NCSX IPT Meeting Minutes

The minutes from the NCSX IPT meeting of Tuesday, February 12, 2008 at 11:30AM are as follows:

Attendees: DOE-PSO: G. Pitonak, L. Dietrich

DOE HQ: B. Sullivan, K. Chao

ORNL: J. Lyon, J. Harris

PPPL: H. Neilson, R. Templon, R. Hawryluk
D. Rej, R. Strykowsky, J. Levine

1. DOE News (Barry)

a) Preliminary funding guidance has been provided to PPPL in support of re-baseline planning. PPPL has provided an assessment of impacts to OFES, and further guidance/decision is needed from OFES management. In the meantime, the NCSX Project is moving forward with the re-baseline activities.

b) A schedule of events for the re-baseline effort has been provided to the NCSX Project, and is now considered firm. Princeton Univ. will conduct their own review March 13-14. Committee has been identified (Coward, Titus, Murdoch, Wegener). Kin will finalize EIR dates with OECM – Jeff needs to send Kin our recommended lines of inquiry for their review

c) The next SC Watch List Report is due to Lehman's office tomorrow (2/13/08). Briefings will resume in March.

2. Safety Management (Jerry)

a) There were no NCSX related safety incidents.

b) The NCSX project continues to improve safety integration in design and startup of new project activities, such as the new assembly work.

3. Rebaseline Status (Kin/Barry/Hutch)

a) Charge letter is being revised to focus on MIE only and remove the Phase 3 upgrade work from this review. The information must still be developed to a level that the program office can use in decision processes, but this will be a separate exercise.

b) The deadline for the NCSX Project Team to publish the new baseline documentation is March 26th. The Project is working hard to support this date.

c) A question was raised as to the content and focus of the SC Review. The last review had more emphasis on cost and schedule versus technical issues/progress. However, Kin mentioned that the review committee will also consist of technical folks. A conference call with Lehman's office on Feb. 7 was very valuable in califying expectations and desired format. The project agreed to propose a draft agenda by Feb. 15.

d) The NCSX Project Team can provide recommendation of committee members if needed. There now exist a large pool of candidates that are familiar with the NCSX Project.

4. General Topics (Don/Hutch)

a) Staff Resource Update:
   - Two new engineers are on board to support NCSX design activities.
   - ORNL and MIT also indicate opportunity to provide more resources to support NCSX design activities.

   Staffing increases will hopefully accelerate both schedule critical and non-critical design work, (electrical leads, PF and trim coils, cryogenic systems and cryostat design).

5. Project technical progress (Hutch)

The following provides a brief status on the major components:

MC Winding

a) Modular coil winding operations are proceeding well. MC winding activities are slightly behind schedule but MC winding is no longer a critical path activity. Looking to finish up this work soonest to free up techs to transfer to assembly work and free up space in the test cell.

Field Period Assembly

Station #2 (mating modular coils together)

a) Station #2 activities continue to be behind schedule. The start of half-period production has been delayed by delays in MC interface design and process development. This is a critical path activity.
b) A significant portion of the shim material delivered to date has issues concerning the consistency of the thickness of the alumina coating. This issue is being worked with the vendor. Alternate processes and designs are also being pursued in parallel. Additional grinding and/or thinner coating are possible solutions. The Project is also investigating alternative materials as a fall back measure. Delay in the receipt of acceptable shims has impacted the Project's critical path (2-3 month impact).

Station #3 (assembly of coil half period '3-packs' over the vacuum vessel)

a) No issues to report – proceeding as planned.

TF Coils

a) Eight TF coils have been completed to date and a sufficient quantity has been received to support start of future Station #5 activities.
b) Wedge casting deliveries, provided via subcontract to Everson Tesla Inc (ETI), continue to be closely monitored. Specifically, the issue is with delay in the machining of the wedge castings. The Project is addressing this concern with ETI and alternate machining services are being used. The situation has improved in the last two weeks.
c) TF coils are not a critical path activity, and are also well off the critical path.

PF Coils

a) Conductor for the PF coils is being procured. The conductor will be provided to the successful bidder for PF coil fabrication. The final design review (FDR) was delayed; re-scheduled for Feb. 20. The target date for procurement award is now May 2008 with a level 2 milestone of Sep 2008.

Trim Coils

a) Physics and engineering personnel completed their analysis to determine the amount and type (kilo-amp turns) of the trim coils. It has been determined that 48 trim coils via 48 circuits should be provided by the MIE project. Design activities continue.

b) Trim coils at the mid plane region, as previously discussed at the last IPT meeting, will not be provided in the MIE. However, these coils may be added post MIE and be located external to or between the TF coils.

Design

a) Coil structure design work continues. The final design review has been delayed until March 2008 in order to optimize interfaces with the trim coils. The coil structures work package is well off the critical path.

b) Procurement of the machine base support structure is scheduled for later this year. Detailed engineering design has begun.

c) Station 5 & 6 design work is maturing in preparation for the upcoming reviews.

Metrology

a) The new photogrammetry system has been received and project engineering staff have undergone training.;

b) The Project is looking to purchase another laser tracker;

c) The Romer® arms are working satisfactorily;

d) Metrology continues to be a very important activity in this project.

6. Procurement (Rod)

a) Procurement is working to expedite the resolution to the shim coating issue;

b) Procurement will establish a designated procurement official to expedite PF and trim coil procurement. Adequate sources have indicated interest in this work. Advanced tasks will include the early establishment of a source selection board and draft a preliminary RFP.

7. Risk Registry (Don/Hutch)

a) Risk registry will be updated and enhanced prior to upcoming reviews. Will include specific action plans and timelines for resolution of issues.

b) Will include greater development of cost and schedule risks along with plans to address these possibilities.

b) Prep for new baseline will include another Monte Carlo analysis to support contingency analysis. Will include a focus on near critical path activities and attempt to assess impact of unexpected insertions to critical path.

8. Planning for the next 6 months (Jeff)

The following activities will continue:

- Continue to prepare the Project's re-baseline package;
- Complete modular coil winding;
- Commence Station #2 activities;
- Continue off-site fabrication of TF coils;
- Design and preparation for Field Period Assembly Stage #3, coil structure design, base structure design, PF and Trim coil design;
- Prepare for upcoming University and DOE Project Reviews.

9. Project performance through end of December (Ron/Hutch)

a) Since the Project's authorized baseline is no longer credible, the following statistics are based on the proposed baseline retroactive to May 1st (approximately 9 months). However, there have been workscope changes to the proposed baseline since then. Detailed data for the end of December 2007 are not yet available.

CPI= 1.09
SPI= 0.92

Costs (end of Dec) = $75,425K

Note from previous IPT meetings: The project continues to be been graded "Red" because the Project's baseline is no longer deemed credible. It was determined that the Project should continue to formally track in PARS against the existing baseline, as per ECP53. In the interim, the Project will informally track against the proposed baseline.

10. ECP status (Jim/Hutch)

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

a) There are currently no ECPs pending DOE approval. An ECP will be developed to support the project's re-baseline.

11. Planned IPT meetings (and other events) are as follows:

March 5.....Next IPT at 11:00am
March TBD.....SC Watch List Briefing
April 1 .....Documents to OECM
April 8-10 .....SC Project Review
April 29-May 2.....EIR by OECM
May 21.....pre-ESAAB
May 30.....ESAAB report
NLT June 30 .....ESAAB