

Memorandum

Date: February 27, 2020
To: LBNF Primary Vacuum Preliminary Design Review Committee
From: Kevin L. Duel – Technical Manager for Primary Vacuum
Re: Charge to Review Committee

Kevin L. Duel
LBNF Primary Vacuum and
Magnet Installation
Technical Manager

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Message:

Preliminary design of the LBNF Primary Vacuum system is considered complete and a preliminary design review is to be performed prior to CD2 which is expected near the end of calendar year 2020. In order to ensure that the level of preliminary design is sufficient to move to final design, this committee is asked to perform a preliminary design review of the vacuum system. The review is scheduled for Tuesday afternoon, March 10th.

In particular preliminary design reviews are to present to the committee how the design meets the technical requirements and that interfaces are understood and identified.

The committee is charged with the following questions:

1. Does the design meet the technical requirements?
2. Are all interfaces adequately identified and defined?
3. Are Fermilab standard vacuum practices adequately applied to the design together with any applicable codes/standards?
4. Have ES&H issues been identified and analyzed appropriately?
5. Have the long lead procurement items been identified, where applicable and does a procurement strategy exist for it?
6. Have all major risks been identified and does a mitigation strategy exist?
7. Is the design maturity at a satisfactory level giving confidence for the Primary Vacuum sub-system to be recommended to proceed to CD-2/CD-3a and Director's readiness review?
 - a. Based on acceptable progress for preliminary design as a minimum of 50 to 60% at the time of this review, with 100% equal to "ready for procurement".
8. Is there an adequate confidence level on cost and schedule estimates?
 - a. Is the final design schedule start date appropriate when taking considerations such as the design maturity of interfacing systems?

The LBNF / DUNE Review Plan document can be found at: <https://edms.cern.ch/document/2173197>

In addition to answering the charge questions, the committee is welcome to comment and offer recommendations on other aspects of the Primary Vacuum system.

It is requested that the committee chairperson collect the findings, comments, and recommendations of the committee, and summarize them along with the answers to the charge questions in a brief written report approximately 1 week after the review.

Review Committee Members:

1. Lucy Nobrega – Chairperson – Senior Engineer AD/MSD
2. Alex Chen – Principal Engineer AD/MSD
3. Denton Morris – Engineer Physicist III AD/MID