

**2022 Professional Enrichment Program:  
Continuing Education Course**

**Monday, January 3, 2022 from 1:00 pm to 5:00 pm  
Marriott Key West Beach Resort, 3841 North Roosevelt Boulevard,  
Key West, Florida 33040 phone 305 296 8100**

**PEP Continuing Education Courses are scheduled prior to the 2022 ISOE North American ALARA Symposium in the same hotel. Radiation Protection professionals from Europe, Japan, Mexico, U.S. and other countries world-wide are planning to attend and participate. PEP Course Co-Academic Deans: Richard Doty, PhD, NATC External Affairs Coordinator, The Grainger College of Engineering, University of Illinois and David W. Miller, PhD. NPRE, University of Illinois. Registrants will also receive a certificate showing the completion of the continuing education course. Contact Amy Moeller at [almoeller88@gmail.com](mailto:almoeller88@gmail.com) or [dmiller@illinois.edu](mailto:dmiller@illinois.edu) if you have any questions. Registration: [ISOE Website iso-network.net](http://www.iso-network.net) Please note the **Day 1 of the 2022 ALARA Symposium is on Tuesday, January 4, 2022 due to the New Years Holiday Weekend to allow travel on Monday when airports are less crowded.****

**PEP Objectives: To provide utility and regulatory health physicists with the latest technology in occupational dose reduction available through the global ISOE program:**

- **To brief RPMs and their ALARA staff on the current and future ALARA Tools (new technology) to support ISOE Members' quest for World Class ALARA Performance in refueling outages with special emphasis this year on technical considerations on accident range effluent monitors (Revised RG 1.21), robotics, verification of adequacy of temporary shielding using 3D isotopic mapping using pixelated CZT technology and chemical engineering aspects of source term reduction at NPPs. Analysis of the root causes and contributing causes of US high Radiation Area (HRA) NRC Violations will be discussed to prevent reoccurrence in Spring, 2022 refueling and maintenance outages.**
- **To train attendees on ALARA data and reports available on the ISOE Website at [www.iso-network.net](http://www.iso-network.net)**
- **To learn how ALARA techniques have achieved significant outage dose reduction and substantial cost savings at operating BWRs, PWRs and CANDUs.**
- **To provide a training session on how to enter ISOE annual site dose and RWP planning data to assist site ALARA & outage planning professional in refueling/maintenance/refurbishment outages**

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**AGENDA:**

- 1:00 pm Welcome and PEP Overview University of Illinois
- 1:10 pm Revisions to RG 1.21 & Considerations on Accident Range Effluent Monitoring  
Steven Garry, NRR, US Nuclear Regulatory Commission (invited).
- 1:45 pm Current Enabling Technologies that are Suitable for Radiation Monitoring  
including RP experience with drones and robotics. TBA
- 2:00 pm New NATC Expert Group Report Preparation on Work Management including  
Aging Plant Asset Preservation, COVID 19 Work Deferral, and RP Knowledge  
Transfer Successes and Challenges.  
TBA
- 2:15 pm Los Alamos Advanced Radiation Safety Training Modules  
(Levels I-IV training stages) TBA
- 2:45 pm Coffee Break
- 3:00 pm Solving Common Problems with Degrading Radiation Source Term: How to Reverse  
the Trend, Patricia Robinson, President, n,P Energy & Paul Skinner, former Turkey  
Point Chemistry Supervisor
- 3:45 pm Technology Improvements from Minion Plant-wide Radiation Monitoring System  
Replacement at Cook Nuclear Plant Units 1.2 Dave Raye (Recorded) &  
David Miller
- 4:15 pm Pixelated CZT 3D Technology, Past and Future NPP Applications, H3D, Ann Arbor,  
Michigan
- 4:45 pm ISOE Website Features for ALARA Planners and RPMs, including ISOE sister plant  
task and dose database for use in outage RWP preparation, David W. Miller, NATC  
ISOE Regional Director, NPRE, The Grainger College of Engineering, University of  
Illinois
- 5:00 pm 2019 ISOE Initiatives & PEP Course Summary – Adjournment

Please note: The final PEP agenda will be issued in December and may have revisions of presenters and topics depending on the availability of speakers.