

**New CZT Spectrum Analysis Experience & Recent Refueling Outages
ALARA Lessons Learned
Professional Enrichment Program:
Continuing Education Course**

Friday, January 12, 2018 from 8:30 am to 4:00 pm

At

**Westin Beach Resort,
Ft. Lauderdale, FL 33316**

<https://www.starwoodmeeting.com/Book/ISOE2018>

The 2018 PEP Continuing Education Course is scheduled after the 2018 ISOE ALARA Symposium in the same hotel. Radiation Protection professionals from Canada, Mexico, US and other countries plan to attend and participate in providing the latest ALARA lessons learned from recent refueling outages. Richard Doty, PhD, NATC External Affairs Coordinator, College of Engineering, University of Illinois, is the Academic Dean of the PEP Course. The cost of the Professional Enrichment Courses is \$75 on the NATC web registration site. Seven continuing education units have been applied for from the American Board of Health Physics. Registrants will also receive a certificate showing the completion of the continuing education course. Contact Dr. Richard Doty at rldphd@gmail.com if you have any questions. Registration: <https://my.engr.illinois.edu/alara-2018>

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

I. In-Plant CZT Measurements of Nuclear Plant Piping and Components Analysis to Evaluate Source Term Trends:

- A. In 2011, USA PWRs and French PWRs initiated a joint ISOE program to perform CZT measurements with the Canberra CZT instrumentation at specific locations in the plant during outage periods. The Braidwood comprehensive report on the Canberra CZT results will be discussed.
- B. Second, the new University of Michigan CZT system (Polaris-H) will be introduced by Dr. Zhong He. The Polaris-H system is unique with high sensitivity to gamma spectrum measurement and individual isotopic identification displayed on digital photo of in-plant areas. The format for the introduction of the Polaris H unit is as follows:

Agenda-

- History of CZT Polaris-H Development Zhong He
- Principles of Operations Zhong He
- How the CZT System Works Zhong He
- New spectrum analysis CZT unit Weiye Wang
- Prairie Island use of CZT spectrum analysis

PROFESSIONAL ENRICHMENT PROGRAM: CONTINUING EDUCATION

- For PWR CRUD burst Brad Boyer
- Demonstration of spectrum analysis Zhong He
- Cook Experience with CZT Derek Hultquist

Instructors:

- Zhong He, Phd, University of Michigan
- Weiyi Wang, H3D
- Derek Hultquist, Cook Nuclear Plant
- Brad Boyer, Prairie Island
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II. Recent Refueling Outages ALARA Lessons Learned:

- To brief RPMs and their staff on key achievements of recent ISOE World Class ALARA Performance Awardees
- To discuss the BWR source term reduction achievements at the LaSalle station using BWR fuel cleaning, BWR vessel vacuuming and BWR piping chemical decon processes. Over 70,000 Ci of Co-60 were removed during the Spring 2017 refueling outage
- To discuss ALARA aspects of PWR plant aging projects including baffle bolt replacement, head peening and PWR flow up conversions.
- To share ALARA achievements during recent CANDU boiler and feedertube refurbishment

Instructors:

John Moser, LaSalle RPM
David Wood, Cook RPM
Colin Pritchard, Bruce Power Refurbishment Project Director

The cost of the Professional Enrichment Courses is \$75 on the web registration site. If individual courses registration is desired, please contact Amy Moeller at 269-930-0753

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