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Commonwealth of Kentucky/DPHS**

Radiation Health Specialist III

- 🛡️ Licensing and inspection of facilities that use sealed and unsealed byproduct and source material (UF_6 , U_3O_8/UO_2), including Industrial, Medical, Academic, Radiopharmacy etc. (Guidance found in 902 KAR 100 and 10 CFR)
- 🛡️ Transport of radioactive material following guidance found in 902 KAR 100:070, 10 CFR 71 and 49 CFR 171-185.
- 🛡️ RHB 'Hot Loads' coordinator (scrap contaminated by radioactive material-typically metal recycling industry) issuance of DOT exemptions US DOT Special Permit SP-10656 (previous exemption E-10656) to return shipments to parent and other states. Also approved for issuance of US-DOT SP-11406 as required for transporters of solid and liquid waste contaminated with low activities of radioactive material.
- 🛡️ Reciprocity coordinator for approvals for out of state licensees to transport, store and carry out licensed activities using radioactive material within the Commonwealth of Kentucky.
- 🛡️ Survey Instrument Calibration Coordinator for the KY Radiation Control Branch.

Past Shipment Campaigns

1. 2001-2005: US DOE transportation (Highway) of TRU through the Commonwealth of KY from Miamisburg Closure Project to Savannah River Site(SRS) in South Carolina
2. 2002-2003: US DOE shipment (Railcar) of TRU waste from Mound (Ohio) to the SRS via Central KY (TRANSCOMM2000)
3. 2003-2007: US DOE SNF shipments (highway) from ORNL to INEEL. KY on one of four alternate routes.
4. 2003-2004: ORNL to Portsmouth dUF6 shipments (Highway via Central KY)
5. 2005-2006: Battelle (Ohio) to SRS TRU shipments via Central KY
6. 2005-2006: North Anna Nuclear Plant (irradiated fuel rods and guide tubes) , Central Virginia to INL via Highway Routes through Western KY
7. 2001-2008: Foreign Research Reactor SNF Highway shipments from SRS to INL via Western KY
8. 2012: REVISS HRCQ shipment Port Newark NJ to Seattle, WA via Paducah KY (RSBL).
9. Navy Nuclear PP program HRCQ shipments (3) in Feb 2014.
10. Vermont Yankee Category I shipment, to WCS Texas in April 2016.

Recent Shipments

- 🛡️ 2019: 3 HRCQ shipments of SNF MURR (Columbia, MO) to SRS (Aiken, SC) via Western KY
- 🛡️ 2020: 2 HRCQ Shipments of SNF MURR (Columbia, MO) to SRS (Aiken, SC) via Western KY.
- 🛡️ 1 HRCQ SNF shipment Watts Bar, TN to Richland WA via Western KY.
- 🛡️ 2. 2021: 1 HRCQ shipment of SNF from Byron NPP, IL to ORNL, Oak Ridge, TN, via Western KY
- 🛡️ 2 HRCQ Spent fuel shipments MURR (Columbia, MO) to SRS (Aiken, SC) , Western KY route.
- 🛡️ 2022: 1 HRCQ shipment in June 2022 scheduled.
- 🛡️ All HRCQ shipments are escorted by two RHB personnel and armed state police (CVE) officers. Level VI inspection is conducted at a weigh station along the established route if warranted. Safeguard of information for all shipments are in compliance with the requirements of 10 CFR 73.21, 10 CFR 73.22(b) 10 CFR 73.23 and 10 CFR 73.37.
- 🛡️ Link: <https://www.cvsa.org/inspections/north-american-standard-level-vi-inspection-program/>

Recent PRND Training Exercises in Kentucky

- 41st CST Army National Guard Louisville KY, CTOS/PRND training conducted with live radioactive sources (beta, gamma, and neutron) provided by the KY RHB (March 2022).
- CTOS/PRND exercises (gamma, neutron sweeps) conducted with Louisville Metro PD (HIRT), 41st CST Army National Guard, LEX FD, KY State Police, FBI at Thunder Over Louisville (April 2022).
- CTOS/PRND exercises (gamma, neutron sweeps) conducted with Louisville Metro PD (HIRT), 41st CST Army National Guard, LEX FD, KY State Police, FBI at Kentucky Derby (May 2021-2022). Other participants in these exercises included Mirion Technologies, RAP Team (Region 2 Oak Ridge, TN).
- PRND exercise (gamma, neutron sweeps) at all University of KY football and basketball (Rupp Arena) home games (beginning August 2022). Conducted with assistance from UK Police, LEX FD, KY State Police (CVE).
- Upcoming-June 6-8, 2022:** 41st CST CBRN Training/Exercise including live radioactive sources in Northern KY, most likely venue is Northern KY University located in Highland Heights KY. Possible participation by CST's from OH, IN and WV.

DOE TEPP Training in Northern KY in Support of Regional Hazmat Team



Kentucky Public Health
Prevent. Promote. Protect.

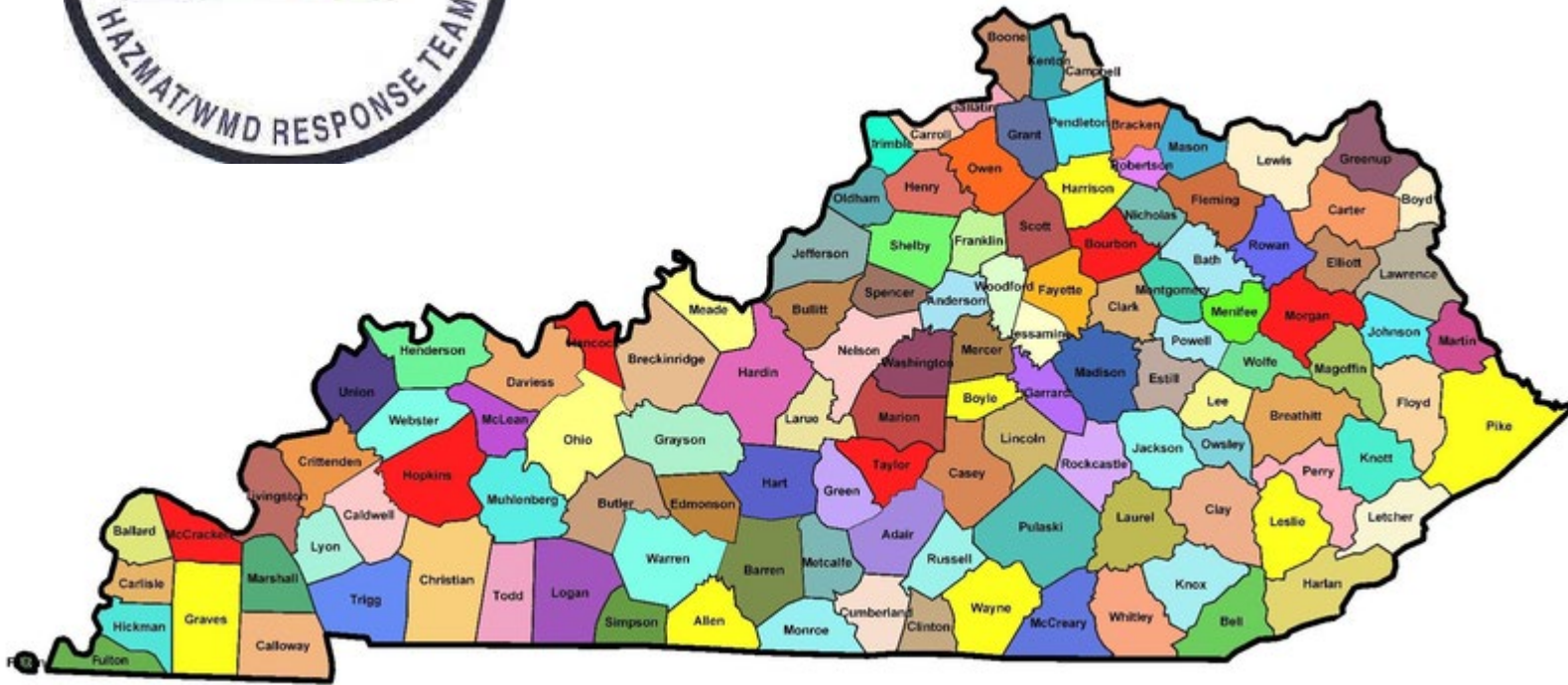


KENTUCKY CABINET FOR
HEALTH AND FAMILY SERVICES

Northern Kentucky Regional Hazmat Team



Northern Kentucky Regional Hazmat Team operates a specially trained and equipped hazardous materials response Unit within the twelve (12) Kentucky counties of Boone, Campbell, Carroll, Gallatin, Grant, Kenton, Owen, Pendleton, Scott, Mason, Robertson and Bracken. Most of the team's radiological response gear resides with Hebron Fire Protection District in Boone County.





DOE TEPP Training in Northern KY



- MERRTT T-t-T Frankfort, Radiation Health, October 15-16, 2020 (provided training for new KY Radiation Health staff so they could assist with classes)
- MERRTT Hebron Fire Protection District, May 10-15, 2021
- T-MERRTT Hebron Fire Protection District, June 7-9, 2021
- MERRTT, Campbell County Fire Training Center, April 6-7, 2022
- MERRTT, Williamston/Grant County Fire Training Center, April 9-10, 2022



Radiation Specialist Partners



- ☢ Kentucky Radiation Health Branch
- ☢ Kentucky State Fire Commission
- ☢ Kentucky Emergency Management
- ☢ Northern Kentucky Regional Hazmat Team member fire departments especially Hebron Fire Protection District





Radiation Specialist Class



- ☢ Class was held March 14-18, 2022 at the KY Fire Commission State Fire Training District 7 in Burlington, KY. A special thanks to Bill Birkle, District Training Coordinator for providing the training venue.
- ☢ A total of 22 first responders attended.
- ☢ Class included first responders from KY, WV, OH, TN, SC, GA and OK.
- ☢ Special thanks to Chris Wells and the Southern States Energy Board for funding the travel of 10 out-of-state first responders to attend.



Radiation Specialist Agenda

MONDAY

Introductions
Course Overview
Pretest and Review of Pretest
Mod 01 The Atom and Radioactivity
Rad/CBRN Responder Review
Mod 02 Nuclear Stability
Calculator Worksheet Review
Lunch
Mod 03 Characteristics of Radioactive Decay
Rad Pro Calculator Review
Mod 04 Radioactive Decay Law
M&M Exercise
Movie “A is for Atom”
Review of the Homework Assignment

TUESDAY

Homework Assignment Review
Test
Mod 05 Technical Resources
Chart of the Nuclides Exercise
Mod 06 Radiation Interactions
Mod 07 Dosimetry Terminology
Lunch
Mod 08 Biological Effects
Instrument show and tell (Students)
Mod 09 Radiation Detector Theory Part 1
Mod 10 Radiation Detector Theory Part 2
Homework Assignment Review

WEDNESDAY

Homework Assignment Review
Test
Mod 11 External Exposure Control
Rad Pro Calculator Review
Case Study – Harborview Seattle, WA
Mod 12 Contamination Control
Mod 13 Transportation of Radioactive Material
Lunch
Mod 14 Radiological Survey Instruments
Practical Exercise Rotations (45 min each):
Instrument Capability Worksheet/Smear Counting/Energy Response
Accident Scene Planning/Rad/CBRN Responder background measurements outside
Package Assessment - Cusack
Review of the Homework Assignment

THURSDAY

Homework Assignment Review
Test
Mod 15 Internal Exposure Control
Mod 16 Acute Radiation Syndrome
Mod 17 Radiological Incidents
Lunch
Mod 18 Decontamination
Practical Exercise Rotations (45 min each):
Accident Scene
Mystery Boxes and Transport Scenarios
Inverse Square Law/Needle in a Haystack/Behind the Wall
Review of the Homework Assignment

FRIDAY

Homework Assignment Review
Mod 19 Uses and Regulations
Mod 20 Evaluating & Terminating the Incident
Course Evaluation
Graduation



Non-Contact Radiometric Measurement

Solutions for the toughest environments

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Tour of Ronan started with classroom presentation by RSO, ARSO with help from TEPP Instructors



Demonstration on how Ronan makes scintillation and ion chamber detectors for its density and level gauges

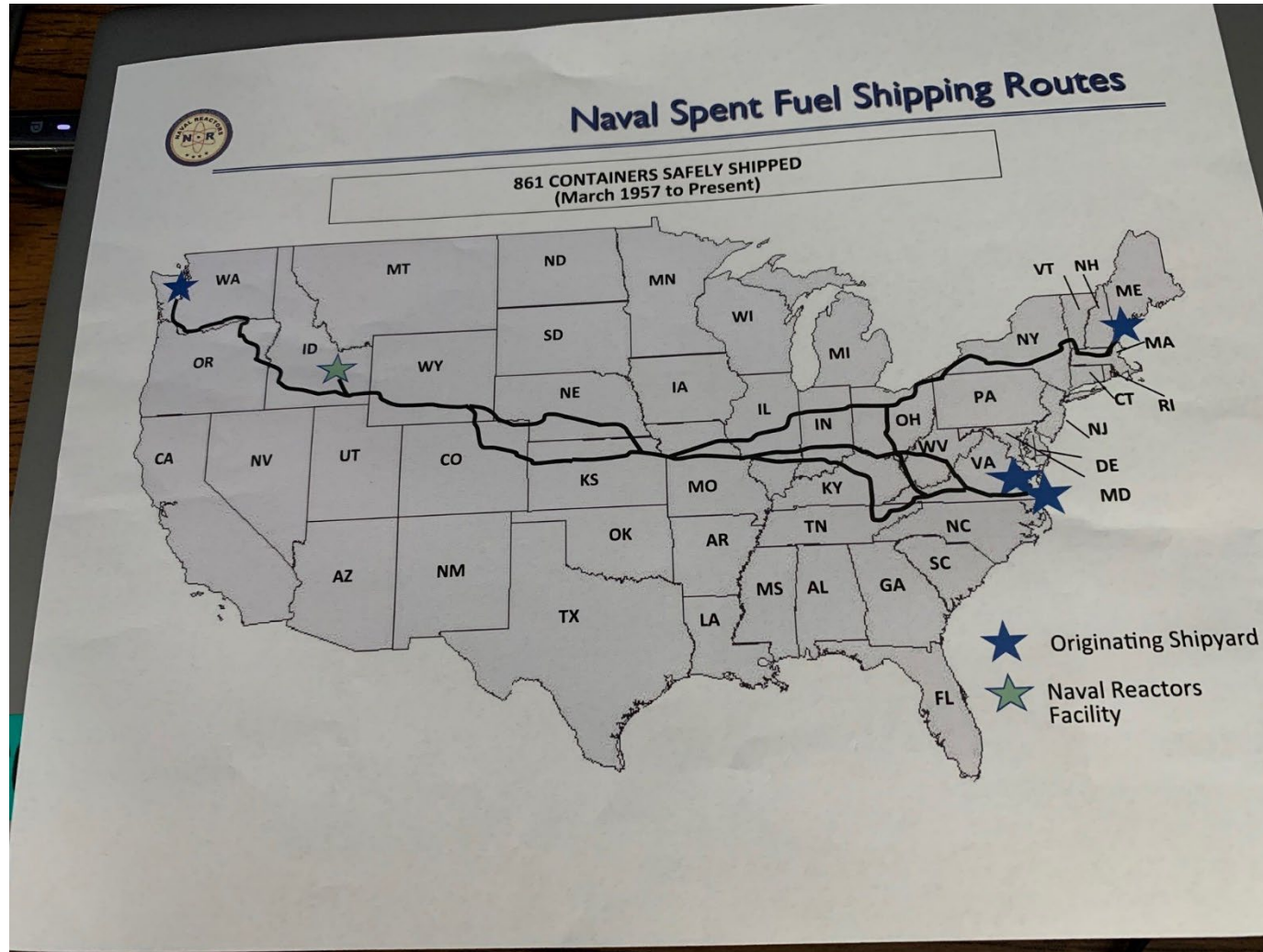


Class included a variety of live source hands-on exercises



Navy Nuclear SNF Shipment Routes

To date no rail car exercises involving SNF shipping casks (M-140, M-290 etc.) have been conducted in KY



Kentucky Derby PRND Exercise May 2021



Thunder Over Louisville PRND April 2022

