

NCSX IPT Meeting Minutes

The minutes from the NCSX IPT meeting of Tuesday, July 10, 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
J. Anderson

Special Note:

Welcome Jim Anderson to the NCSX Project Team as Project Manager. Jim started full time on Monday (July 9th). Contact information: (609) 243-3718 and email jlanders@pppl.gov.

1. DOE News (Barry/Sam/Hutch/Jeff/Kin)

- a) FESAC meeting is schedule for next Monday and Tuesday in the Germantown area;
- b) HQ is working on getting the SC Review Charge letter issued. More in Section 3 below [Update: draft charge letter provided to Project with 5 specific charge questions];
- c) Project requests a \$200K BA shift from PPPL to ORNL to support design work. However, it may be too late for the August FinPlan. [Update: the next available FinPlan change is September];
- d) The Quarterly cost performance data for Joule milestone tracking was provided to OFES.

2. Safety Management (Jerry)

- a) There were no new NCSX related safety incidents.

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

- a) The proposed review date has been changed from July 31st - Aug 1st to Aug 15th-17th. The duration of the Review is now 2.5 days. Draft agenda provided to the Project for review/modification;
- b) The Office of Engineering and Construction Management (OECM) will not be included in the Aug review. At this time, the OECM review is on indefinite hold. Kin will speak with Dan to determine a date;
- c) The review team members are still being assembled. There will likely be 4 technical reviewers, 3 cost and schedule reviewers, and Kin and Dan as co-chairs;
- d) Kin recommended that the information for the review be made available on the NCSX website by August 6th.

4. Project technical progress (Hutch)

The following provides a brief status on the major components:

MC Winding

Twelve modular coils have been potted (vacuum pressure impregnated-VPI) to date. Next coil will be potted in about 2 weeks.

Field Period Assembly

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

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

- a) Proceeding well with no noted issues.

Station #2 (mating modular coils together)

- a) The design for the inboard region of the modular coil interface within a field period will be a welded joint. Edison Welding Institute was consulted regarding weld technique and distortion. A developmental weld trial is underway. The outboard (or remaining) areas of the modular coil flange will be bolted as per original design;
- b) The C to C interface, during machine assembly, will not be welded. Instead, the joint will use a sliding interface design, with additional bolts to minimize displacements.

TF Coils

- a) The TF Coil contract with Everson Tesla Inc (ETI) continues. The first TF coil has been potted, successfully hi-pot tested at room temperature, and cryogenically tested. Hi-pot testing at cryogenic temperature was not completed due to moisture within the coil's test cryostat. Corrections must be made to the apparatus and procedures, and then the coil will be re-tested.) Fractures within resin-rich epoxy layers on the coil surface were noted. Corrective actions are in progress, These issues are not believed to be serious but have delayed delivery of the first TF coil while they are being resolved.
- b) The second TF coil was potted. However, the wedge casting partially delaminated from the coil upon mold separation. The cause is understood and corrective actions are in progress. The issue is not believed to be serious but will delay delivery of the second TF coil while it is being resolved.
- c) An engineering delegation from PPPL will visit ETI next week to investigate the above issues.

Design Reviews

Several design reviews are coming up in the next couple of weeks. Most notable are the modular coil interface design, Station 3 tooling and Coil Structures.

5. Procurement (Rod)

- a) Procurement continues to support both major and minor material contracts and several small purchase orders. No issues noted.

6. Review of critical issues (Jeff)

- a) There are no new 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:

- A new schedule of level I and II milestones are proposed for the Project as part of the re-baseline package.

8. Project performance through April (Jeff)

Costs (end of June) = \$68,874K

The project continues to be graded "Red" because the Project's baseline is no longer deemed credible. It was determined that the Project should continue to formally track against the existing baseline, as per ECP53, at least until the SC Project Review in August or until the end of the fiscal year. A determination will be made thereafter as whether to continue with the existing baseline, or track against the proposed baseline. In the interim, the Project will informally track against the proposed baseline as well as the current approved baseline.

9. ECP status (Jeff)

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 in late summer/early fall. A draft ECP will be examined at the upcoming SC Project Review on August 15th.

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

July 18thMonthly SC Watch List Brief
July 31stNext NCSX IPT meeting at 11:30am
Aug 15th - 17thNext NCSX SC Project Review
TBDStellarator Program Review
TBDOEEM Re-Baseline Review