

Minutes of the NCSX-DOE IPT Meeting on September 18, 2002

On the teleconference: Warren Marton (DOE-OFES), Greg Pitonak (DOE-PG), Gene Nardella (DOE-OFES), John Schmidt (PPPL), Hutch Neilson (PPPL), Wayne Reiersen (PPPL), Ron Strykowski (PPPL), and Bob Simmons (PPPL).

Topics of Discussion:

(1) DOE Status (Warren Marton and Greg Pitonak) (a) AEP continues to await signature by Under Secretary Card. To the best of Warren and Greg's knowledge, all the issues have been resolved. Warren will continue to follow-up with Card's office.

(b) Continuing Resolution - no new status except that DOE financial types have confirmed that the monies targeted for the MIE Project can be reprogrammed to advanced conceptual design activities during the continuing resolution period. Hutch pointed out that while PPPL activities would be relatively unaffected by an expected continuing resolution spanning several months, ORNL will be impacted much more (in the worst case) due to its inability to staff up. PPPL and ORNL are currently exploring areas in which PPPL can temporarily assume some of the ORNL work, if necessary, until the continuing resolution is lifted.

(c) Impact of a protracted continuing resolution will be mitigated somewhat by the progress in the extended advanced conceptual design phase. Overall impact will be less than a month for month delay in the Project and no expected increase in the TEC.

(d) Initial NCSX Project baseline will reflect the \$73.5M TEC and June 2007 first plasma date, the updated CDR technical design that incorporated CDR comments, and the revised WBS structure. This is consistent with the OMB-300 submitted by DOE. The cost and schedule baselines were reflected in the recently approved Project Execution Plan. Other TEC impacts such as the recent DOE accounting ruling on Security and Safeguards (approximately \$500K at PPPL and "t.b.d" at ORNL) will be fully defined and included in the omnibus ECP that will reflect the new coil design. It is expected that this ECP will be finalized around the time of the Modular Coil and Vacuum Vessel PDR next spring. The project will still be within the baseline range established at CD-1 once this ECP is processed and approved.

(2) Technical Design Progress (Hutch Neilson and Wayne Reiersen)

(a) The Project is continuing to investigate several coil designs that result in an improved physics performance. Over the summer, several encouraging concepts have been evaluated and several have completed the coil healing process. Recent additions to the PPPL computing capability have improved the

turn-around time. Hopefully, a final coil decision will be made by mid-October and this will still support the plan to have an updated CAD model in the December or early January time frame available by the time the Modular Coil manufacturing development contracts are awarded. (b) Recently, it was determined that the poloidal time constants were on the order of 40ms-50ms, much too close to the ramp up rate of ~60ms. Ideally, we would like a poloidal time constant to be short relative to the ramp up rate. The Project is exploring the possibility of adding a poloidal break to shorten the time constant.

(c) With the current coil and VV designs, there appears to be an interference between the field periods and VV in the final assembly process when the three field periods are moved into their final positions. It is not known if any of the new coil designs have this problem. This is still very much a work in progress.

(d) The Project is exploring new cooling concepts involving spraying copper directly on the coil winding "tees" and using a wire mesh arrangement to facilitate better cooling distribution.

(e) Modular Coil SPEB has been formed and is developing the procurement package for release in early to mid-October. A meeting yesterday with the DOE Contracting Officer (Jerry Faul) resolved his concerns vis-a-vis impact of a continuing resolution on the ability to place this order. It was agreed that DOE would soon get the applicable sections (RFP & SOW) of the procurement package for review and that, once DOE comments were incorporated, the Project could release the RFP. Depending on the status of the continuing resolution, a later decision would be made as to what DOE could commit to relative to awarding the contract. It was pointed out that the contract could be phase authorized and funded.

(3) Funding Distribution Between Participants The initial FY2003 Fin Plan for the NCSX Project did not properly reflect the funding distribution and this has been the subject of recent discussions between Rich Hawryluk and John Willis to see if an interim adjustment could be made. In parallel, the Project has submitted a proposed funding profile distribution for FY2003 to DOE (Warren Marton) for both the MIE Project and Research Prep based on the proposed \$11,026K MIE Project and \$1,200K Research Prep, that indicates the proposed distribution of funds between PPPL, ORNL, and LLNL. Of course, the exact split will be dependent on the final FY2003 authorization, but it was hoped that this information would serve as a template when DOE finally distributes the FY2003 funds.

The next IPT meeting will be Wednesday, October 9th, at 11:00 am. NOTE THE CHANGE IN THE DAY OF THE WEEK.

If you have any corrections, please contact me.

Summary by:  
Bob Simmons