

# Project Progress Summary

25 September 1990

## Injector and Front End Test

- Injector is complete and under vacuum from the gun through the exit of the capture section.
- FET high-power beam dumps are nearing completion in shop (and look very nice).
- Design of 45-MeV spectrometer is very close to complete, and construction should begin this week. The design will permit the entire beamline and dump, after the analysis dipole, to be quickly moved to unblock the tunnel for large equipment movements.

WBS 1- No report received.

## WBS 2

- The first two girders of magnetic elements for the Front End Test were installed next to the cryomodule and aligned to be ready for vacuum tube hookup.
- The workarounds for the offset beam switchyard tunnels (A and C) were resolved. The A tunnel will remain substantially as is with the beam line further into the aisle than the original design. The wall in a zone where the aisle is too narrow will be moved over. The misplaced wall in the tunnel portion of the C enclosure will be moved to the design position, and in the splitting region it will be scalloped to allow adequate clearance. Beamline optics remains unaffected, construction can continue on schedule, and the costs for correcting the error are borne by the subcontractor.
- The adjustment cartridge procurement package for the entire stand system was sent to vendors for bidding.

## WBS 3

RF Controls:

- RF system group welcomes Walter Livant, contract EE, to take over the systems work of Wendy Linn.
- All PC boards (first 25) in-house except replacements for six rejects. First boards for CPU, buffer, midplane, and backplane have been stuffed and successfully tested. We are stuffing and testing analog and IF boards now. We have had only a few minor problems.

RF Power:

- Testing of the eight-seat HPA going well. Interlocks checked out; high voltage tested.
- We will run RF to dummy loads in the tunnel this week.
- ETM shipped two HPAs last week; anticipate two more in three weeks. They are slightly behind schedule.
- Gamma Microwave has agreed to expedite eight HOM filters. We may require someone to travel to Gamma to be sure everything is moving.
- Six more circulators received and tested at full power. One unit had a small water leak. It has been returned for repair.

## WBS 4

- Received materials for completion of FET 4" x 4" security/ODH duct system. Started installation.
- Ran tests on trim system rack in injector service building. Had one bulk power supply failure.
- Received five additional 208-volt transformers for east arc and south linac.
- One roll of 500 MCM flex for arc magnet jumpers was received.
- AC design for "ice ball" heaters was started.
- Started work again on installation of cable tray/divider installation in north linac.

## WBS 5

FET:

- Injector instrumentation installed.
- Additional three harps will be assembled this week.
- Two warm sections installed ( $\equiv$  prototype for north linac).
- Run/safe boxes in-house, will be equipped with electronics next week and installed.

- Programming of PLC started.
- Cabling continued.
- PC boards for monitors, FSD, BLM, etc., in progress.

North Linac:

- Preparation for warm section assembly.
- RF control system needs clear definitions.

Arc:

- Five arc monitors will be built during the next week (electron welding).
- Out for bids for another 50 monitors.
- Operator screens for machine will be tested in FET.

WBS 6

-Procurements in process as reported previously.

WBS 7

Mechanical:

- Northeast end box about 60% complete.
- 60-foot injector return transfer line complete; to be placed in tunnel this week.
- Completed operation of the quarter-cryomodule.
- Last half of the 80-K purifier for the CTF being placed in its vacuum jacket.
- CVI in process of incorporating fixes as a result of the GN<sub>2</sub> pressure test.
- Purifier/recovery piping 85% complete to the south linac.
- LN<sub>2</sub> system being piped and leak-tested. Metal particles found in the dewar from Taylor-Wharton. Problem corrected, progress continues.
- Regeneration skid being started to regenerate the charcoal adsorber prior to helium test. Entire 4-K system will be vacuum-pumped prior to helium pressure test.
- Dehydrating 2-1/2 inch supply line in the northeast linac for leak testing.
- Clam shell installed on the 3-1/2 inch line in the northwest end box.

Electrical:

- The Kinney vacuum pump system in the W5 building was fitted with a replacement drive pulley and circuit breaker. The water system to the Kinney system was commissioned.
- Electrical connectors were installed on the WBS 7 instrumentation cabling to the FET cryomodule and to the WBS 1 vacuum rack. Cable terminations for the injector racks were completed for the WBS 1 and WBS 7 FET cables.
- The north linac cryo computer was installed in the CHL. Logic programming for the FET is continuing.

WBS 8 - No report received.

Linac Installation - No report received.

Accelerator Division Support Services

Machine Shop:

- Beam dumps near completion.
- Preparation for move to EEL under way.

Stockroom:

- Printroom requirements contract for paper supplies received.
- Stocking of physics end stations requirements being reviewed.

External Fabrication:

- Quotes for 100 each solenoid and camera mounting brackets for the beam viewer assembly being obtained (WBS 5).
- Initiated fabrication in CEBAF machine shop for the top and bottom plates (28 each) for the beam transport differential pump module slide.
- Quotes for 80 air baffle racks, 640 card crate door mounting plates, and 320 card crate front panels are being obtained (WBS 4).
- Reviewed design improvements for the HOM filter bracket (WBS 3).