

# Harvard Cyclotron Laboratory Decommissioning

## Project Location:

Harvard University  
Cambridge, Massachusetts

## Clients:

Casali Group and  
Harvard University

## Project Scope:

Decommissioning of the Harvard Cyclotron Laboratory, including Segmentation and Removal of the 95-inch Cyclotron

## Period of Performance:

June 2002 to April 2003

MOTA Corporation was contracted by the Casali Group and Harvard University to plan and perform the Phase 2 Decommissioning of the Harvard Cyclotron Laboratory, including segmentation and removal of the facility's 95-inch cyclotron, decontamination of the facility, and surveying the facility for free release. The facility consisted of the 95-inch cyclotron yoke and poles, the cyclotron vault and pit, the cyclotron building, and four support rooms. Specific project activities included:

- Preparation and submittal of the decommissioning plan, estimate, and schedule;
- Development and implementation of the facility characterization plan;
- Segmentation using diamond wire sawing methods and removal of portions of the 3-ft-thick vault wall to expose the cyclotron yoke;
- Heavy lifting of the cyclotron components;
- Preparation, segmentation, and removal of the 642-ton yoke and poles;
- Packaging and disposition of resultant radioactive waste;
- Decontamination of the radiologically affected areas to "free release" levels;
- Development and implementation of final survey approach, general survey plan, reference grid system, sample collection including chain of custody protocol, and compilation of survey results to free release the facility.



## Project Performance Features:

- ◆ Project planning and field operations/ management oversight for a nuclear accelerator facility.
- ◆ Preparation of a full decommissioning plan that was submitted for review and approval by Harvard University, Casali Group, Inc., and the State of Massachusetts.
- ◆ Interface with the State Regulatory body for project review and audit.
- ◆ Preparation of comprehensive programs and procedures, including Radiological Control Program, and implementation of procedures, including Health and Safety Program, Operational Procedures, and Facility Radiological Characterization and Final Release Survey Procedures.
- ◆ Reconfiguration of specialty segmentation tooling used for ANL 60-inch cyclotron for application at Harvard Cyclotron Laboratory.
- ◆ Segmentation tooling motion mechanics and blade design optimization through extensive pre-deployment testing program.
- ◆ Optimization program resulting in cutting rate approximately 6 times faster than first application.
- ◆ Completion of project one month ahead of schedule and \$200K under budget.



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