

The Regents of the
UNIVERSITY OF MINNESOTA

on the recommendation of the faculty
have conferred upon

David James Eastman

the degree of

Master of Environmental Health and Safety

with all its privileges and obligations

Given at Duluth, in the State of Minnesota,

this twenty first day of December, two thousand-one.

Ann D. Carlson

SECRETARY, BOARD OF REGENTS

James P. Riehl

DEAN



M. S. York

PRESIDENT

Kathryn A. Martin

CHANCELLOR



Radiation Physics
CONSULTANTS

December 8, 2021

ATTESTATION OF TRAINING

The following is the radiographic equipment David Eastman has been properly trained on to perform Physics Testing. I, Steve Nicholas, verify the above person is competent to assess the following items marked below. If you have any questions, please contact me at steve@rpcphysics.com.

- | | |
|----------------------------------------------------------------|-------------------------------------------------------------|
| <input checked="" type="checkbox"/> Radiographic Room | <input type="checkbox"/> CT Unit (ACR) |
| <input checked="" type="checkbox"/> Digital Radiography | <input type="checkbox"/> CT Unit (Non ACR) |
| <input checked="" type="checkbox"/> CR Reader | <input type="checkbox"/> Gamma Camera |
| <input checked="" type="checkbox"/> Portable Radiographic Unit | <input type="checkbox"/> MRI Unit (ACR) |
| <input checked="" type="checkbox"/> C-Arm | <input type="checkbox"/> MRI Unit (Non ACR) |
| <input checked="" type="checkbox"/> R&F Room | <input type="checkbox"/> Mammo Unit |
| <input checked="" type="checkbox"/> Specials/Cath/EP Lab | <input type="checkbox"/> Tomo/DBT Mammo Unit |
| <input type="checkbox"/> O-Arm | <input type="checkbox"/> Stereotactic Mammo Unit |
| <input checked="" type="checkbox"/> Dental Bitewing | <input type="checkbox"/> EOS Body Scanner |
| <input checked="" type="checkbox"/> Dental Panalipse | <input checked="" type="checkbox"/> Survey Meter |
| <input checked="" type="checkbox"/> Dental Conebeam CT | <input checked="" type="checkbox"/> Leak Test |
| <input checked="" type="checkbox"/> Dexa/Bone Densitometer | <input checked="" type="checkbox"/> Dose Calibrator Testing |

Sincerely,

Steven T. Nicholas, M.S., DABMP
President, RPC





Radiation Physics
CONSULTANTS

December 9, 2021

COMPETENCY ATTESTATION

I, Steve Nicholas, verify David Eastman is trained and competent to perform the follow services. If you have any questions, please contact me at steve@rpcphysics.com.

A. SERVICES TO THE X-RAY DEPARTMENT

1. Radiographic equipment:
 - a) Source-to-image (SID) accuracy, beam quality (HVL) analysis, and evaluation of spatial resolution
 - b) Radiation output (mR/mAs) verses kVp and distance (typical patient exposures)
 - c) Phototimer operation analysis
 - d) Tomographic performance analysis with respect to beam path and exposure uniformity, depth indicator accuracy, cut thickness, and resolution
 - e) Mechanical performance and electrical cable integrity inspection
 - f) Light field to x-ray beam alignment
 - g) Proper operation of interlocks and exposure switches
 - h) Accuracy of manual and automatic collimator operation
 - i) X-ray generator analysis with respect to kVp and timer accuracy, mA linearity, exposure reproducibility and assessment of radiation, and kV waveforms (non-invasive testing)

2. Computed Radiography equipment:
 - a) Physical inspection/inventory of cassettes
 - b) Imaging plate uniformity and dark noise
 - c) Signal response: linearity and slope; calibration and beam quality
 - d) Laser beam function
 - e) High-contrast resolution
 - f) Noise/low-contrast response
 - g) Aspect ratio and accuracy of distance measurements
 - h) Erasure thoroughness
 - i) Throughput

3. Digital Radiography equipment:
 - a) Uniformity and artifact evaluation
 - b) Signal response: linearity and slope; calibration and beam quality
 - c) High-contrast resolution
 - d) Noise/low-contrast response
 - e) Aspect ratio and accuracy of distance measurements
 - f) Anti-aliasing
 - g) Positioning and collimation errors
 - h) Monitor evaluation

4. Fluoroscopic equipment:
 - a) Verify compliance with state and federal regulations for fluoroscopic exposure rate conditions
 - b) Proper operation of interlocks, exposure switches, timers, table side shields, and tower aprons
 - c) Fluoroscopic imaging system resolution and contrast analysis
 - d) Fluoroscopic kVp accuracy, radiation and kV waveforms assessment (non-invasive testing), and fluoroscopic beam quality
 - e) Verify air kerma and/or DAP indicator accuracy
 - f) Spot film x-ray generator analysis with respect to kVp and timer accuracy, mA linearity, exposure reproducibility and assessment of radiation and kV waveforms (non-invasive testing)
 - g) Mechanical performance and electrical cable integrity inspection

5. Evaluate the monitor image and the hardcopy image
6. Upon specific request:
 - a) Evaluate the radiation safety procedures in use to assure the expectations of the regulatory agencies and The Joint Commission are met
 - b) Analyze dosimetry reports to assure the personnel monitoring program meets applicable standards, and assist in minimizing exposures when possible
 - c) Calculate and provide patient exposure levels in accordance with the recommendations of CDRH and the rules of The Joint Commission
 - d) Evaluate the film processor quality control program and make recommendations for improvements

B. SERVICES TO THE NUCLEAR MEDICINE DEPARTMENT

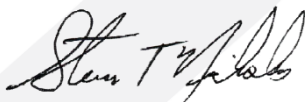
1. Establish a radiological health program and record system in accordance with NRC and/or state regulations.
2. Wipe/leak test sealed sources semi-annually
3. Calibrate survey meters
4. Visit facility to:

- a. Perform accuracy and evaluate constancy and activity linearity checks on dose calibrators, as required
- b. Review record system (e.g. radioactive shipment receipt, use and disposal) for NRC and state compliance, health physics program to assure continued safe handling of by-product materials, dosimetry badge records and recommend action in cases of overexposure
- c. Attend Radiation Safety Committee meetings or staff meetings, if arranged to coincide with routine consultation visit

C. OTHER SERVICES

1. *Shielding*: Individual can help determine the necessary shielding evaluations for new equipment or modified exam rooms to ensure protection from scattered radiation. RPC can:
 - a. Create a concise and detailed report indicating the type and amount of required shielding materials for each wall, ceiling, and floor
 - b. Provide all necessary documentation for submitting the shielding report to state agencies for review
 - c. Communicate directly with state inspectors concerning discrepancies or questions
2. *Annual Audit*: Individual can perform an audit for the facility's Radiation Safety Officer. This is a thorough critique and analysis of the entire Radiology Quality Assurance Program which includes:
 - a. Review of the QA Manual to ensure all QC tests are performed properly, at the correct intervals, and documentation is maintained
 - b. Provide a comprehensive report specifying areas of deficiency and recommending corrections
 - c. Assist in modifying or creating site-specific policies and procedures
3. *Quality Assurance*: Individual can provide consultation services to establish a QA program in select departments (e.g. radiology, ultrasound) to assist the facility's staff in developing a quality assurance program that includes policies and procedures designed to optimize the performance of personnel and equipment
4. *Educational Program*: Individual can provide instructional lectures and individualized training on radiation safety and quality assurance.

Sincerely,



Steven T. Nicholas, M.S., DABMP
President, RPC



Radiation Physics
CONSULTANTS

January 30, 2017

RSO QUALIFICATION LETTER

This letter is in reference to the Radiation Safety Officer qualification requirements set forth by the Minnesota Department of Health Ionizing Radiation Rules:

4732.0500 REGISTRANT'S SAFETY RESPONSIBILITIES.

Subp. 2. Designation of radiation safety officer.

B. The individual designated as a radiation safety officer must be either a licensed practitioner of the healing arts; or an individual who has completed training in the following items:

- (1) fundamentals of radiation safety;
- (2) familiarization with facility's radiation-producing equipment;
- (3) film processing, if applicable;
- (4) quality assurance program;
- (5) audits of the quality assurance program;
- (6) emergency procedures for radiation-producing equipment failures;
- (7) proper use of personal dosimetry, if applicable;
- (8) requirements of pertinent state rules; and
- (9) the registrant's written operating and emergency procedures.

David Eastman, M.E.H.S., employed with Radiation Physics Consultants, Inc., has met the above training requirements due to being listed on a Radioactive Materials License as an RSO, developing and implementing a diagnostic radiation safety program for medical facilities and having 13 plus years of clinical medical physics experience. Therefore, I attest that David Eastman, M.E.H.S. has achieved a level of radiation safety knowledge sufficient to function independently as a Radiation Safety Officer for a facility licensed under MN Rules, Chapter 4732 - Ionizing Radiation.

Sincerely,

A handwritten signature in black ink that reads "J. Douglas Bennett". The signature is written in a cursive, flowing style.

J. Douglas Bennett, M.S., DABR
Medical Physicist & RSO under License Number 1048



Certificate of Training

Awarded To

David Eastman

*Recognizing completion of 16 hours
of specialized instruction in*

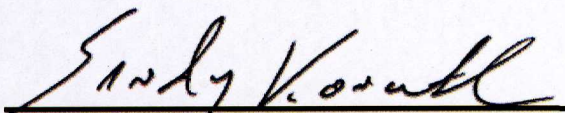
*Regulatory & Safety Compliance
in Nuclear Medicine*

October 12, 2016

Presented by

Versant Medical Physics and Radiation Safety

Instructors: Darrell R. Fisher, Ph.D.
Nadeem Khan, MS, DABR



Sandy Konerth, DABMP, DABR

Director, Training & Regulatory Services

Versant Medical Physics and Radiation Safety



Versant
Medical Physics and Radiation Safety

Certificate of Training

Awarded To

David Eastman

Recognizing completion of 5 days of specialized instruction in

Medical Radiation Safety Officer

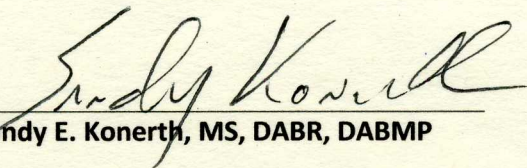
January 27 to 31, 2012

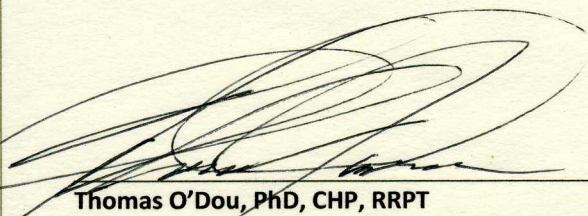
Presented By

Dade Moeller Training Academy

4100 West Flamingo Road, Suite 2200, Las Vegas, Nevada
www.moellerinc.com/academy - 301-990-6006

ABIH has awarded this course 6.01 CM Points, CM Approval #09-4751
AAHP has awarded this course 32 Continuing Education Credits, 2009-00-076
ARRT and SNMT has awarded this course up to 40.5 CEH's, 024551-024555


Sandy E. Konerth, MS, DABR, DABMP


Thomas O'Dou, PhD, CHP, RRPT



RADIATION SAFETY OFFICER COURSE
CERTIFICATE OF ATTENDANCE

This certificate is awarded to

DAVID EASTMAN

For participation at the RSO course sponsored by the MSRT on

NOVEMBER 15TH, 2008

Jennifer M. Schmidt
RSO Course Coordinator

11/15/2008
Date

Control of Blood-Borne Pathogens

Training Certificate

Name: David J. Eastman

Date: January 25, 2018

I certify that I have received training on Blood-Borne Pathogens. The content of this training included:

1. General Blood-Borne Pathogens Policy
2. Types and transmission of blood-borne pathogens
3. General Safety Rules
4. Universal Precautions
5. Use of Personal Protective Equipment
6. Medical Waste Disposal Procedures
7. Post Exposure Treatment and Procedures
8. HBV Vaccinations



3-5-18

Employee's Signature

Date



1-25-18

Employer's Signature

Date



**RADIATION SAFETY OFFICER TRAINING
AND EXPERIENCE AND PRECEPTOR ATTESTATION
[10 CFR 35.50]**

APPROVED BY OMB: NO. 3150-0120
EXPIRES: 04/30/2016

Name of Proposed Radiation Safety Officer

David Eastman

Requested Authorization(s) *The license authorizes the following medical uses (check all that apply):*

- 35.100
 35.200
 35.300
 35.400
 35.500
 35.600 (remote afterloader)
 35.600 (teletherapy)
 35.600 (gamma stereotactic radiosurgery)
 35.1000 (_____)

**PART I -- TRAINING AND EXPERIENCE
(Select one of the four methods below)**

*Training and Experience, including board certification, must have been obtained within the 7 years preceding the date of application or the individual must have obtained related continuing education and experience since the required training and experience was completed. Provide dates, duration, and description of continuing education and experience related to the uses checked above.

1. Board Certification

- a. Provide a copy of the board certification.
- b. Use Table 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
- c. Skip to and complete Part II Preceptor Attestation.

OR

2. Current Radiation Safety Officer Seeking Authorization to Be Recognized as a Radiation Safety Officer for the Additional Medical Uses Checked Above

- a. Use the table in section 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for the additional types of medical use for which recognition as RSO is sought.
- b. Skip to and complete Part II Preceptor Attestation.

OR

3. Structured Educational Program for Proposed Radiation Safety Officer

a. Classroom and Laboratory Training

Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation			
Radiation protection			
Mathematics pertaining to the use and measurement of radioactivity			
Radiation biology			
Radiation dosimetry			

Total Hours of Training:

RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

b. Supervised Radiation Safety Experience

(If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this section.)

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		
Securing and controlling byproduct material		
Using administrative controls to avoid mistakes in administration of byproduct material		
Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures		
Using emergency procedures to control byproduct material		
Disposing of byproduct material		
Licensed Material Used (e.g., 35.100, 35.200, etc.)+ <div style="border: 1px solid black; height: 50px; width: 100%; margin-top: 5px;"></div>		

+ Choose all applicable sections of 10 CFR Part 35 to describe radioisotopes and quantities used: 35.100, 35.200, 35.300, 35.400, 35.500, 35.600 remote afterloader units, 35.600 teletherapy units, 35.600 gamma stereotactic radiosurgery units, emerging technologies (provide list of devices).

RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

b. Supervised Radiation Safety Experience (continued)

(If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this section.)

Supervising Individual	License/Permit Number listing supervising individual as a Radiation Safety Officer
This license authorizes the following medical uses:	
<input type="checkbox"/> 35.100	<input type="checkbox"/> 35.200
<input type="checkbox"/> 35.500	<input type="checkbox"/> 35.600 (remote afterloader)
<input type="checkbox"/> 35.600 (gamma stereotactic radiosurgery)	<input type="checkbox"/> 35.400
	<input type="checkbox"/> 35.600 (teletherapy)
	<input type="checkbox"/> 35.1000 (_____)

c. Describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.

Description of Training	Training Provided By	Dates of Training*
Radiation safety, regulatory issues, and emergency procedures for 35.100, 35.200, and 35.500 uses	Please see the attached license where David Eastman is currently listed as the RSO for activities under this section.	
Radiation safety, regulatory issues, and emergency procedures for 35.300 uses	Please see the attached document for training listed under 35.300	
Radiation safety, regulatory issues, and emergency procedures for 35.400 uses	Please see the attached document for training listed under 35.400	
Radiation safety, regulatory issues, and emergency procedures for 35.600 - teletherapy uses	NA	
Radiation safety, regulatory issues, and emergency procedures for 35.600 - remote afterloader uses	NA	
Radiation safety, regulatory issues, and emergency procedures for 35.600 - gamma stereotactic radiosurgery uses	NA	
Radiation safety, regulatory issues, and emergency procedures for 35.1000, specify use(s):	NA	

RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

c. Training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license (continued)

Supervising Individual <i>If training was provided by supervising RSO, AU, AMP, or ANP. (If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)</i> J. Douglas Bennett	License/Permit Number listing supervising individual 1048-301-69
License/Permit lists supervising individual as: <input checked="" type="checkbox"/> Radiation Safety Officer <input type="checkbox"/> Authorized User <input type="checkbox"/> Authorized Nuclear Pharmacist <input type="checkbox"/> Authorized Medical Physicist	
Authorized as RSO, AU, ANP, or AMP for the following medical uses: <input checked="" type="checkbox"/> 35.100 <input checked="" type="checkbox"/> 35.200 <input checked="" type="checkbox"/> 35.300 <input checked="" type="checkbox"/> 35.400 <input type="checkbox"/> 35.500 <input type="checkbox"/> 35.600 (remote afterloader) <input type="checkbox"/> 35.600 (teletherapy) <input type="checkbox"/> 35.600 (gamma stereotactic radiosurgery) <input checked="" type="checkbox"/> 35.1000 (<u>Y-90</u>)	

d. Skip to and complete Part II Preceptor Attestation.

OR

4. Authorized User, Authorized Medical Physicist, or Authorized Nuclear Pharmacist identified on the licensee's license

- a. Provide license number.
- b. Use the table in section 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
- c. Skip to and complete Part II Preceptor Attestation.

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following:

1. Board Certification

I attest that _____ has satisfactorily completed the requirements in
Name of Proposed Radiation Safety Officer
 10 CFR 35.50(a)(1)(i) and (a)(1)(ii); or 35.50 (a)(2)(i) and (a)(2)(ii); or 35.50(c)(1).

OR

2. Structured Educational Program for Proposed Radiation Safety Officers

I attest that David Eastman has satisfactorily completed a structural educational
Name of Proposed Radiation Safety Officer
 program consisting of both 200 hours of classroom and laboratory training and one year of full-time radiation safety experience as required by 10 CFR 35.50(b)(1).

OR

RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

Preceptor Attestation (continued)

First Section (continued)

Check one of the following:

3. Additional Authorization as Radiation Safety Officer

I attest that _____ is an
Name of Proposed Radiation Safety Officer

Authorized User

Authorized Nuclear Pharmacist

Authorized Medical Physicist

identified on the Licensees license and has experience with the radiation safety aspects of similar type of use of byproduct material for which the individual has Radiation Safety Officer responsibilities

AND

Second Section

Complete for all (check all that apply):

I attest that David Eastman has training in the radiation safety, regulatory issues, and
Name of Proposed Radiation Safety Officer

emergency procedures for the following types of use:

35.100

35.200

35.300 oral administration of less than or equal to 33 millicuries of sodium iodide I-131, for which a written directive is required

35.300 oral administration of greater than 33 millicuries of sodium iodide I-131

35.300 parenteral administration of any beta-emitter, or a photon-emitting radionuclide with a photon energy less than 150 keV for which a written directive is required

35.300 parenteral administration of any other radionuclide for which a written directive is required

35.400

35.500

35.600 remote afterloader units

35.600 teletherapy units

35.600 gamma stereotactic radiosurgery units

35.1000 emerging technologies, including:

RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

AND


Third Section
Complete for ALL

I attest that David Eastman has achieved a level of radiation safety knowledge
Name of Proposed Radiation Safety Officer
sufficient to function independently as a Radiation Safety Officer for a medical use licensee.

Fourth Section
Complete the following for Preceptor Attestation and signature

I am the Radiation Safety Officer for Essentia Health St. Mary's Medical Center - East Region
Name of Facility

License/Permit Number: 1048-301-69

Name of Preceptor	Signature	Telephone Number	Date
J. Douglas Bennett		(218) 786-1823	5/11/2016



Radioactive Materials Unit
P.O. Box 64975
St. Paul, MN 55164-0975
Phone (651) 201-4400 • Fax (651) 201-4606

RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION

Name of Proposed Radiation Safety Officer <i>David James Eastman</i>	State or Territory Where Licensed <i>- NA</i>
-------------------------------------------------------------------------	--------------------------------------------------

Requested Authorization(s). The license authorizes the following medical uses. (Check all that apply.)

<input checked="" type="checkbox"/> 4731.4432	<input checked="" type="checkbox"/> 4731.4434	<input checked="" type="checkbox"/> 4731.4440	<input checked="" type="checkbox"/> 4731.4450	<input type="checkbox"/> 4731.4460
<input type="checkbox"/> 4731.4463 (remote afterloader)			<input type="checkbox"/> 4731.4463 (teletherapy)	
<input type="checkbox"/> 4731.4463 (gamma stereotactic radiosurgery)			<input type="checkbox"/> 4731.4404 ()	

PART I – TRAINING AND EXPERIENCE
(Select one of the four methods below)

* Training and Experience, including board certification, must have been obtained within seven years preceding the date of application or the individual must have obtained related continuing education and experience since the required training and experience was completed. Provides dates, duration, and description of continuing education and experience related to the uses checked above.

- 1. Board Certification**
 - a. Provide a copy of the board certification
 - b. Use Table 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
 - c. Skip to and complete Part II Preceptor Attestation
- 2. Current Radiation Safety Officer Seeking Authorization to Be Recognized as a Radiation Safety Officer for the Additional Medical Uses Checked Above**
 - a. Use the table in Section 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license for which recognition as RSO is sought.
 - b. Skip to and complete Part II Preceptor Attestation

- 3. Structured Educational Program for Proposed Radiation Safety Officer**
 - a. Classroom and Laboratory Training

Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation	<i>- see attached document for training documentation.</i>		
Radiation Protection			
Mathematics pertaining to the use and measurement of radioactivity			
Radiation biology			
Radiation dosimetry			

Total Hours of Training: *200+ hours*

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)
b. Supervised Radiation Safety Experience

Description of Experience	Location of Training and License or Permit Number of Facility	Dates of Training*
Shipping, receiving, and performing related radiation surveys	- see attached document for experience.	
Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides		
Securing and controlling radioactive material		
Using administrative controls to avoid mistakes in administration of radioactive material		
Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures		
Using emergency procedures to control radioactive material		
Disposing of radioactive material		
Licensed material used (e.g., 4731.4432, 4731.4434, etc.)** _____ _____ _____ _____		

** Choose all applicable Section of 4731 to describe radioisotopes and quantities used: 4731.4432, 4731.4434, 4731.4440, 4731.4450, 4731.4460, 4731.4463 (remote afterloader), 4731.4463 (teletherapy), 4731.4463 (gamma stereotactic radiosurgery), 4731.4404 (emerging technologies – provide list of devices)

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

b. Supervised Radiation Safety Experience (continued)

(If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this section.)

Supervising Individual J. Douglas Bennett	License or Permit Number listing the supervising individual as a Radiation Safety Officer 1048-302-69
The license authorizes the following medical uses:	
<input checked="" type="checkbox"/> 4731.4432 <input checked="" type="checkbox"/> 4731.4434 <input checked="" type="checkbox"/> 4731.4440 <input checked="" type="checkbox"/> 4731.4450 <input type="checkbox"/> 4731.4460 <input type="checkbox"/> 4731.4463 (remote afterloader) <input type="checkbox"/> 4731.4463 (teletherapy) <input type="checkbox"/> 4731.4463 (gamma stereotactic radiosurgery) <input type="checkbox"/> 4731.4404 (_____)	

c. Describe the training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.

Description of Training	Training Provider	Dates of Training*
Radiation safety, regulatory issues, and emergency procedures for 4731.4432, 4731.4434, and 4731.4460 uses	<i>-see attached document for training documentation.</i>	
Radiation safety, regulatory issues, and emergency procedures for 4731.4440 uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4450 uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – teletherapy uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – remote afterloader uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – gamma stereotactic radiosurgery uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4404, specify use(s):		

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

d. Training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license. (continued)

Supervising Individual If training was provided by supervising RSO, AU, ANP, AMP. (If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.) <u>J. Douglas Bennett</u>	License or Permit Number listing the supervising individual as a Radiation Safety Officer <u>1048-302-69</u>
The license or Permit lists supervising individual as: <input checked="" type="checkbox"/> Radiation Safety Officer (RSO) <input type="checkbox"/> Authorized User (AU) <input type="checkbox"/> Authorized Nuclear Pharmacist (ANP) <input type="checkbox"/> Authorized Medical Physicist (AMP)	
Authorized as RSO, AU, ANP, AMP for the following medical uses: <input checked="" type="checkbox"/> 4731.4432 <input checked="" type="checkbox"/> 4731.4434 <input checked="" type="checkbox"/> 4731.4440 <input checked="" type="checkbox"/> 4731.4450 <input type="checkbox"/> 4731.4460 <input type="checkbox"/> 4731.4463 (remote afterloader) <input type="checkbox"/> 4731.4463 (teletherapy) <input type="checkbox"/> 4731.4463 (gamma stereotactic radiosurgery) <input type="checkbox"/> 4731.4404 (_____)	

e. Skip to and complete Part II.

OR

4. Authorized User, Authorized, Authorized Medical Physicist, or Authorized Nuclear Pharmacist identified on the licensee's license.

- a. Provide the License Number.
- b. Use the table in Section 3.c. to describe the training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
- c. Skip to and complete Part II Preceptor Attestation.

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies the training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following:

1. Board Certification

I attest that _____ has satisfactorily completed the requirements in
Name of Proposed Radiation Safety Officer
 4731.4411 Subpart 2 Item A.(1) and A.(2); or 4731.4411 Subpart 2 Item B.(1) and B.(2); or 4731.4411 Subpart 1.C.

OR

2. Structured Educational Program for Proposed Radiation Safety Officers

I attest that David James Eastman has satisfactorily completed a structured educational
Name of Proposed Radiation Safety Officer
 program consisting of both 200 hours of classroom and laboratory training and one year of full-time radiation safety experience as required by 4731.4411 Subpart 1 Item B.(1).

OR

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

Preceptor Attestation (continued)

First Section (continued)

3. Additional Authorization as Radiation Safety Officer

I attest that _____ is one of the following:
Name of Proposed Radiation Safety Officer

Authorized User (AU) Authorized Nuclear Pharmacist (ANP) Authorized Medical Physicist

Identified on the licensee's radioactive materials license and has experience with the radiation safety aspects of similar types(s) of use of radioactive material for which the individual has Radiation Safety Officer responsibilities.

AND

Second Section

Complete for all. (Check all that apply.)

I attest that David James Eastman has training in the radiation safety, regulatory issues, and emergency procedures for the following types of use:
Name of Proposed Radiation Safety Officer

4731.4432

4731.4434

4731.4440 oral administration of less than or equal to 33 millicuries of sodium iodine I-131, for which a written directive is required

4731.4440 oral administration of greater than 33 millicuries of sodium iodine I-131

4731.4440 parenteral administration of any beta-emitter, or a photon-emitting radionuclide with a photon energy of less than 150 keV for which a written directive is required

4731.4440 parenteral administration of any other radionuclide for which a written directive is required

4731.4450

4731.4460

4731.4463 (remote afterloader)

4731.4463 (teletherapy)

4731.4463 (gamma stereotactic radiosurgery)

4731.4404 emerging technologies, including:

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

AND

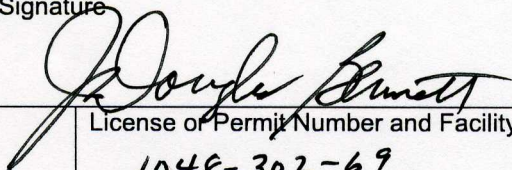
**Third Section
Complete for ALL**

I attest that David James Eastman has achieved a level of radiation safety knowledge
Name of Proposed Radiation Safety Officer
 Sufficient to function independently as a Radiation Safety Officer for a medical use licensee.

**Fourth Section
Complete the following for Preceptor Attestation and signature**

I am a Radiation Safety Officer for: Essentia Health - East
Name of Facility

License or Permit Number: 1048-302-69

Name of Preceptor <u>J. Douglas Bennett</u>	Signature 	Date <u>3 March 2014</u>
Telephone Number <u>218-786-1823</u>	License or Permit Number and Facility Name <u>1048-302-69</u> <u>Essentia Health - East</u>	



Radioactive Materials Unit
P.O. Box 64975
St. Paul, MN 55164-0975
Phone (651) 201-4400 • Fax (651) 201-4606

**RADIATION SAFETY OFFICER
 TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION**

Name of Proposed Radiation Safety Officer <p style="text-align: center;">David J. Eastman</p>	State or Territory Where Licensed <p style="text-align: center;">Minnesota</p>
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Requested Authorization(s). The license authorizes the following medical uses. (Check all that apply.)

<input type="checkbox"/> 4731.4432	<input type="checkbox"/> 4731.4434	<input type="checkbox"/> 4731.4440	<input type="checkbox"/> 4731.4450	<input type="checkbox"/> 4731.4460
<input type="checkbox"/> 4731.4463 (remote afterloader)			<input type="checkbox"/> 4731.4463 (teletherapy)	
<input type="checkbox"/> 4731.4463 (gamma stereotactic radiosurgery)			<input checked="" type="checkbox"/> 4731.4404 (Low Dose Brachytherapy)	

Seed Localization of Non-Palpable Lesions

PART I – TRAINING AND EXPERIENCE
(Select one of the four methods below)

* Training and Experience, including board certification, must have been obtained within seven years preceding the date of application or the individual must have obtained related continuing education and experience since the required training and experience was completed. Provides dates, duration, and description of continuing education and experience related to the uses checked above.

- 1. Board Certification**
 - a. Provide a copy of the board certification
 - b. Use Table 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
 - c. Skip to and complete Part II Preceptor Attestation

- 2. Current Radiation Safety Officer Seeking Authorization to Be Recognized as a Radiation Safety Officer for the Additional Medical Uses Checked Above**
 - a. Use the table in Section 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license for which recognition as RSO is sought.
 - b. Skip to and complete Part II Preceptor Attestation

- 3. Structured Educational Program for Proposed Radiation Safety Officer**
 - a. Classroom and Laboratory Training

Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation			
Radiation Protection			
Mathematics pertaining to the use and measurement of radioactivity			
Radiation biology			
Radiation dosimetry			

Total Hours of Training:

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

b. Supervised Radiation Safety Experience

Description of Experience	Location of Training and 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		
Securing and controlling radioactive material		
Using administrative controls to avoid mistakes in administration of radioactive material		
Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures		
Using emergency procedures to control radioactive material		
Disposing of radioactive material		
Licensed material used (e.g., 4731.4432, 4731.4434, etc.)** _____ _____ _____ _____		

** Choose all applicable Section of 4731 to describe radioisotopes and quantities used: 4731.4432, 4731.4434, 4731.4440, 4731.4450, 4731.4460, 4731.4463 (*remote afterloader*), 4731.4463 (*teletherapy*), 4731.4463 (*gamma stereotactic radiosurgery*), 4731.4404 (emerging technologies – provide list of devices)

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

b. Supervised Radiation Safety Experience (continued)

(If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this section.)

Supervising Individual	License or Permit Number listing the supervising individual as a Radiation Safety Officer
The license authorizes the following medical uses:	
<input type="checkbox"/> 4731.4432 <input type="checkbox"/> 4731.4434 <input type="checkbox"/> 4731.4440 <input type="checkbox"/> 4731.4450 <input type="checkbox"/> 4731.4460 <input type="checkbox"/> 4731.4463 (<i>remote afterloader</i>) <input type="checkbox"/> 4731.4463 (<i>teletherapy</i>) <input type="checkbox"/> 4731.4463 (<i>gamma stereotactic radiosurgery</i>) <input type="checkbox"/> 4731.4404 (_____)	

c. Describe the training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.

Description of Training	Training Provider	Dates of Training*
Radiation safety, regulatory issues, and emergency procedures for 4731.4432, 4731.4434, and 4731.4460 uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4440 uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4450 uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – teletherapy uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – remote afterloader uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – gamma stereotactic radiosurgery uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4404, specify use(s):	See attached letter from preceptor RSO	10-5-13 to current

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

d. Training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license. (continued)

Supervising Individual If training was provided by supervising RSO, AU, ANP, AMP. (If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)	License or Permit Number listing the supervising individual as a Radiation Safety Officer
The license or Permit lists supervising individual as: <input type="checkbox"/> Radiation Safety Officer (RSO) <input type="checkbox"/> Authorized User (AU) <input type="checkbox"/> Authorized Nuclear Pharmacist (ANP) <input type="checkbox"/> Authorized Medical Physicist (AMP)	
Authorized as RSO, AU, ANP, AMP for the following medical uses: <input type="checkbox"/> 4731.4432 <input type="checkbox"/> 4731.4434 <input type="checkbox"/> 4731.4440 <input type="checkbox"/> 4731.4450 <input type="checkbox"/> 4731.4460 <input type="checkbox"/> 4731.4463 (remote afterloader) <input type="checkbox"/> 4731.4463 (teletherapy) <input type="checkbox"/> 4731.4463 (gamma stereotactic radiosurgery) <input type="checkbox"/> 4731.4404 (_____)	

e. Skip to and complete Part II.

OR

4. Authorized User, Authorized, Authorized Medical Physicist, or Authorized Nuclear Pharmacist identified on the licensee's license.

- a. Provide the License Number.
- b. Use the table in Section 3.c. to describe the training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
- c. Skip to and complete Part II Preceptor Attestation.

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies the training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following:

1. Board Certification

I attest that _____ has satisfactorily completed the requirements in
Name of Proposed Radiation Safety Officer
 4731.4411 Subpart 2 Item A.(1) and A.(2); or 4731.4411 Subpart 2 Item B.(1) and B.(2); or 4731.4411 Subpart 1.C.

OR

2. Structured Educational Program for Proposed Radiation Safety Officers

I attest that David J. Eastman has satisfactorily completed a structured educational
Name of Proposed Radiation Safety Officer
 program consisting of both 200 hours of classroom and laboratory training and one year of full-time radiation safety experience as required by 4731.4411 Subpart 1 Item B.(1).

OR

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

Preceptor Attestation (continued)
First Section (continued)

3. Additional Authorization as Radiation Safety Officer

I attest that _____ is one of the following:
Name of Proposed Radiation Safety Officer

Authorized User (AU) Authorized Nuclear Pharmacist (ANP) Authorized Medical Physicist

Identified on the licensee's radioactive materials license and has experience with the radiation safety aspects of similar types(s) of use of radioactive material for which the individual has Radiation Safety Officer responsibilities.

AND

Second Section

Complete for all. (Check all that apply.)

I attest that David J. Eastman has training in the radiation safety, regulatory issues,
Name of Proposed Radiation Safety Officer
and emergency procedures for the following types of use:

4731.4432

4731.4434

4731.4440 oral administration of less than or equal to 33 millicuries of sodium iodine I-131, for which a written directive is required

4731.4440 oral administration of greater than 33 millicuries of sodium iodine I-131

4731.4440 parenteral administration of any beta-emitter, or a photon-emitting radionuclide with a photon energy of less than 150 keV for which a written directive is required

4731.4440 parenteral administration of any other radionuclide for which a written directive is required

4731.4450

4731.4460

4731.4463 (remote afterloader)

4731.4463 (teletherapy)

4731.4463 (gamma stereotactic radiosurgery)

4731.4404 emerging technologies, including:

Low Dose Brachytherapy Seed

Localization of Non-Palpable

Lesions

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

AND


**Third Section
Complete for ALL**

I attest that David J. Eastman has achieved a level of radiation safety knowledge
Name of Proposed Radiation Safety Officer
 Sufficient to function independently as a Radiation Safety Officer for a medical use licensee.

**Fourth Section
Complete the following for Preceptor Attestation and signature**

I am a Radiation Safety Officer for: Essentia Health - East Region
Name of Facility

License or Permit Number: 1048-69

Name of Preceptor J. Douglas Bennett	Signature 	Date 11/13/2017
Telephone Number 218-786-1823	License or Permit Number and Facility Name 1048-69 - Essentia Health	



RADIOACTIVE MATERIALS LICENSE

Pursuant to Minnesota Statute 144.12 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 radioactive materials 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 rules. This license is subject to all applicable rules and orders of the Minnesota Department of Health (MDH) including the Minnesota Radioactive Materials Rules, Chapter 4731, now or hereafter in effect, and to any conditions specified below.

1. LICENSEE

ESSENTIA HEALTH EAST
420 EAST 1ST STREET
DULUTH, MINNESOTA 55805

In accordance with the documents listed in Item 17, the Minnesota Department of Health Radioactive Materials License is issued to read as follows:

- | | |
|---------------------|--------------------------|
| 2. License Number: | 1048 |
| Amendment Number: | 14 |
| 3. Issue Date: | November 16, 2017 |
| 4. Expiration Date: | February 28, 2021 |

Program Codes

Primary: 2120	Secondary: 3220	Other: 3221
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5. Byproduct, Source, Special Nuclear and/or Natural Occurring; or Accelerator Produced Radioactive Material

- A. Any radioactive material authorized by 4731.4432
- B. Any radioactive material authorized by 4731.4434 (excluding Xenon-133)
- C. Any radioactive material authorized by 4731.4440
- D. Iodine-125
- E. Iodine-125 authorized by 4731.4404

6. Chemical and/or Physical Form

- A. Any (excluding generators)
- B. Any (excluding generators)
- C. Any
- D. Sealed sources (Bard Brachytherapy, Inc. Model STM 1251; Best Medical International, Inc. [formerly Best Industries, Inc.] Model 2300 Series; Theragenics Corporation Model I25.S06; Medi-Physics, Inc. d/b/a GE Healthcare Model 6711 [OncoSeed™])
- E. Sealed sources (Medi-Physics, Inc. d/b/a GE Healthcare Model 6711 [OncoSeed™]; Medi-Physics, Inc. Model 6733 [EchoSeed™]; Amersham/Medi+Physics, Inc. Model 6702; Bard Brachytherapy, Inc. Model STM 1251; Best Medical International, Inc. [formerly Best Industries, Inc.] Model

7. Maximum Amount That Licensee May Possess At Any One Time Under This License

- A. As needed
- B. As needed
- C. 2 curies (74 GBq). Not to exceed 1 Curie (37 GBq) of Iodine-131.
- D. Total possession not to exceed 2 curies (74 GBq)
- E. Not to exceed 1.5 millicuries (55.5 MBq) per procedure. Total possession not to exceed 75 millicuries (2.78 GBq)



RADIOACTIVE MATERIALS LICENSE

<p>F. Yttrium-90 authorized by 4731.4404</p> <p>G. Cesium-137</p> <p>H. Any radioactive material with atomic numbers between 3-83, inclusive</p>	<p>2300 Series; Core Oncology, Inc. [formerly Mills Biopharmaceuticals, LLC. Model I-125 SL; International Brachytherapy, Inc. Model 1251L; IsoAid, LLC. Model IAI-125A [Advantage™ I-125]; North American Scientific, Inc. Model MED3631; Theragenics Corporation Model I25.S06)</p> <p>F. Sealed Sources (Nordion [Canada], Inc. [formerly MDS Nordion a division of MDS [Canada] Inc.] Model TheraSphere Including Mark III Administration Set and Accessory Kit)</p> <p>G. Sealed sources (QSA Global, Inc. [formerly AEA Technology-QSA Incorporated] Model 77302 source rod assembly [CDC.800 Series source attached to source rod])</p> <p>H. Analytical samples</p>	<p>F. Not to exceed 540 millicuries (19.98 GBq) per vial. Total possession not to exceed 5 curies (185 GBq).</p> <p>G. 2 sources, no single source to exceed 175 millicuries (6.48 GBq).</p> <p>H. As needed (see item 8. H.)</p>
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8. AUTHORIZED USE

- A. Any uptake, dilution and excretion study authorized by 4731.4432.
- B. Any imaging and localization study authorized by 4731.4434.
- C. Medical use of unsealed radioactive material requiring a written directive as authorized by 4731.4440.
- D. Any manual brachytherapy procedure authorized by 4731.4450.
- E. For use as temporary implants to localize non-palpable lesions as authorized by 4731.4404.
- F. Yttrium-90 (Y-90) microspheres to be used for manual brachytherapy permanent implantation therapy authorized by 4731.4404.
- G. To be used in a QSA Global Model 773 calibrator for calibration of licensee's instruments and instruments from other licensees.
- H. Possession incident to analysis of leak test/contamination samples as a service for licensee and other licensees.

CONDITIONS

- 9. A. Licensed material may be used at the following addresses of Essentia Health Systems facilities: 400 East 3rd Street, Duluth, Minnesota, 420 East 1st Street, Duluth, Minnesota, and 502 East 2nd Street, Duluth, Minnesota.
- B. Material in item 5. H. may be used at temporary job sites of the licensee anywhere in the State of Minnesota where Minnesota Department of Health maintains jurisdiction for regulating the use of licensed material. Analysis

RADIOACTIVE MATERIALS LICENSE

of leak test samples shall be performed only at the licensee's facilities in item 9. A.

10. The Radiation Safety Officer for this license is **David J. Eastman, MEHS.**

11. Licensed material is only authorized for use or under the supervision of:

A. Individuals authorized to work as an authorized user in accordance with 4731.4403.

B. The following individuals are authorized users for medical use as indicated:

<u>Authorized User</u>	<u>Material and Use</u>
David G. Alexander, M.D.	Material authorized by 4731.4432, 4731.4434, 4731.4440 (limited to oral administration of sodium iodide I-131) and 4731.4404 (limited to Iodine-125 for localization of non-palpable lesions).
Kimberly Boddicker, M.D.	Material authorized by 4731.4432 and 4731.4434
Michael Caldwell, M.D.	Material authorized by 4731.4432, 4731.4434, and 4731.4440 (limited to oral administration of sodium iodide I-131 in quantities less than or equal to 33 millicuries).
Andrew C. Chiu, M.D.	Material authorized by 4731.4432 and 4731.4434
Bruce Derauf, M.D.	Material authorized by 4731.4432, 4731.4434, 4731.4440, and 4731.4404 (limited to Iodine-125 for localization of non-palpable lesions).
Kenneth J. Dornfeld, M.D.	Material authorized by 4731.4440 and 4731.4450 and 4731.4404 (limited to Iodine-125 for localization of non-palpable lesions).
Eduardo Ehrenwald, M.D.	Material authorized by 4731.4404 (limited to Yttrium-90 TheraSpheres microspheres for manual brachytherapy permanent implantation therapy).
Tammy M. Fox, M.D.	Material authorized by 4731.4432, 4731.4434, and 4731.4404 (limited to Iodine-125 for localization of non-palpable lesions).
Wilson L. Ginete, M.D.	Material authorized by 4731.4432 and 4731.4434
Justin Hill, M.D.	Material authorized by 4731.4432, 4731.4434 and 4731.4440 (limited to oral administration of sodium iodide I-131 in quantities less than or equal to 33 millicuries).
Jill R. Holsinger, M.D.	Material authorized by 4731.4432, 4731.4434, and 4731.4404 (limited to Iodine-125 for localization of non-palpable lesions).
Gregory L. Horsley, M.D.	Material authorized by 4731.4432, 4731.4434, 4731.4440 (limited to oral administration of sodium iodide I-131) and 4731.4404 (limited to Yttrium-90 TheraSpheres microspheres for manual brachytherapy

RADIOACTIVE MATERIALS LICENSE

	permanent implantation therapy).
Ningmei Hu, M.D.	Material authorized by 4731.4432 and 4731.4434.
Michael J. Lucca, M.D.	Material authorized by 4731.4432 and 4731.4434.
David McNaney, M.D.	Material authorized by 4731.4440, 4731.4450 and 4731.4404 (limited to Iodine-125 for localization of non-palpable lesions).
Nicholas J. Milanovich, M.D.	Material authorized by 4731.4432, 4731.4434, and 4731.4440 (limited to oral administration of sodium iodide I-131).
Daniel J. Mullins, M.D.	Material authorized by 4731.4432, 4731.4434, 4731.4440 (limited to oral administration of sodium iodide I-131 in quantities less than or equal to 33 millicuries) and 4731.4404 (limited to Iodine-125 for localization of non-palpable lesions).
Margaret Naylor, M.D.	Material authorized by 4731.4432, 4731.4434 and 4731.4440 (limited to parenteral administration of any beta emitter, or a photon-emitting radionuclide with a photon energy of less than 150 KeV).
Michael E. Ryan, M.D.	Material authorized by 4731.4432, 4731.4434, 4731.4440 (limited to oral administration of sodium iodide I-131), and 4731.4404 (limited to Iodine-125 and for localization of non-palpable lesions).
Nizar Saleh, M.D.	Material authorized by 4731.4432 and 4731.4434
Michael J. Sassman, <i>D.O.</i>	Material authorized by 4731.4432, 4731.4434, and 4731.4404 (limited to Yttrium-90 TheraSpheres microspheres for manual brachytherapy permanent implantation therapy).
Jessica W. Rooney Sawyer, M.D.	Material authorized by 4731.4450.
Gregory B. Snyder, M.D.	Material authorized by 4731.4404 (limited to Yttrium-90 TheraSpheres microspheres for manual brachytherapy permanent implantation therapy).
Chad St. Germain, M.D.	Material authorized by 4731.4432 and 4731.4434.
Dan Zelen, M.D.	Material authorized by 4731.4432, 4731.4434, and 4731.4440.
Eric J. Zimmerman, M.D.	Material authorized by 4731.4432, 4731.4434, and 4731.4440 (limited to oral administration of sodium iodide I-131).

12. A. Sealed sources must be tested for leakage and/or contamination in accordance with 4731.2360.

B. Leak test sample analysis shall be performed by the licensee or by other persons specifically licensed by the US Nuclear Regulatory Commission or an Agreement State to perform such services.



RADIOACTIVE MATERIALS LICENSE

- 13. Licensed material in Items 5. G. and 5. H. shall be used by, David Eastman, M.E.H.S., Erik Julsrud, M.S., Bruce M. Libey, B.S., Steven T. Nicholas, M.S., William N. Salk, M.S., or by any authorized medical physicist or designated person authorized by this license who has received manufacturer's training or equivalent for performing leak tests, sample analysis and instrument calibration as a commercial service.
- 14. Radiation survey instrument calibration provided as a commercial service to licensees of the Minnesota Department of Health, other Agreement States, or the US Nuclear Regulatory Commission shall be conducted in accordance with statements, representations, and procedures approved by the Minnesota Department of Health.
- 15. Sealed source leakage or contamination tests provided as a commercial service to licensees of the Minnesota Department of Health, other Agreement States, or the US Nuclear Regulatory Commission shall be conducted in accordance with the procedures approved by the Minnesota Department of Health.
- 16. In addition to the possession limits in Item 7, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in Chapter 4731.3080 for establishing decommissioning financial assurance.
- 17. 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 except for minor changes in the medical use radiation safety procedures as provided by 4731.4405 Subpart 2. The Minnesota Department of Health rules shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the rules.
 - A. Renewal application dated January 15, 2016, and emails dated February 23, 2016, March 8, 2016, and March 17, 2016.
 - B. Amendment request dated April 7, 2016 and emails dated April 19, 2016, May 12, 2016, May 23, 2016, May 26, 2016, May 31, 2016, and July 28, 2016.
 - C. Amendment request dated July 19, 2017 and email dated August 4, 2017.
 - D. Amendment request dated October 18, 2017, and emails dated November 13, 2017.**

FOR THE MINNESOTA DEPARTMENT OF HEALTH

Prepared by: Date: 11/16/2017
Radioactive Materials Unit Staff

Reviewed by: Date: 11/16/2017
Radioactive Materials Unit Staff

Approved by: Date: 11/16/2017
Radioactive Materials Unit Supervisor



Radioactive Materials Unit
P.O. Box 64975
St. Paul, MN 55164-0975
Phone (651) 201-4400 • Fax (651) 201-4606

**RADIATION SAFETY OFFICER
 TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION**

Name of Proposed Radiation Safety Officer <p style="text-align: center;">David J. Eastman</p>	State or Territory Where Licensed <p style="text-align: center;">Minnesota</p>
--------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------

Requested Authorization(s). The license authorizes the following medical uses. (Check all that apply.)

<input type="checkbox"/> 4731.4432	<input type="checkbox"/> 4731.4434	<input type="checkbox"/> 4731.4440	<input type="checkbox"/> 4731.4450	<input type="checkbox"/> 4731.4460
<input type="checkbox"/> 4731.4463 (remote afterloader)			<input type="checkbox"/> 4731.4463 (teletherapy)	
<input type="checkbox"/> 4731.4463 (gamma stereotactic radiosurgery)			<input checked="" type="checkbox"/> 4731.4404 (Yttrium-90 microspheres)	

PART I – TRAINING AND EXPERIENCE
(Select one of the four methods below)

* Training and Experience, including board certification, must have been obtained within seven years preceding the date of application or the individual must have obtained related continuing education and experience since the required training and experience was completed. Provides dates, duration, and description of continuing education and experience related to the uses checked above.

- 1. Board Certification**
 - a. Provide a copy of the board certification
 - b. Use Table 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
 - c. Skip to and complete Part II Preceptor Attestation

- 2. Current Radiation Safety Officer Seeking Authorization to Be Recognized as a Radiation Safety Officer for the Additional Medical Uses Checked Above**
 - a. Use the table in Section 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license for which recognition as RSO is sought.
 - b. Skip to and complete Part II Preceptor Attestation

3. Structured Educational Program for Proposed Radiation Safety Officer

a. Classroom and Laboratory Training

Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation			
Radiation Protection			
Mathematics pertaining to the use and measurement of radioactivity			
Radiation biology			
Radiation dosimetry			
Total Hours of Training:			

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

b. Supervised Radiation Safety Experience

Description of Experience	Location of Training and 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		
Securing and controlling radioactive material		
Using administrative controls to avoid mistakes in administration of radioactive material		
Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures		
Using emergency procedures to control radioactive material		
Disposing of radioactive material		
Licensed material used (e.g., 4731.4432, 4731.4434, etc.)** _____ _____ _____ _____		

** Choose all applicable Section of 4731 to describe radioisotopes and quantities used: 4731.4432, 4731.4434, 4731.4440, 4731.4450, 4731.4460, 4731.4463 (*remote afterloader*), 4731.4463 (*teletherapy*), 4731.4463 (*gamma stereotactic radiosurgery*), 4731.4404 (emerging technologies – provide list of devices)

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

b. Supervised Radiation Safety Experience (continued)

(If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this section.)

Supervising Individual	License or Permit Number listing the supervising individual as a Radiation Safety Officer
The license authorizes the following medical uses:	
<input type="checkbox"/> 4731.4432 <input type="checkbox"/> 4731.4434 <input type="checkbox"/> 4731.4440 <input type="checkbox"/> 4731.4450 <input type="checkbox"/> 4731.4460 <input type="checkbox"/> 4731.4463 (<i>remote afterloader</i>) <input type="checkbox"/> 4731.4463 (<i>teletherapy</i>) <input type="checkbox"/> 4731.4463 (<i>gamma stereotactic radiosurgery</i>) <input type="checkbox"/> 4731.4404 (_____)	

c. Describe the training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.

Description of Training	Training Provider	Dates of Training*
Radiation safety, regulatory issues, and emergency procedures for 4731.4432, 4731.4434, and 4731.4460 uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4440 uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4450 uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – teletherapy uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – remote afterloader uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – gamma stereotactic radiosurgery uses		
Radiation safety, regulatory issues, and emergency procedures for 4731.4404, specify use(s):	See attached letter from preceptor RSO	3-10-16 to current

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

d. Training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license. (continued)

Supervising Individual If training was provided by supervising RSO, AU, ANP, AMP. (If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)	License or Permit Number listing the supervising individual as a Radiation Safety Officer
The license or Permit lists supervising individual as: <input type="checkbox"/> Radiation Safety Officer (RSO) <input type="checkbox"/> Authorized User (AU) <input type="checkbox"/> Authorized Nuclear Pharmacist (ANP) <input type="checkbox"/> Authorized Medical Physicist (AMP)	
Authorized as RSO, AU, ANP, AMP for the following medical uses: <input type="checkbox"/> 4731.4432 <input type="checkbox"/> 4731.4434 <input type="checkbox"/> 4731.4440 <input type="checkbox"/> 4731.4450 <input type="checkbox"/> 4731.4460 <input type="checkbox"/> 4731.4463 (remote afterloader) <input type="checkbox"/> 4731.4463 (teletherapy) <input type="checkbox"/> 4731.4463 (gamma stereotactic radiosurgery) <input type="checkbox"/> 4731.4404 (_____)	

e. Skip to and complete Part II.

OR

4. Authorized User, Authorized, Authorized Medical Physicist, or Authorized Nuclear Pharmacist identified on the licensee's license.

- a. Provide the License Number.
- b. Use the table in Section 3.c. to describe the training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
- c. Skip to and complete Part II Preceptor Attestation.

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies the training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following:

1. Board Certification

I attest that _____ has satisfactorily completed the requirements in
Name of Proposed Radiation Safety Officer
 4731.4411 Subpart 2 Item A.(1) and A.(2); or 4731.4411 Subpart 2 Item B.(1) and B.(2); or 4731.4411 Subpart 1.C.

OR

2. Structured Educational Program for Proposed Radiation Safety Officers

I attest that David J. Eastman has satisfactorily completed a structured educational
Name of Proposed Radiation Safety Officer
 program consisting of both 200 hours of classroom and laboratory training and one year of full-time radiation safety experience as required by 4731.4411 Subpart 1 Item B.(1).

OR

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

Preceptor Attestation (continued)

First Section (continued)

3. Additional Authorization as Radiation Safety Officer

I attest that _____ is one of the following:
Name of Proposed Radiation Safety Officer

Authorized User (AU) Authorized Nuclear Pharmacist (ANP) Authorized Medical Physicist

Identified on the licensee's radioactive materials license and has experience with the radiation safety aspects of similar types(s) of use of radioactive material for which the individual has Radiation Safety Officer responsibilities.

AND

Second Section

Complete for all. (Check all that apply.)

I attest that David J. Eastman has training in the radiation safety, regulatory issues,
Name of Proposed Radiation Safety Officer
and emergency procedures for the following types of use:

4731.4432

4731.4434

4731.4440 oral administration of less than or equal to 33 millicuries of sodium iodine I-131, for which a written directive is required

4731.4440 oral administration of greater than 33 millicuries of sodium iodine I-131

4731.4440 parenteral administration of any beta-emitter, or a photon-emitting radionuclide with a photon energy of less than 150 keV for which a written directive is required

4731.4440 parenteral administration of any other radionuclide for which a written directive is required

4731.4450

4731.4460

4731.4463 (remote afterloader)

4731.4463 (teletherapy)

4731.4463 (gamma stereotactic radiosurgery)

4731.4404 emerging technologies, including:

Yttrium-90 microspheres

**RADIATION SAFETY OFFICER
TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)**

AND

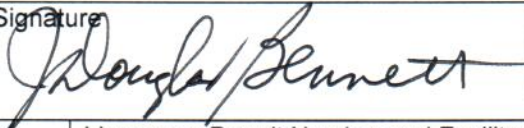
**Third Section
Complete for ALL.**

I attest that David J. Eastman has achieved a level of radiation safety knowledge
Name of Proposed Radiation Safety Officer
Sufficient to function independently as a Radiation Safety Officer for a medical use licensee.

**Fourth Section
Complete the following for Preceptor Attestation and signature**

I am a Radiation Safety Officer for: Essentia Health - East Region
Name of Facility

License or Permit Number: 1048-69

Name of Preceptor J. Douglas Bennett	Signature 	Date 9/19/2017
Telephone Number 218-786-1823	License or Permit Number and Facility Name 1048-69 - Essentia Health	

Structured Educational Program for Proposed RSO

a. 200 hours of Classroom and Laboratory Training

Description of Training	Location of Training	Lecture Time	Exam Time	Lab Time	Total Clock Hours	Dates of Training
Radiation Physics & Instrumentation	Essentia Health Miller Dwan Medical Center, Duluth, MN Survey Meter Calibration (1)	NA	NA	0.5	0.5	4/8/2013
	Essentia Health Miller Dwan Medical Center, Duluth, MN Survey Meter Calibration (1)	NA	NA	0.5	0.5	4/15/2013
	Essentia Health Miller Dwan Medical Center, Duluth, MN Sealed Source Leak Tests (1)	NA	NA	0.5	0.5	4/18/2013
	Essentia Health Miller Dwan Medical Center, Duluth, MN Survey Meter Calibrations (10)	NA	NA	3.5	3.5	6/10/2013
	Essentia Health Miller Dwan Medical Center, Duluth, MN Sealed Source Leak Tests (2)	NA	NA	0.25	0.25	7/16/2013
	Intro. to Diagnostic Radiographic Equipment, Medical Health Physics by Health Physics Society	0.5	NA	NA	0.5	4/19/2013
	Nuclear Medicine Instrumentation, Medical Health Physics by Health Physics Society	1.0	NA	NA	1.0	4/29/2013
	Health Physics in Brachytherapy: Applications of Radiological Safety, Clinical Implementation and Medical Research, Medical Health Physics by Health Physics Society	0.5	NA	NA	0.5	4/29/2013
	Radiology, Production of X-Rays, X-Ray Generators, Basic Interaction between X-Rays & Matter, Attenuation, Filters, X-Ray Beam Restrictors, Grids, Luminescent Screens, Physical Characteristics of X-Ray Film & Film Processing, Photographic Characteristics of X-Ray Film and Fluoroscopic Imaging by Christensen's Physics of Diagnostic Radiology (Chapters 1-12)	11.25	NA	NA	11.25	8/14-19/2013
	Essentia Health Miller Dwan Medical Center, Duluth, MN Sealed Source Leak Tests (4)	NA	NA	0.75	0.75	10/1/2013
	Annual Physics Testing of Three Nuc. Med. Gamma Cameras	NA	NA	10.0	10.0	2/11-12/2014
Radiation Protection	RSO Training Course conducted by the MSRT in cooperation with the MDH	6.0	NA	0.0	6.0	11/5/2008
	Create Computer Based Fluoroscopic Radiation Safety Training Program w/Quiz & Certification	NA	NA	40.0	40.0	6/29/2012
	The Human Factor in Quality & Safety of Radiation Therapy (AAPM)	1.0	0.5	NA	1.5	3/29/2013
	Radiation Protection in a Medical Institution, Medical Health Physics by Health Physics Society	0.25	NA	NA	0.25	4/19/2013
	A Guide to Licensing a Medical Facility for the Use of Radioactive Materials, Medical Health Physics by Health Physics Society	0.25	NA	NA	0.25	4/29/2013
	Medical Events and the Health Physicist, Medical Health Physics by Health Physics Society	0.5	NA	NA	0.5	5/13/2013
	Radioactive Waste Management in Medical Programs, Medical Health Physics by Health Physics Society	1.5	NA	NA	1.5	5/28/2013

	Essentia Health Radiation Safety Committee Meeting	NA	NA	1.0	1.0	8/15/2013
	Radioactive Seed Localization with Iodine 125 for NonPalpable Lesions Prior To Breast Lumpectomy and/or Excisional Biopsy by Health Physics Society 2013	1.0	NA	NA	1.0	10/5/2013
	Essentia Health Radiation Safety Committee Meeting	NA	NA	1.0	1.0	11/21/2013
	ALARA Audit w/Doug Bennett	NA	NA	4.0	4.0	1/21/2013
	Dade Moeller Medical Radiation Safety Officer (MRSO) Course taken in Las Vegas, NV [See attachment for a detailed course information.]	36.0	NA	NA	36.0	1/27-31/2014
	NRC Regulations 10 CFR 35	4.0	NA	NA	4.0	2/10/2014
	CardinalHealth Hazardous Materials Transportation Safety (DOT) Regulatory Compliance Training	1.75	0.25	NA	2.0	2/13/2014
	Occupational Radiation Safety by ASRT Radiology Technology, May/June 2013, Volume 84, No. 5	1.75	0.25	NA	2.0	2/17/2014
	Essentia Health Radiation Safety Committee Meeting	NA	NA	1.0	1.0	2/20/2014
	Site Planning and Radiation Safety in the PET Facility by Jon Anderson & Dana Mathews, Dept. of Radiology, The University of Texas Southwestern Medical Center at Dallas	1.25	NA	NA	1.25	2/21/2014
	MDH Radioactive Materials Regulatory Guide for Diagnostic and Therapeutic Medical Procedures	5.25	NA	NA	5.25	2/25&28/2014
	MDH 4731 Rules	5.5	NA	NA	5.5	2/28/2014 to 3/2/2014
Mathematics pertaining to the use and measurement of radioactivity	Lakewalk Imaging Center, Duluth, MN CT Scanner Shielding Plan Evaluation	NA	NA	5.0	5.0	1/29/2009
	Lakeview Memorial Hospital, Two Harbors, MN Portable C-Arm Shielding Plan Evaluation for use in two diff. OR Suites	NA	NA	3.0	3.0	2/21/2012
	St. Francis Medical Center, Shakopee, MN Stereotactic Mammo Shielding Plan Evaluation	NA	NA	2.0	2.0	4/4/2013
	Essentia Health St. Mary's Medical Center, Duluth, MN Panalipse Shielding Plan Evaluation	NA	NA	3.0	3.0	4/9/2013
	Essentia Health St. Mary's Hospital Superior, Superior, WI Tomo Room Shielding Plan Evaluation	NA	NA	8.75	8.75	4/26/2013
	Innovis Health, Fargo, ND Urology Procedure Room Shielding Plan Evaluation for C-Arm Use	NA	NA	3.0	3.0	8/6/2013
	Essentia Health Sandstone, Sandstone, MN OR Suite #2 Shielding Plan Evaluation for C-Arm Use	NA	NA	5.0	5.0	8/8/2013
	Ely-Bloomenson Re-Calculation of the Daily CT QC +/- 3 SD of baseline values and provided updated Daily CT QC log	NA	NA	0.5	0.5	9/23/2013

Radiation Biology	Science Behind the ICRP 2005 Recommendations: Biological and Epidemiological Information (AAPM)	0.5	0.25	NA	0.75	3/29/2013
	Patient Radiation Dose Estimate & Sterility Risk Assessment	NA	NA	2.0	2.0	6/11/2013
	Quantities & Units, Radiation w/Matter and Mammalian Cells	1.0	NA	NA	1.0	11/27/2013
	Material Safety Data Sheet (MSDS) review of the following isotopes: Tc99, In111, I123, I131, Ga67 and Strontium-89	0.75	NA	NA	0.75	2/12/2014
	Nuclear Medicine Technology: Procedures and Quick Reference [The book was used to learn how the isotopes of Tc99, In111, I123, I131 and Ga67 are used for clinical exams. See attached document for types of exams reviewed.]	4.5	NA	NA	4.5	2/12/2014 & 2/17/2014
	Prenatal Radiation Exposure: A Fact Sheet for Physicians by Center for Disease Control	0.5	NA	NA	0.5	2/24/2014
	ACR Practice Guideline for Imaging Pregnant or Potentially Pregnant Adolescents and Women with Ionizing Radiation	1.25	NA	NA	1.25	2/25/2014
Radiation dosimetry	Dose Estimation and Measurement (AAPM)	1.0	0.5	NA	1.5	3/29/2013
	Basic Film Dosimetry (AAPM)	1.0	0.5	NA	1.5	3/30/2013
	Patient Dosimetry in Diagnostic Imaging, Medical Health Physics by Health Physics Society	0.5	NA	NA	0.5	4/19/2013
	Evaluation and Consulting on Patient Dose in Diagnostic Imaging (AAPM)	1.0	0.5	NA	1.5	5/28/2013
	Essentia Health Nuclear Medicine Department Training In: Shipping, Receiving, Performing Related Radiation Surveys, Daily QC Checks of Instruments/Camera, Weekly QC Check for Camera, Monthly QC Check for Camera, Securing & Controlling Radioactive Material, Went Over Administrative Controls w/NMIS Computed System & Patient Check-In Protocols, and Procedures To Minimize Radioactive Contamination	NA	NA	7.0	7.0	8/15/2013
	Essentia Health Nuclear Medicine Department Training In: Shipping, Receiving, Performing Related Radiation Surveys, Daily QC Checks of Instruments/Camera, Weekly QC Check for Camera, Monthly QC Check for Camera, Securing & Controlling Radioactive Material, Went Over Administrative Controls w/NMIS Computed System, Procedures To Minimize Radioactive Contamination, Used Emergency Procedures To Control Radioactive Material In Mock	NA	NA	5.0	5.0	9/27/2013
	The Selection, Use, Calibration and Quality Assurance of Radionuclide Calibrators Used in Nuclear Medicine by Report of AAPM Task Group 181, June 2012	2.75	NA	NA	2.75	2/17/2014
Total Hours:		94.00	2.75	107.25	204.00	

b. Supervised Radiation Safety Experience

Description of Training	Location of Training and License or Permit Number of Facility	Dates of Training
Shipping, receiving, and performing related radiation surveys	Essentia Health Miller Dwan Medical Center (License #: 1048-301-69) [Note: The training involved receiving and sending of a shipment as well as end of day radiation surveys.] Dade Moeller Medical Radiation Safety Officer (MRSO) Course Covered Appropriate Areas as indicated by (^). CardinalHealth Hazardous Materials Transportation Safety (DOT) Regulatory Compliance Training as indicated by (*).	8/15/2013 9/27/2013 1/27-31/2014^ 2/12/2014 2/13/2014"
Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides	Essentia Health Miller Dwan Medical Center (License #: 1048-301-69) [Note: The dates with a (*) indicate when a survey meter(s) was calibrated. The other dates indicate training in daily, weekly and monthly QC checks (i.e. daily- Well Counter, Dose Calibrator, Survey Meter and Camera; Weekly- Bar Phantom; Monthly- Max. Head Rotation/Center of Rotation, Non-Circular Orbit).] Dade Moeller Medical Radiation Safety Officer (MRSO) Course Covered Appropriate Areas as indicated by (^). CardinalHealth Hazardous Materials Transportation Safety (DOT) Regulatory Compliance Training as indicated by (*).	4/8/2013* 4/15/2013* 6/10/2013* 7/16/2013* 8/15/2013 9/27/2013 1/27-31/2014^ 2/13/2014"
Securing and controlling radioactive material	Essentia Health Miller Dwan Medical Center (License #: 1048-301-69) [Note: Observation of a locked storage cabinet for the Daily PET QC phantom as well as badged access to all hot labs and radioactive waste storage areas.] Dade Moeller Medical Radiation Safety Officer (MRSO) Course Covered Appropriate Areas as indicated by (^). CardinalHealth Hazardous Materials Transportation Safety (DOT) Regulatory Compliance Training as indicated by (*).	8/15/2013 9/27/2013 1/27-31/2014^ 2/11-12/2014 2/13/2014
Using administrative controls to avoid mistakes in administration of radioactive material	Essentia Health Miller Dwan Medical Center (License #: 1048-301-69) [Note: Went over proper procedure for checking in patients (i.e. ask name and have verify birth date before administering any Radioactive Material) and also went over the Essentia Health Nuclear Medicine Information Systems (NMIS) computed software which helps avoid mistakes in administration of radioactive material.] Dade Moeller Medical Radiation Safety Officer (MRSO) Course Covered Appropriate Areas as indicated by (^).	8/15/2013 9/27/2013 2/12/2014 1/27-31/2014^
Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures	Essentia Health Miller Dwan Medical Center (License #: 1048-301-69) [Note: The dates with a (*) indicate when a Sealed Source Leak Test(s) was performed. The other dates were working with staff on conducting the department weekly wipe tests.] Dade Moeller Medical Radiation Safety Officer (MRSO) Course Covered Appropriate Areas as indicated by (^).	4/18/2013* 8/15/2013 9/27/2013 10/1/2013* 1/27-31/2014^

c. Describe the training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.

Description of Training	Location of Training and License or Permit Number of Facility	Dates of Training
Radiation safety, regulatory issues, and emergency procedures for 4731.4432, 4731.4434, and 4731.4460 uses	Participated in MDH inspection at Essentia Health (License #: 1048-301-69) as indicated with a (*). Attended/Participated in Essentia Health Radiation Safety Committee Meetings. Participated in ALARA Audit as indicated by (**). Dade Moeller Medical Radiation Safety Officer (MRSO) Course Covered Appropriate Areas as indicated by (^).	5/1/2013* 8/15/2013 11/21/2013 1/21/2014** 1/27-31/2014^ 2/20/2014 2/28/2014
Radiation safety, regulatory issues, and emergency procedures for 4731.4440 uses	Participated in MDH inspection at Essentia Health (License #: 1048-301-69) as indicated with a (*). Attended/Participated in Essentia Health Radiation Safety Committee Meetings Participated in ALARA Audit as indicated by (**). Dade Moeller Medical Radiation Safety Officer (MRSO) Course Covered Appropriate Areas as indicated by (^).	5/1/2013* 8/15/2013 11/21/2013 1/21/2014** 1/27-31/2014^ 2/20/2014 2/28/2014
Radiation safety, regulatory issues, and emergency procedures for 4731.4450 uses	Participated in MDH inspection at Essentia Health (License #: 1048-301-69) as indicated with a (*). Attended/Participated in Essentia Health Radiation Safety Committee Meetings Participated in ALARA Audit as indicated by (**). Dade Moeller Medical Radiation Safety Officer (MRSO) Course Covered Appropriate Areas as indicated by (^).	5/1/2013* 8/15/2013 11/21/2013 1/21/2014** 1/27-31/2014^ 2/20/2014 2/28/2014
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – teletherapy uses	NA	NA
Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – remote afterloader uses	NA	NA

Using emergency procedures to control radioactive material	Essentia Health Miller Dwan Medical Center (License #: 1048-31-69) [Note: Conducted a mock radioactive isotope spill in the Hot Lab to go through proper emergency procedure to contain and clean-up the spill as well as go over a past patient radioactive spill that occurred within a bathroom.] Dade Moeller Medical Radiation Safety Officer (MRSO) Course Covered Appropriate Areas as indicated by (*).]	9/27/2013 1/27-31/2014^
Disposing of radioactive material	Essentia Health Miller Dwan Medical Center (License #: 1048-31-69) [Note: Training in proper disposal of a sharps container containing Tc-99. Training on the radioactive isotopes half life decay secured storage areas.] Dade Moeller Medical Radiation Safety Officer (MRSO) Course Covered Appropriate Areas as indicated by (*). CardinalHealth Hazardous Materials Transportation Safety (DOT) Regulatory Compliance Training as indicated by (*).]	9/27/2013 1/27-31/2014^ 2/12/2014 2/13/2014
Licensed material used (i.e. 4731.4432 , 4731.4434 , etc.)**	Essentia Health Miller Dwan Medical Center (License #: 1048-301-69) [Note: Received documentation on all of the procedures/doses conducted at the facility within the Nuc. Med. Dept. for treating patients. Reviewed all licensed material used, including MSDS's as indicated by (*).]	9/27/2013 2/12/2014* 2/17/2014*
**Choose all applicable Section of 4731 to describe radioisotopes and quantities used: 4731.4432 , 4731.4434 , 4731.4440 , 4731.4450, 4731.4460, 4731.4463 (remote afterloader), 4731.4463 (teletherapy), 4731.4463 (gamma stereotactic radiosurgery), 4731.4404 (emerging technologies - provide list of devices).		

Radiation safety, regulatory issues, and emergency procedures for 4731.4463 – gamma stereotactic radiosurgery uses	NA	NA
Radiation safety, regulatory issues, and emergency procedures for 4731.4404, specify use(s):	NA	NA

*Note: Bold areas above indicate areas under the facilities license.