

TO: Vered Shaffer, NRC (F: 630-515-1078)
FROM: Scott Shepherd, EJ (W: 231-536-4471 C: 231-357-2623)
RE: Control # 590685 (RTI Training Course Syllabus)

Vered,

Here is the course syllabus for my RTI training course. The first page lists the hands on info that you are looking for. Let me know if you need any other info. I believe that I still have the course materials in a ring binder, but I may need to dig a bit for it.

Thank you,

A handwritten signature in black ink that reads "Scott Shepherd". The signature is written in a cursive, flowing style.

Scott Shepherd

RECEIVED APR 29 2016

RADIATION TECHNOLOGY, INC.
40-HOUR INDUSTRIAL RADIATION SAFETY TRAINING COURSE
AGENDA

Radioactive Materials

- A. Isotopes
- B. Decay
- C. Half-life

Types of Radiation**Radiation Interaction with Matter**

- A. Ionizing Radiation
 - 1. Electromagnetic
 - 2. Charged Particle
 - 3. Neutron
- B. Specific Ionization

Radiation Dosimetry

- A. Units & Dose Determination
- B. Quality Factor
- C. Gamma Exposure Rate
- D. Neutron Exposure Rate

Shielding

- A. Inverse Square Law
- B. Time, Distance, Shielding
- C. Half-Value Layer
- D. Calculating Shield Thicknesses

Biological Effects

- A. Radiosensitivity
- B. General Cell Structure
- C. Radiation Exposure
- D. Radiation Damage
- E. Long Term Effects
- F. Dose Limits
- G. Total Accumulated Dose

Biological Effects (Con't)

- H. Radiation Protection Guides
- I. Natural Background Radiation
- J. Estimated Loss of Life Expectancy

Radiation Detection

- A. Detection Instruments
 - 1. Basic Operation
 - 2. Survey Meters

Personnel Monitoring

- A. Requirements
- B. Devices

Industrial

- A. Posting
- B. Industrial Device Installation
 - 1. Requirements
 - 2. Surveying & Leak Testing Demonstration

"Hands-On" Practical Session

- A. Check-out and re-briefing on use of portable radiation survey meters
- B. Survey a Fixed Gauge
- C. Prepare Survey Forms
- D. Leak Test Devices using Mailable Kit Procedure

Industrial Radiation Safety Training Course
Agenda
Page Two

Regulatory Control

- A. Title 10 Code of Federal Regulations
- B. Agreement States
- C. Licensing Procedures
- D. General vs Specific License
- E. User Responsibility
- F. Radiation Protection Program
 - 1. Recordkeeping
 - 2. Posting
 - 3. Training
 - 4. Incident Reporting
 - 5. Emergency Procedures

Shipping Radioactive Material

Summary of Topics

- A. Role of Radiation Safety Personnel
- B. Class Discussion

Written Test on Lectures and Homework Assignments

Note: Homework is assigned each night during the course.