Third Annual Midwest Health Physics Technical Symposium
Saturday, April 24, 2010, Argonne National Laboratory, Argonne, IL

Sponsored by Midwest Chapter of the Health Physics Society

The topic of this Symposium is Radioactive Contamination Events – Response and Prevention. The Symposium will feature technical presentations and vendor displays, and is open to Chapter members and non-members. The AAHP has granted 6 Continuing Education Credits for the Symposium. Registration includes a continental breakfast, lunch, and coffee break with snack. ADVANCE REGISTRATION IS REQUIRED FOR ALL ATTENDEES (by April 16 for U.S. citizens, April 9 for non-citizens). Discounted prepayment of the registration fee is encouraged. See page 3 for registration and payment information and page 4 for maps to Argonne National Laboratory.

Presentations

New Concepts in Radiological Emergency Planning
Edward Maher, Sc.D. CHP, President-Elect, Health Physics Society
The presentation will describe the new Federal framework for radiological emergency planning, including the responsibilities of various agencies of the Federal government. Considerations when deciding whether or not the public should evacuate, or shelter-in-place following a radiological dispersal device (RDD) or improvised nuclear device (IND) event, and how these scenarios differ from the familiar nuclear power plant release scenario, will be discussed.

Recent Intakes of Transuranics in the DOE Complex
Richard Toohey, Ph.D., Acting Vice President for University Partnerships, Oak Ridge Associated Universities
Several intakes of plutonium and/or americium have occurred in the past few years within the DOE complex, including inhalation of Am-241 during a waste-handling operation at Hanford, and two wounds contaminated with plutonium at Los Alamos. Every intake could have been easily prevented by proper safety analysis and training, as these accidents were all replays of intakes well-described in the literature. Prompt medical intervention and decorporation therapy kept the resulting effective doses at low levels, but obviously no one had learned the lessons of previous incidents.

The Importance of Health Physics and Medical Coordination during Radiation Emergencies
Jamie Stalker, MD, Director, Medical Division, Argonne National Laboratory
The presentation will address how Health Physics and Medical professionals must integrate during a radiation incident with or without injury. Graded approach will be discussed. The importance of communication will be emphasized. The most recent medical interventions for radiation contaminated patients will be reviewed.

2008 NIST Boulder Plutonium Contamination Event
Peter Mason, Reference Materials Program Coordinator, New Brunswick Laboratory
This presentation will discuss the June 9, 2008, event where researchers in a laboratory room at the Commerce Department’s National Institute of Standards and Technology (NIST) campus in Boulder, Colorado, discovered that the bottom of a vial holding about ¼ gram of plutonium in a powdered form had broken and that there were holes in the bag used for secondary containment. Mishandling of the vial and improper initial response to the incident resulted in radioactive contamination of the laboratory, nearby hallways and adjacent labs and offices. Lessons learned will be discussed.
Biosafety at Ricketts Biocontainment Laboratory
Joe Kanabrocki, Ph.D., C.B.S.P., Assistant Dean for Biosafety, Department of Microbiology, University of Chicago
This presentation will introduce the sophisticated research activities that will be supported by the University of Chicago Howard T. Ricketts Regional Biocontainment Laboratory, with an emphasis on the "state of the art" design and operational features enabling investigations involving pathogenic microorganisms to be conducted safely.

The Tritium Guy
Joseph Klinger, M.S., Assistant Director, Illinois Emergency Management Agency
Exit signs containing tritium serve a valuable role and are fairly common. There are over 12,000 of the Generally Licensed devices in Illinois and over 350,000 under NRC jurisdiction. They are quite safe and if used properly (in accordance with the general license requirements) there are no problems. Unfortunately, many facilities that possess these devices are not aware that they contain radioactive material. This is particularly troubling since most contain multicurie quantities and must be disposed of properly. Again, they are quite safe, unless encountered by someone like the curious "Tritium Guy" who decided to try to use the interesting illuminating material inside the sign on his rifle gunsight. The Illinois experience with the "Tritium Guy" is discussed in this presentation.

Lessons learned from leaking Am-241 Smoke Detectors
Steve Butala, M.S., CHP, Health Physicist, Argonne National Laboratory
Mark Sreniawski, B.S., Chief Health Physics Technician, Argonne National Laboratory
Smoke detectors are credited with saving thousands of lives from fires each year. Americium-241 has been commonly used in these devices since the early 1970s. Maintenance workers at Argonne routinely exercise contamination control measures when handling these devices. Recently, health physics surveys measured removable Am-241 contamination on the exterior of several detectors that were removed from service. This presentation will describe the unexpected discovery of contaminated smoke detectors and the control methods that prevented personnel contamination incidents.

Operational Experience with Next Generation Gamma Sensitive RCA Exit Monitors at D.C. Cook Nuclear Plant
David Miller, Ph.D., Assistant Professor, Nuclear, Plasma, and Radiological Engineering Department, University of Illinois
This presentation will discuss operational experience with, and lessons learned during initial installation and use of the new, gamma-sensitive GEM-5 at the Cook Nuclear Plant. The units were installed to supplement the ARGOS 5 Zeus beta-gamma RCA exit monitors provided at two radiological access control points. Results of the new contamination monitoring system at the spring 2010 Unit 1 refueling outage will be discussed.

Respiratory Protection Issues
K. Paul Steinmeyer, RRPT, Vice President of Technical Services, Radiation Safety Associates
This presentation will cover topics of interest to respirator users and program administrators alike. Applicability of Occupational Safety and Health Administration (OSHA) rules at NRC- and DOE-licensed facilities, major differences between NRC and OSHA requirements, terminology clarifications, the NIOSH approval requirement, derivation and application of Assigned Protection Factors, training efficacy, and many other topics will be addressed.
Operational Guidelines for Consequence Management of a Radiological Dispersal Device Incident

Sunita Kamboj, Ph.D., CHP, Environmental Systems Engineer, Argonne National Laboratory

Operational guidelines were developed through the interagency Operational Guidelines Task Group to support the implementation of the Department of Homeland Security’s protective action guides (PAGs) for radiological dispersal device (RDD) incident. This talk will cover the development of operational guidelines, methodology used, and a software tool (RESRAD-RDD) that facilitates their implementation.

Advance registration is REQUIRED for ALL ATTENDEES (including ANL employees):

All attendees must contact Vernetta Carten at 630-252-3355 or dosimetry@anl.gov.
U.S. Citizens: Register by 4 p.m., Friday, April 16th.
Non-Citizens: Contact Vernetta Carten as soon as possible but no later than Friday, April 9th.
Non-Argonne Employees: If you are not an Argonne employee, your name must be on the Argonne site access list and you must have a photo ID to enter the site. If you do not register by the established deadline, you may not be allowed access to the site!
Argonne Employees: You must register for the Symposium to ensure that lunch and refreshments are available for you.

Cost:
Prepay (via U.S. mail): $30 Midwest Chapter members; $35 non-members; $15 students.
At the door: $40 Midwest Chapter members; $45 non-members; $25 students.
For prepayment, please mail check to Midwest Chapter HPS, P.O. Box 513, Westmont, IL 60559.

Meeting Location: Building 402, Advanced Photon Source (APS), Argonne National Laboratory. Registration will be in the APS lobby.

Program: Registration & Continental Breakfast, 7:30 a.m. - 8:15 a.m.
Presentations, 8:20 a.m. - 4:30 p.m.
Continental breakfast, lunch, and afternoon coffee break/snack included with registration.

The American Academy of Health Physics has granted 6 Continuing Education Credits for this year’s Symposium.

Directions: Argonne is 25 miles southwest of Chicago’s Loop. From I-55, take the Cass Ave. South exit. Turn right at the Argonne sign onto Northgate Rd. Show photo ID at gate. Turn right and follow Northgate Rd.; turn right on Inner Circle Rd. (stop sign); turn left on Meridian Rd. (stop sign); turn right at Rock Rd. (stop sign). Go half mile to APS and turn left into parking area. Enter via revolving doors where rectangular and round buildings intersect. Maps are provided on page 4.

Map of Argonne site
http://www.anl.gov/Administration/Argonne_map.pdf