Sunday 5 February -
Wednesday 8 February 2012

Preliminary Program

Dallas, Texas
The Fairmont Dallas
# Health Physics Society Committee Meetings

**Saturday, February 4, 2012**

**FINANCE COMMITTEE**  
8:00 AM - NOON

**ABHP PART II PANEL WORKSHOP**  
8:00 AM - 5:00 PM

**HPS EXECUTIVE COMMITTEE**  
Noon - 5:00 PM

**Sunday, February 5, 2012**

**AAHP EXECUTIVE COMMITTEE**  
8:00 AM - 5:00 PM

**ABHP PART II PANEL WORKSHOP**  
8:00 AM - 5:00 PM

**HPS BOARD OF DIRECTORS**  
8:00 AM - 5:00 PM

**PROGRAM COMMITTEE**  
10:00 AM - NOON

**Monday, February 6, 2012**

**LAB ACCREDITATION POLICY COMMITTEE**  
8:00 - 10:00 AM

**LAB ACCREDITATION ASSESSMENT COMMITTEE**  
10:00 AM - NOON

**HISTORY COMMITTEE**  
12:00 - 2:00 PM

**AD HOC COMMITTEE ON LAB ACCREDITATION POLICY**  
12:30 - 2:30 PM

**ANSI N42.323AB**  
1:30 - 5:00 PM

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**Tuesday, February 7, 2012**

**SOUTH TEXAS CHAPTER BREAKFAST MEETING AND EXECUTIVE COUNCIL**  
7:00-10:00 AM

**ANSI N42.323AB**  
9:30 AM-5:00 PM

**HOMELAND SECURITY COMMITTEE**  
4:30 - 6:00 PM

**Wednesday, February 8, 2012**

**SCIENTIFIC AND PUBLIC ISSUES COMMITTEE**  
1:00 - 3:00 PM

**PROGRAM COMMITTEE**  
12:30 - 2:00 PM

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**OOPS!**

*We cancelled it because we didn’t know you wanted it!*

Sometimes excellent courses with super instructors are cancelled when too many people wait until the last minute to register. We need a minimum number of participants enrolled before a class can take place in order to cover costs.

This applies to tours as well as classes.

Don’t wait - avoid disappointment - register early!
**DALLAS, TEXAS**  
*Welcome to Dallas!*  
Dallas, Texas, is the ninth-largest city and part of the fourth-largest metropolitan area in the nation. Dallas covers approximately 343 square miles and has a population of 1,299,543. The ultramodern and sophisticated city attracts worldwide travelers, making the area the number one visitor and leisure destination in Texas.

Dallas is centrally located and within a four-hour flight from most North American destinations. DFW International Airport is the world’s third-busiest airport, offering nearly 1,750 flights per day and providing nonstop service to 138 domestic and 38 international destinations worldwide annually. In addition, Dallas Love Field Airport is conveniently located 10 minutes from downtown. Once here, visitors can ride one of the fastest-growing light-rail systems in the nation or the historic, free McKinney Avenue Trolley from the Dallas Arts District throughout the Uptown area with its restaurants, pubs, boutique hotels, and shops.

Throughout the city, a visitor will enjoy the best shopping in the southwest, four- and five-diamond/star hotels and restaurants, the largest urban arts district in the nation, 13 entertainment districts, and much more. Blend in moderate weather, year-round sports, and true Southern hospitality for a true “taste” of the Dallas difference. Visitors are exposed to a city that models its slogan, “Live large. Think big.™” Its pioneering spirit is alive and well, and the philanthropic contributions from its many residents continue to enrich the community and quality of life.

**WEATHER**  
The average temperatures in Dallas in February range from a low of 41 degrees F to a high of 61 degrees F. Be sure to bring a light jacket, but should be nice temperatures indeed for all those from the North!
**SUBSTITUTION/CANCELLATION POLICY**

Substitutions of meeting participants may be made at any time without penalty. All conference and tour cancellations must be in writing and must reach the HPS Office by January 6 to receive a refund. All refunds will be issued after the meeting minus a $50 processing fee. Refunds will not be issued to no-shows.

**FOR REGISTERED COMPANIONS**

Registered spouses and companions can enjoy the benefit of a Hospitality Suite during the 2012 Midyear meeting. See the final program for exact room and times.

**WELCOME RECEPTION**

*Sunday, February 5*

6:00-7:30 PM  
Dallas Fairmont

**EXHIBITOR RECEPTION**

*Monday, February 6*

5:15-6:15 PM  
Dallas Fairmont  
Exhibit Hall A

**TECHNICAL TOURS**

*Tuesday, February 7*

The University of Texas Southwestern Medical Center Waste Handling Facility  
3:30-5:30 PM  
Preregistration $20/Onsite $25  
*Tour is limited to 30 participants; first come, first served.*

The University of Texas Southwestern Medical Center Waste Handling Facility is a self standing 7000+ sq.ft. site designed in 2005 to handle Radioactive, Chemical, Biological and Universal waste from a large Medical Research Institution. It integrates security control and access, with laboratory functions and the central receiving and processing of Radioactive Materials packages for the authorized laboratories. The facility handles short lived solid waste, compaction of long lived solid waste, refrigeration of radioactive animal carcasses, shredding of Liquid Scintillation mixed waste vials and storage of sealed sources. The facility also handles storage of chemical, biological and medical waste, bulking of chemical solvents, storage of mixed waste, lab-packing for chemical waste, refrigeration of chemical waste, and storage of universal waste.

**PUB CRAWL**

*Tuesday, February 7*

6:00-10:00 PM  
Preregistration $20/Onsite $25  
Come join us for a tour down famous McKinney Ave., home of many entertaining and interesting drinking establishments. We will visit 4 local pubs, each with its own atmosphere and specials. We will spend about an hour at each place. All locations are along McKinney Ave. and are within walking distance of each other, and all locations are a trolley ride from the hotel. Participants will receive a light blue t-shirt and souvenir glass.

**HPS SHIRTS**

Pre-order your HPS polo or t-shirt! All shirts are available in gray, natural and light blue and cost $22 for the polos ($25 onsite), and $12 for T-shirts ($15 onsite). You can get an additional Bar Crawl t-shirt for $12 (one shirt is included in your Pub Crawl registration; $15 onsite). See the registration page to order.
REGISTRATION
Registration Hours
Sunday, February 5 . . . . . . . . . . . . . . . . . 3:30-6:30 PM
Monday, February 6 . . . . . . . . . . . . . . . . . 7:30 AM-3:00 PM
Tuesday, February 7 . . . . . . . . . . . . . . . . . 8:00 AM-3:00 PM
Wednesday, February 8 . . . . . . . . . . . . . . . . . 8:00 AM-Noon

Registration Information
• Preregistration Deadline: January 6, 2012
• Registration fees for members and non-members include the Welcome Reception and Exhibitor Reception
• Purchase orders are not accepted for PEP, AAHP or Tour Registration

Register now to reserve your place!
Register online at www.hps.org

OR:
Register by fax: Fax your completed form with credit card information to (703) 790-2672

OR BY MAIL:
Mail your completed form with payment to:
HPS Headquarters
1313 Dolley Madison Blvd., Suite 402
McLean, VA 22101

Mail completed registration form with check made payable to Health Physics Society, purchase order or credit card information. You are considered registered when full payment or purchase order has been received.

EXHIBITS
Exhibit Hours
Monday . . . . . 5:15-6:15 PM Opening Reception
Tuesday . . . . . . . . . . . . . . . . . . . . . . . . . . . . 9:30 AM-5:00 PM
Tuesday . . . . . Noon Lunch in Exhibit Hall
Wednesday . . . . . . . . . . . . . . . . . . . . . . . . . . . 9:30 AM-Noon

2012 Meeting Exhibitors
(as of January 2012)
To request a booth for the Midyear Topical Meeting, contact Lori Strong at HPS Headquarters, (703) 790-1745, email: LStrong@BurkInc.com

Ameriphysics
Apantec Fuji
Arrow Tech
Best Medical
Bionomics
Bladewerx
Canberra
Chase Environmental
CHP Consultants
Creative Electron
Dade Moeller
Dycem
Eckert & Ziegler
Ecology Services
ENERCON Services Inc
Energy Solutions
F&J Specialty Products
Gamma Products
GEL Group
G/O
GCR & Associates
Hi-Q
Hopewell Designs
JL Sheperd
K&S Lab
Lab Impex
Lab Logic Systems
Landauer
Laurus Systems
Ludlum
Mazur Instruments
Mirion
MJW
ORAU
Ortec
Perma-Fix
Philetectics
QAL-TEK
Radiation Safety Assoc
Radiation Solutions
RSCS
RSO
Saphymo
SE International
Technical Associates
Teletrix
Thermo Fisher
Thomas Gray & Assoc
Tidewater
US Army Health Care
Recruiting
Waste Control Specialists
Preliminary Technical Program

If a paper is going to be presented by other than the first author, the presenter’s name has an asterisk (*)

All Sessions will take place in the Dallas Fairmont

MONDAY

7:00-8:00 am

CEL 1 ABHP Exam Fundamentals
Gus Potter

CEL 2 HPS Laboratory Accreditation Program
Introduction to Uncertainty Calculations Part 1
Daniel VanDalsem
Eckert & Ziegler Isotope Products

8:15 am-Noon

MAM-A Plenary Session
Chair: Kathy Pryor

8:15 am
Welcome & Announcements
Kathy Pryor
President, HPS

8:30 am MAM-A.1
Texas: The Path and Policy to Radioactive Waste Disposal
Jablonski S
Texas Commission on Environmental Quality

9:00 am MAM-A.2
An Update on the Texas Compact Low-Level Radioactive Waste Disposal Facility
Baltzer R
Waste Control Specialists LLC

9:30 am MAM-A.3
Radioactive Waste – Past, Present and Future Policies and Regulatory Issues
Magette T
EnergySolutions

10:00 am Break

10:30 am MAM-A.4
A Perspective on Waste and Fuel Cycle Issues in a Post Fukushima World
Magwood WD
US Nuclear Regulatory Commissioner

11:15 am MAM-A.5
Radioactive Waste Management: Where Do We Go from Here?
Jacobi R
Jacobi Consulting

11:45 am Roundtable Discussion

1:30-2:45 pm

MPM-A The Name of Our Society - Is It Finally Time to Consider Changing It?
Chair: Armin Ansari

2:30-3:45 pm

MPM-B Policies and Regulatory Issues
Co-Chairs: Paul Ward, Karen Langley

2:30 pm MPM-B.1
Prevention of Unauthorized Disposal of Radioactive Material in Solid Waste and Scrap Recycling Facilities: Role of State Radiation Control Programs and Resources Available
McBurney R
Conference of Radiation Control Program Directors, Inc. (CRCPD)

2:45 pm MPM-B.2
The Psychology of Radioactive Waste Disposal
Johnson R
Radiation Safety Counseling Institute and Dade Moeller

3:00 pm MPM-B.3
Sealed Source Security and Commercial Disposition: Progress, Prospects, and the Path Ahead
Cuthbertson A, Cocina F, Jennison M, Martin D
National Nuclear Security Administration, Office of Global Threat Reduction, Los Alamos National Laboratory, National Nuclear Security Administration/Pacific Northwest National Laboratory, National Nuclear Security Administration/Energetics Incorporated
3:15 pm  MPM-B.4  
Technical and Policy Approaches to Managing Waste from Radiological Incidents
Peake RT, Schultheisz DJ, Czyczinski KS, Lemieux PM, Boe TR, Michael JF, Ierardi M, Parrish CS, Rodgers MM 
US Environmental Protection Agency, Eastern Research Group

3:30 pm  MPM-B.5  
Health Physics Society Positions on Waste Disposal
Vetter RJ, Pryor KH 
Health Physics Society, Pacific Northwest National Laboratory

3:45 pm  BREAK

4:15-5:15 pm  MPM-C Radioactive Waste Past, Present and Future
Co-Chairs: Paul Ward, Karen Langley

4:15 pm  MPM-C.1  
Low Activity Waste: Navigating a Pathway for Disposal
Hamrick BL 
University of California Irvine Medical Center

4:30 pm  MPM-C.2  
Health Effects from Exposure to Natural and Depleted Uranium
Keith LS, Wilbur S, Ingerman L, Faroon O, Scinicariello F, Roney N 
ATSDR, SRC

4:45 pm  MPM-C.3  
Activities of the Southeast Compact Commission for Low-level Radioactive Waste Management
Lanza J 
Florida Department of Health

5:00 pm  MPM-C.4  
The Source Collection and Threat Reduction Program: What It Is, Where It Is, Where It Will Be
Meyer R 
Conference of Radiation Control Program Directors, Inc. (CRCPD)

5:15-6:15 pm  Exhibit Hall
Exhibitor Opening Reception

Again this Year
The Professional Enrichment Program (PEP) handouts for the Midyear Meeting will not be available in hard copy. For those who pre-register, you will be provided with an access code for downloading the handouts approximately two weeks prior to the meeting. For those who register for courses on-site, you will be provided the code when you register.
TUESDAY

7:00-8:00 am

CEL 3  The Psychology of Radioactive Waste Disposal
Ray Johnson
Radiation Safety Counseling Institute

CEL 4  HPS Laboratory Accreditation Program
Introduction to Uncertainty Calculations Part 2
James Tarzia
Radiation Safety & Control Services

8:30-9:45 am

TAM-A Academic, Medical and Nuclear Waste
Co-Chairs: Mike Davidson, Wayne Gaul

8:30 am  TAM-A.1
Challenges in Managing College Radwaste Projects
Dibblee MGK, Kay MA
Ambry, Inc.

8:45 am  TAM-A.2
Design and Relocation of a Research University’s Low-Level Radioactive Waste Storage Facility
Tabor C, Zakir N, Spichiger G
Georgia Tech

9:00 am  TAM-A.4
Thermal Characteristics and Radiotoxicity Analysis of the Advanced PWR Spent Fuels for Safe Storage Management Plan
Faruk MG, Pfeil AL, Aghara S*, Vasudevan L
Prairie View A&M University, Texas A&M University

9:15 am  TAM-A.5
Nuclear Medicine Research and Development Waste Management
Quinn BM, Dauer LT
Memorial Sloan Kettering Cancer Center

9:30 am  TAM-A.6
Unique Challenges and Lessons Learned from Management of Unconventional Waste at Old Universities
Inyang O, Nam S, Williams S
University of Houston

9:45 am  BREAK

10:15 am-12:15 pm

TAM-B Environmental Issues
Co-Chairs: Wayne Gaul, Andrew Thatcher

10:15 am  TAM-B.1
Decontamination Alternatives In Decommissioning Projects
Gaul W
Tidewater

10:30 am  TAM-B.2
Savannah River Site Composite Analysis Monitoring Plan
Crapse KP, Phifer MA, Smith FG, Jannik GT*, Milings MR
Savannah River National Laboratory

10:45 am  TAM-B.3
Implementation of Multi-Agency Radiological Laboratory Analytical Protocols (MARLAP) in Environmental Monitoring Programs at a Low-Level Waste Facility
Matthews T, Kirk M, Zychowski G, Kirk S
WCS

11:00 am  TAM-B.4
RACER: A Data Analysis Tool Used to Evaluate Potential Environmental Impacts at a New Low-Level Radioactive Waste Disposal Facility
Kirk S, Matthews T, Kirk M, Zychowski G
WCS

11:15 am  TAM-B.5
Performance Assessment for Delaying Installation of an Infiltration Reducing Cover at the Low Level Radioactive Waste Site in Richland, Washington in Support of the Final Environmental Impact Statement
Rood AS, Thatcher AH
K-Spar Inc.

11:30 am  TAM-B.6
Improving Radwaste Soil Estimates with Gamma Logs
Flynn CRF
Health Physics Consultants

11:45 am  TAM-B.7
Updating a Deterministic Modeling Design from RESRAD to GoldSim: Examining a Highly Engineered Low-Level Waste Disposal Facility
Shaw C, Kirk S, Dornsife B
WCS
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
<th>Location</th>
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<tbody>
<tr>
<td>Noon</td>
<td>TAM-B.8</td>
<td>Discovery of Unexpected Waste Stream Radionuclide of Concern</td>
<td>Mason T Cabrera Services, Inc.</td>
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<td>1:15-3:15 pm</td>
<td>TPM-A WIPP-Special Session</td>
<td>The Waste Isolation Pilot Plant-Update on Operational Performance and Exciting New Developments</td>
<td>Hayes RB WIPP</td>
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<td>1:15 pm</td>
<td>TPM-A.1</td>
<td>The Waste Isolation Pilot Plant-Update on Operational Performance and Exciting New Developments</td>
<td>Hayes RB WIPP</td>
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<td>2:00 pm</td>
<td>TPM-A.2</td>
<td>Comparing Defense TRU Waste Disposal Costs at WIPP with Class C Low-Level Waste Disposal Costs at Waste Control Specialists</td>
<td>Hayes RB WIPP</td>
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<tr>
<td>2:15 pm</td>
<td>TPM-A.3</td>
<td>Use of Health Physics at the Waste Isolation Pilot Plant (WIPP)</td>
<td>Hayes RB WIPP</td>
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<td>3:00</td>
<td>TPM-A.3</td>
<td>Use of a Portable HPGe for Counting Smears and Air Filters</td>
<td>Hayes RB WIPP</td>
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<td>3:15 pm</td>
<td>BREAK</td>
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<td>3:30-5:30 pm</td>
<td>Meet in Lobby</td>
<td>Technical Tour</td>
<td>Southwestern Medical Center</td>
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<td>2:15-5:30 pm</td>
<td>TPM-B Radioactive Waste - Past, Present and Future, Round Table</td>
<td>The Last 30 Years of LLRW Disposal</td>
<td>McCormick J Bionomics</td>
<td>WIPP</td>
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<td>2:15 pm</td>
<td>TPM-B.1</td>
<td>The Last 30 Years of LLRW Disposal</td>
<td>McCormick J Bionomics</td>
<td>WIPP</td>
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<td>2:30 pm</td>
<td>Roundtable Discussion: Disposal Options</td>
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<td>3:15 pm</td>
<td>BREAK</td>
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<td>3:45 pm</td>
<td>TPM-B.2</td>
<td>A View From the Chair: Perspectives and Lessons Learned from the Texas LLRWD Compact Commission</td>
<td>Ford M Texas Low Level Radioactive Waste Disposal Compact Commission</td>
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<td>4:00 pm</td>
<td>Roundtable Discussion: Policies/Regulatory/Licensing</td>
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### WEDNESDAY

**7:00-8:00 am**

**CEL 5**  Environmental Risk Assessment  
*Andrew H. Thatcher*

**CEL 6**  Statistical Sampling and Analysis Approaches for Waste Disposal and Decommission Projects  
*Thomas L. Rucker, Dennis J. Beal*  
*Science Applications International Corporation*

**8:45-9:45 am**

**WAM-A** Low Level Waste, and Disposal of Exempt Sources  
*Co-Chairs: Karen Barcal, Bob Wills*

**9:00 am**  **WAM-A.3**  
Status of the Texas Low Level Radioactive Waste Disposal Compact Commission  
*White JC*  
*VA North Texas Health Care System*

**9:15 am**  **WAM-A.4**  
A Comparative Analysis of Internal Monitoring Programs at a Low-Level Radioactive Waste Facility  
*Kraus J, Shaw C, LaBone T*  
*Waste Control Specialists LLC, MJW Corporation*

**9:30 am**  **WAM-A.5**  
Disposal of Smoke Detectors  
*Lolap GN, Lemon MR*  
*University of Kansas*

**9:45 am**  BREAK

**10:15 am-12:15 pm**

**WAM-B** Contemporary Topics in Waste Management  
*Co-Chairs: Alex Lopez, Tom Hansen*

**10:15 am**  **WAM-B.1**  
Communication Strategies for Radiation Professionals  
*Selig E, Glass A*  
*Center for Responsible Environmental Strategies*

**10:30 am**  **WAM-B.2**  
Feasibility of Clearance Concept for Daily Release of Small Amount of Solid Materials from Radiation Controlled Area  
*Ogino H, Hattori T*  
*Central Research Institute of Electric Power Industry*

**10:45 am**  **WAM-B.3**  
Characterization, Removal, and Disposal of the University of Iowa MC17 Cyclotron  
*Hansen T*  
*Ameriphysics, LLC*

**11:00 am**  **WAM-B.4**  
Estimation of Waste Volumes from Radiological Incidents  
*Boe TR, Lemieux PM, Rodgers MM, Peake RT, Schulteisz DJ, Ierardi M, Parrish CS*  
*US Environmental Protection Agency, Eastern Research Group*

**11:15 am**  **WAM-B.5**  
Reduce Reuse Recycle, Electronic Waste Reduction  
*Gunter R*  
*CHP Consultants*

**11:30 am**  **WAM-B.6**  
Transportation Challenges and the Security of Disused Sealed Sources: Progress and Prospects for Type-B Package Certification  
*Taplin T, Cuthbertson A, Martin D*  
*National Nuclear Security Administration/MELE Associates, National Nuclear Security Administration/Office of Global Threat Reduction, National Nuclear Security Administration/Energetics Incorporated*
11:45 am WAM-B.7
Beta Dose Calibration of Thin Contact Colorimetric Dosimeters
Abegaz S, Brodsky A
Georgetown University

12:00 pm WAM-B.8
Application of Soil Segregation Technology to Accurately Assay Concrete Material as a Means to Minimize Offsite Waste
Lopez AU, Lively JW
AMEC Environment and Infrastructure

12:15 pm Meeting Adjourned
Radiation safety is but one of a series of specialties that exist under the larger category of “loss prevention and control measures” intended to protect an organization’s people, property, and environment. Other specialties can include risk management & insurance, security, fire safety, occupational safety, chemical safety, biological safety, and hazardous waste management. In our current period of constrained economic resources, many radiation safety professionals are being asked to participate in, or assume, other safety-related duties, but often without specific training. This day long course will describe the necessary essentials of a set of safety and loss control specialties from a radiation safety perspective, equipping participants with the ability to address a variety of basic issues within the larger universe of safety-related concerns. The essential references for each specialty area will also be discussed. The course will culminate in a discussion about key loss control measures and metrics and the effective presentation of such data.

Medical Physics for Non-Medical Physicists
Andy Miller, Dave Burkett; Vanderbilt University, VA National Health Physics Program

NCRP 160 estimates that 48% of the exposure for an average person comes from Medical Exposure of Patients. Specifically, the modalities that were noted were computed tomography (CT), conventional radiography and fluoroscopy, interventional fluoroscopy, nuclear medicine, and external-beam radiotherapy. Are you ever approached with questions like, “I am supposed to receive a nuclear medicine scan for my heart. How much radiation will I receive?” or “I saw in the newspaper that CT scans will make your hair fall out. Is this true?” This course is designed to provide basic information to better answer these questions.

This course is designed to be a broad survey covering the types of equipment, nuclides, and doses, from radiation producing machines and radioactive materials used to diagnose and treat disease. Pertinent regulatory issues will be covered as part of each topic area and current issues will be discussed.

Nuclear medicine topics to be discussed include the production, preparation and delivery of radiopharmaceuticals to the point of care of the patient. SPECT and PET/CT and diagnostic tests including typical isotopes, amounts, radiation doses and images will be covered. Therapeutic administration of radiopharmaceuticals on an outpatient and inpatient basis and issues in nuclear medicine such as shielding, patient release, pregnancy, and medical events (diagnostic and therapeutic) will be discussed.

Machine sources of radiation will be covered. Starting with a review of x-ray production, conventional and digital radiography, portable and fixed x-ray units, mammography, CT, fluoroscopy, doses to staff, accreditation, sentinel events, Image Gently and dose reduction efforts will be presented.

Finally issues in Radiation Oncology will be covered. Fundamentals of linear accelerators, IMRT, and proton therapy will be covered. High dose rate and low dose rate therapies with radioactive materials will be discussed including the use of temporary and permanent implants. We will close with issues in radiation oncology such as shielding, patient release, and medical events.

This course will provide a broad overview only and is not designed to be focused in depth on any particular topic. It is being targeted for those HPs who in non-medical environment who want to gather basic information and reference materials that may be beneficial in explaining the estimated largest source of exposure for the average US citizen.
Again This Year...Again This Year

The Professional Enrichment Program (PEP) handouts for the Midyear Meeting will not be available in hard copy. For those who pre-register, you will be provided with an access code for downloading the handouts approximately two weeks prior to the meeting. For those who register for courses on-site, you will be provided the code when you register.

Sunday, 8:00 - 10:00 am

PEP 1A  EH&S “Boot Camp” for Radiation Safety Professionals: 2011, Part 1
Robert Emery, Janet Gutierrez
*The University of Texas Health Science Center at Houston, The University of Texas School of Public Health*

It is currently quite rare for organizations to maintain stand-alone radiation safety programs. Resource constraints and workplace complexities have served as a catalyst for the creation of comprehensive environmental health & safety (EH&S) or risk management (RM) programs, which include, among other health and safety aspects, radiation safety programs. But many of these consolidations were not inclusive of staff training to instill an understanding of the areas now aligned with the radiation safety function. This situation is unfortunate because when armed with a basic understanding of the other safety programs, the radiation safety staff can provide improved customer service and address many simple issues before they become major problems. This unique Professional Enrichment Program (PEP) series is designed to address this shortcoming by providing an overview of a number of key aspects of EH&S and RM programs from the perspective of practicing radiation safety professionals who now are involved in a broader set of health and safety issues. The PEP series will consist of two 2 hour segments:

Part 1 will address “The Basics of Fire & Life Safety” and “The Basics of Biological and Chemical Safety.” Included in the fire & life safety segment will be a discussion on the basic elements of the life safety code and the fire detection and suppression systems. The requirements for means of egress will also be discussed. The second part of the session will address the classification of infectious agents and the various assigned biosafety levels. Aspects of chemical exposures, exposure limits, monitoring and control strategies will also be discussed.

Each PEP segment is designed so that participants can take any session individually, although the maximum educational benefit will be derived from the participation in both sessions. The particular topics included in the PEP series have been consistently identified as extraordinarily useful to participants in the highly successful week-long “University of Texas EH&S Academy.” Ample time will be allotted for questions, answers and discussion, and each segment will be supplemented with key reference information.

PEP 1B  HPS Laboratory Accreditation Program Overview
Jeffrey Guenther
*HPS Laboratory Accreditation Policy Committee*

The objective of this professional enrichment program topic is to provide an overview of the HPS Laboratory Accreditation Program and a framework around which the participant can help laboratories being assessed to improve through the process of technical assessment. Technical assessing requires that an assessor know what is important in the health physics field and where to help the laboratory being assessed focus resources for optimization of their process. This course will review the history, the current and possible future scope, and the intent of the HPS Laboratory Accreditation Program. Advantages of accreditation will be provided. A review of the HPS Laboratory Accreditation Manual will be presented. This course is intended for laboratories interested in achieving accreditation, for individuals interested in enhancing the quality programs of their organization, and as the first training phase for anyone planning to become assessors.
PEP 1C  Navigating Through Hazardous Material Classification – A Primer of DOT and EPA Regulations
Robert M. Wester, Joseph D. Koch

Classifying hazardous materials and hazardous wastes can be confusing, frustrating and very trying on one’s patience. Trying to identify these materials to meet different criteria for two Federal Regulatory Agencies, each with different objectives, is difficult at best. But, depending on the state, they too may have their own regulatory agencies overseeing storage, disposal, and transportation, making the process downright excruciating. This presentation will give the participants a brief overview of DOT and EPA regulations concerning the identification and classification of hazardous materials and wastes. (49 CFR 171-173, 40 CFR 260, 261). We will learn that classifying by one set of regulations may not satisfy the requirements of the second set, and if you get those regulations correct, then what about the various state regulations that your materials will travel through?

We will provide several workbook examples and comparisons of classifying hazardous materials and wastes, which will allow the participants to demonstrate their new found knowledge. We will also give a current example of how one state is addressing waste identification and proposed mandatory labeling, perhaps to an extreme new level. Any guess as to which state this may be?

Sunday, 10:30 am-12:30 pm

Robert Emery, Janet Gutierrez
The University of Texas Health Science Center at Houston, The University of Texas School of Public Health,

Part 2 will focus on “Measuring and Displaying Radiation Protection Program Metrics That Matter to Management.” Radiation protection programs typically accumulate data and documentation so that regulatory officials can assess compliance with established regulations. The implicit logic associated with this activity is that compliance equates to safety. But in this era of constricted resources, mere regulatory compliance is no longer sufficient to justify all necessary programmatic resources. Radiation protection programs are now expected to readily demonstrate how they add tangible value to the core missions of an organization. The demonstration of this value is expected to be in the form of some sort of performance metrics, but this is an area where many radiation safety professionals have not been trained. The issue is further compounded by the need to display the metrics in manners that are succinct and compelling, yet another area where formal training is often lacking. This session will first describe a variety of possible radiation protection program performance measures and metrics, and then will focus on the display of the information in ways that clearly convey the intended message. Actual before and after data display “make-overs” will be presented, and ample time will be provided for questions, answers, and discussion.

PEP 2B  HPS Laboratory Accreditation Program Assessor Training
Tom Voss
HPS Laboratory Accreditation Assessment Committee

The objective of this professional enrichment program topic is to familiarize HPS Laboratory Accreditation Program assessors and others with the requirements of the assessment program. The training will describe the program documentation, incorporated elements of ISO/IEC 17025, the accreditation process, and will specifically address technical requirements for radiation instrument calibration and radioactive source manufacturing/calibration laboratories. The training is required for all members of the HPS Laboratory Accreditation Assessment Committee and is recommended for laboratories and others interested in accreditation. The HPS Laboratory Accreditation Program Overview and Introduction to Uncertainty Calculations presentations should also be attended. The HPS program is similar to other ISO/IEC 17025 based accreditation programs and the training will be useful for anyone interested in the accreditation process.

PEP 2C  Fundamentals of Gamma Spectroscopy – Part I
Doug Van Cleef
ORTEC/Advanced Measurement Technology, Inc.

This course offers a fast-paced review of the basic principles of gamma spectroscopic analysis. The course includes a review of the nature and origins of gamma-emitting radioactivity, basic physics of gamma interaction with matter, consequences of gamma interactions on gamma spectra, gamma spectroscopy system components and calibrations, gamma spectroscopy analysis methods, and interpretation of gamma spectroscopy data.

Objective: Upon completion of this course, student will have a working knowledge of radioactive decay schemes, radiation emissions, gamma radiation detection, and the principles of the laboratory gamma spectroscopy process.
The dynamic medical health physics setting mandates continual review of current practices. The medical health physics environment has drastically changed over the recent past with new applications, new imaging modalities, and a new regulatory structure. This continual evolution makes it challenging for the practicing medical health physicist to remain abreast of current issues. This continuing education session will review recent regulatory changes, highlight commonly observed radiation-producing device deficiencies, operator doses from portable x-ray imaging, CT imaging dose considerations, and discuss recent medical irradiator security issues. Ideas for improving medical health physics programs focusing on training, example shielding calculations, medical health physics safety surveys, and commonly observed medical health physics issues are provided. Attendees will have the opportunity to ask medical health physics questions and exchange key successes that worked in their environment with the speaker.

Medical Health Physics Refresher:
1. The University of Texas Health Science Center at San Antonio maintains the only medical health physics graduate program in Texas. This novel program emphasizes the tangible relationship between physicians, medical physicists, and health physicist in the conduct of medicine.
2. This refresher course was developed through lectures given to assist health physics students and radiology residents prepare for national board examinations.
3. Dr. Charlton was awarded the 2006 Teacher of the Year Award in UTHSCSA Radiology and the first non-clinician to receive the award in more than a decade.

PEP 3C  Fundamentals of Gamma Spectroscopy – Part II
Doug Van Cleef
ORTEC/Advanced Measurement Technology, Inc.
See PEP 2C for description.
The process for achieving ABHP certification – beginning with the application submission through the completion of the examination to certification – will be presented. Tips for navigating certification throughout the process will be discussed. Topics will include qualifications and the application process, preparation of both exam parts, and keys to good performance. The material presented consolidates pertinent exam policy/procedure into an easily digestible format, offering real world examples of good and poor responses. Persons who are already certified may gain insight into the process and identify areas where they would be willing to assist in certification process. The presenters are current members of the ABHP board.

**CEL2  HPS Laboratory Accreditation Program Introduction to Uncertainty Calculations Part 1**
*Daniel VanDalsem*
*Eckert & Ziegler Isotope Products*

The objective of this continuing education lecture is to familiarize HPS Laboratory Accreditation Program assessors and others with the requirements of the assessment program as they relate to radioactive source manufacturers/calibration laboratories. Because of the importance of uncertainty calculations in Laboratory Accreditation this course will concentrate on the corresponding technical issues involving laboratory quality assurance, the estimation of uncertainty, and limits of detection. An important element in the activities of health physicists who are responsible for the safety of personnel and the general public is the measurement of radiation from various sources, including reactors, radiation-generating machines and radioactive sources used in industry and in the medical diagnosis and treatment of patients. To be meaningful, these measurements must be performed using radioactive sources that are traceable to a national standards laboratory (e.g., NIST). Radioactive source manufacturers/calibration laboratories are accredited by the HPS LAP in accordance with the HPS Laboratory Accreditation Manual, ANSI/ISO/IEC 17025-2005 “General requirements for the competence of testing and calibration laboratories,” and ANSI 42.22-1995 “Traceability of Radioactive Sources to the National Institute of Standards and Technology (NIST) and Associated Instrument Quality Control.”

**CEL3  The Psychology of Radioactive Waste Disposal**
*Ray Johnson*
*Radiation Safety Counseling Institute*

Which is the greatest challenge for radioactive waste disposal: technical issues or people issues? While this HPS conference is mainly about technical issues; social issues, politics, and public perceptions of risks may pose the greatest challenges. Viable technical solutions to radioactive waste disposal have been available for many decades and yet the public seems to believe that we do not know what to do with such wastes. Public and political views often say the technical solutions for radioactive waste are not acceptable. Since acceptability seems to be more about risk perceptions than technology, perhaps we could benefit from better understanding of social issues. Health physicists have long been perplexed by the nature of public risk perceptions. Studies over that past two decades have begun to show how our minds work to protect us from perceived risks. Our subconscious minds create fear as a natural function for our protection. For survival we have learned to respond automatically to fears without conscious judgment. However, since radiation fears are based on imagined unacceptable consequences of exposure, they are not a true fear such as we might experience upon direct attack by an animal. Fears of radiation pervade all discussions of waste disposal like the invisible elephant in the room. Since radiation fears are from our subconscious, appeals to the conscious mind for rational decisions may not change a fearful person’s feelings. The fearful imagination of the subconscious mind will win over rational intellect every time. Persons with subconscious fears will also distrust appeals for rational logical analysis by technical experts. Such persons will seek confirmation for their fears and discount anything which seems contrary to their beliefs. People’s views of radiation risks will not change without a change in their subconscious minds. Marketers and psychologists know how to address the subconscious mind and their strategies will be reviewed.

**CEL4  HPS Laboratory Accreditation Program Introduction to Uncertainty Calculations Part 2**
*James Tarzia*
*Radiation Safety & Control Services*

The objective of this continuing education lecture is to familiarize HPS Laboratory Accreditation Program
assessors and others with the requirements of the assessment program as they relate to radiation instrument calibration laboratories. Because of the importance of uncertainty calculations in Laboratory Accreditation this course will concentrate on the corresponding technical issues involving laboratory quality assurance, the estimation of uncertainty, and limits of detection. An important element in the activities of health physicists who are responsible for the safety of personnel and the general public is the measurement of radiation from various sources, including reactors, radiation-generating machines and radioactive sources used in industry and in the medical diagnosis and treatment of patients. To be meaningful, these measurements must be performed using radiation instruments whose calibrations are traceable to a national standards laboratory (e.g., NIST). Radiation instrument calibration laboratories are accredited by the HPS LAP in accordance with the HPS Laboratory Accreditation Manual and ANSI/ISO/IEC 17025-2005 “General requirements for the competence of testing and calibration laboratories.”

**Wednesday, February 8  7:00-8:00 am**

**CEL5  Environmental Risk Assessment**

*Andrew H. Thatcher*

A common theme in evaluating contaminated sites regardless of the origin or type of radioactive contamination is a risk assessment developed to fully evaluate the potential impact of the contamination to surrounding environs and future residents. In order to accomplish this objective in a two hour window we’ll walk through the environmental transport and pathway analysis for a low level radioactive waste facility and address the topics related to fully completing the analysis from start to finish. Topics will include:

* Site characterization and evaluation
* Development of scenarios to include solicitation of input from interested parties and applicable regulatory drivers
* Selection of environmental pathways for evaluation based upon the exposure scenarios and the location.
* Selection of input parameters and obtaining site specific data where needed.
* Performing sensitivity analysis and evaluating uncertainty for complex sites
* Validation of the model used with actual data where possible
* Presentation of results on a deterministic or probabilistic basis.

This basic model for risk assessment has been applied by the presenter to a number of contaminated sites over the years. This course is for participants interested in obtaining a greater background and details on performance assessments and the legwork involved in various aspects of the process.

**CEL6  Statistical Sampling and Analysis Approaches for Waste Disposal and Decommission Projects**

*Thomas L. Rucker, Dennis J. Beal*

*Science Applications International Corporation*

It has been said that you can prove anything with statistics. However, the “proof is in the pudding” and valid proofs depend on valid application of statistical principles and assumptions. The use of MARSSIM (Multi-Agency Radiation Survey and Site Investigation Manual) guidance and it’s supplement MARSAME (Multi-Agency Radiation Survey and Assessment of Material and Equipment Manual) have provided a statistical framework for sampling and analysis of characterization data for both site decommissioning and waste management projects based on a standard data life cycle and on meeting developed data quality objectives. However, statistical assumptions are often not verified to be applicable to the material in question. Furthermore, misunderstanding of how to apply statistical principles and methods to radiological data can lead to erroneous conclusions. Some examples of misapplication of statistics includes poor assumptions relative to the grouping of material into homogenous populations for statistical sampling based on poor or missing historical process knowledge or scouting data; poor or unverified assumptions relative to the relationship between surface and volumetric contamination; poor assumptions relative to population distribution shapes; and, improper application of statistical methods for “undetected” versus “detected” data. Some available statistical packages lend themselves to misapplication in these ways, especially for the unwary and uninitiated. Examples from some actual site decommissioning and waste management projects using various statistical methods and available statistical software packages will demonstrate the misapplication and proper application of statistical principles.
Name for badge: (Last) ____________________________ (First) ____________________________ (Nickname) ____________________________

Affiliation (for badge) (limit to 18 characters and spaces): ____________________________

Address: ____________________________ HPS Member #: ____________________________

City: ____________________________ State: ____________________________ Zip/Postal Code: ____________________________

Business Phone: ____________________________ FAX: ____________________________ E-mail: ____________________________

If Registering - Companion Name: _______________________________________________________________

Preregistration Deadline: January 6

REGISTRATION FEES: (Mark Appropriate Boxes) 

- HPS Member (Receipts, Exhibitor Lunch, Proceedings) $430.00 $525.00
- Non-Member* (Receipts, Exhibitor Lunch, Proceedings) $535.00 $635.00
- HPS Member (Receipts, Exhibitor Lunch, Proceedings) + Annual Dues $580.00 $680.00
- Emeritus Member (Receipts, Exhibitor Lunch, Proceedings) $215.00 $215.00
- One Day Mon Tues Wed $275.00 $275.00
- Student (Receipts and Proceedings) $ 70.00 $ 70.00
- Companion (Receipts, Hospitality Room) $ 70.00 $ 70.00
- Emeritus Companion (Receipts, Hospitality Room) $ 35.00 $ 35.00
- Exhibits Only $ 40.00 $ 40.00

*Includes HPS Associate Membership for year 2012 - First Time Members Only

TECHNICAL TOURS:

- Southwestern Medical Ctr (Tues 3:30-5:30 pm, 2/7) # of Tickets ___ X $20
- McKinney Street Pub Crawl (Tues 6-10 pm, 2/7) # of Tickets ___ X $20

PUB CRAWL:

- T-Shirt size ___Small ___Medium ___Large ___X-Large
- HPS Polo # of Shirts ___ X $22
- Polo size ___Small ___Medium ___Large ___X-Large; ___Gray ___Natural ___Light Blue
- HPS T-Shirt # of Shirts ___ X $12
- Shirt size ___Small ___Medium ___Large ___X-Large; ___Gray ___Natural ___Light Blue

AAHP COURSES (Saturday, February 4):

- Course 1 – Radiation Safety’s “Other Duties As Assigned” (R Emery, J Gutierrez) $275.00
- Course 2 – Medical Physics for Non-Medical Physicists (A Miller, D Burkett) $275.00

PEP COURSES (Sunday, February 5) -

8:00–10:00 AM (3 concurrent courses)

1-B HPS Laboratory Accreditation Program Overview (J Guenther)
1-C Navigating through Hazardous Material Classification ... (RM Wester, JD Koch)

10:30 AM–12:30 PM

2-B HPS Laboratory Accreditation Program Assessor Training (T Voss)
2-C Fundamentals of Gamma Spectroscopy - Part 1 (D Van Cleef)

2:00–4:00 PM

3-B Medical Health Physics Refresher (MA Charlton)
3-C Fundamentals of Gamma Spectroscopy - Part 2 (D Van Cleef)

PAYMENT INFORMATION - Purchase Orders NOT Accepted for AAHP/PEP or Tour Registration

If paying by check, make payable and mail to:

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Registration Section Total $ ____________

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AAHP & PEP Section Total $ ____________

TOTAL FEES $ ____________