Summary of PSS Generation 3 Status Review held on March 9th, 2004

(Please forward corrections and/or additions to tbarsz@aps.anl.gov, or use the comment section below)

Review Date: 3/9/04

Time: 9:30-12:00

Place: B401, B4100

Attendees:

N. Arnold, R. Flood, T. Dawson, J. Forrestal, A. Boron, W. Ruzicka, P. McNamara, G. Markovich, V. Nguyen, J. Hawkins, K. Belcher, J. Servino, M. Ramanathan, R. Gerig, J. Carwardine, N. Friedman, R. Klaffky, J. Noonan, T. Barsz.

Review committee members:

J Carwardine, J Noonan, M. Ramanathan

Purpose:

To review the current status and schedule for the PSS Generation 3 upgrade project.

Agenda:

The review consisted of two parts:

1) A 30 minute presentation by Roy Emerson. (Roy's presentation can be viewd at http://www.aps.anl.gov/asd/esystems/Interlock_Sys/PSS/Gen3/Reviews/040309G3StatusReview/040309SReview01.html).

2) A sit-down review with project members and the review committee to discuss project progress & schedule, deliverables, and issues. This comprised primarily a walk-through and discussion of the Statement of Work and project schedule.

Items raised during the presentation

The question as to why two different vendors' plcs were being used for Chains A and B caused some discussion. The PSS Generation-3 project team should plan on explaining the rationale for two vendors at the final design review in April.

In response to a question from Ned Arnold about obsolescence, Roy noted that both Allen Bradley & GE offer a 10 year lifetime even though Intel only offers the CPU for 5 years.

During a discussion about retrofitting, Roy noted that retrofitting the "upstairs" part of the system would be relatively easy. Retrofitting the I/Os on the floor will be harder

Other items

The statement of work was reviewed. No specific issues were raised by reviewers or project members in the context of meeting the goals and objectives.

The document package for the PSS Generation-3 system was presented on a table in B4100 for the review. More than half the required documents have been completed and are ready for review and sign-off, although no documents have yet been fully signed off and approved. Outstanding documents include some high-level documents for Chain C and for the HMI (Human Machine Interface), and the overall Interface Control Document (ICD).

Validation procedures will need to be re-visited once the specification and functional requirements documents have been approved.

There was some discussion about commissioning the prototype system at 30-ID, specifically in the context of how to gain confidence in operational performance and reliability before handing over the beamline commissioning team.

Only one outstanding technical decision was highlighted: what to use for the HMI touch panels (the choice is either Allan Bradley 'Panelviews' or Wonderware-driven pc-based touch panels).

Schedule Issues:

It was the consensus of those present that the schedule is tight to meet a mid-April final design review.

It was agreed that all materials will be prepared by April 19th, when a dry-run will be held. The actual review will be held on April 26th. At review time, documents must be complete and signed off, engineering design work completed, and all engineering decisions made.

Critical schedule items will be getting all documents reviewed and signed off in a timely manner, and completion of the lab-based demo/development system that must be commissioned before software can be prepared for the 30-ID prototype system.

An examination of Roy's Gant Chart revealed that the assembly of the Lab Prototype PCB is scheduled to coincide with the April Shutdown, and therefore Technicians or Engineers may not be available. This should be re-baselined following discussion with Phil McNamara about technician scheduling.

It was noted that the commissioning schedule for 30-ID will allow plenty of opportunity for test and evaluation, but that other beamlines (namely 23-BM, 11-BM, and 26-ID) are also scheduled to receive a Generation-3 PSS system, and that their schedules may place greater burden on finishing the evaluation and successful commissioning of the Gen-3 prototype at 30-ID.

Summary:

Documentation approval appears to represent the greatest challenge to meeting the mid-April final design review.

Also crucial to meeting the present schedule will be the successful and timely completion of the lab-based demo/development system.

Despite not meeting the March 1st due date for the final design review, the pace of the project has improved significantly in the past two months. The goal of a mid April final design review seems doable, albeit challenging.

Action Items

- A clear plan should be developed by the Gen-3 team for retrofitting key features of the Gen-3 system into the existing Gen-1 systems (Emerson/Gen-3 team)
- Expedite circulating documents for approval, starting with the high-level specification and functional requirements documents (Emerson/Gen-3 team).
- Develop a commissioning plan for 30-ID that makes use of available time at the beamline to develop confidence in the system before handing over to the beamline commissioning team (Emerson/Gen-3 team).
- Finalize design documents and numbering. (Emerson/Gen-3 team).
- Re-assess validation procedure once designs have been finalized. (Emerson/Gen-3 team).
- Develop a 'hit-list' of topics and issues for the final design review. Specific items raised included justification for the use of two vendors' plcs for Chains A and B (Emerson, Hawkins, Carwardine).
- Schedule the final design review for around April 26th. Make documentation available electronically to reviewers as soon as practical. Presentation material will be sent to the reviewers following a dry run on April 19th (Hawkins).
- Develop and engineer an incremental retro-fit path for incorporating key Gen-3 features into existing Gen-1 systems (Emerson/Gen-3 team).
- Perform re-baseline of project schedule after speaking with Phil McNamara. regarding assembly of Lab Prototype PCB by PS Technicians.
- Complete Lab Prototype PCB designs, to allow the option of having the Lab Prototype PCB assembled either by PS Technicians of ANL-CIS (ECT).

Comments: (Enter optional comments below and return to tbarsz@aps.anl.gov)