

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Renée D. Coleman-Mitchell, MPH
Commissioner-Designate



Br. J

Ned Lamont
Governor
Susan Bysiewicz
Lt. Governor

Department of Public Health Laboratory

June 17, 2019

Licensing Assistance Team
Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission, Region 1
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-2713

Ref: NRC License 06-27895-03

103037847

REC RG 10621 19MM0704

Dear Licensing Assistance Team:

This is to request an amendment to the license of the State of Connecticut Department of Public Health (DPH) Laboratory, NRC #06-27895-03 in order to change the Radiation Safety Officer (RSO) of record.

Paul Milne, the current RSO, retired on 12/30/2018, but remained available as a Temporary Retiree Worker while we arranged to have another individual trained. The DPH Laboratory has appointed Joanne Lenoce as the RSO effective 7/1/2019.

Ms. Lenoce's experience and training (see attached) qualify her to implement and manage the Radiation Safety Program for the DPH Laboratory. In particular, Ms. Lenoce's recent RSO week long training in April that took place at Radiation Safety Associates in Hebron, CT. In addition, Ms. Lenoce has worked extensively in the Radiochemistry section of the lab, has participated in several training opportunities and is very familiar with the safety protocols required when working with radioactive materials.

Specifically, her training and experience have addressed: Radiation program principles, Characteristics of ionizing radiation, Units of radiation dose and quantities, Radiation detection instrumentation, Biological Hazards of exposure to radiation, NRC regulatory requirements and standards and Hands on use of radioactive materials.

612575
NMSS/RGNI MATERIALS



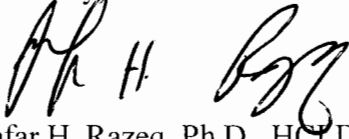
Phone: (860) 509-7101 • Fax: (860) 509-7111
Telecommunications Relay Service 7-1-1
410 Capitol Avenue, P.O. Box 340308
Hartford, Connecticut 06134-0308
www.ct.gov/dph

Affirmative Action/Equal Opportunity Employer



Thank you for your consideration. Should you have any questions regarding this amendment, please contact Susan Isch, Environmental Chemistry Division Director, at (860)920-6570. The DPH Laboratory looks forward to a continued productive relationship with the NRC

Sincerely,

A handwritten signature in black ink, appearing to read 'JH Razeq', written over the printed name.

Jafar H. Razeq, Ph.D., HCLD, (ABB)
Laboratory Director
Connecticut Department of Public Health

Joanne G Lenoce
Radiation Safety Officer
Dr. Katherine A Kelley State Public Health Laboratory

Work Experience

January 2019- present:

Assigned to Radiation Chemistry and have learned the following methods:

- Gross Alpha/Beta testing using gas proportional counting
- EPA Method 901.1 Analysis of Gamma Emitters in Water, Milk, Sediments, Solid Media and Air
- Radon in Air using Liquid Scintillation Counting
- EPA Method 905.0 Determination of Radiostrontium in Drinking Water

September 2013- July 2014:

Worked on a grant to develop rapid method testing for isotopic Uranium, Plutonium and Americium. Responsibilities included wet chemistry procedures and use of a gas proportional Alpha/Beta counting system.

March 1988- November 1995:

Worked as a Chemist 2 in the Special Chemistry section of Environmental Chemistry. Responsibilities included Gross Alpha/ Beta in Water testing, Radon in Water testing and developing the SOP for Radium 226/228 in water.

Education

Western Connecticut State University, BA, [REDACTED]

Courses and Classes related to RSO duties

Radiation Safety Associates, Inc. Hebron, CT
Radiation Safety Officer Training April 8-12, 2019

FERN- Regional Training Center Shoreline, WA
Alpha and Beta Emitter Analysis of Radionuclides using Gas Proportional Counting, Alpha Spectrometry and Liquid Scintillation Counting June 10-12, 2014

DPH- Katherine A Kelley State Public Health Laboratory
Radiation Safety Review Program November 2013

Canberra- Katherine A Kelley State Public Health Laboratory
Fundamentals of Alpha Spectroscopy May 2013

CERTIFICATE OF ACHIEVEMENT

This is to Certify that

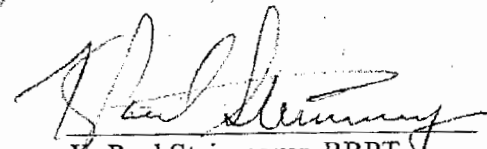
JOANNE LENOCE

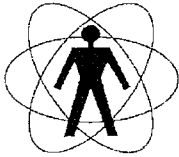
Has Completed 40 Hours of

Radiation Safety Officer Training

April 8 - 12, 2019




K. Paul Steinmeyer, RRPT
Radiation Safety Associates, Inc.
19 Pendleton Dr., PO Box 107
Hebron, CT 06248
860-228-0487



Radiation Safety Associates, Inc.

RADIATION SAFETY OFFICER

COURSE OUTLINE

THE ATOM

- Atomic Structure
- Elements
- Isotopes

TYPES OF RADIATION

- Radiation
- Alpha Particles
- Beta Particles
- Gamma and X-rays
- Neutrons
- Units of Radiation Energy

RADIOACTIVITY AND DECAY

- Radioactivity
- Decay
 - Half-life: the rate of radioactive decay
 - Decay constant
- Decay Equation
- Conservation of Mass, Charge, and Energy
- Methods of Radioactive Decay
 - Alpha decay
 - Beta decay
 - Beta minus
 - Positrons
 - Gamma rays
 - X rays
 - Isomeric transition
 - Internal conversion
 - Auger electrons
 - Electron capture
- Chart of the Nuclides
- Decay Data Tables
- Radioactive Series

UNITS OF MEASURE

- Radioactivity
 - The curie
 - Sub-units of the curie
- Radiation
 - Radiation exposure vs. radiation dose
 - Radiation exposure: the roentgen
 - Absorbed dose: the rad
 - Dose equivalent: the rem
 - Dose and dose rate
 - Determination of dose and

- dose rate
- Source Activity vs. Gamma
- Exposure Rate
- CPM vs. DPM
- Specific Activity
- SI Units

RADIATION INTERACTIONS WITH MATTER

- Charged Particle Interactions
 - Ionization
 - Excitation
 - Bremsstrahlung
- Photons
 - Photoelectric effect
 - Compton scattering
 - Pair production
- Neutron Interactions
 - Fast/slow neutron interactions

BACKGROUND RADIATION

- Introduction
- Cosmic Radiation
- Radioactivity of the Earth
- Radioactivity of Air
- Radioactivity of Water
- Radioactivity in the Human Body
- Artificial (Man-made) Radioactivity
 - Medical and dental exposures
 - Nuclear reactors
 - Transportation
 - Low level waste storage
 - Nuclear reactor accidents
- Summary

APPLICATIONS

- X Ray Machines
 - Production
 - Filtering
- Medical Radionuclides
 - Diagnosis
 - Therapy (radiation oncology)
- Linear accelerators
- Nuclear Reactors
 - Boiling water reactor
 - Pressurized water reactor
 - Nuclear fuel
 - Safety
- Radiation Sterilization

- Other Industrial Sources
 - Isotopic neutron sources
 - Oil well logging
 - Level and density gauges

BIOLOGICAL EFFECTS

- Introduction
- Cell Damage
- Acute and Delayed Effects
- Somatic and Genetic Effects
- Linear or Threshold
- Stochastic and Non-stochastic Effects
- Summary

PERSONAL DOSIMETRY

- Dose Limits
 - Definitions
 - 10 CFR 20 occupational dose limits
- Pregnant workers
- Minors
- Non-radiation workers
- Violations
- ALARA
- Personal Dosimetry
 - Badge placement
 - Film badge
 - Thermoluminescent dosimeter (TLD)
 - Pocket ion chambers
 - Chirpers and alarming dosimeters
 - Neutron dieters
 - Control badges
 - Regulatory Guide 8.13

RADIATION DETECTION AND MEASUREMENT

- Gas-filled Detectors
 - Pulse size considerations
 - Ionization chambers
 - Proportional counters
 - Limited proportionality region
 - Geiger-Mueller (GM)
 - Continuous discharge region
- Solid State Detectors
 - Scintillation detectors
 - Semiconductor detectors
 - Detector Applications

Portable survey meters	DISTANCE AND SHIELDING	INTERNAL EXPOSURE CONTROL AND DOSE ASSESSMENT
Calibration programs	Distance	ALARA
Laboratory instruments	Point sources	Annual Limit on Intake (ALI)
Portal monitors	Line sources	Derived Air Concentration
Personnel contamination monitors	Plane sources	Derived air concentration-hour
Whole body counters	Shielding	Assessing Body Burden
Basic Radiation Spectroscopy	Beta	Bioassay Methods
Spectrometer	Gamma	Whole body counting
Single and multi-channel analyzers	Neutron	Radiourinalysis
	CONTAMINATION CONTROL	Fecal analysis
REGULATIONS AND GUIDES	Radiation Vs. Contamination	Bioassay Programs
History of Protective Standards	Survey Methods	Calculating Internal Dose
ICRU, ICRP, and NCRP	Loose contamination	Examples of Dose Calculations
Radiation exposure concerns	Total contamination	Removing Internal Contamination
Basic recommendations	Wipe Test Evaluation	Required Postings
Federal policy	Statistical Considerations in a Counting Program	Airborne radioactivity area
Regulating agencies	Accuracy and precision	Regulatory Guide 8.20
Other Organizations	Normal probability distribution	Regulatory Guide 8.32
Regulations and Guides	Standard deviation	
10 CFR 19	Confidence levels	SOURCE HANDLING
10 CFR 20	Minimum detectable count rate (MDCR)	TECHNIQUES/RADIOACTIVE
10 CFR 30	Minimum detectable activity (MDA)	MATERIAL CONTROL AND
10 CFR 40	Changing the MDA	DISPOSAL
10 CFR 70	Survey Frequency and Limits	Definitions
10 CFR 71	Protective Clothing	Sealed source
10 CFR 74	Self-Frisk	Source material
Regulatory guides	Personnel Decontamination	Special nuclear material
NUREGs	Skin Dose Assessment	Regulations and Procedures
American National Standards	Skin dose calculation	10 CFR 20
Institute (ANSI) Standards	Documentation	10 CFR 30
Information notices	Survey Documentation	10 CFR 40
	Posting and Control of Contaminated Areas	10 CFR 70/74
EXTERNAL EXPOSURE CONTROL AND SURVEYS	Equipment And Area Decontamination	Exempt vs. Nonexempt Quantities of Radioactive Material
ALARA	AIR SAMPLING AND EVALUATION	Responsibilities
10 CFR 20	Types of Airborne Contaminants	Use and Precautions
Current ALARA-related regulatory guides	Sample Collection	Labeling
Radiation Exposure Control	Air Sample Accuracy	Master Index
Time	Total sample volume	Leak Testing
Distance	Efficiency of collection medium	Storage Limitations
Shielding	Counting efficiency	Disposal
Administrative Controls	Representative sample	Receiving Packages
Radiation work permits	Calculation of Airborne Concentrations	Container Labels
Access Control	Lower Limit of Detection (LLD)	Exemptions from Labeling Requirements
10 CFR 20		Disposal of Empty Radioactive Material Containers
Posting and Control		Storage and Control
10 CFR 20		Posting
Surveys		Exceptions from Posting
10 CFR 20		Requirements
Survey Form Contents		Loss or Theft of Licensed Material
Regulatory Guide 8.21		Industry Events
		Radioactive Waste - Definition
		Radwaste Minimization

- Radwaste Treatment
 - Storage for decay
 - Evaporation
 - Dilution and release
 - Filtration and deionization
 - Incineration
 - Compaction
 - Solidification
- Waste Disposal
 - Disposal facilities
- Packaging
 - Physical form
 - Strong tight containers
 - Type A containers
 - Type B containers
 - Warning labels on packages
 - Contamination limits on packages
 - Radiation limits during transport
 - Vehicle placarding
 - Other methods
- Source Handling Incidents
- NRC Information Notice 88-32
- NRC Information Notice 90 35

LICENSE REQUIREMENTS AND THE RADIATION PROTECTION PROGRAM

- Notice of Expiration
- Application NRC Form 313
- Radiation Protection Program
 - ALARA
 - Procedures
 - Training
 - Document Posting
 - Surveys
 - Legal Aspects
 - Procedural Compliance
 - Fundamentals of excellence
 - Pitfalls
- Ways for Health Physicists to Minimize the Chances of Being Sued

EMERGENCY PLANNING

- Introduction
- The Emergency Plan
- Emergency Response
- Organization
- Characterization of Installation and Facilities
- Licensed Activities
- Emergency Plan Implementation
- Response Actions
 - Assessment Actions
 - Protective Access
 - Corrective Actions
- Facilities and Equipment
- Off-site Agreements and Support
- Re-entry and Recovery
- Maintaining Emergency
- Preparedness
- Notifications

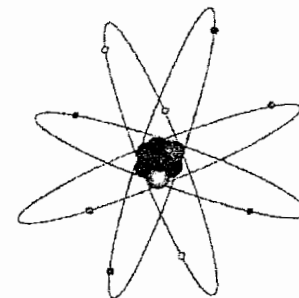
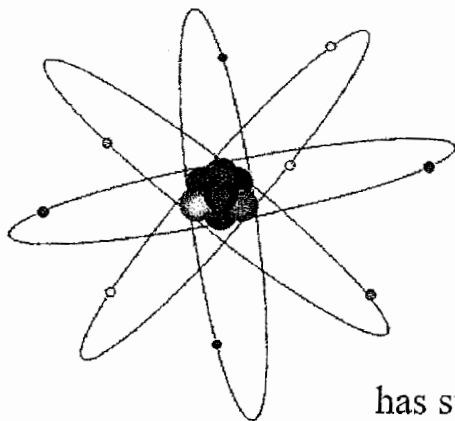
AUDITS

- Introduction
- In-house Audits
- Who Should Audit?
- What Should Be Audited?
- Performing An Audit
 - Audit Preparation
 - Audit Performance
- Audit Follow-Up
- Suggested Audit Finding Format
- Closing Out Previous Audits
- Dealing With Findings
- Handling a Regulatory Audit
- Other Regulatory Action
- General Comments

Course offered at our Hebron, Connecticut facility in rotation with other radiation safety courses. For more information, see our website at <http://www.radpro.com/training/>, or contact us at 860.228.0487.

FERN

Food Emergency Response Network



This is to certify that

Joanne Lenoce

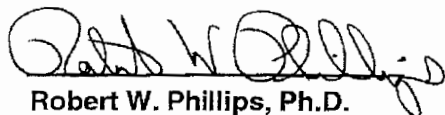
has successfully completed the training program entitled

**Alpha and Beta Emitter Analysis of Radionuclides Using
Gas Proportional Counting, Alpha Spectrometry, and
Liquid Scintillation Counting**

held at the

Washington State Department of Health Public Health Laboratories

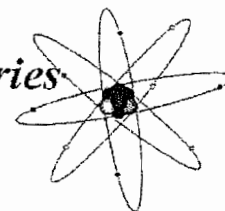
June 10-12, 2014



Robert W. Phillips, Ph.D.
Training Officer, National Program Office
USDA, FSIS, OPHS, FERN



Brenna Jacobson
Training Coordinator, WA FERN
Training Center, WA DOH PHL



CANBERRA

Meriden, Connecticut, U.S.A.

presents this

Certificate of Achievement

to

Joanne Lenoce

for successfully completing a course of instruction for the

Fundamentals of Alpha Spectroscopy

this 20th day of May , 2013 .

This course is awarded 24 Continued Education Credits using GP-405-2

Shelia Webb

Director of Support & Service

Doug Van Cleef

Training Instructor



This Certificate

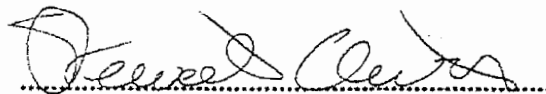


is presented to

Joanne Lenoce

for

Completing the Radiation Safety Review Program



Signature

11/29/13

Date

Connecticut Department of Public Health



ACKNOWLEDGEMENT - RECEIPT OF CORRESPONDENCE

Name and Address of Applicant and/or Licensee

State of Connecticut
ATTN: Jafar H. Razeq, Ph.D, HCLD (ABB),
Laboratory Director
395 West Street
Rocky Hill, CT 06067

Date

June 25, 2019

License Number(s)

06-27895-03

Mail Control Number(s)

612575

Licensing and/or Technical Reviewer or Branch

Commercial, Industrial, R&D, & Academic Branch

This is to acknowledge receipt of your: ☒ Letter and/or ☐ Application Dated: 06/17/2019

The initial processing, which included an administrative review, has been performed.

☒ Amendment ☐ Termination ☐ New License ☐ Renewal

☒ There were no administrative omissions identified during our initial review.

☐ This is to acknowledge receipt of your application for renewal of the material(s) license identified above. Your application is deemed timely filed, and accordingly, the license will not expire until final action has been taken by this office.

☐ Your application for a new NRC license did not include your taxpayer identification number. Please complete and submit NRC Form 531, Request for Taxpayer Identification Number, located at the following link: <http://www.nrc.gov/reading-rm/doc-collections/forms/nrc531.pdf>
Follow the instructions on the form for submission.

☐ The following administrative omissions have been identified:

Your application has been assigned the above listed MAIL CONTROL NUMBER. When calling to inquire about this action, please refer to this control number. Your application has been forwarded to a technical reviewer. Please note that the technical review, which is normally completed within 180 days for a renewal application (90 days for all other requests), may identify additional omissions or require additional information. If you have any questions concerning the processing of your application, our contact information is listed below:

Region I
U. S. Nuclear Regulatory Commission
Division of Nuclear Materials Safety
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-2713
(610) 337-5260, (610) 337-5313,
(610) 337-5398, or (610) 337-5239