

QUALITY ENGINEERING AND INSPECTION

Quality Engineering and Inspection (QE&I) provides welding engineering, quality engineering, nondestructive examination, and safety inspection capabilities and expertise that support research and construction activities. Nondestructive examinations include X-ray and gamma radiographic examination, visible and fluorescent dye liquid penetrant examination, mass spectrometer leak detection, ultrasonic examination, visible and fluorescent magnetic particle examination, pressure gage calibrations, helium leak test bombing, and visual weld inspections. QE&I performs safety inspections on elevators, respirator mask and cartridges, pressure vessels, relief valves, pressure regulators, tanks (storage and DOT tankers), backflow preventers, ladders, hoisting and rigging equipment, and HEPA filtration systems. Quality engineering services include inspection planning, design document reviews, contractor procedure reviews, and vendor evaluations. Inspection staff maintain current NDT technician certifications and ASNT Level III qualifications.



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INTERCOMPARISON STUDIES PROGRAM

The Intercomparison Studies Program (ISP) meets ORNL's needs for radiobioassay in the areas of quality control (QC), quality assurance, and performance testing. The program provides cross-check blind/double-blind urine, fecal, whole body count, and environmental samples spiked with known amounts of radioactivity to various DOE facilities, universities, and private industry organizations throughout the United States, Canada, and Europe. These samples can be packaged as single-blind QC samples using ORNL bottles, chain of custody forms, tamper seals, etc., or according to the needs of a particular facility if a double-blind sample mode is required. The ISP laboratory is set up to function as a routine bioassay facility with the capability to perform all the separations and analyses that would be carried out in a typical bioassay laboratory, along with all the necessary policies, procedures, and document controls that go along with these techniques. The ISP laboratory uses National Institute of Standards and Technology (NIST) traceable materials in the preparation of all samples and also participates in a sample exchange with NIST to maintain this traceability.

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