

PM, 7, 2

Project Progress Summary

9 October 1990

Injector and Front End Test

- Local injector air line assembly started. Water has been run in girder.
- Klystrons were successfully tested at moderate power in the 8-seater HPAs.
- Cable pulling for safety system has been completed.
- Installation of all FET warm girders, except spectrometers, is complete.
- Beam-line vacuum hook-up to cryomodules is under way.
- Commissioning of the CHL continues; first stage compressors 1, 2, and 3 were operated.

WBS 1

- Assembled an in-house cavity pair last week; however, a flange leaked.
- The niobium purification furnace is being moved to the second floor of the test lab.
- Assembly of the second cryomodule should be completed by the end of October, with testing in November. Three cryounits have the beam vacuum connected. One end can has arrived; the other was shipped 1 October. The waveguide bellows from Calorstat were shipped 13 October and should arrive 17 or 18 October.
- All WBS 1 vacuum components have been baked and are ready for the FET. Pressure has not reached 10^{-7} Torr yet.
- HOM loads: cleaned 116 flanges to prepare for brazing. Continue to thermal cycle completed loads.
- Work continues on the EBW fixture for the windows. Proceeding with the sputtering system modifications to increase the throughput. Two more sapphire windows made.

WBS 2

FET:

- All construction project magnetic elements for the FET are now installed and aligned to be ready for vacuum tube, water and electrical hook-up. (Special FET elements, i.e., spectrometer and dumps, remain in procurement, fabrication, and assembly.)
- The procurement and fabrication of the remaining diagnostic elements needed by the operations group for the FET was started.

Magnets:

- The bids for the CEBAF-supplied QB quadrupole laminations were received.
- The request for proposals for the QB quadrupole fabrication assembly was sent to vendors.

Magnet Stands and Installation:

- Started organization of the assembly space for mounting and aligning of quadrupoles and corrector magnets on their girders for the remainder of the accelerator.
- Girder stands for the arcs and adjustment cartridges for the arcs were sent out for bid.

Survey and Alignment:

- The group finished the skeleton traverse of the entire enclosure.

WBS 3

Klystrons and Power:

- Produced RF from the first 8-seater. No major problems to date. First four klystron/waveguide assemblies complete.
- Six klystrons arrived Friday. Fifty-two have now been received.
- Additional flex waveguide was received from MEC.
- Twelve additional circulators from FCI should arrive next week.
- HOM filters should be at CEBAF by 15 October.
- Directional couplers and transition tests were witnessed at the vendor's location. Sixteen of each were promised 31 October.
- Crowbar is functional, but fault current is excessive and causes circuit breaker trip. Still needs refinement. Remaining parts being ordered.
- Capture section waveguide installed Friday, 5 October. Next week for quarter-cryomodule.

RF Controls:

- Twenty-three buffer boards and 20 CPU boards were sent to vendor for stuffing.
- In-house fabrication IF transformers 85% complete.
- RF crate rear planes in-house.
- Zone 1 RF control racks transported to injector service building (from Blue Crab).
- One analog board has been built and tested.
- Drawings of Star System are out for comment.

Other:

- Except for capacitor (not yet here) injector HV power supply is assembled and hi-potted. Capacitor is due 23 October.
- Demand power system monitoring equipment print is complete.

WBS 4

- Completed emergency power as-built drawings for injector building.
- Finished installation of WBS 5 4" x 4" duct and conduit runs for FET.
- Completed a cable pull for WBS 7.

WBS 5

RF Controls:

- Continuing work on RF micro software.

Injector:

- Continuing to update software for diagnostics.

Safety:

- ODH cable runs complete.
- Software loaded onto PLCs.

Diagnostics:

- Continue stuffing 1500-MHz electronic modules.
- Terminating diagnostic cables in tunnel.
- Diagnostic racks wired.

FET:

- Cabling continues.
- Software for injector test finished.
- Most of the monitors installed.
- All monitor electronics built.

North Linac:

- Assembling of warm section continues.
- Electronics production continues.

Arc:

- Fifty arc monitors: orders placed; monitors will be electron-beam welded.

WBS 6 - No report received.

WBS 7

CHL:

- First-stage compressors have been started and checked out.
- Stokes vacuum pumps for linac quadrant vacuum system operational.
- Leak checking supply transfer line to south linac.
- Recovery compressor and 80-K purifier ready to flow test.

Tunnel:

- Ready to weld the 6-inch outer jacket in the NE quadrant of north linac.

Test Lab Fabrication:

- 10,000-liter neck modification complete; ready to install.
- Helium dewar line for CHL is 40% complete.

WBS 8

Accelerator Enclosure:

- Continued painting the tunnel.
- Continued roofing and interior work on west arc service and exit stair buildings.

- Completed subgrade preparation for roads and parking lots and will start placing the stone base this week. Expect to start paving next week.

End Stations:

- Started saw-cutting beam-tunnel A walls in preparation for necessary rework.
- Completed the floor slab in Hall A.
- Started forming and installing reinforcing steel in preparation for placing the concrete floor slab in beam dump A.

EEL Building:

- Interior finish work is substantially complete.
- Project punch list inspections are essentially complete.
- The subcontractor is working on correcting punch list items.

Integration and Installation

-Injector song sheets for the tunnel configuration (dwg. 28401-E-000301), machine elements and girders (dwg. 28401-E-000302), and cooling water distribution have been signed off. Their release is held up pending the completion of a tunnel section view at STA 195. This section drawing will be finalized by 10 October.

-A group has been established to work with WBS 8 during the final inspection of electrical and mechanical systems being accepted from civil construction contractors. Members of the group are: Dana Arenius, George Biallas, William Chronis, Nick Dobeck, Jock Fugitt, Tom Mann, Rick Nelson, and Claus Rode. A report will be issued on each subsystem when it is accepted.

Accelerator Division Support Services

Machine Shop:

- Three beam dumps completed and delivered.
- Five microwave-type beam position monitors completed and delivered (WBS 5).
- Miscellaneous parts made for CTF upgrade completed and delivered (WBS 7).
- Dial gauge support for dipole and girder alignment completed (WBS 2).

Stockroom:

- Total business last week \$45,160.47.
- Three new kits: "Arc Detector," "I/R Detector," and "Interface" accepted and entered into inventory (WBS 3).
- Delivered 23 CPU board kits and 5 BLM and PMT analog cards.
- Seventy-nine fast shutdown kits delivered last week (WBS 5).

External Fabrication:

- Fabrication jobs processed for FET: chicane magnet stand top plate, 45-Mev spectrometer QB magnet girder and girder modification, beam steering unit receptacle bracket, and differential pump station Z-axis adjuster.

Training Opportunities

-CPR, 17 October, 8:30-12:30, Rooms 53/55.

-Aerial Work Platform Operator, 24 October, 9:00-11:00, EEL.

-Additional training opportunities are listed in the Personnel Office's yellow pamphlet for October and November.

Announcements

-Site-wide water shutdown scheduled for 9 p.m. on Saturday, 13 October.

-The Project Office will prepare a calendar-style project schedule again this year for general distribution at CEBAF. Suggestions, especially for technical illustrations to be included, are welcome. Please call Michele at extension 7564 with ideas.

-As of the end of FY 1990 the construction project is 51% complete.