

# NCSX IPT Meeting Minutes

The minutes from the NCSX IPT meeting of Tuesday, June 12, 2007 at 11:30pm are as follows:

**Attendees:**

DOE-PSO:	J. Makiel, G. Pitonak, A. Indelicato, L. Dietrich
DOE HQ:	B. Sullivan, S. Barish, K. Chao
ORNL:	J. Lyon
PPPL:	R. Templon, H. Neilson, J. Malsbury, J. Levine, R. Hawryluk

## 1. DOE News (Barry/Sam)

None

## 2. Safety Management (Jerry)

- a) There were no new NCSX related safety incidents;
- b) PSO will request support from the Chicago Field Office (Support Center) to review the lifting and rigging of the modular coils and the resulting coil pack assemblies. PSO needs to be notified 4 weeks in advance to the upcoming lifts which are currently planned in October. The project will provide said notification.

## 3. SC Project Review (Jeff/Barry/Hutch/Greg/Kin)

- a) The proposed review date is July 31 - Aug 1<sup>st</sup>;
- b) The anticipated review team members will most likely change from the candidates mentioned at the last IPT meeting. Since coil winding capability has been established and proceeding well, expertise will most likely be sought for upcoming field period and machine assembly tasks;
- c) The Office of Engineering and Construction Management (OECM) will also be on-site performing their review. Kin will send a letter or email to Suneel. Ten elements are required by the Project to support their review as follows:

- Definition of NCSX CD4 Scope of Work
- Work Breakdown Structure dictionary/elements
- Technical basis/requirements for all remaining work
- Cost estimate to complete (to level 4 or level 5)
- Basis of estimates for all remaining project work
- Resource loaded schedule
- Contingency estimates (and risk basis)
- Proposed project budget profile
- Updated Project Execution Plan
- Final Engineering Change Proposal with new baseline

- d) Preparation of a 'bottoms-up' cost-to-complete continues and is on-track. The internal review in May and June by Princeton University supported this effort. The review package will be available on the NCSX website by June 29<sup>th</sup>;

- e) A 'risk registry' has been developed which will supersede the critical issues list. Work still remains in the development of the registry with the identification of technical risk; Updates were subsequently completed.

f) The Project continues to resolve the critical engineering issue regarding the modular coil interface. A plan to weld the modular coils within a period is being developed. A plan to use additional bolts to reduce motion and sliding shims to handle compressive forces is being examined for the connection between field periods during final machine assembly (C-C connection). Finalizing the MC interface design is important for the upcoming re-baseline;

g) The following managerial changes were proposed by SC-PSO to support the re-baseline task and the implementation of the new baseline:

- Once the annual budget is established, re-planning of the upcoming year's work may be required. However, BCWS will remain unchanged within the fiscal year;
- Contingency will be applied to cover the incurred 'cost' of the variance when deemed unrecoverable or the job task is completed. However, the variances will remain fully visible both within the individual work packages, and in the aggregate, which also applies to the formulation of CPI and SPI;
- Additional level II milestones will be required for the near term work to validate project performance against the new baseline;

h) No changes to the basic CD-4 definition will be proposed. No previously removed non-CD4 workscope will be re-inserted back into the project.

#### **4. Project technical progress (Hutch)**

The following provides a brief status on the major components:

##### MCWFs

All eighteen modular coil winding forms (MCWFs) have been delivered to date. Contract delivery has been successfully completed.

##### MC Winding

Twelve modular coils have been potted (vacuum pressure impregnated-VPI) to date.

##### Field Period Assembly

The Field Period (FP) Assembly effort continues as follows:

Station #1 (VV prep - diagnostics, h/c tubes)

- a) FP #1 is completed except for lead termination;
- b) FP#2 is nearing completion of cooling/heating tubes connections to the manifolds;
- c) FP #3 is undergoing layout of heating / cooling tubes and flux loops.

Station #2 (mating modular coils together)

- a) Commencement of Station #2 is delayed. This is a critical path activity. The current re-baseline proposal indicates a new start-up date in the Fall. Two prerequisite tasks must be completed:

- 1) Complete work on the modular coils (drilling additional bolt holes, grinding in way of bolt locations, installation of all clamps and thermal insulation);

- 2) Engineering and developmental tasks, and necessary procurements for the modular coil interface hardware, must be completed;

### TF Coils

- a) The TF Coil contract with Everson Tesla Inc (ETI) continues. The first TF coil has been potted and now undergoing final machining of the inboard wedge plate. Progress is going smoothly but slowly. Delivery of the first TF coil is now anticipated by mid July;
- b) The second TF coil is being ground wrapped; the third is being wound
- c) It is anticipated that the first TF coil's delivery date will be in mid July. The original contract schedule called for the first TF delivery back in February. Although the TF coils are well off the critical path as described in the proposed new baseline, there is a concern that subsequent TF coils will not be delivered within the 2 week intervals as currently planned. No cost issues by ETI have been noted. PSO plans to visit ETI during an upcoming visit by project team members.

### **5. Procurement (Rod)**

- a) Procurement continues to support both major and minor material contracts including:
  - Completion of MCWF contract with EIO. Final incentive payments totaled \$639K
  - 8 purchase orders in process (~\$170K) for actuator assemblies, and flange and stud kit for coil-to-coil mating
  - There will be a modification of ETI's internal contract milestones to support ETI's subcontract of wedge casting machining to an off-site machine shop
  - Support the procurement of services from Edison Welding Institute to examine weld distortion when welding modular coils together within a field period

### **6. Review of critical issues (Jeff)**

- a) There are no Category I critical issues
- b) The critical issue regarding the readiness for Field Period Assembly for Stage #2 continues with the engineering development of the modular coil interface within a period, and between periods, as described in section 3(f) above. Stage #2 will be pushed back to the Fall timeframe as currently proposed in the draft re-baseline.

### **7. Planning for the next 6 months (Jeff)**

With the upcoming project re-baseline, planning for the next 6 months is undergoing development. However the following activities will continue:

#### Modular Coil winding;

- Field Period Assembly Stage #1, and Stage #2 including developmental trials for regarding interface design;
- Off-site fabrication of TF coils;
- Prepare a bottoms-up estimate for remaining work and documentation to support re-baseline activities.

Upcoming Level II milestones are as follows:

- Last MCWF delivered by Sep 07: *Completed June 07*
- Begin FPA July 2007: *Completed June 07*

As part of the re-baseline, new milestones will be formulated.

## **8. Project performance through April (Jeff)**

The project performance data that was entered into PARS is as follows:

SPI = .98

CPI = .96

Costed (end of April) = \$67,232K

The project has been assigned “Red” because the Project’s baseline is no longer deemed credible. To alleviate resources to support the current re-baseline activity, it was agreed that formal status of earned value will not be performed for this month. Only the BCWS and ACWP will be inputted directly into PARS. The BCWP will be derived from the previous month’s CPI and SPI indices.

## **9. ECP status (Jeff)**

The following are current and anticipated Engineering Change Proposals (ECPs) that require DOE approval:

There are currently no ECPs pending DOE approval.

An ECP will be developed to support the project’s re-baseline in late summer/early fall.

A draft ECP will be examined at the upcoming OEEM/SC Project Review on July 31<sup>st</sup>.

## **10. Planned IPT meetings (and other events) are as follows:**

June 25 <sup>th</sup>	Monthly SC Watch List Brief
July 10 <sup>th</sup>	Next NCSX IPT meeting at 11:30am
July 31 - Aug 1 <sup>st</sup>	Next NCSX SC Project Review/OEEM Review