Proton Power Upgrade Project--Management Advisory Committee Charge

1. **Is the PPU project office adequately/properly staffed and appropriately organized?**

Summary response:

The PPU Project Office appears appropriately organized and staffed with well qualified and project-experienced staff to effectively manage the project. Staffing levels are reasonable for the scope of work, and the management of matrized resources appears to be effective. As the project moves from the design phase into execution and down the line into installation and integration, **more effort may be required to manage and coordinate systems engineering.** Re-starting the technical advisory committees as PPU management plans to do is encouraged, however care must be taken to **focus the membership and charge on the upcoming work of fabrication/installation, integration and commissioning vs. design.**

Comments:

- **There is no specific role for a chief/lead systems engineer,** the Project Manager reported that he is fulfilling that function. As the project shifts into execution and eventually moves to installation and integration, this dual role may become constrained by management bandwidth
- Although reported not a problem at present, as the ORNL re-organization is further implemented, **the availability of matrix staff may be affected by new managers with competing priorities.**
- Some of the Level 2's reported some **concerns with loss of some critical staff to take other roles through the reorganization;** they are working to individually replace these but additional management help might be needed.
- **Re-starting the technical advisory committees should be helpful to the project.** As long as the membership and charter are focused on the upcoming phases of work. There may be some synergy with STS committees with the above caveat noted.

Recommendations:

- Consider the options to increase the management and oversight of systems engineering as the project transitions from planning/engineering moves further into fabrication and installation.
- Continue to monitor for potential impacts of dual assignments within NSCD and matrixed resource availability as the lab re-org proceeds.
- The Project Director/Manager should maintain a critical-fill list of positions to assist with and keep visibility on fills/backfills as the project proceeds into the next phase(s)
- Develop the charters and membership of the technical advisory committees with a view toward the future phases of the project..

2. **Are there additional management actions that should be done w.r.t. COVID, ORNL organizational reimaging and changing leadership?**

   Summary response:
   The PPU project has **implemented a top-down evaluation and impact of COVID on work plans and it appears less than earlier anticipated.** Constant communication in times of uncertainty, such as during re-organizations, is helpful to keep staff focused on the project work but is complicated by remote work practices. **Closely managing staff transitions with the lab re-org and eventually as project staff roll-off is an important leadership function** that will require attention from the PD/PM but also will pay dividends in improved morale.

   Comments:
   - Some level 2's report that **remote work practices in the design phase have added to schedule/delays for some systems.**
   - Some level 2's expressed concern with **disconnects in the outage schedule versus the project schedule, which could impact installation activities.** Based on the experience at other labs, outage periods tend to be oversubscribed and require added coordination and planning to avoid impacts on downstream project work or scientific user schedules. **Project-driven outages also require more attention and discipline than operational outages to avoid pushing incomplete work downstream.**
   - While it is possible that COVID impacts may diminish throughout the year, **some work may be subject to continued COVID uncertainty,** such as the RTBT stub, where a new contractor may be involved and the workforce drawn from outside the lab with greater public exposure,

   Recommendations:
   - Continue to communicate as often as possible with all project staff through available forums, especially as the lab re-org matures.
   - Develop--with cognizant manager involvement-- individual plans for managing staff roll-offs and communicate this to affected staff.
   - Be mindful of critical areas where COVID could cause impacts on schedule within the next 12-18 months and make assessments of needed contingency.

3. **Is the proposed contingency buydown plan reasonable? Are there other areas besides spares that should be considered?**

Summary response:
The planning to date for spares is reasonable as far as it goes; however, **there may be an opportunity to effectively use the remaining contingency to strengthen the scientific capability of the SNS facility** including spares that enhance the reliability of the facility. We support the purchase of a spare cryomodule as important to future reliability.

Comments:

- In addition to spares, there may be multiple areas where strategic equipment upgrades might improve reliability and/or enhance performance beyond the initial scope of the PPU Project.
- **A comprehensive scope enhancement package should be considered** that includes a strategy for science enhancements, accounts for the retirement of risks, decision timing for acquiring critical components in/near fabrication, performance since CD-2, and allows for unknowns based on the phase of the project.
- Such a comprehensive plan and package can be more appealing to sponsor decision-makers than itemized changes and **should be socialized early.**

Recommendations:

- It is recommended that PPU management take a broader view of the technical landscape and put together a “package” of potential actions that, taken together, would greatly increase the scientific impact of SNS.
- Begin dialog with the BES sponsor regarding this potential strategy.