X-Ray Safety Retraining 2017
Human Use Systems

Training

- All x-ray equipment operators must complete a two part training: Part I: X-Ray Safety Training Part 1 is an online course located at http://ehs.yale.edu/training/x-ray-generating-equipment-safety-training. Part II: Is a "How to" training provided by the PI or unit supervisor.
- Area frequenters (not involved in x-ray activities) must be made aware of x-ray use in that space.

Dosimetry

- Wear your badge whenever using x-rays equipment. Wear your badge at the collar outside of any lead apron.
- Store badge away from radiation when not being used.
- Never share badges or intentionally expose badges to radiation.
- Return badges in a timely manner at the end of the wear period.

Security

- Turn off your equipment when not in use. Always secure keys when x-ray unit is not in use.
- Do not post passwords nearby x-ray control computers and do not leave any keys with your equipment.
- Only trained authorized users should have access to the unit keys.

Human Use Safety

- Only a properly credentialed individual may operate an x-ray machine for human use. Studies must be on the order of a physician or authorized provider. Research (involving exposure to radiation) on human subjects requires prior YNHH Radiation Safety Committee and Yale University HIC approval.
- Operators of x-ray equipment must either stand behind a lead barrier, or wear a lead apron during x-ray exposures. Stand as far back from the x-ray tube and patient as feasible during x-ray exposures. Do not direct the x-ray tube toward the operator or the control booth during exposures. Anyone holding a patient for an exam should wear lead gloves in addition to the lead apron.
- Always strive to reduce patient doses while optimizing image quality.

Unit Malfunction

- If the x-ray unit appears to malfunction, remove it from service immediately.
- Contact your supervisor and the service representative as soon as possible.
- Make certain other users are aware that the unit is out of service and notify Radiation Safety at the EHS main line 203-785-3550.

Termination of Use

- Contact EHS prior to relocation, transfer, donation or disposal of an x-ray unit to ensure all work is handled correctly and in accordance with Connecticut Department of Energy and Environmental Protection regulations.

Emergency Procedures

- If there is a suspicion of an x-ray exposure or for any other x-ray related emergency, call the EHS emergency line at 203-785-3555. This line is staffed 24 hours per day, seven days per week.

Questions or concerns? Contact Radiation Safety at 203-785-3550.

Traits of a Positive Safety Culture

Experience has shown that certain personal and organizational traits are present in a positive safety culture. A trait, in this case, is a pattern of thinking, feeling and behaving that emphasizes safety, particularly in goal conflict situations (e.g., production, schedule and the cost of the effort versus safety).

The following are traits of a positive safety culture:

1. **Leadership Safety Values and Actions**
Leaders demonstrate a commitment to safety in their decisions and behaviors.

2. **Problem Identification and Resolution**
Issues potentially impacting safety are promptly identified, fully evaluated and promptly addressed and corrected commensurate with their significance.

3. **Personal Accountability**
All individuals take personal responsibility for safety.

4. **Work Processes**
The process of planning and controlling work activities is implemented so that safety is maintained.

5. **Continuous Learning**
Opportunities to learn about ways to ensure safety are sought and implemented.

6. **Environment for Raising Concerns**
A safety conscious work environment is maintained where personnel feel free to raise safety concerns without fear of retaliation, intimidation, harassment, or discrimination.

7. **Effective Safety Communication**
Communications maintain a focus on safety.

8. **Respectful Work Environment**
Trust and respect permeate the organization.

9. **Questioning Attitude**
Individuals avoid complacency and continuously challenge existing conditions and activities in order to identify discrepancies that might result in error or inappropriate action.

Source: United States Nuclear Regulatory Commission.