

2019 Director's Review of SoLID

The Solenoidal Large Intensity Device, SoLID, is a multipurpose spectrometer system that has been under development by the SoLID collaboration and Jefferson Lab for the last decade. Five experiments using SoLID have been recommended for Stage I approval by the Jefferson Lab Program Advisory Committee. Following preparation of a draft pre-Conceptual Design Report in 2014, a Director's Review was held to evaluate the status of SoLID in February 2015. The collaboration has devoted considerable effort over the last 5 4 years to address the many valuable recommendations resulting from that review. In summer 2017, the previous review committee was requested to review (via email) the updated pre-CDR. The committee submitted a favorable report with advice to monitor progress in a few areas of focus. Since that time, the SoLID team has concentrated on pre-project R&D and developing a more thorough cost estimate. In anticipation of the next step in developing this effort into a construction project, we are convening another Director's Review of SoLID focused on technical readiness design, risk assessment, and the cost/schedule of the anticipated project.

Charge

We would like the review team to evaluate the technical design of SoLID and as well as assess the technical readiness to proceed with construction, as well as the status of the cost estimate with project planning by assessing the preliminary cost and schedule estimate, within the context of a project risk assessment.

In particular, we request that the review team address the following charge questions:

1. Are the scientific and technical requirements clearly identified? Is the SoLID conceptual design sound, achievable and sufficiently defined to meet those requirements?
2. Have all technical risks been identified? Is the risk assessment sufficiently mature for this stage, and are there appropriate plans in place to mitigate these risks?
3. Are the costs well-understood and properly estimated? Are the cost and schedule estimates appropriately developed for this stage of pre-project planning? Is the basis of the contingency estimate well-founded, and is there appropriate cost and schedule contingency included to address the identified risks?
4. Are ES&H aspects properly considered in the design, fabrication, and testing plans?
5. Has all off-project scope that is required for the successful operation of SoLID been identified? Are credible plans in place to secure completion of that scope?
6. Has the project team responded appropriately to recommendations from prior Director's Reviews?