

NUCLEAR INCIDENT RESPONSE SELF-PACED LEARNING OPPORTUNITIES

Consequence Management (CM) is the U.S. Department of Energy's Nuclear Emergency Support Team (NEST) asset that provides technical assistance during a nuclear incident to the coordinating agency, State, Local, Tribal and Territorial (SLTT) authorities by staffing a field element (CM Response Team) and a remote, home-team element (CM Home Team) of scientists, engineers, and technologists. During a response, the CM Asset partners with the interagency in the formation of the Federal Radiological Monitoring and Assessment Center (FRMAC). To support this asset, Sandia and partners have developed free, online training material on nuclear incident response for Assessment Science and Laboratory Analysis pertinent to Health Physicists, Radiochemists, Nuclear Engineers, Laboratory Managers, and Quality Assurance Specialists. This course acts as an introduction to Assessment Science and the methods used during the course of incident response and laboratory analysis.

Who should take this training?

- Health Physicists
- Radiochemists
- Nuclear Engineers
- Laboratory Managers
- Quality Assurance Specialists

FRMAC ASSESSMENT MISSION

The mission of Assessment is to review and analyze the models and data available to develop an understanding of the radiological environment and communicate that understanding to the responders and SLTT officials.

- Characterize the radiological release to develop and evolve the Common Operating Picture (COP)
- Provide enabling tools to speed up response timelines
- Support the situational awareness of the radiological environment for all responders
- Develop and maintain products to support protective action recommendations (PARs)

FRMAC LABORATORY ANALYSIS MISSION

The mission of Laboratory Analysis is to assist the SLTT agencies with sample control and laboratory data quality assurance as well as provide a limited field laboratory capability.

- Setup and operate a sample control hotline and portable Fly Away Lab (FAL)
- Coordinate state and federal laboratory analytical services
- Reachback to extended laboratory networks for analytical support
- Manage data through quality assurance review and upload to a centralized database



ASSESSMENT SCIENCE COURSES

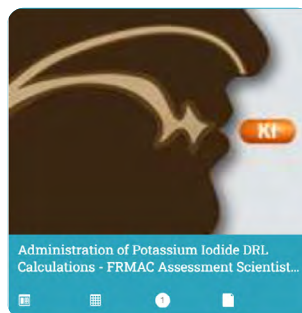


24 ABHP CECs

AS-100:

Registration Code:
PNNS-KDXC

- Introduction to Assessment Science
- 22 module course covering FRMAC Assessment methods for public protection, worker protection, and ingestion pathway



1 ABHP CEC each

TURBO FRMAC ADVANCED METHODS:

Registration Code: OMXL-NMBV
Administration of Potassium Iodide Derived Response Level Calculation

Registration Code: HZAK-EWAX
Analytical Action Level Calculation



LABORATORY ANALYSIS COURSES

LA-050: SUPPORT LABORATORY BRIEFING (EXPECTED LIVE SEPT. 2022)

- What labs should expect when called to help FRMAC

GAMMA SPECTROSCOPY (EXPECTED LIVE SEPT. 2022)

- Detector Calibration Methods
- Sample Analysis
- Software Functions
- Mathematical Instrument Calibration
- True Coincidence Summing Corrections
- In-Situ Gamma Spectrometry

OTHER USEFUL GUIDANCE/TRAINING

Emergency Response Assessment Science:

Sandia National Laboratories Nuclear Incident Response Program

<https://nirp.sandia.gov>

Federal Radiological Monitoring and Assessment Center (FRMAC) Manuals

https://www.nnss.gov/pages/programs/frmac/frmac_documentsmanuals.html

Radiation Protection Computer Code Analysis and Maintenance Program (RAMP)

<https://ramp.nrc-gateway.gov/>

Emergency Response Laboratory Analysis:

EPA Incident Response Guidance for Radioanalytical Laboratories

<https://www.epa.gov/radiation/incident-guides>

EPA Rapid Radiochemical Methods for Selected Radionuclides

<https://www.epa.gov/radiation/rapid-radiochemical-methods-selected-radionuclides/>

Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) Free online training

<https://www.epa.gov/radiation/marlap-online-training>

The Integrated Consortium of Laboratory Networks (ICLN)

<https://www.icln.org/>

THESE LEARNING OPPORTUNITIES ARE BROUGHT TO YOU BY A MULTI-ORGANIZATION PARTNERSHIP



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