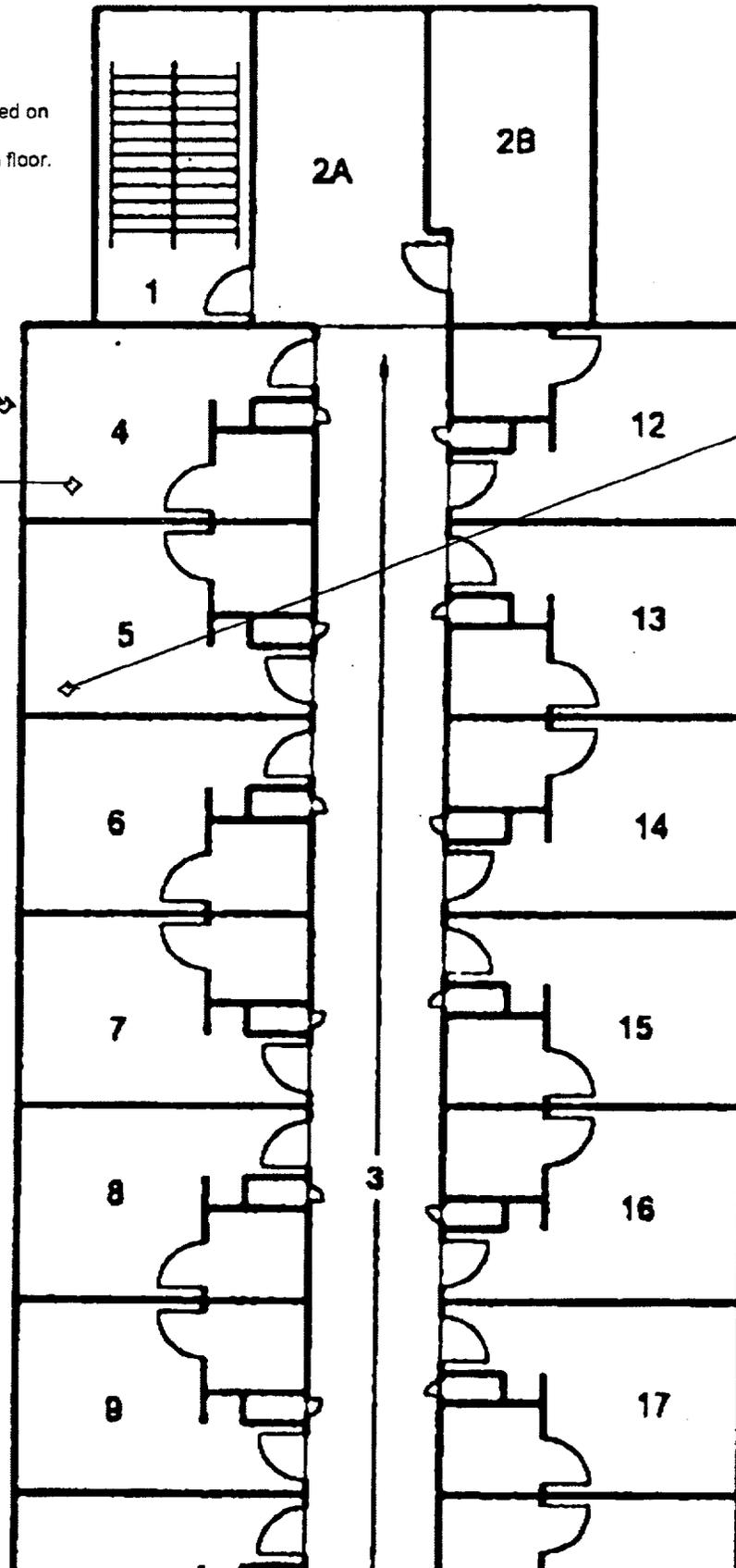
Lewis-Gale Medical Center  
License Renewal

Room 664 is located on  
the exterior of the  
hospital on the 6th floor.

Room 664 is reserved  
for patients undergoing  
Low Dose Rate  
Brachytherapy.

6th Floor Layout:  
Layout of patient holding area  
where patients who cannot be  
released under 35.75 will be  
sequestered

Any Patients in Room 665 have  
their head positioned adjacent  
to room 666 to minimize  
unnecessary exposure.



**MEDICAL PHYSICS  
SHIELDING RECOMMENDATIONS**

**RADIATION PHYSICS  
EMERGENCY CONSULTATION**



## **PHYSICS ASSOCIATES**

Lee S. Anthony, Ph.D.  
Certified Health Physicist  
Certified Medical Physicist  
Certified Radiologic Physicist

**5346 Peters Creek Road  
Roanoke, Virginia 24019  
Tel: (540) 563-0165  
Fax: (540) 563-0082**

Robert C. Hudson, M.S.  
Kay A. Saul, B.S.  
Lee S. Anthony, Jr., B.S.;M.A.  
James P. Nunn, B.S.

3 March 2006

US Nuclear Regulatory Commission  
Licensing Assistant Section  
475 Allendale Road  
King of Prussia, Pennsylvania

To Whom It May Concern:

This letter will serve as written attestation required by 10 CFR 35.51(b)(2) that will accompany USNRC form 313A for Mr. James P. Nunn, MS to be listed on Lewis-Gale Medical Center's USNRC materials license. (45-09207-01)

As this date Mr. Nunn has completed the requisite training in a facility described in 10 CFR 35.51(b)(1) and (c) in the applicable categories referenced in sections i,ii,iii, and iv of the above chapter. The training in remote afterloading units was completed in February of this year, and totaled 1 year. Mr. Nunn has attended and satisfactorily completed the manufacture specific course at the Nucletron training facility in Columbia, Maryland. (please find attached documentation)

I would heartily support the addition of Mr. Nunn on Lewis-Gale's materials license as an Authorized Medical Physicist (AMP). Should you have any further questions regarding this matter, please do not hesitate to contact me.

Sincerely,

Lee S. Anthony, Ph.D.  
C.H.P., C.R.P., C.M.P.  
Radiation Safety Officer  
Authorized Medical Physicist  
Lewis-Gale Medical Center

NRC FORM 313A (10-2005)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0120 EXPIRES: 10/31/2008
<b>MEDICAL USE TRAINING AND EXPERIENCE                  AND PRECEPTOR ATTESTATION</b>		

**PART I – TRAINING AND EXPERIENCE**

**Note:** Descriptions of training and experience must contain sufficient detail to match the training and experience criteria in the applicable regulation (10 CFR Part 35)

1. Name of Individual, Proposed Authorization (e.g., Radiation Safety Officer), and Applicable Training Requirements (e.g., 10 CFR 35.50)

James P. Nunn, MS    Authorized Medical Physicist    10 CFR 35.51(b)(c)

2. For Physicians, Podiatrists, Dentists, Pharmacists -- State or Territory Where Licensed

N/A

**3. CERTIFICATION**

a. Provide a copy of the board certification. *(Stop here if applying under 10 CFR Part 35, Subpart J or 35.590(a); continue if applying under other subparts.)*

b. Provide documentation in appropriate items 4 through 10 of training or clinical case work required by 35.50(e); 35.51(c); 35.290(c)(1)(ii)(G) for AU seeking 35.200 authorization; 35.390(b)(1)(ii)(G); 35.396(d)(1) and 35.396(d)(2); 35.590(c); or 35.690(c).

c. Provide completed Part II Preceptor Attestation, Items 11a through 11d.

Stop here after completing items 3a, 3b, and 3c when using board certification to meet 10 CFR Part 35 training and experience requirements.

**4. INDIVIDUALS IDENTIFIED ON A LICENSE OR PERMIT AS RADIATION SAFETY OFFICERS (RSO), AUTHORIZED USERS (AU), AUTHORIZED MEDICAL PHYSICISTS (AMP), OR AUTHORIZED NUCLEAR PHARMACISTS (ANP) SEEKING ADDITIONAL AUTHORIZATIONS**

a. Provide a copy of the license or broadscope permit listing the current authorization **and** (b) or (c)

b. Complete items 6c (and 10 when training is provided by an RSO, AMP, ANP, or AU) and preceptor items 11b through 11d to meet requirements for: RSO in 35.50(c)(2) or 35.50(e); or AU in 35.290(c)(1)(ii)(G) or 35.390(b)(1)(ii)(G) or 35.590(c) or 35.690(c); or AMP under 35.51(c).

c. Complete items 5, 6a, 6b, 10, and Preceptor items 11a through 11d to meet AU requirements in 35.396(a).

**5. DIDACTIC OR CLASSROOM AND LABORATORY TRAINING (optional for Medical Physicists)**

Description of Training	Location	Clock Hours	Dates of Training
Radiation Physics and Instrumentation	Physics Associates; Roanoke, Virginia	60 hours	2001-2004
	Virginia Polytechnic Institute	42 hours	8-12/2004 (semester)
Radiation Protection	Physics Associates; Roanoke, Virginia	60 hours	2001-2004
Mathematics Pertaining to the Use and Measurement of Radioactivity	Physics Associates; Roanoke, Virginia	60 hours	2001-2004
Radiation Biology	Physics Associates; Roanoke, Virginia	60 hours	2001-2004
Chemistry of Byproduct Material for Medical Use	Physics Associates; Roanoke, Virginia	60 hours	2001-2004
OTHER Nuclear and Particle and Physics	Virginia Polytechnic Institute and State University; Blacksburg, Va.	42 hours	1-5/2003 (semester)

NRC FORM 313A  
(10-2005)

U.S. NUCLEAR REGULATORY COMMISSION

**MEDICAL USE TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)****6a. WORK OR PRACTICAL EXPERIENCE WITH RADIATION**

Description of Experience	Name of Supervising Individual(s)	Location and Corresponding Materials License Number	Dates and/or Clock Hours of Experience
Planning, loading, and verification of Low dose rate Cs-137 implants.	Lee S. Anthony, Ph.D.	Lewis-Gale Medical Center 45-09207-01	2/2005-3/2006 27 hours
Sealed source inventory and leak test of Cs-137 brachytherapy sources, I-125 LDR sources, Ir-192 HDR sources, and calibration sources	Lee S. Anthony, Ph.D.	Lewis-Gale Medical Center 45-09207-01	2/2005-3/2006 25 hours
Conducting Radiation surveys around external beam linear accelerators for shieldign verification	Lee S. Anthony, Ph.D.	Various licensees under 45-17344-01 (Physics Associates)	6/1999-3/2006 100 hours
Conducting radiation surveys around high dose rate afterloaders and LDR Cesium safe	Lee S. Anthony, Ph.D.	Lewis-Gale Medical Center 45-09207-01	2/2005-3/2006 8 hours
Loading I-125 and Pd-103 Brachytherapy needles and surveying following load	Lee S. Anthony, Ph.D.	Augusta Medical Center 45-25527-01	6/1999-12/2001 46 hours
Full calibration of High Dose Rate remote afterloading units	Lee S. Anthony, Ph.D. and Robert Glossner, MS	Lewis-Gale Medical Center 45-09207-01	1/2005-3/2006 16 hours
I-131 as Tositumab (Bexxar)-calibration, dosimetry, and radiation safety during administration	Lee S. Anthony, Ph.D. and James Matthews, MD (AU)	Lewis-Gale Medical Center 45-09207-01	year 2005 2 hours

**6b. SUPERVISED CLINICAL CASE EXPERIENCE (describe experience elements in 6a)**

Radionuclide	Type of Use	No. of Cases Involving Personal Participation	Name of Supervising Individual	Location and Corresponding Materials License Number	Dates and/or Clock Hours of Experience
Cs-137	LDR Brachytherapy	9	Lee S. Anthony, Ph.D.	Lewis-Gale Medical Center 45-09207-01	2/2005-3/2006 27 hours
Ir-192	Full calibration of HDR remote afterloader	4	Lee S. Anthony, Ph.D.	Lewis-Gale Medical Center 45-09207-01	2/2005-3/2006 4 hours
I-125	loading and verification of LDR needles for implant	23	Lee S. Anthony, Ph.D.	Augusta Medical Center 45-25527-01	6/1999-12/2001 46 hours
Y-90	Instrument calibration/ verification	N/A	Lee S. Anthony, Ph.D.	Lewis-Gale Medical Center 45-09207-01	2/2005-3/2006
Ir-192	Patient treatment	60	Lee S. Anthony Ph.D.	Lewis-Gale Medical Center 45-09207-01	2/2005-3/2006 90 hours
I-131	Review of Written Directives	50	Lee S. Anthony, Ph.D.	Lewis-Gale Medical Center 45-09207-01	year 2005 25 hours
I-131	as Bexxar (Tositumab)	2	James Matthews, MD	Lewis-Gale Medical Center 45-09207-01	year 2005 12 hours

NRC FORM 313A (10-2005)		U.S. NUCLEAR REGULATORY COMMISSION	
MEDICAL USE TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)			
6c. TRAINING FOR SECTIONS 35.50(e), 35.51(c), 35.590(c), or 35.690(c)			
Training Element	Type of Training *	Location and Dates	
Nucletron customer training	Hands-on device operation, safety procedures, clinical use, and operation of Treatment Planning System	Nucletron, Inc. Columbia, Maryland 3/14-17/2005	
Bexxar I-131 Tositumab site training	procedures and protocols for calibration, dosimetry, and administration of I-131 Tositumab	Lewis-Gale Medical Center, Salem Virginia May 2005	

\* Types of training may include supervised (complete item 10 for 35.50(e), 35.51(c), and 35.690(c)), didactic, or vendor training.

**7. FORMAL TRAINING Physicians (for uses under 35.400 and 35.600) and Medical Physicists**

Degree, Area of Study or Residency Program	Name of Program and Location with Corresponding Materials License Number	Dates	Name of Organization that Approved the Program (e.g., Accreditation Council for Graduate Medical Education) and the Applicable Regulation (e.g., 10 CFR 35.490)
Master of Science, Physics	Virginia Polytechnic Institute and State University	8/2001-5/2005	Southern Association of Colleges and Schools

**8. RADIATION SAFETY OFFICER (RSO) – ONE-YEAR FULL-TIME EXPERIENCE**

YES Completed 1 year of full-time radiation safety experience (in areas identified in item 6a) under supervision.

N/A of \_\_\_\_\_ the RSO for License No. \_\_\_\_\_

**9. MEDICAL PHYSICIST – ONE-YEAR FULL-TIME TRAINING/WORK EXPERIENCE**

YES Completed 1 year of full-time training (for areas identified in item 6a) in therapeutic radiological physics (35.961) or medical physics (35.51) under the supervision of Lee S. Anthony, Ph.D.

N/A who is a medical physicist (35.961) or meets requirements for Authorized Medical Physicists (35.51);

**and**

YES Completed 1 year of full-time work experience (at location providing radiation therapy services described and for topics identified in item 6a) for (specify use or device) High Dose Rate Remote Afterloader Therapy

N/A under the supervision of Lee S. Anthony, Ph.D. who is a medical physicist (35.961) or meets requirements for Authorized Medical Physicists (35.51) (specify use or device) 10 CFR 35.51 (a)

NRC FORM 313A  
(10-2005)

U.S. NUCLEAR REGULATORY COMMISSION

MEDICAL USE TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

10. SUPERVISING INDIVIDUAL – IDENTIFICATION AND QUALIFICATIONS

The training and experience indicated above was obtained under the supervision of (if more than one supervising individual is needed to meet requirements in 10 CFR Part 35, provide the following information for each):

A. Name of Supervisor

Lee S. Anthony, Ph.D.

B. Supervisor is:

Authorized User

Authorized Medical Physicist

Radiation Safety Officer

Authorized Nuclear Pharmacist

C. Supervisor meets requirements of Part 35, Section(s) 51(a)(1-3)

for medical uses in Part 35, Section(s) N/A

D. Address

Lewis-Gale Medical Center  
1900 Electric Boulevard  
Salem Virginia 24153

E. Materials License Number

45-09207-01

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each. This part is not required to meet training requirements in 35.590 or Part 35, Subpart J (except 35.980).

I attest the individual named in Item 1:

11a.

has satisfactorily completed the requirements in Part 35, Section(s) and Paragraph(s) 51b(1-3) & c as documented in section(s) 5, 6, and 7 of this form.

11b. Select one

meets the requirements in  35.50(e)  35.51(c)  35.390(b)(1)(ii)(G)  35.690(c) for N/A types of use, as documented in section(s) 6(c) of this form.

11c.

- has achieved a level of competency sufficient to independently operate a nuclear pharmacy (for 35.980); **OR**
- has achieved a level of competency sufficient to function independently as an authorized Medical Physicist for Afterloader uses (or units); **OR**
- has achieved a level of radiation safety knowledge sufficient to function independently as a Radiation Safety Officer for a medical use licensee; **OR**
- N/A

11d.

I am an Authorized Nuclear Pharmacist; **OR**  I am a Radiation Safety Officer; **OR**

I meet the requirements of 35.51(a) section(s) of 10 CFR Part 35

or equivalent Agreement State requirements to be a preceptor  AU or  AMP

for the following byproduct material uses (or units): Remote afterloader

A. Address

Lewis-Gale Medical Center  
1900 Electric Road  
Salem, Virginia 24153-7494

B. Materials License Number

45-09207-01

C. NAME OF PRECEPTOR (print clearly)

Lee S. Anthony, Ph.D.

D. SIGNATURE – PRECEPTOR

Lee S. Anthony

E. DATE

3/3/06

**James P. Nunn**

[REDACTED]  
Phone (540) 563-0165  
FAX (540) 563-0082  
Home Phone [REDACTED]  
jpn@pa.roacoxmail.com

**EDUCATION:** Bachelor of Science (BS) 2001  
Major: Mathematics – Minor: Physics  
Bluefield College

Master of Science (MS) 2005  
Major-Physics  
Virginia Polytechnic Institute and State University

**WORK HISTORY:**

1999-present: Physicist, *Physics Associates*, Roanoke, Virginia  
Field work including: nuclear medicine quality control consultation, shielding recommendations for x-ray equipment, surveys of radiographic, fluoroscopic, mammographic, computed tomography and nuclear magnetic resonance imaging equipment, radiation safety consultation. Computer systems analysis for Physics Associates.

1997-1999: Geophysical Engineer, *The Intermont Company, Inc.*  
Field work including: surveys of borehole methane wells for various petroleum and gas companies.

**COMPUTER SKILLS:**

Software programs: Microsoft Windows v. 3.1, 95, 98, 2000, NT, Me, Perform Pro Plus, Mathematica 4.0, C.C++, Q Basic, Mathcad, Microsoft Word, Excel, Power Point, Publisher, Adobe Photoshop, Microsoft Works Suite, Radpro 2000, Landauer III, Biodex Atomlab 950, Compulog III & 5 well logging software, DuPont Nuclear Medicine Manager, Pinestar Nuclear Medicine Information System, Plato Brachytherapy Planning System, and various other medical software programs.

**PERSONAL INFORMATION WAS REMOVED  
BY NRC. NO COPY OF THIS INFORMATION  
WAS RETAINED BY THE NRC.**

**ORGANIZATIONS AND AFFILIATIONS:**

1. Virginia Health Physics Society; Western Council Representative
2. Health Physics Society; Plenary Member

**RECENT CONTINUING EDUCATION:**

1. 21 hours-*"MRI Hands-On Course For Physicist"*, June 28-30 2002; Sponsored by MTMI (Medical Technology Management Institute) MD Anderson Cancer Center, Houston Texas.
2. 1 hour- *"Medical Ethics"*, April 20, 2002; Sponsored by Wythe County Community Hospital.
3. 1 hour- *"Pathology of Breast Cancer"*, April 30, 2002; Sponsored by Wythe County Community Hospital. Wes Asbury, M.D., Instructor.
4. 45 hours- *"Radiation Safety Officer/Medical Physics"*, February 19-24, 2001; Sponsored by Physics Associates. Lee S. Anthony, Ph.D., Instructor.
5. 12-hours- *"Hands-on Multi-Slice CT Workshop for Physicists"*, Sponsored by MTMI at MD Anderson Cancer Center, Houston Texas
6. 15 hours- *"The Physics of Mammography 2004"* Sponsored by MTMI at Royal Crown Plaza, Boston, MA October 2-3 2004
7. 15.5 hours *"Brachytherapy Treatment Planning Version 14.2"* Nucletron, Inc., Columbia Maryland, 14-17 March 2005

**RECENT LECTURES GIVEN:**

1. 1hour-*"Regulatory Concerns in The Radiology Department"*, Wythe County Community Hospital annual training day. April 20.2002
2. 1-hour- *"Regulatory Concerns in The Radiology Department"*, Fall VSRT Seminar Roanoke, Virginia. September 22, 2001
3. 1-hour- *"Fundamental Principles of NMR Imaging"*, Virginia Polytechnic Institute and State University, Department of Physics, Blacksburg, Virginia. October 9, 2002

4. 1-hour- "*Radiopharmaceutical Therapy Quality Control: Implementing and maintaining your Program*", Spring VSRT Seminar, Roanoke, Virginia May 3, 2002
5. 2-hour- "*The Physics of Computed Radiography: A brief Overview of Technology and Image Quality*", Virginia Western Community College, 13 April 2004
6. 2-hour- "*The Physics of Computed Radiography: A brief Overview of Technology and Image Quality*", Fall VSRT Seminar, Wytheville, Virginia November 20, 2004
7. 1-hour- "*Radiation in Medicine*" Virginia College of Osteopathic Medicine at VPI, Blacksburg, Virginia, 5 May 2005

#### HOSPITAL TEACHING EXPERIENCE:

During my tenure at Physics Associates I have the opportunity to teach many short courses in radiation safety and medical physics. These courses have been taught to the technologists as well as the ancillary staff of the medical center. I have also assisted in several 45-hour courses on radiation safety that satisfied the Category III.b didactic requirements of the NMTCB for technologist certification.

#### WELL LOGGING EXPERIENCE:

During my tenure at Physics Associates I have had used my experiences as a well logging supervisor for The Intermont Company, Inc. to prepare myself for training other well logging supervisors and assistants. I have had several years of radiation safety teaching experience with minerals exploration companies.

#### MATERIALS LICENSES LISTED FOR HEALTH PHYSICS ACTIVITIES:

1. Physics Associates: NRC License #45-17330-40 (Assistant Radiation Safety Officer)
2. Physics Associates: VBRH License #VA-125-01 (Assistant Radiation Safety Officer)
3. Physics Associates: Tennessee License #R-V2005-A11 (Assistant Radiation Safety Officer)

4. Harlan Appalachian Regional Hospital: Kentucky License #202-018-24 (Health Physics Activities)
5. Javed Cardiac Center, LLC USNRC License #45-31100-01 (Radiation Safety Officer)

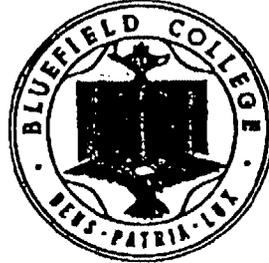
#### STATES LISTED AS QUALIFIED EXPERT/REGISTERED INSPECTOR

1. Virginia: License #RH-1-02-220 Expires 7/1/2008
2. West Virginia: Registration #601005 Expires 12/1/2008
3. Kentucky: General Radiation Health Physics categories A(D), A(T), B, E, F, and G
4. Tennessee: Registered Inspector # 2064 Classes I, II, III, V, VI

#### ARCHITECTURAL DESIGN; FACILITY LAYOUT; RADIATION SHIELDING SPECIFICATION, DESIGN AND EVALUATION:

1. Augusta Medical Center Cancer Center, Fishersville, Virginia: Design and evaluation of radiation shielding for 21 MeV Elekta Precise linear accelerator.
2. Precision Nuclear, LLC, Gray, Tennessee: Design and evaluation radiation shielding for 16.5 MeV General Electric PETtrace 8 Cyclotron.
3. Southwest Virginia RPS, Roanoke, Virginia: Design and evaluation of radiation shielding for Siemens Eclipse HP 11 MeV Cyclotron.
4. Cabell Huntington Memorial Hospital, Huntington, WV; Verification of shielding for a 21 MeV Varian Clinac 2100 EX linear accelerator.

# Bluefield College



By the authority of the Board of Trustees, and upon the recommendation  
of the faculty, has conferred upon

**James H. Nunn**

the degree of

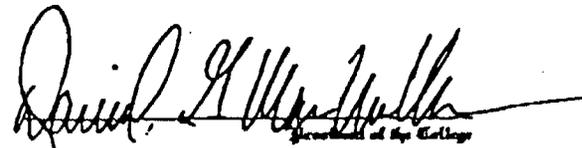
**Bachelor of Science**

with all the rights, privileges, and responsibilities thereto pertaining.

In witness the Seal of the college and the signatures of the  
authorized officers are affixed at Bluefield, Virginia,

on the fifth day of May, two thousand and one.

  
Vice President for Academic Affairs

  
President of the College

# Virginia Polytechnic Institute and State University

*The Board of Visitors of the Virginia Polytechnic Institute  
and State University has conferred upon*

**James Paul Numm**

*upon the recommendation of the Faculty, the degree of  
Master of Science*

**Major - Physics**

*with all the rights, privileges and honors pertaining thereto.*

*In testimony whereof, the undersigned, by authority  
vested in them, have hereunto affixed their signatures  
and the seal of the University at Blacksburg, Virginia  
this second day of July, two thousand and five.*

*Ben J. Doughty, Jr.*  
\_\_\_\_\_  
Rector

*Ray W. Tomney*  
\_\_\_\_\_  
Dean



*Charles W. Stuess*  
\_\_\_\_\_  
President

*James P. [Signature]*  
\_\_\_\_\_  
Dean



VIRGINIA POLYTECHNIC INSTITUTE  
AND STATE UNIVERSITY

**Graduate School**

Admissions Plans and Clearance Office  
Sandy Hall (0325)  
Blacksburg, Virginia 24061  
540/231-6691 Fax: 540/231-2727

*Hampton Roads*  
*National Capital Region*  
*Richmond*  
*Roanoke*  
*Southwest Virginia*

June 20, 2005

To Whom It May Concern:

This letter is to certify that James Paul Nunn has completed all the requirements for the Master of Science degree in Physics with all the rights and privileges and honors pertaining thereto. Upon recommendation of the faculty and the Board of Visitors, the degree will be officially conferred on July 2, 2005.

Sincerely,

Karen P. DePauw, Ph.D  
Vice Provost for Graduate Studies and  
Dean of the Graduate School



**Nucletron**

*This certifies that*

**Mr. James Nunn**

*has completed our course on*

***Brachytherapy Treatment Planning Version 14.2***  
***March 14<sup>th</sup>-17<sup>th</sup>, 2005***

*At Nucletron*  
*Columbia, MD*

*and has been awarded 15.5 Category A*  
*CE credits as designated by the*  
*American Society of Radiological Technologists*  
*And 19 MDCB Credits*

  
Margaret Peterson

  
Tracy Spurlock

ASRT Ref#-MDZ0142008  
MDCB Ref# MDCB041561  
8671 Robert Fulton Drive  
Columbia, MD 21046-2788