



Project Summary:

DOE Ohio Closure Projects

Locations:

Ashtabula, Battelle Columbus, Fernald and Miamisburg (Mound)

Government Agency:

U.S. Department of Energy

Project Timetable:

2000 to 2007

Oak Ridge Associated Universities (ORAU) has performed verification surveys to facilitate the closure of four major U.S. Department of Energy (DOE) sites in the state of Ohio. The sites include the Battelle Columbus Operations Decommissioning Project, the Ashtabula Closure Project, the Fernald Closure Project and the Miamisburg (Mound) Closure Project. The projects presented numerous challenges related to the cleanup and removal of various types of radionuclides, including mixed fission and activation products, transuranics, hard-to-detect radionuclides, uranium and thorium.

As part of the final release process, the verification projects required performing survey activities at process buildings and support facilities, and over hundreds of acres of open-land areas. The objectives of the independent verification surveys were to confirm that remedial actions were effective in meeting established release criteria and the documentation accurately and adequately described the final radiological conditions of the sites.

Specifically related to the projects, the survey team:

- Reviewed various technical documents and reports associated with the decontamination and decommissioning process, including technical basis documentation, survey and analysis procedures and characterization reports.
- Performed Type A and Type B verification of final status survey reports to ensure that residual activity levels satisfied the established release criteria.
- Conducted verification surveys of buildings, above-grade structures, foundations, open land areas and piping designated for unrestricted use or industrial reuse.
- Implemented in-process inspections to improve quality assurance and to identify areas needing resolution prior to completion of the final status survey.
- Performed surface scans for alpha, alpha plus beta, beta and gamma radiation using gas proportional, sodium (NaI) and cesium iodide (CsI) scintillation, and Geiger-Mueller detectors.
- Collected and submitted more than 500 soil samples to the ORAU/ORISE laboratory in Oak Ridge, TN, for data interpretation and analysis.
- Worked closely with the cleanup contractor to ensure safe working conditions and timely completion of the project.
- Identified areas of elevated activity that required remediation and/or additional investigation.

Partnerships for Innovation



P.O. Box 117, Oak Ridge, TN 37831 ■ (865) 241-8893 ■ IVSurveys@orau.org
On the Web: www.orau.org/environmental-assessments-health-physics/

Oak Ridge Associated Universities (ORAU) is a university consortium leveraging the scientific strength of major research institutions to advance science and education by partnering with national laboratories, government agencies, and private industry. ORAU manages the Oak Ridge Institute for Science and Education for the U.S. Department of Energy.