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. Wire Electrical Discharge Machining (Wire EDM) is the primary technique used to machine highly radioactive materials, due to its inherent accuracy and thin kerf (~0.005”) produced during machining. Included in the machine shop is an optical comparator and other measuring devices to ensure proper dimensioning.

The machine shop can also handle very large components ranging from several hundred to more than a thousand pounds. The shop includes large capacity band saws and other sectioning equipment suitable for this purpose. Underwater grinding is available for highly radioactive material.

**Equipment**

- Four (4) Electrical Discharge Machines
  - Three (3) in radioactive area
  - One (1) in non-radioactive area
- Vertical Milling Machines (CNC)
  - One (1) in radioactive area
  - One (1) in non-radioactive area
- CNC Surface Grinder
- Large Capacity Vertical Band Saw
- Horizontal Band Saw
- Abrasive Cut-Off Saws
- Precision Diamond Saw
- Quality Control Instrumentation
- 25-Ton Bridge Crane
Services
The HMS equipment has been used to produce a variety of mechanical specimens including:

- Full-Size and Sub-Size Charpy Specimens
- Full-Size and Miniature Tensile Specimens
- Compact Tension C(T) Specimens
- TEM Specimens
- Positron Annihilation Specimens
- Atom Probe Specimens
- Neutron Scattering Specimens

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