



Project Scope: Fabrication; Mechanical & Electrical Assembly; Set-up & Commissioning of Dri-Train System; Leak Testing, System Testing (Functional & Atmospheric Parameters); ASME NQA-1.

Springs Fab, working with Merrick & Company as a design/build team, supplied the fabrication, assembly, testing and delivery of an integrated glovebox and atmospheric control system to a DOE facility. The glovebox is used to enclose and stabilize an extremely sensitive Coordinate Measuring Machine (CMM).

The CMM is mounted to a heavy granite table, and its work process is highly sensitive to oxygen, moisture, and temperature. Work pieces are introduced into the glovebox via a Rapid Transfer Port (RTP) interface. Viewing is accomplished with large windows, and aided by a high resolution video camera. All work must be done within a glovebox nitrogen atmosphere at a near zero concentration of oxygen and moisture, maintained by a dri-train gas purification system. The glovebox is sealed against the granite table. In addition to the CMM machine, the integrated system includes an internal jib crane, RTP port, a rotary probe change rack, atmospheric monitors (O₂ and H₂O analyzers), electrical controls and HMI panel, high resolution camera and view portal, gas purifier, and piping.