DEPARTMENT OF THE ARMY
UNITED STATES MILITARY ACADEMY
WEST POINT, NY 10996

REPLY TO
ATTENTION OF

B. 2

MADN-PHY (11-9n)

28 August 2009

MEMORANDUM FOR U.S. Nuclear Regulatory Commission - Region 1, ATTN: LAT, 475 Allendale Road, King of Prussia, Pennsylvania 19406-1415

SUBJECT: Amendment to US Nuclear Regulatory Commission License BML 31-02102-02, Docket No. 030-00897

1. Request that US Nuclear Regulatory Commission License BML 31-02102-02 issued to the Department of Physics, US Military Academy, be amended as follows:

a. Designate MAJ Brian R. Champine as an Authorized User. The Radiation Safety Committee (RSC) reviewed and approved the training and experience of MAJ Champine at the 17 August 2009 RSC meeting. See enclosure 1 for MAJ Champine's training and experience.

b. Designate LTC Donald J. Gillich, PhD, as an Authorized User. The RSC reviewed and approved the training and experience of LTC Gillich at the 17 August 2009 RSC meeting. See enclosure 2 for LTC Gillich's training and experience.

c. Designate MAJ Robert Holcombe as an Authorized User. The RSC reviewed and approved the training and experience of MAJ Holcombe at the 17 August 2009 RSC meeting. See enclosure 3 for MAJ Holcombe's training and experience.

d. Designate MAJ Michael P. Shannon as an Authorized User. The RSC reviewed and approved the training and experience of MAJ Shannon via an e-mail vote on 26 August 2009. See enclosure 4 for MAJ Shannon's training and experience.

2. The United States Military Academy (USMA) is a public undergraduate educational institution, accredited by the Middle States Association of Colleges and Schools, offering programs of instruction leading to the bachelor's degree. The USMA is an activity of the United States Army and is supported by appropriated funds. As such it appears to meet your definition of a "nonprofit educational institution" (10 CFR 171.5). Request that USMA be exempted from any fees for this action.

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3. Point of contact for licensing in the Department of Physics is Dr. Daniel Schultz, Radiation Safety Officer, (845) 938-5009, or daniel.schultz@usma.edu.

EDWARD P. NAESSENS, Jr.
COL, PR,USMA
Head of the Department of Physics

4 Encls
1. MAJ Champine T&E
2. LTC Gillich T&E
3. MAJ Holcombe T&E
4. MAJ Shannon T&E

TRAINING AND RADIOISOTOPE EXPERIENCE

BRIAN R. CHAMPINE

1. **Education.**
   B.S. in Physics from the United States Naval Academy, Annapolis, MD, 1997.
   Naval Nuclear Power School and Prototype, Charleston, SC, 2000.
   M.S. in Radiological Sciences from University of MA, Lowell, MA, 2009.

2. **Training.** Training and experience at Naval Nuclear Power School and Prototype including safety procedures operating in Radiation Areas, High Radiation Areas and potentially Contaminated Areas. Training and experience at University of MA, Lowell, under the supervision of Dr. Mark Tries included laboratory procedures and handling requirements for depleted uranium and various check sources.

   Category A: Radiation Protection Principles
   Category B: Characteristics of Ionizing Radiation
   Category C: Units of Radiation Dose and Quantities
   Category D: Radiation Detection Instrumentation
   Category E: Biological Hazards of Exposure to Radiation
   Category F: Hands-on Use of Radioactive Materials

CATEGORY	*LOCATION OF TRAINING*	*DATE/DURATION*	*TYPE OF TRAINING*
A, B, C, D, E, F	Naval Nuclear Power School and Prototype	1999-2000	Classes & Laboratory
A, B, C, D, E, F	CVN-70 USS Carl Vinson	2000-2002	On the job
A, B, C, D, E, F	AMEDD Center and School San Antonio TX	2005-2007	On the job, Classes & Laboratory
A, B, C, D, E, F	Department of Physics, University of MA at Lowell	2007-2009	Classes & Laboratory
A, B, C, D, E, F	D/Physics, US Military Academy, West Point, NY	2009 - present	On the job, Classes, & Laboratory

3. **Experience with Isotopes**

ISOTOPE	*MAXIMUM ACTIVITY*	*DATE/DURATION*	*TYPE OF EXPERIENCE*
Uranium	Classified	2000-2002	Navy Nuclear A4W Reactors
Various isotopes with atomic numbers 1 through 95	Nominal activity	1999-2000; 2000-2002; 2005-2007; 2007-2009;2009-present	Check Sources

TRAINING AND RADIOISOTOPE EXPERIENCE

Donald J. Gillich

1. Education.

B.A. in Mathematics from Florida Southern College, Lakeland, FL, 1989.
M.S. in Physics from Naval Postgraduate School, Monterey, CA, 2000.
Ph.D. in Nuclear Engineering and Sciences, Rensselaer Polytechnic Institute, 2009.

2. Training. Training and experience at RPI under the supervision of Dr. Yaron Danon and included safety procedures and shielding requirements for radiation. Also, I completed Radiological Worker II training at Idaho National Lab in Aug 2005 in preparation for an Interagency Radiological Exercise.

Category A: Radiation Protection Principles
Category B: Characteristics of Ionizing Radiation
Category C: Units of Radiation Dose and Quantities
Category D: Biological Hazards of Exposure to Radiation
Category E: Hands-on Use of Radioactive Materials
Category F: Radiation Detection Instrumentation

CATEGORY	*LOCATION OF TRAINING*	*DATE/DURATION*	*TYPE OF TRAINING*
A, B, C, D, F	D/Physics, US Military Academy, West Point, NY	2001-2003	Classes
A, B, C, D	Lawrence Livermore National Lab, Livermore, CA	Summers 2001 & 2002	Calculations for the National Ignition Facility
A, B, C, D, F	NORAD-USNORTHCOM, Petersen AFB, CO	2003 - 2006	Interagency Coordination with various National Labs & Agencies
A, B, C, D, E, F	Department of Nuclear Engineering, RPI	2006-2009	Classes & Laboratory
A, B, C, D, E, F	D/Physics, US Military Academy, West Point, NY	2009 - present	Classes, & Laboratory

3. Experience with Isotopes

ISOTOPE	*MAXIMUM ACTIVITY*	*DATE/DURATION*	*TYPE OF EXPERIENCE*
Na-22	9.5 μCi	2006-2009	Calibration of detectors
Cf-252	4.96 μg (1.1×10^7 nps)	2009	Calibration of detectors
Co-57	10 μCi	2006-2009	Calibration of detectors
Various isotopes with atomic numbers 1 through 95	Nominal activity (in the μCi range)	2006-2009	Check Sources

TRAINING AND RADIOISOTOPE EXPERIENCE

ROBERT HOLCOMBE

1. **Education**.
   B.A. in Chemistry from the United States Military Academy, West Point, NY, 1998.
   M.S. in Nuclear Engineering from MIT, Cambridge, Mass, 2008.

2. **Training**. Training and experience at USMA and MIT included safety procedures and shielding.

   Category A: Radiation Protection Principles
   Category B: Characteristics of Ionizing Radiation
   Category C: Units of Radiation Dose and Quantities
   Category D: Radiation Detection Instrumentation
   Category E: Biological Hazards of Exposure to Radiation
   Category F: Hands-on Use of Radioactive Materials

CATEGORY	*LOCATION OF TRAINING*	*DATE/DURATION*	*TYPE OF TRAINING*
A, B, C, D, E	D/Chemistry, Physics, US Military Academy, West Point, NY	1994-1998, 2008-2009	Classes & Laboratory
A, B, C, D, E	Department of Nuclear Engineering, MIT	2006-2008	Classes

3. **Experience with Isotopes**

ISOTOPE	*MAXIMUM ACTIVITY*	*DATE/DURATION*	*TYPE OF EXPERIENCE*
Uranium	2500 kg	1996-1998	Light Water Moderated Subcritical Assembly
Cs-137	50 mCi	1996-1998	Compton Experiment
Co-57	10 mCi	1996-1998	Mossbauer Experiment
Am-241	10 mCi	1996-1998	X-ray Studies
Various isotopes with atomic numbers 1 through 95	Nominal activity	1996-1998	Check Sources

TRAINING AND RADIOISOTOPE EXPERIENCE

MICHAEL P. SHANNON

1. **Education**.
   B.S. in Aerospace Engineering from Embry-Riddle Aeronautical University, Prescott, AZ, 1995.
   M.S. in Aeronautics from Embry-Riddle Aeronautical University, Daytona Beach, FL, 1999.
   M.S. in Health Physics from Georgia Tech, Atlanta, GA, 2003.
   Ph.D. in Nuclear and Radiological Engineering, Georgia Tech, Atlanta, GA, 2009.

2. **Training**. Training and experience at Georgia Tech under the supervision of Dr. Nolan Hertel and at the Idaho National Laboratory under the supervision of Dr. James Jones included safety procedures, dosimetry, and shielding requirements for electron accelerators. Ph.D. dissertation research included operating a 25-MeV electron linear accelerator as well as using various sealed sources to characterize and calibrate neutron and gamma detectors.

   Category A: Radiation Protection Principles
   Category B: Characteristics of Ionizing Radiation
   Category C: Units of Radiation Dose and Quantities
   Category D: Radiation Detection Instrumentation
   Category E: Biological Hazards of Exposure to Radiation
   Category F: Hands-on Use of Radioactive Materials

CATEGORY	*LOCATION OF TRAINING*	*DATE/DURATION*	*TYPE OF TRAINING*
A, B, C, D, E	Nuclear & Radiological Engineering Program, Georgia Tech, Atlanta, GA	2001-2003	Classes, Laboratory, Research
A, B, C, D, E, F	D/Physics, US Military Academy, West Point, NY	2003-2006	Classes & Laboratory
A, B, C, D, E	Nuclear & Radiological Engineering Program, Georgia Tech, Atlanta, GA	2006-2009	Classes, Laboratory, Research

3. **Experience with Isotopes (Sampling of relevant experience)**

ISOTOPE	*MAXIMUM ACTIVITY*	*DATE/DURATION*	*TYPE OF EXPERIENCE*
Uranium	2500 kg	2003-2006	Light Water Moderated Subcritical Assembly
Cf-252	10 Ci	2006-2009	Sealed neutron source
AmBe	10 mCi	2006-2009	Detector calibration & research
Cs-137	Various Activities	2001-2003 2006-2009	Detector calibration & research
Co-60	Various Activities	2001-2003 2006-2009	Detector calibration & research
Various isotopes with atomic numbers 1 through 95	Nominal activity	2001-2009	Check Sources

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

8/28/09, and to inform you that the initial processing which includes an administrative review has been performed.

Amendment (31-02102-02)

[X] 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

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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** 144120.
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 (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader