

Project Progress Summary

31 July 1990

Please note: Based on a few weeks' experience, we are adjusting the input, production, and distribution phasing for the CEBAF *Project Progress Summary*. Starting next week, the input deadline is close of business Mondays, with distribution Tuesday afternoons. Are other adjustments needed? Is the information itself generally useful for a broad technical audience? Is the technical level about right for inter-WBS communication, or should we try harder to weed out overly specialized acronyms and technical jargon? Please call in or send your comments, either to Steve Corneliussen (7582) or the Project Management Office (7633).

Injector

- Addition of capacitor to 100-kV supply solved pulse-droop phase shift problem.
- Ran for a variety of tests: 100-MHz BPM, 1500-MHz BPM, RF control response.
- Ran 400- μ A CW beam (2 \times design).
- New design steering coils and water-cooled apertures ready for fabrication.

Front End Test

- FET song sheets achieved first signoff.
- FET projected start date has moved up to 1 January due to progress in WBS 7 vacuum and transfer line activities.
- Tunnel humidity appears under control with portable dehumidifiers.
- Work continues on coordinating cable pulls.
- Preparations continue for injector move.
- RF board production back on track, saving two weeks of potential slip.
- Injector testing has been proceeding successfully taking data for WBS 3 and WBS 7.

WBS 1

Facilities (T. Powers): All major components for the VCO system for cavity pair testing have been received. The printed circuit board facility is on line. Access is controlled through Gayle Sundeen by a sign-out sheet and through the guards after hours. The displacement soldering machine is working.

Cryomodules (W. Schneider): The cryomodule is cooled down and filled. Cycled the tuner on cavity 3 during filling and it is still operating when full. The quarter-cryomodule is in the cryomodule assembly area on the bench. The beam pipes were to be installed yesterday. Cutting the heads off C'. Received 2 pairs last week. The flange on C003/006 was slightly out and the frequency was changed. The vacuum is gone due to a leak from the window to the cavity. Cavity pair was returned.

Acceleration System Interlocks (W. Schneider): Signed off the insulating vacuum interlock drawing.

HOM Loads (I. Campisi): Testing and cycling loads with no new failures. Checked IA004/005 on the cryomodule. This is the first pair with the production loads. Spectrum from the injector cavity saw power up to 10th harmonic of fundamental frequency.

RF Windows (L. Phillips): Received 10 windows from PTR on Saturday. Leak checking the batch. Two windows have been temperature cycled, titanium dioxide coated, and are being tested. These will be windows #21 and #22. John Brawley will test window weld parameters.

WBS 2

-The changes that have been made to the approved common arc dipole coil contract drawings were signed off at the next revision level and transmitted to the two vendors. No schedule or cost impact is anticipated. Six people from Process Equipment Corp. who will be involved in the fabrication and assembly of dipoles visited CEBAF on 27 July.

-Drawing work is nearing completion on the spreader/recombiner dipoles procurement package.

-The review before sign-off was held and specification work continued on the linac quadrupole packages.

-The mounting and aligning of the first FET magnets on their girders continued.

-The girder extrusion drawing was signed off and the final configuration of the arc stand tops and bottoms was agreed on in the continuing work on the stands.

-FET magnet production continues on schedule.

-Three sheets (elements, vacuum, and cryogenics) of the first two drawings of the song sheet drawing set were signed off.

-The survey of positions of elements in the tunnel was redone to reflect the error caused by the surface monument's movement.

WBS 3

Klystrons and Power: Second HOM filter delivered; absorption looks even better than number one. There were a few small problems with the HPA; notably the spacings on the output terminal board were not quite enough. We specify 25-kV hipot for an 11-kV working voltage; they held less than 20 kV. The boards are being modified. The power supply appears to need additional filtering to meet our specifications. They are in the process of adding capacity to make a 24- μ F cap bank.

RF Control Module: The last of the PC board packages went to procurement on Friday evening for Saturday express mail delivery to the vendors. Again, thanks to all the many people responsible who helped get this important procurement out. Injector testing is going well. Have run 400- μ A CW beam and have completed most of the required tests. Control module has run at 60° offset and still maintained the required control. Software effort is going well. We will move the software development station to the MCC to be located near the other efforts.

WBS 4

-Installed rack supports in injector service building for equipment racks to be moved from test lab.

-Work is progressing on generation of cable installation database, which is especially important for FET preparations. We now have received input from four groups.

-Finished design on phone conduit system. Installation was to start yesterday, 30 July.

- Prototype trim system rack is complete. Awaiting completion of 32 regulator cards so that testing can start.
- Assembly work on FET trim system rack has started.
- Developed and submitted a list of required CAMAC crates and locations for WBS 4.

WBS 5

Software

RF: Definition of microprocessor code continues.

Beam Transport: Received info on FET crate layout.

Safety: Personnel protection system installation continues (camera systems, intercom system, PLC system). FSD modules ordered (80 ea.). BLM module artwork continues. Conduit being installed for ODH system. Order placed for fencing, etc. on boundary monitors. Cleanup of area monitor RFQ.

Beam Diagnostics: Cable layout for FET continues (due this week). Tests of 100-MHz and 1.5-GHz monitors.

Hardware

Diagnostics: Tested both the 100-MHz and 1500-MHz BPM electronics on the injector. Both sets of electronics performed per specification. Began harp tests on injector.

WBS 6

Hall A dipole RFP issued 27 July.

WBS 7

- Completed leak checking guard vacuum line, warm GHe purge line, interstage/suction to the K-15 in the W-5 service building in preparation for FET.
- Three sections of supply transfer line complete for the northeast quadrant.

WBS 8

Tunnel: The infamous three dehumidifiers are operating well and providing heat and dry air. North access building LCW system scheduled to be operating 1 August.

End Stations, Package A: Hall A excavation is nearly complete. Good progress is being made on beam tunnels A and C. SOG is placed in the counting house pump room. The mud slab is complete at the elevator pit.

End Stations, Package B: The 100% design is under review. The cost estimate has been delayed until 8 August.

Test Lab: Startup of 250-ton chiller delayed to 30 July. Chem room ceiling progressing slowly but well.

EEL: Building is enclosed and gutters are being installed. Mechanical and electrical systems are approximately 75% complete. Exterior concrete work is essentially complete. Overhead door installation is to start 9 August.

Linac Installation

- The north linac-FET temporary shielding wall design was resolved in a meeting yesterday. A safety review will be scheduled.

-The next Systems Meeting will be held on Tuesday, 7 August, in the CEBAF Center conference room, L104.

Power Outage

The power outage originally scheduled for 4 August is now set for Saturday, 8 September. A memo with details is being distributed.

Training Opportunities

-ODH, 9:30–11:00, 53/55, 9 August.

-All staff requiring radiation badges must attend one of the radiation worker training sessions scheduled for 21 August, 29 August, or 18 September in the CEBAF Center auditorium.