

Section 400.00 – ITD Nuclear Gauge Program

The administration of the nuclear gauge program is handled through the Central Laboratory. A person within the laboratory who is qualified as a Radiation Safety Officer (RSO) will manage this program statewide and act as a liaison with the Nuclear Regulatory Commission (NRC). The RSO will ensure that all personnel required to operate nuclear equipment will be trained in the safe handling and proper usage of nuclear equipment according to the policies and regulations set by the NRC. Trained personnel shall be provided with the proper equipment to perform their duties. Districts, operators, and equipment will be monitored on a routine basis for conformance to policies and regulations. Failure to comply could result in substantial penalties and fines to the Department as well as the individual.

SECTION 410.00 – ITD HQ Central Laboratory

The Central Laboratory will carry the license, provide policies and regulations, and maintain a line of communication with the NRC.

The Central Laboratory will administer and fund a program monitoring personal exposure to radiation, (i.e., personal dosimetry) as well as provide, administer, and fund a leak testing program.

The Central Laboratory will review nuclear gauge operator certifications every quarter. Only qualified operators will receive TLDs (Thermo-Luminescent Dosimeters) for the quarter. This will ensure that TLDs are only distributed to operators who have current certifications.

The Central Laboratory will assign gauges to districts and conduct a gauge inventory every six months, or as requested, and provide a depot with storage for gauges that require repair or recalibration.

The Central Laboratory will:

- Maintain records on:

- Personnel
- Training
- Dosimeters
- Gauges

- Provide:

- Personnel exposure records to District RSO's
- Certification cards to qualified operators

The ITD RSO will conduct an audit in each District at least once per year and record the findings of the audit to comply with NRC requirements.

The Central Laboratory will oversee the procurement, funding of new gauges, and disposal of density gauges according to NRC regulations.

SECTION 420.00 – ITD District Materials Laboratories

Each ITD District Materials Engineer will assign at least one person to obtain required training and become qualified as the District RSO. The District RSO's duties include:

- Receive TLDs from HQ Central Laboratory for distribution to operators as necessary
- Collect TLDs each quarter and return them to the HQ Central Laboratory for evaluation
- Provide exposure records to gauge operators and distribute certification cards as required
- Maintain a permanent nuclear density gauge storage area
- Assign nuclear density gauges to residencies as needed
- Provide shipping papers and documents
- Ensure that nuclear devices are being used safely, transported correctly, and TLDs worn during gauge use
- Perform wipe tests on nuclear devices as requested
- Conduct an audit on randomly selected operators several times per year and provide results to the HQ Central Laboratory RSO

SECTION 430.00 – ITD District Residencies

Residencies will assign nuclear density gauges to qualified operators/projects with provisions for temporary storage sites, when necessary, and document the location. In addition, they will ensure proper use of nuclear devices and see that each user has a certification card, TLD, proper shipping papers, and a properly secured and labeled nuclear density gauge.

SECTION 440.00 – Required Training

The ITD RSO will monitor essential training to ITD personnel within the program.

440.01 ITD RSO. The ITD RSO is required to attend a 40-hour training class approved by the NRC.

440.02 District RSOs. Persons at the District Level must attend the NRC-approved, 8-hour RSO class in order to qualify for the position of District RSO or Assistant District RSO.

440.03 Gauge Operators. Required classes include the following:

- An 8-hour Nuclear Gauge Certification Class (NRC approved).
- Gauge operator classes or on-the-job training.
- Refresher classes every two years.

Refresher classes may be instructed by state personnel familiar with the subject matter, such as the ITD RSO or a District RSO. Information presented must cover regulatory compliance, transportation, personal monitoring, emergency response, and general safety with radioactive materials.

SECTION 450.00 – Required Forms

The following list of [forms](#) will be used where required for compliance to the ITD Nuclear Gauge Program:

- ITD-804 Certificate of Training for Transportation of Nuclear Devices
- ITD-817_ Nuclear Program Audit
- ITD-823 Nuclear Gauge Inventory Record
- ITD-824_ Shippers' Certification for Radioactive Materials
- ITD-825 Nuclear Gauge Inventory Record
- ITD-863 Nuclear Gauge Dispatch Log
- ITD-864 TLD Personnel List – Nuclear Program
- ITD-866 Wipe Test Kit for Nuclear Density Gauge (Internal & Rod Source)