

Radiation Control Technicians: Making Decisions under Pressure

Radiation control technicians, called RCTs, help ensure that people and the environment are protected from exposure to radiation or radioactive materials. They must make correct decisions under pressure—people’s health and safety may depend on it.

RCTs survey, monitor, and respond to radiation concerns, including radiation abnormalities and emergencies at the Laboratory. These workers are critical to Laboratory facilities that use radioactive materials and machines that produce radiation.



Above and at right, RCTs go about their daily duties at the Laboratory.

An RCT has many duties and responsibilities that require a well-qualified and trained professional. In a typical work day, an RCT may

- work with a variety of people from scientific researchers to managers and crafts workers;
- evaluate and help direct work in radiological controlled areas;
- designate radiological controls for safe work practices;
- perform area surveys to evaluate radiological conditions; and
- respond to emergency and abnormal conditions dealing with radiation.

Northern New Mexico Community College in Española, New Mexico, is home to a RCT training program that prepares many of the Laboratory’s radiation control technicians for their work. The community college offers a two-year program that leads to an associate of applied science degree in radiation protection. The Laboratory recently started offering summer undergraduate RCT internships for interested students.

Colleen Wilson, an undergraduate student intern from the training program, worked with Michael Duran at Los Alamos during the summer 2002. Colleen decided to enter the training program because she enjoys radiation-protection work and hopes to become a Laboratory employee.

Colleen became interested in radiation protection after working as an x-ray technician. She pursued her interest by enrolling in the community college training program. She finds that much of her x-ray technician background helped prepare her for the present course of study to become an RCT.



What do radiation protection professionals do?

Colleen assists Laboratory RCTs with surveys and health physics duties. As a student, she has flexibility and variety in her daily duties. There is a moderate amount of physical work involved—she may carry radiation-detection equipment while wearing personal protective equipment, which may consist of two pairs of coveralls and a respirator, or even self-contained breathing apparatus.

What training does a radiation professional receive?

Comprehensive examinations, written and oral, are given at the end of training before the student candidate becomes qualified by the Department of Energy. Then, the RCT must requalify every two years. Professional development can continue with the National Registry of Radiation Protection Technologist examination and the American Board of Health Physics certification examination after seven years of professional experience.

Colleen's mentor, Michael Duran, is a Laboratory radiation-protection professional. Mike comes from a family of educators and earned his bachelor of science degree in physics at Fort Lewis College in Colorado and a master of science in health physics from Colorado State University. Regarding his Laboratory career, Mike says, "I started out as a graduate research assistant and was encouraged by the opportunities through mentorship.

"I have taught radiation-protection classes for more than eight years now, mainly in the evenings at the Northern New Mexico Community College campus in Española."

Mike's enthusiasm about the RCT training program shows: "I like the satisfaction of seeing students gain knowledge that leads to a good outcome. Students who go through the training program are prepared to successfully compete and obtain jobs as radiation control technicians at the Laboratory. Most students in the program are from the surrounding communities, and they are people who are likely to stay at the Laboratory."

Mike says, "The radiation protection degree program at Northern New Mexico Community College takes effort, but it is a Laboratory investment in training that benefits students and the Laboratory. There are always opportunities."



Micheal Duran demonstrates the survey and monitoring process to intern Colleen Wilson.



RCTs wear personal protective equipment to perform their duties.