15 Aug 2019

To: LBNF Target Conceptual Design Review Panel

From: P. Hurh, L4 Technical Lead for Targetry

CC: C. Densham, P. Loveridge, K. Gollwitzer, S. Tariq, J. Lewis

Re: Charge to Review Panel

Patrick Hurh

Deputy Head Target Systems Department

Program Coordinator, RaDIATE Collaboration

Target Systems/Accelerator Division

P.O. Box 500, MS 341

Kirk Road and Pine Street  
Batavia, Illinois 60510-50­11 USA

Office: 630.840.2814

[hurh@fnal.gov](mailto:hurh@fnal.gov)

After considering 3 different design concepts for the LBNF target (1.2 MW) in the aspects of physics performance, reliability, design complexity/risks, and impacts to operations, the LBNF targetry team has selected one design concept to take forward to the preliminary design phase. In order to ensure that the level of conceptual design is sufficient to move to preliminary design, this panel is asked to perform a conceptual design review. The specific charge questions are:

1. Is the presented target design at a level appropriate for the conceptual design phase and likely to result in a successful target for 1.2 MW primary beam operation?
2. Have all potential design and manufacturing risks/challenges been identified by the targetry team and have they adequately planned to address these during the preliminary design and feature prototyping phase?
3. Is the level of integration of the STFC targetry team with the LBNF project at Fermilab appropriate for this stage of the work? I.E. Are interfaces being managed appropriately?

In addition to answering the charge questions, the panel is welcome to comment and offer recommendations on other aspects of the target conceptual design. The panel chairperson is kindly asked to gather the findings, comments, and recommendations of the panel and summarize them along with the answers to the charge questions in a brief written report due approximately 1 week after the review.

Review Panel Members:

1. Chair: Kavin Ammigan (TSD/AD FNAL)
2. Marco Calviani (EN/STI CERN)
3. Yun He (TSD/AD FNAL)
4. Zarko Pavlovic (TSD/ND FNAL)