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Director, BCMT
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HTS Test Facility Dipole Magnet (TFD) Conceptual Design Review

Review Committee:

Helene Felice (Chair), Giorgio Ambrosio, Lance Cooley, Etienne Rochepault, Susana Izquierdo Bermudez

Observers: Steve Gourlay, George Velev, Ken Marken, Barry Sullivan

Date: Thursday, June 11, 2020; 7am-11am PDT / 10am-2pm EDT / 4-8pm Europe

The US DOE Offices of Fusion Energy Sciences and High Energy Physics are investing in an HTS Cable Test Facility, to be located at Fermilab. A major element of the facility is a 15T large bore dipole magnet; the design and fabrication of the magnet is the responsibility of LBNL.

We would like your expert opinion on the design status of the magnet. This is the first design review for the project, and the intent is to focus on reviewing the design process, the status of the design, and the ability of the design to meet performance requirements. This is intended as a technical review of the conceptual design of the magnet. Project schedule, budget, etc. will be part of a separate review.

Charge:

1. Are the magnet requirements properly defined and documented? Have interfaces with the final facility been properly documented?
2. Are conductor options appropriately considered? Are the plans for conductor selection and cable design finalization appropriate for this stage of the project, and have associated risks been identified?
3. Has the project team properly reviewed and considered design alternatives?
4. Is the design team using appropriate design and analysis tools?
5. Is the design at the proper level of maturity for this stage in the design? Is the project managing the design process to meet performance requirements while minimizing project risk?
6. Have critical technology issues and relevant decision points been identified? Is the team benefiting from all relevant experience from the broader community?
7. Is the design team properly staffed? Are there areas where additional resources should be provided?