

PM. 7.2

# Project Progress Summary

11 December 1990

## Semi-Annual Review

- The DOE Review Committee (DRC) found that overall project technical, cost, and schedule performance has been outstanding. The DRC endorsed CEBAF's schedule plan to complete installation by June 1993 and to start operation by February 1994, which will require hard work by all of us in the months ahead.
- The success to date of the project and the success of the review are attributable to the hard work of the CEBAF staff and contractors. Congratulations and thank you!

Injector and Front End Test - No report received.

WBS 1 - No report received.

## WBS 2

Magnets:

- The design process of the second phase of the spreader/recombiner dipoles and the dog leg dipoles entered the checking stage.
- Bids for the first phase of the spreader/recombiner dipoles were received and the evaluation process was started.

Stands:

- Orders were placed for tops and bases of all arc stands (Scientific Engineering, Salina, Kansas) and for arc quadrupole girder stands (Ross Engineering, Leola, Pennsylvania) at prices substantially below estimate.
- Drawings for east arc dipole stands were signed off.

Survey and Alignment:

- Layout of the element positions in the south linac started.

System Integration:

- The detailed layout of the east spreader was started utilizing all the detailed designs of magnetic elements and girders.
- Reports generated from the INGRES database were signed off for the first three sections of the machine injector through the end of the north linac.

Vacuum:

- Further tests of the new diaphragm flange design, in several sizes, that allows permanent adjustment of the beam position monitor (BPM) to the axis of the beam tube showed some residual reverse motion after final adjustment. Additional tests designed to eliminate these motions are planned. Since these diaphragm-like modifications to flanges are also anticipated to replace bellows assemblies on one end of the connection tube and quad girders, additional tests will also assess the flange's effect on alignment.
- Bids were received for the dipole vacuum tubes and are under evaluation.

## WBS 3

RF Controls Group:

- Production model control module running capture section from MCC.
- Five additional units now ready for test stand calibration.
- In-house design review for the RF distribution system was scheduled for 7 December. Frequencies to be available for end use are 10 MHz, 499 MHz, and 1497 MHz.

Fabrication/Installation Groups:

- Started putting together the waveguide assemblies at the Blue Crab shop, and installing the long pieces in the north linac.

#### RF Power Group:

- Gamma Microwave is again behind schedule with the next two batches of HOM filters. Dick Lusk and Jock Fugitt will make a trip to the factory this week to evaluate their problems and take corrective action.
- First power supply modified with 480-V line reactors and new fast crowbar current sensor. Will continue testing this week.

#### WBS 4

- Ran a full air flow test for the trim system rack located in the test shack.
- Received and checked out two trim system CAMAC 32-channel scanner modules.
- Completed section drawings for arc service buildings E1 and E2 which show component and rack layouts. These elevation drawings are available on a virtual disk under user name REFBASE1 (refer to TN 251 for access information).
- Solicitation for box power supplies is "on the street" with bids due back 7 January, 1991.
- Solicitation for CAMAC 16-bit digital I/O module is "on the street."
- Set up a database to track trim system components both during construction and operation.
- Completed installation of 4 x 4 box duct through half of south linac tunnel.
- Pulled 500-MCM ground cable for east arc service buildings, south linac service building and west arc service buildings W1 through W4. Completion for W5 was expected by 10 December 1990.

#### WBS 5

##### Safety:

- The beam loss monitor high-voltage power supply has been mounted and all cables for the FET have been pulled.
- The FET Personnel Safety System is complete except for one control room panel, final radiation monitor hook-ups, and HP monitor screens.

##### Diagnostics:

- Seven 100-MHz BPM systems are ready for installation.
- The first arc BPM system has been tested on the bench and performed according to specifications. Fifteen tunnel boards are fully assembled and fourteen detector modules have been delivered to EDL to be stuffed.
- One harp is fully operational.
- Chopper aperture is operational.
- All long-lead items for all viewers and harps ordered.

WBS 6 - No report received.

#### WBS 7

##### U-Tube Status:

- Complete/installed for 4-K refrigerator test.
- Complete shield 2 K to supply manifold and supply manifold to CHL supply transfer line.
- Third phase separator and heater 50% complete.
- Two 60-ft. transfer line sections ready for tunnel.
- WBS 7 ready for CVI 4-K test.

## WBS 8

### Accelerator Enclosure:

- Continued correcting punch list items. The major activity has been the installation of the LCW equipment and controls in the south access building, now 98% complete and being tested.

### End Stations:

- Completed all repair work on beam tunnel C and started waterproofing and backfilling.
- Started placing concrete walls in Hall A.
- Continued working on the dewatering pumping system in the lower level of the counting house.
- Completed cableway ladders and decks in the counting house.
- Continued reinforcement and constructing forms for Hall C walls.
- Excavation for Hall B floor slab remains 85% complete; now installing tagged photon beam dump.
- Continued backfilling counting house and beam line A rework area when weather permits.

### EEL Building:

- The subcontractor continued correcting punch list items. This work is substantially complete.

## Accelerator Division Support Services:

### Machine Shop:

- All machinery from Hampton Crane and Rigging has been relocated to the EEL machine shop.
- FET model moved and reassembled in CEBAF Center 2nd floor atrium.
- Fifty percent of the machines in the machine shop are wired for operation.

### Stockroom:

- Completed move of material services from public storage.
- Delivered six shunt regulator board kits.