PM 1.2

Project Progress Summary

14 August 1990

Front End Test

-The injector warm beam line elements are undergoing cleaning prior to reassembly in the tunnel.
-HPAs and racks are being wired and set up in the injector service building. Two-seater HPAs have had waveguide installed to the tunnel. Eight-seater HPAs shipped 10 August; high-voltage power supplies were to be shipped 13 August; both due by 17 August.
-Kinney pump wiring to be finished this week. Leak test of NW quadrant transfer and return line vacuum jackets except end box was scheduled for 13 August.
-Differential pumps for the front end have been installed in their tunnel locations.

WBS 1

-Fitting an internal TV system to the EBW to allow viewing pieces during welding.
-For pair parts production started preparing specs for the machining contract for pair parts flanges. Weld preps on the elbows have been refined and the program is set. The CNC will need to run one and a half shifts at full production.
-Jerry Pauley and Skeeter Heidt are visiting the vendor to qualify the acid transfer system, which will be shipped in two weeks. The neutralization system vendor is back this week to do final work. The production chem room should be ready for commissioning by 31 August.
-Contamination during the processing or assembly stage may have caused three recent cavity pairs to fall short of specs. One good pair was tested Friday and should be transferred to cryounit assembly by today or tomorrow. Another pair was being tested yesterday. Two more pairs will be processed and assembled this week.
-John Mammosser and Peter Kneisel will visit Interatom 8–12 September to clarify any technical questions and confirm tolerances before cavity delivery reaches the full-production rate of 12 per month.
-The cryomodule is warmed up and ready to have some field probes replaced before retesting in two weeks.
-The quarter-cryomodule to be used in the injector is assembled and will be tested after the next cryomodule test is finished.
-A new cryounit is done. It will be part of the first production cryomodule.
-The waveguide bellows received from Calorstat look good. These bellows, which fit between the fundamental power cold window and the top hat of the vacuum vessel, will allow more flexibility in alignment.
-Delivered ceramic windows #21 and #22 last week. Possible low-field multipacting and discoloration of windows are being looked into.

WBS 2

-For the arc dipoles, copper has been received by United Magnet Technologies, and the first batch of steel is reported en route to Process Equipment.
-The work on the arc stand tops and bottoms continued, and the discussion of the design philosophy of mounting the BPMs to the quads in the arcs was concluded. Alignment will be made by a permanent and accurate placement of the BPM assembly integral with the quadrupole.

Compiled and distributed by the CEBAF Project Management staff. Please direct information and comments to Steve Corneliussen, Trailer City office 194, ext. 7582. Weekly deadline: close of business Monday.

-The injector chicane dipoles were completed.
-The alignment and grouting of the stands for the injector elements of the front end test was started.
-Contract was let for the injector service building LCW system.
-The survey group placed monuments in the arcs as part of the skeleton traverse of the entire tunnel. The computer simulation of the properties of that traverse is well under way, and has shown that fewer monuments than originally planned are required to achieve the required alignment tolerances.

WBS 3

Klystrons and Power Supplies:

- The first power supply was tested at Hiprotronics' Millerton, NY, plant 9 August, witnessed by R. Nelson
- R. Killion visited FCI to witness circulator testing. FCI expects to ship the first 16 units within two weeks.
- Hoses and valves are being procured for LCW connections. Workarounds for temporary LCW are being explored to avoid delaying HPA testing should LCW not be available when needed. Latest promised date is 30 August.
- Plans are being made to order components for crowbars for all cathode supplies.
- The move of our present two-seater capture and quarter-cryo HPAs went smoothly. Reinstallation is under way. Arrival of the eight-seaters will interrupt this.
- Waveguide gaskets were received and have been installed in capture and quarter-cryo HPAs.

RF Control Module: First article RF crate and modules have arrived. Purchase req issued for module power supplies (15 V being converted to 18 V). Converter mounting plate and video board shielding box ready for signature on Monday. PR initiated for remaining digital board ICs.

Software: Good progress is being made on both TACL and RF microprocessor software. Preparing to run experiments on downloading calibration tables to RF microprocessor. Adding to the RF microprocessor UNIX emulator to emulate the CAMAC interface.

WBS 4

-Continued work on safety system/ODH conduit.
-Finished 32-channel dummy load for trim system. Completed AC power wiring to prototype trim system rack.
-Started installation of FET 12-in. cable tray—about 75% complete.
-Finished north linac AC raw power installation.
-Worked on installation of RF racks in injector service building.
-Installing 4 × 4 duct in north linac service building and tunnel.

WBS 5

Monitor Mechanics:

- Drawings ready for arc monitors.
- Bellows for all harps (30) on order.
- Fifty viewers ready to assemble. Twelve will be assembled first.

- New Faraday cup will be started this week.

Monitor Electronics:

- Ten 100-MHz electronic boards to be built.
- Ten 1.5-GHz, full-blown version, in final preparation for building.
- Ten 1.5-GHz, "simplified" version, building just started.

Safety and Access Control: Installation for FET started on keyboxes, card readers, and intercom.

WBS 6

Hall C dipole RFP to be published ~22 August. Written specifications distributed for internal review.

WBS 7

-First section of the dual 80-K purifier has been set at the CHL; second section is being welded in the vacuum vessel.
-The supply and return transfer lines to the south linac are being leak-checked.
-Piping of the K-15 (Kinney pump) in the W-5 service building initiated. Estimated completion date is 25 August. Electrical power is being installed. Work to be completed this week.
-Cable has been run between the injector vacuum rack and cryo racks for the FET. Waiting for the electrical connector pin-out information to complete cable termination documentation.
-CHL cold box instrumentation checkout is under way. Commissioning the 18 cold box control valves.
-Interfaces and installation responsibilities clarified concerning WBS 2 FET vacuum controls. Identified instrumentation to be wired for FET. WBS 2 to install field cabling. WBS7 to provide CAMAC interface cards, cross connects, terminal blocks, etc. WBS 5 to provide computer hardware support. WBS 2 has provided complete list of signals and signal tag numbers.

WBS 8

Tunnel: LCW system in north access building retested, and cracked 10-in. valve body found. It was to be replaced yesterday. Target date for LCW activation is 20 August. Completion of stairs on exit stair 5 signals completion of underground concrete. Lights and piping system work continues. Contractor still working on east arc service building punch list.

End Stations, Package A: Excavation completed on Hall A; mud slab being installed along with grounding cables. Excavation continues for halls B and C. Elevator pit slab in counting house has been poured. Pump room walls have been placed and backfilled. Beam tunnel progressing; approximately 420 linear feet (of 770 LF) have been placed.

End Stations, Package B: Design review comments are coming in. Corrections and revisions are being compiled and meet the design-to-cost target for the package. IFB scheduled to be issued in October, with award in January and notice to proceed in March 1991.

Test Lab: Main chem room ceiling contract complete except for punch list.

EEL: Gutter and downspouts being installed. Mechanical and electrical systems installation continues. Overhead doors ~90% complete. First layer of asphalt pavement has been placed.

Linac Installation

-Safety review for the temporary shielding wall is scheduled for 22 August.

Accelerator Division Support Services

Machine Shop:

- Beam transport support stand completed (WBS 2).
- Harps 99% complete (WBS 5).
- Faraday cup to be started this week.

External Fabrication:

- HOM filter support bracket being tested this week with new cryomodule windows.
- HPA water (temporary) schematic being developed.

Training Opportunities

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.

Detailed information on the following is available in a blue pamphlet called *Training Activities for August & September 1990*, available from the training office (7502) in Personnel:
-DOS/PC Operating System Users Forum, 2:00–4:00, 47, total 8 hours: 14 & 28 August and 11 & 25 September.
-Procurement User Orientation, 9:30–11:30, 53, 15 August.
-How to Use Electronic Mail at CEBAF, 2:00–4:00, 47, 21 August.
-Safety Workshop, 9:00–10:45, 53/55, 11 September.

- Hazard Communication Training, 9:00–9:45.
- Lock & Tag Procedures, 10:00–10:45.

-Employee Orientation, 9:300–11:30, 53, 12 September.
-Respirator Training, 2:00–3:00, SRF Conference Room, 13 September.

- Self-Contained Breathing Apparatus (SCBA), 2:00–2:30.
- Emergency Escape Appliances (EEA), 2:30–3:00.

-Fire Prevention, 1:30–3:00, 47, 17 September.
-Symbols and Logicals, 9:00–10:30, 53, 19 September.
-Computer-Aided Software Engineering, 9:30–11:30, 47, 26 September.