



REPLY TO  
ATTENTION OF

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

Br. 2

REC RG 1 08 19 13 AM 07 13

MADN-PNE

12 August 2013

MEMORANDUM FOR U.S. Nuclear Regulatory Commission - Region I, ATTN: LAT,  
2100 Renaissance Blvd., Suite 100, King of Prussia, PA 19406-2713

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 and Nuclear Engineering, US Military Academy, be amended as follows:

a. Remove MAJ Brian R. Champine, MAJ Amy J. Eastburg, MAJ Brian S. Kohler, and MAJ Christopher P. Matthew as Authorized Users; they no longer work at the US Military Academy.

b. Designate MAJ Sean A. Barbaras, MAJ Nestor J. Echeverria, CPT Samuel A. Heider, CPT Trevor D. McLaughlin, MAJ Thomas P. McQuary, and LTC Robert Prins as Authorized Users. The Radiation Safety Committee (RSC) reviewed and approved the training and experience of these people via an e-mail vote on 12 August 2013. See the enclosures for their 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.

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](mailto:daniel.schultz@usma.edu).

EDWARD P. NAESSENS, JR.  
COL, PR, USMA  
Head of the Department of Physics and Nuclear  
Engineering

6 Encl

1. MAJ Barbaras T&E
2. MAJ Echeverria T&E
3. CPT Heider T&E
4. CPT McLaughlin T&E
5. MAJ McQuary T&E
6. LTC Prins T&E

581590  
NMSS/RGN1 MATERIALS-002

# TRAINING AND RADIOISOTOPE EXPERIENCE

SEAN A. BARBARAS

## 1. Education.

B.S. in Electrical Engineering from the United States Military Academy at West Point,  
M.S. in Nuclear Engineering from University of South Carolina

## 2. Training. Certified Department of Energy Radiological Worker at the Nevada National Security Site. University of Idaho and Idaho Accelerator Center Radiation Safety Training Certified.

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

| <i>CATEGORY</i>  | <i>LOCATION OF TRAINING</i>                    | <i>DATE/DURATION</i> | <i>TYPE OF TRAINING</i>           |
|------------------|--|----------------------|-----------------------------------|
| A, B, C, D, E    | DOE Nevada National Security Site              | 2012-2013            | Classes                           |
| A, B, C, D, E    | University of Idaho, Idaho Accelerator Center  | 2013                 | 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

| <i>ISOTOPE</i>                                    | <i>MAXIMUM ACTIVITY</i> | <i>DATE/DURATION</i> | <i>TYPE OF EXPERIENCE</i> |
|---|-------------------------|----------------------|---------------------------|
| Various isotopes with atomic numbers 1 through 95 | Nominal activity        | 2009-Present         | Check Sources             |

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

## TRAINING AND RADIOISOTOPE EXPERIENCE

### NESTOR J. ECHEVERRIA

#### 1. Education.

B.S. in Civil and Environmental Engineering from University of Utah, Salt Lake City, UT

M.S. in Nuclear Engineering from University of Wisconsin-Madison, Madison, WI

2. **Training.** Training and experience at University of Wisconsin- Madison under the supervision of Professors Raymond Fonck, Douglass Henderson, and Robert Agasie included safety procedures and shielding requirements for nuclear reactors and other radioactive materials.

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

| <i>CATEGORY</i>  | <i>LOCATION OF TRAINING</i>   | <i>DATE/DURATION</i> | <i>TYPE OF TRAINING</i>              |
|------------------|---|----------------------|--------------------------------------|
| A, B, C, D, E, F | D/Nuclear Engineering,<br>University of Wisconsin –<br>Madison, Madison, WI | 2010 - 2012          | Classes & Laboratory                 |
| A, B, C, D, E    | Shine Medical Technologies,<br>Madison, WI                                  | 2011 – 2012          | On the job                           |
| A, B, C, D, E, F | D/Physics, US Military<br>Academy, West Point, NY                           | 20012 - present      | On the job,<br>Classes, & Laboratory |

#### 3. Experience with Isotopes

| <i>ISOTOPE</i>  | <i>MAXIMUM<br/>ACTIVITY</i> | <i>DATE/DURATION</i> | <i>TYPE OF<br/>EXPERIENCE</i>              |
|---|-----------------------------|----------------------|--|
| Uranium (LEU)   | 15 kg                       | 2011-2012            | TRIGA Reactor                              |
| Pu-239  | 16 g                        | 2010-2011            | Pu-Be neutron source                       |
| Au-198  | 5 $\mu$ Ci                  | 2010-2011            | Various radiation<br>detection experiments |
| Various isotopes<br>with atomic numbers<br>1 through 95 | Nominal activity            | 2010-2013            | Check Sources                              |

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## TRAINING AND RADIOISOTOPE EXPERIENCE

### SAMUEL A. HEIDER

**1. Education.**

B.A. in Physics from the University of Nebraska at Lincoln, Lincoln, NE, [REDACTED]  
M.S. in Nuclear Engineering from Kansas State University, Manhattan, KS, [REDACTED]

**2. Training.** Training and experience at Kansas State University under the supervision of Doctors William Dunn, J. Kenneth Shultis, and Douglas S. McGregor included safety procedures and shielding requirements for gamma-ray and thermal neutron beams.

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

| <i>CATEGORY</i>  | <i>LOCATION OF TRAINING</i>                                | <i>DATE/DURATION</i> | <i>TYPE OF TRAINING</i> |
|------------------|--|----------------------|-------------------------|
| A, E, F          | D/Physics, University of Nebraska, Lincoln, NE             | 2003-2004            | Classes & Laboratory    |
| A, B, C, D, E, F | Department of Nuclear Engineering, Kansas State University | 2010 - 2012          | Classes & Laboratory    |

## TRAINING AND RADIOISOTOPE EXPERIENCE

**Trevor D. McLaughlin**

### 1. Education.

B.A. in Nuclear Engineering from the USMA, West Point, NY, [REDACTED]  
M.S. in Nuclear Engineering from University of Florida, Gainesville, FL, [REDACTED]

### 2. Training.

Category A: Radiation Protection Principles  
Category B: Characteristics of Ionizing Radiation  
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Category D: Radiation Detection Instrumentation  
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Category F: Hands-on Use of Radioactive Materials

| <i>CATEGORY</i>  | <i>LOCATION OF TRAINING</i>                    | <i>DATE/DURATION</i> | <i>TYPE OF TRAINING</i> |
|------------------|--|----------------------|-------------------------|
| A, B, C, D, E, F | D/Physics, US Military Academy, West Point, NY | 2003-2005            | Classes & Laboratory    |
| A, B, C, D, E, F | UFL, Gainesville, FL                           | 2009-2011            | Classes & Laboratory    |
| A, B, C, D, E, F | D/Physics, USMA, West Point, NY                | 2012-2013            | Classes & Laboratory    |

### 3. Experience with Isotopes

| <i>ISOTOPE</i>                                    | <i>MAXIMUM ACTIVITY</i> | <i>DATE/DURATION</i>            | <i>TYPE OF EXPERIENCE</i>                    |
|---|-------------------------|---------------------------------|--|
| Cs-137  | 5 mCi                   | 2009-2011                       | Classes & Laboratory                         |
| Co-60   | 10 mCi                  | 2009-2011                       | Classes & Laboratory                         |
| Natural Uranium                                   | 2500 kg                 | 2003-2005                       | Subcritical assembly<br>Classes & Laboratory |
| Pu-239  | 80 g                    | 2003-2005                       | Sealed neutron source                        |
| Various isotopes with atomic numbers 1 through 95 | Nominal activity        | 2003-2005, 2009-2011, 2011-2013 | Check Sources                                |

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## TRAINING AND RADIOISOTOPE EXPERIENCE

Thomas P. McQuary

### 1. Education.

B.S. in Chemistry & Life Science from the United States Military Academy at West Point,  
[REDACTED]  
M.S. in Nuclear Engineering from Air Force Institute of Technology, [REDACTED]

### 2. Training.

Certified Department of Energy Radiological Worker at the Nevada National Security Site.  
University of Idaho and Idaho Accelerator Center Radiation Safety Training Certified.

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

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|------------------|--|----------------------|-----------------------------------|
| A, B, C, D, E    | DOE Nevada National Security Site              | 2012 – 2013          | Classes                           |
| A, B, C, D, E    | University of Idaho, Idaho Accelerator Center  | 2012 – 2013          | Classes & Laboratory              |
| A, B, C, D, E, F | D/Physics, US Military Academy, West Point, NY | 2012 - present       | On the job, Classes, & Laboratory |

### 3. Experience with Isotopes

| <i>ISOTOPE</i>                                    | <i>MAXIMUM ACTIVITY</i> | <i>DATE/DURATION</i> | <i>TYPE OF EXPERIENCE</i> |
|---|-------------------------|----------------------|---------------------------|
| Various isotopes with atomic numbers 1 through 95 | Nominal activity        | 2010-Present         | Check Sources             |

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## TRAINING AND RADIOISOTOPE EXPERIENCE

**Robert D. Prins**

### **Training.**

Training and experience at Brooke Army Medical Center, Fort Sam Houston, Texas, under the supervision of COL Casmere Taylor and COL John Cuellar included calibration procedures, radioactivity measurement standardization, and radiation safety procedures and requirements.

Category A: Principles and Practice of Radiation Protection

Category B: Radioactivity Measurement Standardization and Monitoring

Category C: Mathematics and Calculations Basic to the Use and Measurement of Radioactivity

Category D: Biological Effects of Radiation

Category E: Radioactive Waste Disposal

| <i>CATEGORY</i> | <i>LOCATION OF TRAINING</i>                                   | <i>DATE/DURATION</i> | <i>TYPE OF TRAINING</i>          |
|-----------------|---|----------------------|----------------------------------|
| C,D             | United States Military Academy,<br>West Point, New York       | 1988-1993            | Classes/Laboratory<br>Experience |
| A,B,C,D,E       | Vanderbilt University, Nashville,<br>Tennessee                | 1999-2001            | Classes/Laboratory<br>Experience |
| A,B,C,D,E       | Various (see curriculum vitae)                                | 1996-1999            | Classes/On the Job               |
| A,B,C,D,E       | United States Military Academy                                | 2001 – 2005          | Classes (Professor)              |
| A,B,C,D,E       | Army Materiel Command   | 2005-2008            | On the Job                       |
| A,B,C,D,E       | Columbia University/Memorial<br>Sloan Kettering Cancer Center | 2008-2011            | Classes/Research                 |

### **Experience with Isotopes**

| <i>ISOTOPE</i>     | <i>MAXIMUM ACTIVITY</i> | <i>DURATION OF EXPERIENCE</i> | <i>TYPE OF EXPERIENCE</i>                     |
|--------------------|-------------------------|-------------------------------|---|
| <b>Uranium</b>     | 2500 kg                 | 1992- 1993<br>2001 – 2005     | Light Water Moderated<br>Subcritical Assembly |
| <b>Pu-239</b>      | 80 g                    | 1992- 1993<br>2001 – 2005     | Sealed neutron source                         |
| <b>Cs-137</b>      | Nominal Activity        | 1999- present                 | Check Sources &<br>Brachytherapy Sources      |
| <b>Co-57</b>       | Nominal Activity        | 1992- 1993<br>2001 - 2005     | Check Sources                                 |
| <b>Co-60</b>       |                         | 1999-2001                     | Teletherapy Unit                              |
| Atomic Nos<br>1-83 | 10 mCi                  | 1996-1999<br>2001 - present   | Sealed sources                                |
| Tc-99m             | Ci Generator            | 1996-1999                     | Nuclear Medicine Pharmacy<br>doses            |
| I-131              | Nominal Activity        | 1996-1999<br>2001 – present   | Nuclear Medicine Pharmacy<br>Check sources    |
| I-125              | Nominal Activity        | 1999-2001                     | Prostate Seed Implants                        |
| Ir-192             | Nominal Activity        | 1999-2001                     | Brachytherapy Sources                         |

MEMORANDUM

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

8/12/13, and to inform you that the initial processing which includes an administrative review has been performed.

Amendment (31-02102-02) 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** 581590.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.

Sincerely,  
Licensing Assistance Team Leader