

Indiana University of Pennsylvania

College of Natural Sciences and Mathematics
Weyandt Hall, Room 305
975 Oakland Avenue
Indiana, Pennsylvania 15705-1087

724-357-2609
Fax: 724-357-5700
Internet: <http://www.iup.edu>

April 15, 2005
License No: 37-13088-01 03001603
Program Code: 03620
Subject: Request for Amendment to Materials License

RECEIVED
REGION 1
05 APR 22 P 2:36

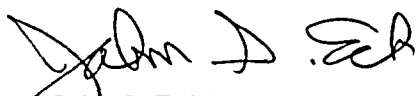
ATTN:
Licensing Assistance Team
Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission, Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Enclosed please find an application for amendment to our Materials License requesting a change of the Radiation Safety Officer for our program. There is no other change in the application. Dr. Muhammad Numan has academic background in experimental nuclear and particle physics and has recently completed a five-day Radiation Safety Officer course. He is currently assisting Dr. V. Wijekumar in his responsibilities as the Radiation Safety Officer, in preparation for his proposed assumption of the RSO position by June 1, 2005.

If there is any question regarding this application, please contact Dr. V. Wijekumar [telephone (724) 357-4588/2370; email vjwije@iup.edu] or Dr. Muhammad Numan [telephone (724) 357-2318/2370; email mznuman@iup.edu]

Sincerely,




Dr. John S. Eck, Dean
College of Natural Science and Mathematics,
Indiana University of Pennsylvania

136927
NMSS/RGNI MATERIALS-002

NRC FORM 313
(4-2004)
10 CFR 30, 32, 33,
34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 10/31/2005

Estimated burden per response to comply with this mandatory collection request: 7 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 F52), 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, NEOB-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
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-4005

03601003

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 37-13088-01
 C. RENEWAL OF LICENSE NUMBER _____

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

Indiana University of Pennsylvania
Department of Physics
Indiana, PA 15705-1087

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Weyandt Hall - Departments of Physics,
Chemistry, and Biology
Indiana University of Pennsylvania
Indiana, PA 15705-1087

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Dr. Muhammad Z. Numan

TELEPHONE NUMBER

(724) 357-2318

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.

Resume attached

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 | AMOUNT ENCLOSED \$

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

Dr. John S. Eck, Dean, College of NSM

SIGNATURE

John S. Eck

DATE

4/19/05

FOR NRC USE ONLY

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

136927

**Resume of the proposed Radiation Safety Officer,
Dr. Muhammad Z. Numan**

Education:

Ph. D. College of William and Mary, Williamsburg, VA, 1982, in Experimental Solid State Physics. Dissertation: "The Diffusion and Trapping of Muons in Niobium and Aluminum Alloys."

M. Sc. First Class, 1974, and B.Sc (Honors) First Class, 1972, Dhaka University, Dhaka, Bangladesh. National Merit Scholar.

Professional Positions:

2003 – Present Professor, Indiana University of Pennsylvania, Indiana, PA.

1994 - 2003: Associate professor, Indiana University of Pennsylvania, Indiana, PA.

1987 - 1994: Assistant professor, Indiana University of Pennsylvania, Indiana, PA.

1984 - 1987: Research Associate and Visiting Lecturer, University of North Carolina at Chapel Hill, Chapel Hill, NC

1983 - 1984: Research Instructor, East Carolina University, Greenville, North Carolina.

1982 - 1983: Research Associate, Virginia Commonwealth University, Richmond, VA

Radiation Safety Training:

Successfully completed a 5-day Radiation Safety Officer Training course offered by Radiation Safety Academy, Gaithersburg, MD, November 15–19, 2004.

Served as Assistant RSO since January 2005; calibrated survey meters using Cesium 137 sealed source; performed leak test (on a 2 Ci Pu-Be source and a 100 mCi Cs-137 source) and wipe test under the supervision of Dr. Wijekumar (current Radiation Safety Officer).

As a graduate student, took a short course on Radiation Safety and Health Physics, offered by the Nuclear Physics group at the College of William and Mary.

Relevant Research Experience:

Rutherford Backscattering and Channeling in materials characterization. Experience with mega volt Van-de-Graff generators and energetic particle beams. Material modification by ion implantation for semiconductor device application.

Muon spin resonance studies of diffusion and trapping of light interstitials in metals performed at the synchrotron facilities at Brookhaven National Lab and Los Alamos National Lab. Nuclear particle detection with scintillation counters and wire chambers; nuclear instrumentation, data acquisition, and analysis methods.

Thesis Supervision:

Brian Wargo, 'Incorporating X-ray Powder Diffraction into the Existing Curriculum of Natural Sciences' M.A. Thesis, 2002

- Bo Li, 'Development of a Cryogenic Accessory for the Fourier Transform Spectrometer in the Far Infrared Regime,' M. S. Thesis, 2001
- Sohrab Hossain, 'C-V Characterization of Crown-Ether-Cyanide Treated and KCN Treated Si <100> N-Type Material with Al and Au Gates' M.S. Thesis, 2001
- Phil Landis, 'Electrical Characterization of Low Temperature Plasma Grown Silicon dioxide films' M.S. Thesis, 1998
- Niru Nahar, 'Investigation of Internal Emission Infrared Photo Detectors Based on Silicide Silicon Schottky Barrier Diodes' M.S. Thesis, 1997
- Tawana Day, '*Opto-Electrical Characterization of Electroluminescence from a Fabricated Metal-Porous Silicon Schottky diode*' M.S. Thesis, IUP, 1996.
- Jinbo Zhang, '*Infrared Study of Silicon-Hydrogen Bonds in Hydrogen Ion Implanted Crystalline Silicon*' M.S. Thesis, IUP, 1995.
- G. Zimmerman, '*Deep Level Transient Spectroscopy of Hydrogen Ion Implanted Crystalline Silicon*' M.S. Thesis, IUP, 1994
- Lihua Peng 'Experimental Investigation of Luminescence from Porous Silicon' MS Thesis, IUP, 1992.
- Xiaoxing Yang '*Effect of Alloy Disorder on the Vibrational Properties of Si-Doped Aluminum Gallium Arsenide*' MS Thesis, IUP, 1991.
- Avery Austin 'Growth and Characterization of Epitaxial γ Grown Yttrium Silicide' MS Thesis, IUP, 1990.
- S.S. Choi '*Oxidation Studies of Highly Doped Silicon for Device Applications*' Ph. D.. dissertation, UNC-Chapel Hill, 1986; with Professor Wei-Kan Chu.
- Keelho Cho '*Channeling Effect for Low Energy Ion Implantation in Silicon*' Ph.D. dissertation, UNC-Chapel Hill, 1985; with Prof. Wei-Kan Chu.

Grants:

1. IUP research and scholarly activity grant '*Oxidation behavior of Thin Films of Yttrium and Yttrium Silicide*' \$4,600; 1988-89
2. Equipment grant from Research Corporation '*Identification and Characterization of DX and EL2 Centers by Greens Function Theory and Infrared Spectroscopy*' \$50,000; 1989 - 90.
3. NSF instrumentation and Lab improvement grant '*Semiconductor Characterization Workstation for an Undergraduate Solid State Electronics Laboratory*' \$82,135; 1990-91.
4. Air Force Summer Faculty Research Fellowship Grant, Electronic Technology Laboratories, Wright-Patterson AFB, \$10,175; 1990
5. IUP faculty research fellowship, \$3,230; 1990-91.
6. IUP Senate Fellowship Grant '*Identification And Characterization Of Impurity Vibrational Modes For III-V Compound Semiconductors*' \$ 5,095; 1996-97
7. NSF Grant '*Acquisition of a Powder X-Ray Diffraction Instrument*' \$162,600; 1998-00
8. NSF CETP-PA Grant '*Toys across Grade Levels: A Workshop on Constructivist Lesson Design for the Academic Standards for Physical Sciences and Technology Education*' \$15,000; 2002-3.
9. IUP Senate Fellowship Grant '*Enhanced Student Learning in Large Lecture Sections of a Physical Science Course Through Peer Instruction and Interactive Classroom Technology*' Muhammad Z. Numan and Stanley Sobolewski, \$6,180; 2003 - 4.

Publications:

1. C. Boekoma, R. H. Heffner, R. H. Hutson, M. Leon, M. E. Shillachi, W. J. Kossler, M. Numan, and S. A. Dodds. Diffusion and Trapping of Positive Muons in Niobium, Phys. Rev. B26, 2342, (1982).
2. G. Bissinger, J. Geiser, J.M. Joyce, and M. Numan. Wake Formation by Mega Electron Volt-per-nucleon Bare H and He Ions in Large Hydrogen Molecules, Phys. Rev. Lett. 55, 197 (1985).
3. K. Cho, M. Numan, T.G. Finstad, W.K. Chu, J. Liu and J.J. Wortman. Transient Enhanced Diffusion During Rapid Thermal Annealing of Boron Implanted Silicon, Appl. Phys. Lett. 47, 1321 (1985).
4. S.S. Choi, M.Z. Numan, T.G. Finstad, W.K. Chu, D. Fathy and J.J. Wortman. Oxidation of High Dose Arsenic Implanted Si, MRS Symp. Proc. Vol. 54, 567 (1986).
5. M.Z. Numan, Z.H. Lu, W.K. Chu, D. Fathy and J.J. Wortman. Stability of Heavily Doped Silicon Formed by As Implantation and Rapid Thermal Annealing, MRS Symp. Proc. Vol. 52, 31 (1986).
6. S.S. Choi, M.Z. Numan, W.K. Chu, J.K. Srivastava and E.A. Irene. Redistribution of Arsenic in Silicon During High Pressure Thermal Oxidation, Appl. Phys. Lett. 50, 688 (1987).
7. S.S. Choi, M.Z. Numan, W.K. Chu, E.A. Irene. Anomalous Oxidation Rate of Silicon Implanted with Very High Doses of Arsenic, Appl. Phys. Lett. 51, 1001 (1987).
8. E.C. Frey, N.R. Parikh, M.L. Swanson, M.Z. Numan and W.K. Chu. The Effect of Ge Segregation on Oxidation of Si, MRS Symp. Proc. Vol. 105, 277 (1988).
9. A.E. Michel, M.Z. Numan, and W.K. Chu. Anomalous diffusion of Boron implanted into silicon along the [100] direction. Appl. Phys. Lett. 53, 851 (1988).
10. W.K. Chu, A.E. Michel, and M. Numan. Transient diffusion of Boron implanted in Si along random and channeling direction, Nuclear Inst. and Meth. in Phys. Res. 1337/38, 365 (1989).
11. M. Z. Numan, "Photoreflectance Study of $\text{In}_x\text{Ga}_{1-x}\text{As}/\text{GaAs}$ Single Quantum Wells and Low Temperature MBE Grown GaAs layers." Final Report, USAF-UES Summer Faculty Research Program, 1990.
12. D. C. Look, D. C. Walters, , C. E. Stutz, K. R. Evans, J. S. Szelove, and M. Z. Numan, "Photoreflectance and X-Ray Photoelectron Spectroscopy in Low Temperature MBE GaAs." Proceedings of Materials Research Society 241,87(1991)

13. Devki N. Talwar and M. Z. Numan, "Effects of composition on IR reflectivity and Raman scattering in n-type $\text{Al}_x\text{Ga}_{1-x}\text{As}$ ternary layers and $\text{AlGaAs}/\text{GaAs}$ superlattices," Proceedings of Photonics 2002 Conference, Mumbai, India, Dec. 16-18, 2002
14. Devki N. Talwar, M. Z. Numan, and Danial Sloppy, "Structural and vibrational properties of novel $\text{GaN}_x\text{As}_{1-x}(\text{P}_{1-x})$ alloys and strained $\text{GaNAs}(\text{P})/\text{GaAs}(\text{P})$ superlattices," Photonics 2002, Mumbai, India, Dec. 16-18, 2002

Presentations:

The Effect of Ge Segregation on Oxidation of Si- E. C. Fray, N. R. Parikh, M. L. Swanson, M.Z. Numan, and W. K. Chu at the Materials Research Society Fall (International) Meeting, Nov 1987

Transient Diffusion of Boron Implanted in Si along Random and Channeling Direction- W. K. Chu, A. E. Michel, M. Z. Numan at the 7th International Ion Implantation Technology Conference, Shanghai, China, June 7-8, 1988.

Rutherford Backscattering and Channeling: A surface analytic tool in undergraduate research- M. Z. Numan at Western Pennsylvania Meeting of the American Association of Physics Teachers, April 22, 1989

Formation of Metastable Silicide Phase Under Beam Irradiation of Ni/Si Thin Film Bilayers- M. Z. Numan and Lim Poh Leng, Materials Research Society Fall Intl. Meeting, Boston, MA, Nov 27-Dec 2, 1989

Photoreflectance spectroscopy: Application to Novel Materials- M. Z. Numan, Invited Paper, Electronic Research Division Seminar, Wright Patterson Air Force Base, Dayton, OH, July 31, 1990

Effect of a thin Titanium Sandwich Layer on the Epitaxial Growth of Yttrium Silicide Under Thermal Annealing, M.Z. Numan and Avery Austin, Materials Research Society Fall Meeting (International), Boston, MA, Dec. 2-6, 1991

Photoluminescence from Microcrystalline Porous Silicon, F. M. Sheikh and M.Z. Numan, American Association of Physics Teachers, Western Pennsylvania Section, McKeesport, PA, Oct. 23, 1993.

Infrared Study of the Silicon-Hydrogen Bonds in Silicon formed by Hydrogen Implantation at 60 KeV, V. Wijekumar, M.Z. Numan, J. Zhang, and G. Zimmerman, American Physical Society, Ohio Section, May 1994.

Effect of Explicit Problem solving Instructions on the Problem Solving Performance and Conceptual Understanding of Introductory College Physics' M. Z. Numan and Stan Sobolewski, Joint American Physical Society/American Association of Physics Teachers Meeting, Columbus, OH, April 18 - 21, 1998

Effective Interaction Through Bulletin Board in a Web Based Thermal Physics Course, Muhammad Z. Numan, Gordom Conference on Physics Research and Education: Thermal and Statistical Physics, Plymouth, N.H., June 11 - 16, 2000

Development of a Multi-Scale Assessment Tool, Sobolewski, S., Numan, M., Hershman. K., and Freda, R. 123rd Meeting of the American Association of Physics Teachers, Rochester N.Y., July 21 - 25, 2001

Teaching Effective Problem Solving in Introductory Physics, Muhammad Z. Numan and Stanley Sobolewski, 21st Annual Lilly Conference on College Teaching, Miami University, Oxford, OH, November 15 – 18, 2001

Strategies for Providing Scaffolding to Improve Problem Solving and Higher Order Cognitive Skills, Numan, M. Z., Giniewicz, J., Ali, S., Annual Conference on Advancement of College Teaching and Learning, Harrisburg, PA, March 21 - 23, 2002

Reliability of Concept Maps in Assessing Students' Knowledge Structure: Developing a Scoring Rubric, Muhammad Z. Numan and Sanwar Ali, Annual Conference on Advancement of College Teaching and Learning, Harrisburg, PA, February 27 - March 1, 2003.

Toys Across Grade Levels: A workshop on Constructive Lesson Design held at Indiana University of Pennsylvania, Muhammad Z. Numan, Devki Talwar, Meghan Twiest, and Brian Wargo, Annual CETP-PA Summer Conference, Clarion, Pa, August 18 - 20, 2004.

Enhancing Teaching and Learning in P-16 Classrooms through Teaching Circles and Reflective Practice, Diane Klein, Laurel Black, Stephanie Taylor-Davis, Muhammad Numan and John Woolcock, Hawaii International Conference on Education, Honolulu, HI, January 3 - 8, 2005.



RADIATION SAFETY OFFICER

November 15-19, 2004

Instructors: Ray Johnson, CHP, PE, RSO; Alan Fellman, PhD, CHP; Sean Austin, CHP,
Richard Turner, Jr., BS

This course is intended to provide a minimum of 40 hours of required and elective classes to meet provisions of 10 CFR 33.15. Required classes are already checked.
Please select elective classes for a total of 40 or more hours.

Day 1 Monday November 15, 2004

Class Selected	Start Time	Class Titles (electives in <i>bold, italics</i>)	Class Hours
<input checked="" type="checkbox"/>	8:00	Introduction, Course Overview, Radiation Fundamentals	4.0
	12:00	Lunch (provided)	
<input checked="" type="checkbox"/>	1:00	Radiation Fundamentals (continued)	3.0
<input checked="" type="checkbox"/>	4:00	Health Effects	2.0
<input checked="" type="checkbox"/>	6:00	<i>X-Ray Safety</i>	<i>1.5</i>
	7:30	Adjourn	

Day 2 Tuesday November 16, 2004

Class Selected	Start Time	Class Titles (electives in <i>bold, italics</i>)	Class Hours
<input checked="" type="checkbox"/>	8:00	Radiation Protection Standards, 10 CFR Part 19 and 20	2.0
<input checked="" type="checkbox"/>	10:00	Essential Highlights of 10 CFR Part 2, 30, 31, 33	2.0
	12:00	Lunch (provided)	
<input checked="" type="checkbox"/>	1:00	<i>Sealed Sources & Industrial Gauges</i>	<i>1.0</i>
<input type="checkbox"/>	1:00	<i>License Applications and Amendments</i>	<i>1.0</i>
<input checked="" type="checkbox"/>	2:00	External Dosimetry and Shielding	1.5
<input checked="" type="checkbox"/>	3:30	Internal Dosimetry	1.5
<input checked="" type="checkbox"/>	5:00	Legal Implications: Radiation Litigation	1.0
<input type="checkbox"/>	6:00	<i>Math Review & Radiation Safety Problem Solving</i>	<i>1.5</i>
	7:30	Adjourn	

Day 3 Wednesday November 17, 2004

Class Selected	Start Time	Class Titles (electives in <i>bold, italics</i>)	Class Hours
<input checked="" type="checkbox"/>	8:00	Radiation Survey Instruments, Laboratory Instruments	4.0
	12:00	Lunch (provided)	
<input checked="" type="checkbox"/>	12:30	Instruments Lab, Applications & Troubleshooting, Leak Tests	3.0
<input checked="" type="checkbox"/>	3:30	Radiation Safety Surveys	2.0
	5:30	Adjourn	

Day 4 Thursday November 18, 2004

Class Selected	Start Time	Class Titles (electives in <i>bold, italics</i>)	Class Hours
<input checked="" type="checkbox"/>	8:00	Interpreting Radiation Measurements and Quality Assurance	2.0
<input checked="" type="checkbox"/>	10:00	Shipping and Receiving Radioactive Materials, DOT Training Requirements	2.0
	12:00	Lunch (provided)	
<input checked="" type="checkbox"/>	1:00	Transportation (continued), Transportation Exam	3.5
<input checked="" type="checkbox"/>	4:30	<i>Radioactive Waste Management, Mixed Wastes, Waste Manifests</i>	1.5
<input type="checkbox"/>	6:00	<i>Course Review and Preparation for Final Exam, Refreshments</i>	1.5
	7:30	Adjourn	

Day 5 Friday November 19, 2004

Class Selected	Start Time	Class Titles (electives in <i>bold, italics</i>)	Class Hours
<input checked="" type="checkbox"/>	8:00	Radiation Safety Program Management	1.0
<input checked="" type="checkbox"/>	9:00	Preparing for Regulatory Inspections, Emergency Response, Information Resources, Challenges for RSO's	2.0
<input checked="" type="checkbox"/>	11:00	Final Exam (passing grade of 70% correct is required)	1.0
	12:00	Presentation of Certificates and Adjourn	

AAHP has awarded this course 32 Continuing Education Credits, 2003-00-018
 ABIH has awarded this course 4.5 CM Points, CM Approval # 03-021.

Certificate of Training

Awarded To

Muhammad Numan

Recognizing completion of 5 days of specialized instruction in

**Radiation Safety Officer with
LSC Option**

November 19, 2004

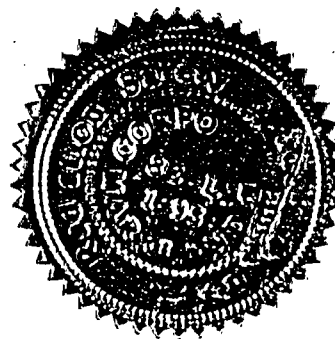
Presented By

Radiation Safety Academy
481 North Frederick Avenue, Suite 302
Gaithersburg, Maryland 20877

ABIH has awarded this course 4.5 CM Points, CM Approval #04-185
AAHP has awarded this course 32 Continuing Education Credits, 2003-00-018

Ray Johnson

Raymond Johnson, CHP, PE, RSO
Training Director



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

4/15/2005, and to inform you that the initial processing which includes an administrative review has been performed.

Amendment 37-13088-01
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 136927.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (R1)
(6-00)

Sincerely,
Licensing Assistance Team Leader

BETWEEN: : (FOR LFMS USE)
 : INFORMATION FROM LTS
 : -----
 :
 License Fee Management Branch, ARM : Program Code: 03620
 and : Status Code: 0
 Regional Licensing Sections : Fee Category: EX 3M 1D
 : Exp. Date: 20110531
 : Fee Comments: 170.11(A) (4)1D IS STORAGE
 : Decom Fin Assur Req'd: N
 : ::

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED
 Applicant/Licensee: INDIANA UNIVERSITY OF PENNSYLVANIA
 Received Date: 20050422
 Docket No: 3001003
 Control No.: 136927
 License No.: 37-13088-01
 Action Type: Amendment

2. FEE ATTACHED
 Amount: /
 Check No.: /

3. COMMENTS
 Signed Rebecca Jurok
 Date 4/29/2005

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 _____