



Department of Energy
Office of Science
Washington, DC 20585

MEMORANDUM FOR KURT FISHER
DIRECTOR
OFFICE OF PROJECT ASSESSMENT

FROM: JAMES SIEGRIST
ASSOCIATE DIRECTOR OF SCIENCE
FOR HIGH ENERGY PHYSICS

SUBJECT: Request that OPA Conduct a CD-3A Independent Project
Review for the PIP-II Project

I request that your office conduct an Independent Project Review to determine the readiness of the PIP-II project for Critical Decision (CD)-3A, Approval for Long-lead Procurement. The review will be held on February 17, 2021, by virtual access. Previously CD-2, Approval of the Performance Baseline, was approved by Office of Science Director Christopher Fall on December 14, 2020.

The PIP-II request for approval of CD-3A is designed to capitalize on investments from foreign partners, mitigate impacts related to the COVID-19 pandemic, support the approved baseline schedule and reduce schedule risk. The ultimate goal of the project is to deliver efficiently a leading-edge Superconducting Radio Frequency (SRF) linear accelerator to enable a broad range of particle physics experiments at Fermilab for decades to come. The request for CD-3A is consistent with the PIP-II tailoring strategy approved with CD-2.

The scope of the CD-3A request includes long-lead procurement of material and equipment including niobium and SRF cavities for SSR1-type cryomodules, equipment required to improve PIP-II cryo-system performance, power amplifiers and vacuum tubes for the Main Injector, and a beam current monitor for the Booster Synchrotron.

Your review committee is requested to assess the project's readiness to proceed with the long-lead procurements, particularly with respect to the following issues:

1. Is the technical and schedule justification sufficient for approving long-lead procurement?
2. Are the interfaces between subsystems and integration of the project adequate to proceed with the CD-3A scope? Are the risks being handled appropriately?

3. Is the procurement planning sufficiently mature and are the costs well enough understood?
4. Are Environment Safety and Health aspects of the CD-3A scope being properly addressed, given the project's current stage of development?
5. Do any other significant issues require management attention?

As Program Manager for the PIP-II project, Dr. Michael Harrison will serve as the contact person for the Office of High Energy Physics for this review. We appreciate your assistance in this matter. As you know, these reviews play an important role in our program. I look forward to receiving your committee's report.

cc: J. Stephen Binkley, SC-2
Harriet Kung, SC-3
Michael Procario, SC-35.2
Michael Harrison, SC-35.2
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