

Radiation Safety Course Presenters

Sue Engelhardt-Seminar Coordinator

Sue Engelhardt has over 25 years of experience in Health Physics. After receiving her M.S., she worked as a Health Physicist in the uranium fuel cycle, and then as the RSO at the University of Wisconsin-Madison for 10 years. While there, Sue had experience with multi curie quantities of radioactive material. As a nationally recognized speaker/trainer in the heavy industry environment, Sue also presents client specific courses for other industries. As President of Engelhardt and Associates Inc., she has organized and presents a wide spectrum of training courses, conducts compliance audits and helps customers with their licensing issues.

Josh Walkowicz, CHP

Josh Walkowicz is a graduate of the University of Illinois with a degree in Nuclear Engineering and has a Masters Degree in Health Physics from Texas A+M University. He worked two years as a Health Physicist at Purdue University where he gained familiarity with the operation of a broad-scope license. In 1998, he joined Engelhardt and Associates as a Health Physicist. Josh has familiarity with industrial gauges, research facilities and x-rays (analytical and diagnostic).

Mick Schwartz

Mick Schwartz has a BA from Arizona State University, and has held a variety of sales and sales management positions. Having been in the process measurement industry since 1995, Mick is currently the Business Unit Manager –Industrial Products for Berthold Technologies-USA in Oak Ridge, Tennessee.



Berthold Technologies-USA

Berthold Technologies USA is located in Oak Ridge Tennessee. It is responsible for Sales, Operations and Service in both North and South America. The office includes sales, technical support, engineering and administrative functions.

Its equipment is used in the most harsh and demanding of process measurement conditions. Due to the nature of its non-contacting-non-intrusive technology, Berthold Technologies provides solutions for some of the most complex and difficult measurement challenges in the industry.

Berthold Technologies USA is a wholly owned subsidiary of Berthold Technologies GmbH & Co, Wildbad Germany.

Engelhardt and Associates, Inc.

As the nuclear industry grows and changes, so does the demand for quality trained and informed employees. Responding to this need, Engelhardt and Associates, Inc. provides a comprehensive range of industry related services and expertise.

Engelhardt and Associates, Inc. is composed of qualified professionals with advanced degrees in health physics and people oriented managerial fields.

Whether its field audits, consulting services, or other activities related to maintaining your radiation safety program, Engelhardt and Associates, Inc. can provide the solutions to your regulatory and compliance challenges.



40 Hour Radiation Safety Course

Presented by
Engelhardt and Associates, Inc



Reliant Park Spring Hill Suites Hotel
1400 Old Spanish Trail
Houston TX
Nov. 13-17, 2006



Course Agenda

Day One

Radiation and its uses

- Contemporary applications

Radiation Physics

- Radioactive decay
- Properties of common decay products
- Interactions with matter

Regulatory Agencies and Licensing

- Where regulatory standards come from
- NRC vs. Agreement States

Math Review

- Basic math functions
- Common Health Physics applications

Day Two

Radiation Units

- Types of equipment/applications
- Demonstration of equipment/hands on

Regulatory Dose Limits/Dosimetry

- Dose limits (public vs. occupational)
- Types of dosimeters; how they work
- Personnel monitoring requirements

Radiation Protection

- ALARA
- Methods of protection

Common Sources of Radiation

- Naturally occurring
- Man-made

Day Three

Radiation Biology

- Cellular, tissue and systemic effects
- Delayed effects, early somatic effects
- Acute radiation syndrome
- Homesis, threshold vs. non-threshold

Radiation Incidents/Early Response

- Type (gauge, medical, academic); procedures
- Source leakage
- Emergency personnel as responders

Radiation Protection Programs/responsibilities

- Key elements (records, audits, RSO, etc.)
- Annual Review

Day Four

NRC Regulations

- Part 19, notices, instructions to workers
- Part 20, radiation protection standards
- Parts 30-35—license types and provisions
- NUREGS
- Device registrations

Packaging Transport and Receipt of Radioactive Material

- Transportation regulations (NRC, DOT, IATA)
- Classification and packaging
- Receipt of Radioactive material

Radioactive Waste

- Type of waste
- Disposal options

Laboratory Workstations

- Radioactive decay measurements
- Solid scintillation detection
- Geiger counter operation/measurements
- Survey and decontamination
- Direct/scatter measurements/leak testing

Day Five

Regulatory Inspections

- How to prepare for NRC/State Inspections
- What to do if an inspection is going badly
- What to do if called for an enforcement conference

Writing a License

- New, renewal and amendment applications
- Content and fees

Reportable Incidents

- When to/not to report an incident
- Interactions with the public and the media

* NOTE— All of the course material presented will be applicable for the 40 hour certification. However, minor changes in the program may occur.

To register, send, fax or email this form to

Berthold Technologies, USA

99 Midway Lane

Oak Ridge, TN 37830

PH 865 483 1488 FAX 865 425 4309

Email—berthold-us@berthold-us.com

www.berthold-us.com

REGISTRATION FEE- \$1600 PER PERSON

Registrar-Donna Scott-Berthold Technologies USA

Name_____

Organization_____

Position_____

Address_____

City_____

State/ZIP_____

Telephone_____

Fax_____

Email_____

Check Enclosed Check or PO to follow

Charge to Company PO_____

Credit Card (MasterCard or VISA only)

Name on Card_____

Card Number_____

Expiration Date_____ Type of Card_____

All registration payments are due no later than October 24th, 2006. No refunds will be given if cancellation occurs less than 10 days prior to the course.

Registration Includes:

Course fees, continental Breakfast, morning and afternoon breaks, comprehensive Radiation Safety Manual, radiation training materials and licensing sessions. Continuing education credits are available.

Hotel Information

Call Hotel for special course room rate
Spring Hill Suites Medical Center Reliant Park
1400 Old Spanish Trail
Houston, TX 77054

PH 703 796 1000 FAX 713 796 9075

www.marriott.com/hourp



www.berthold-us.com



www.berthold-us.com