The BWX Technologies, Inc. (BWXT) Radioactive Material Machine Shop is fully equipped with the machine tools necessary to machine radioactive and non-radioactive parts and specimens from all types of materials.

Included in the machine shop is an optical comparator to ensure proper dimensioning. In addition to this equipment, shielding has been erected to permit machining of radioactive specimens outside the cell. If samples are emitting high dose rates, they can be transferred to the hot cell facility for rough machining to a size and radiation level that will allow handling in the machine shop. The hot cell facility is equipped with a remote bench top mill and remote cut-off saws for this purpose.

---

**Equipment**

- Three Electrical Discharge Machining (EDM) Machines (CNC)
  - Two in radioactive area
  - One in non-radioactive area
- Vertical Milling Machines (CNC)
  - One in radioactive area
  - One in non-radioactive area
- Large capacity vertical band saw
- Horizontal band saws
- Lathes
- Abrasive cut-off saws
- Diamond saw
- Quality assurance instrumentation
Services

The machine shop equipment has been used to produce a variety of mechanical property specimens including:

- Charpy specimens
  - Full size
  - 1/2 size
  - 1/3 size
  - 1/4 size
- Reconstituted full size charpy specimens
- Full-size tensile specimens
- Miniature tensile specimens
- Compact tension specimens

The machine shop has also prepared samples for analytical evaluations, such as:

- Transmission electron microscopy
- Positron annihilation
- Atom probe field-ion microscopy
- Small angle neutron scattering

Sectioning control rod drive mechanism nozzle and surrounding reactor vessel head material on large capacity vertical band saw. Blade angle range is ±45° (inset)