Fact Sheet

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

X-ray Refresher Training

Medical X-ray Procedures Operator Training Guide

In August 2009, the Pennsylvania Department of Environmental Protection's (DEP) Bureau of Radiation Protection (BRP) issued Technical Guidance Document No. 291-4200-001, *Medical X-ray Procedures Operator Training Guide*. The document provides guidance to the regulated community for compliance with 25 Pennsylvania Code § 221.11 (Registrant responsibilities) regarding instruction of X-ray operators. The intent of the regulation is to promote awareness of the importance of continuing education and ensure operators performing X-ray medical procedures do so safely.

The Technical Guidance Document requirement states that *"all operators performing Low-Risk Procedures must demonstrate two contact hours or four units of continuing education every four years in topics covered in Appendix A (Determination of Competence)."* The list of topics in Appendix A is as follows:

(1) Basic Properties of Radiation
(2) Units of Measurement
(3) Sources of Radiation Exposure
(4) Methods of Radiation Protection
(5) Biological Effects of Radiation Exposure
(6) X-ray Equipment
(7) Imaging Recording and Processing
(8) Patient Exposure and Positioning
(9) Procedures
(10) Quality Assurance Program
(11) Regulations

Training and Continuing Education Requirements

DEP regulations require an individual to be trained and competent in the general operation of the X-ray equipment, in the above-listed subject areas and, as applicable, to the procedures performed and the specific equipment utilized. They should also have routine continuing education in these subject areas.

Why is Training so Important?

According to the National Council on Radiation Protection and Measurements (NCRP) Report No. 134, *Operational Radiation Safety Training*, there are at least four important reasons for conducting such training:

- **First**, the development of worker skills through training enables the individual to perform tasks efficiently and with confidence;
- **Second**, when individuals are aware that there is some risk associated with the exposure (both to themselves and their patients), they can become active participants in the decision to accept and, where possible, reduce such risk;
- **Third**, the number and seriousness of accidents can be reduced through training; and
- **Fourth**, workers who are properly trained will be aware of the regulatory requirements associated with their activities that involve radiation exposure.

Based on these reasons and the regulatory requirements, generic materials for training for individuals who operate X-ray equipment have been developed for DEP by a Bloomsburg University professor of health physics to assist registrants in ensuring the requirements of the article are met in the operation of X-ray systems. This refresher training program is made available to X-ray equipment operators on DEP's website at www.dep.state.pa.us, keyword: X-ray Refresher Training.

Note:

DEP does not solicit for any particular training resource, but does ensure through facility record inspections that the course meets the requirements of the regulation and individuals are qualified to operate X-ray equipment.