Minutes of the NCSX-DOE IPT Meeting on December 17, 2002

On the teleconference: Warren Marton (DOE-OFES), Greg Pitonak (DOE-PG), Chuck Finfgeld (DOE-OFES), Jim Lyon (ORNL), Rich Hawryluk (PPPL), John Schmidt (PPPL), Hutch Neilson (PPPL), Wayne Reiersen (PPPL), and Bob Simmons (PPPL).

Topics of Discussion:
(1) Overall Project Status - Warren Marton, Greg Pitonak, and Hutch Neilson
(a) CR continues, although there are some expectations that Congress will pass an omnibus funding bill early in 2003 (perhaps in February). The current "baseline" is the $73.5M total cost/June 2007 schedule. The baseline will be updated for the PDR/EIR to incorporated the effects of the Continuing Resolution, accounting changes (e.g., safeguards and security costs at PPPL) and any technical changes resulting from design and R&D activities.
(b) (b) A general discussion of how to react to the release of the CR ensued. Hutch noted that the Project is proceeding with the placement of the two (VV and mod coil winding form) prototype contracts with award expected in January - February time frame. These will be funded by OPEX funds. PPPL costing guidelines indicated that prototypes that have "no value" relative to use as production units should be funded by OPEX funds and not MIE funds. It was previously thought that because this work was in support of manufacturing development, it could be funded by MIE.
(c) We also discussed the options available for re-planning the work once the CR is released. OFES feels that Advanced Conceptual Design activities cannot extend beyond the CR.

(2) Project Status - Hutch Neilson and Wayne Reiersen
(a) Technical progress - Wayne indicated that the engineering team is continuing to address configuration issues in the context of the CDR design. Engineering is just starting to evaluate the impact of the new coil design point (M50) and is revising its plans accordingly.
(b) The proposals for the modular coils winding form prototype have been received - a total of 5 proposals received. It is anticipated that the contract will be placed in late January or early February. The vacuum vessel proposals are due in early January.
(c) Hutch indicated that the impact of the CR on the ORNL planned staffing

buildup has been significant, although recent progress has been made in this area. The problem has been the funding allocation received from ORO has not been as great as needed to support the ORNL staffing buildup.

(3) NCSX Review Discussions - Warren Marton, Hutch Neilson, and Greg Pitonak
(a) A general discussion of the various reviews indicated in the attached table. Actions were assigned as indicated on the table (e.g., who will run the review, the approach needed, conflicts with other planned PPPL meetings, etc. The specific actions from this discussion are as follows:
i. Hutch will coordinate the scheduling of the NCSX PDR with other planned PPPL meetings - tentatively the PDR is scheduled for late June.
ii. Warren will confirm the makeup of the PDR review committee.
(b) Greg stressed that the PDR presentations must address the technical basis for the performance baseline (CD-2). The Project agrees. The NCSX PDR will be an overall DOE PDR for the entire project and an internal detailed PDR for the modular coils and vacuum vessel.

The next IPT meeting will be Tuesday, January 21st, at 11:00 am.

If you have any corrections, please contact me.

Bob S.

NCSX Project Review Plan
outcome of IPT Meeting 12/17/02

Milestone	PDR	EIR	CD-2	FDRs	CD-3
When	June 23(?), 2003 (***GHN to coordinate with other meetings***)	July, 2003	August, 2003 (allows for EIR follow-ups and ESAAB members to review EIR report)	MC: Sep., 2003 VV: Dec., 2003	January, 2004
Who runs it	Project (***W.M. to confirm***)	DOE-OECM Liaison: SC-CMSD	SC-OFES	Project	SC-OFES
Review Team Members	Fusion engineers & DOE (***+CMSD reps. for cost review?- W.M. to confirm***)	Jupiter or LMI	ESAAB members	Fusion engineers	ESAAB members
Main Objective	1. Validate MC & VV design maturity sufficient to proceed with development of build-to specs. 2. Review updated C&S estimate for entire project.	Validate that there is sufficient confidence in the estimates (i.e., sound technical basis and plans) and mgt. systems to establish performance baseline.	DOE Approval of the performance baseline. DOE approval to continue with FD and initiate critical fabrication activities.	Validate that technical specs and estimates are sufficient to issue for fabrication.	DOE approval to proceed with all fabrication activities.
Desired Output	Report that concludes: • MC & VV design is sound, satisfies requirements. Plans are sound. Proceed with final design. • CDR issues have been resolved as appropriate. • C&S estimates for all systems have a sufficiently sound basis (well beyond conceptual design) for performance baseline.	Report that concludes: • Estimates are sound, based on: – Appropriate technical reviews conducted. – Risks identified, mitigation plans incorporated. – Execution plans sound. • NEPA requirements satisfied. • Ready for CD-2.	Approval of performance baseline. Approval to continue with FD and initiate critical fabrication activities.	Reports that conclude: • VV & MC procurement packages (e.g., specs, MIT plans) are sound. • In-house R&D plans, fabrication and assembly specs, and MIT plans are sound. • Estimates are well bracketed, based on design and R&D input. • Ready for CD-3.	Approval to fabricate modular coils and VV.

Milestone	PDR	EIR	CD-2	FDRs	CD-3
Required Input	Design package: • Design documents for VV & MC. • Interface documents demonstrating that VV & MC boundary conditions are established. • Analyses demonstrating that design satisfies all requirements and boundary conditions. • Risk assessment and mitigation plans. • Plans and estimates to complete the design, fabrication, inspection, and testing. • Manufacturability R&D input supporting the estimates. • Resolution of CDR issues commensurate with design stage. • Documentation of design, cost, & schedule for all systems.	PDR inputs & outputs, including: • Design documents for VV, MC, and their interfaces. • Risk assessment and mitigation plans. • Technology development (R&D) results and procurement decisions. • Report from the PDR. Resource-loaded schedule, with technical basis documentation: • Updated system estimates. • Risk-based contingency analysis. Documentation of readiness to proceed with other critical fabrication tasks, e.g. power cables, test cell mods. ISTP (how detailed?) Management plans: • Final PEP. • SEMP. Final EA/FONSI.	Positive report from the EIR / C&S Review.		