



# Illinois Department of Transportation

## **STTP S-34 Radiation Safety and Density by the Nuclear Method Course**

**Course Objectives:** This course is designed for technicians or engineers who will be involved with performing field testing on soil, aggregate and hot mix asphalt using nuclear test equipment.

Upon successful completion of the course, students should be able to:

- Understand radiological safety
  - Principles and practices of radiation safety
  - Leak testing procedures
  - Mathematics and calculations basic to the use and measurement of radioactivity
  - Biological effects of radiation
  - Radioactivity measurement, standardization, and monitoring techniques
  - Accident and incident procedures
  - Nuclear gauge transportation and storage procedures
- Understand nuclear gauge operation
  - Instrument theory
  - Operation procedures
  - Maintenance
  - Field application
  - Gauge calibration

**Prerequisite:** STTP S-33 Soils Field Testing and Inspection Course

**Course Materials:** Radiation Safety and Density by the Nuclear Method Course Manual  
A copy of the current version of the course manual will be provided in class.  
Students will need to **bring a pencil, calculator and note pad** with them.

**Enrollment:** Please have one coordinator from your local agency contact Mr. Trevor Satterlee at 217-782-1057 or preferably by email at [Trevor.Satterlee@illinois.gov](mailto:Trevor.Satterlee@illinois.gov) to enroll students in a class.  
**Each student will be put on a waiting list for the class of their choice.** Two to three weeks prior to class start the student or coordinator will be contacted with confirmation of enrollment.

There is no fee for this class at this time. You will receive 9.0 PDHs for taking this class if you need them.

**Schedule:** Each class is 1.5 days. The first day starts at 8:30am and ends at 4:30pm. The second and final day starts at 8:30am and ends around noon. Please be advised that due to updates to the class content and format, the class daily start and end times may be subject to minor adjustments by the instructor(s) if needed to accommodate the new course material and structure. The 2023 training schedule is listed below:

**Class Dates/Location:**

**IDOT District Three:** “The Staved Rock” Conference Room **(This class is full.)**  
**700 East Norris Drive**  
**Ottawa, Illinois 61350**

- Mar 14 – 15

**IDOT District Seven:** Effingham County Emergency Services Building  
**311 W Miracle Ace**  
**Effingham, Illinois 62401**

- Mar 22 – 23

**IDOT District One:** Materials Laboratory  
**101 West Center Court**  
**Schaumburg, Illinois 60196**

- Apr 4 – 5