

Project Progress Summary

17 July 1990

Injector

Injector tests produced over 70 μA of CW beam before a steering error caused a bellows to be punctured. The beam burn-through accident while running 25- μA CW beam on 9 July necessitated warming up the injector cryounit for repair. Repair has been made, and cooldown was to begin yesterday.

Front End Test

-Humidity in the tunnel has continued as a major problem, but some progress was made by using portable dehumidifiers and by heating the air with the injector dehumidifier. As of yesterday, all three dehumidifiers were operational.

-A move plan for the injector has been completed, and preparations have been made for moving the week of 1 August.

-Preparations have been made to supply cooling water in the injector service building by 4 August, when we expect to receive the high power amplifiers.

WBS 1

Facilities (T. Powers): Civil construction of the printed-circuit dark room is almost finished. The equipment was to have been received last week. A mop sink has been installed next to the boilers. Final debugging of the crates for VTA controllers is progressing.

Cryomodules (W. Schneider):

- In the A' loss of vacuum, the bellows next to the valve had a hole and was replaced. Final leak checking was to be done yesterday, and cavity status is to be known by Wednesday.
- The cryounit to replace C' is being pumped down and leak checked. It was to be turned over to the cryomodule assembly area last Tuesday (10 July) if it tested okay. The old cryounit is being recycled. The quarter-cryomodule is complete except for end cap installation, which will be done after the cryomodule is reassembled. Waiting for pairs. Two sets have leaky valves (one is tested; the other is not).

Acceleration System Interlocks (W. Schneider): There is still some discussion left on the arc detector interlock. More drawings have been turned over to Tom Mann.

HOM Loads (I. Campisi): Eight more loads have been thermally cycled 100 times and delivered. An additional 8 loads were to complete cycling 100 times on 9 July. The WR-430-to-HOM taper was expected 9 July so RF absorption in the range 1.9 to 2.1 GHz can be measured.

RF Windows (L. Phillips): Processing windows from Leybold. Two are okay and will have RF testing started (windows #19 and #20). The sputter metallization adhesion is excellent. Currently using boiling nitric acid and 1000°C air firing, plus in-situ argon ion bombardment.

WBS 2

- Vacuum: Expect award of phased contract for all ion pumps and power supplies on 16 July. Cost is 10% below estimate.
- The common arc dipole contracts continue in place despite word of a protest of the coil award by Elma Engineering.
- Specifications were signed off and drawings work continued on the spreader/recombiner dipoles procurement package.
- The designs of the tops and bottoms of the arc stands were modified to be more adjustable as a result of prototyping lessons learned. The planned stand count was decreased by combining stand functions.
- Improvement of song sheet drawing package continues, with the first two sheets of the first drawing in the checking process.
- Resolution of the differences in the survey of the north linac baseline continued with validation that the survey to the central monuments repeats. What remains is to validate that the central monuments haven't moved.
- The injector service building water system drawing for the bid process was completed and is ready for sign-off.

WBS 3

- RF components for IF board awarded to Synergy.
- RFQ for amplitude detector released.
- Received first HOM filter for evaluation.
- Tested crowbar circuit for HPA.
- All passive and the majority of active components on order in process.
- Sample of ± 18 -V power supply being shipped.
- Cost analysis of transformers for IF board shows 50% savings by building in-house.
- Vendor for PC boards for RF control modules selected (TRI-Circuits).
- RF control module design review was held 10 & 11 July. External review committee members: Hans-Dieter Gräf (Darmstadt), Daniel Boussard (CERN), Bert Kortegaard (LANL).

WBS 4

- Received eight loaded trim system regulator boards from vendor. Testing of regulators will start this week. Remainder of the FET order of 70 boards due this week.
- Box system power supply specification being modified to purchase 10-ppm power supplies for all of the arc dipole strings. Solicitation will include twelve 10-ppm power supplies for arc dipole strings and experimental hall beam line as well as nine 100-ppm power supplies for dogleg magnets.
- WBS 4 electricians started installing AC power distribution equipment in the remainder of the north linac service building.

WBS 5

Safety Systems:

- Final artwork for FSD boards completed. Photoplots will be procured this week.
- Radiation monitor specifications will be sent to Procurement today.
- Work orders to begin ODH monitor installation sent to WBS 4.

-Run-safe box parts on order.

Beam Diagnostics:

- Work order to pull cables to FET BPMs sent to WBS 4.
- FET diagnostic cable runs being defined. Complete by 27 July.

WBS 6

- CLAS bids were received 12 July and are in evaluation. Contract award expected 9 November.
- Hall A dipole RFP to be issued 20 July, with bids received by 31 October and contract award 2 January 1991.
- Collaboration discussions under way with Saclay on Hall A quadrupoles.

WBS 7

- Transfer Lines: The NW quadrant supply transfer line has been delivered and is being welded.
- Gas Piping: The NE quadrant wall piping has been welded.
- CHL: 4.5-K cold box controls being debugged.

WBS 8

Accelerator Enclosure: As of yesterday, all three dehumidifiers were operational. South linac backfilling is nearly done.

End Stations: Forming and casting of 225 linear feet of the beam tunnels is done, with 525 feet remaining. Elevator hydraulic cylinder casing has been installed. A temporary line has been installed for site power.

Test Lab: Start-up and placement in service scheduled this week for the 250-ton chiller. Work is under way on the main chem room ceiling.

EEL: Electrical power was hooked up on Saturday. Siding is nearly complete. Sheet rock is 85% complete. Some painting will start this week.

Linac Installation

-The next Systems Meeting is Tuesday 24 July at 3:30 in the auditorium, rather than today as previously announced. Agenda items can be submitted to the Project Management office (7633). Agenda items for the 24 July meeting include:

- Drawing control update (B. Dillon-Townes)
- Systems integration (T. Mann)
 - Song sheet responsibilities and issues (T. Mann)
 - Project documentation access (S. Williams)
 - Wiring documentation system (N. Dobeck)
 - Exceptions to cabling standards (i.e., HV co-ax, WBS 1; RF co-ax, WBS 3).
- Interlocks update
- QA plans status

-Fast access to petty cash for FET or linac installation problems is available via installation coordinator Steve Suhring, who works out of the MCC main control room (ext. 7670, pager 881-7670).

-Stocks of tunnel-approved cable on hand have been inventoried by the stockroom and plainly marked. See the minutes of the 10 July Systems Meeting (especially Attachment 2) for details.

Support Services

Machine Shop:

-The HOM filter support bracket prototype is near completion and will be fit checked when completed.

-Fabrication of one sextupole-SA magnet has begun, the final BS magnet is being assembled, and a BL magnet has been fabricated and is being assembled.

-Five harp assemblies are in the process of being fabricated. NC machining capability will be used.

Stockroom:

-Catalog of current items being distributed to all divisions for comments and suggestions.

-New request forms address user needs, wants, requirements, and suggestions.

External Fabrication:

-The HOM filter support bracket prototype is near completion and will be fit checked (WBS 3).

-Inspection of the first article manufacture of the 1500 waveguide contract included a QC check of the flange to the drawing and a fit check to the waveguide. The vendor passed inspection and is to continue with the contract (WBS 3).

Power Outage, 4 August

A power outage of approximately 10 to 12 hours is planned for Saturday, 4 August. A corrected memo (replacing the one from 16 July) will be issued. Call Bob Rice (7673).

Training Opportunities

-Network Analyzer Users Course, 9:00-4:00, Room 47, tomorrow, Wednesday 18 July.

-Intro to On-Line Stockroom, 2:00-3:00, Computer Center, 24 July.

-ODH training is being scheduled.