

## **Department of Energy**

Washington, DC 20585

July 19, 2007

MEMORANDUM FOR

Daniel R. Lehman, Director Construction Management Support Division

FROM:

Raymond J. Fonck Kyllingh Associate Director for Fusion Energy Sciences

SUBJECT:

Cost and Schedule Review of the National Compact Stellarator Experiment (NCSX) at the Princeton Plasma Physics Laboratory (PPPL)

I would like to request that your office organize and lead an Office of Science (SC) review of the NCSX project.

The purpose of this review is to evaluate the project's latest cost and schedule performance, and the project's path forward. This information will help SC determine whether the remainder of the NCSX Project's scope, cost and schedule are reasonable.

The review is planned to be held on August 15-17, 2007, at PPPL. In carrying out its charge, the review committee should evaluate the following:

- 1. Is the project's bottoms-up-estimate credible? Based on the funding guidance provided by the FES Program, is the cost and schedule estimate realistic for the remaining work? Is there an adequately mature design available on complex activities, such as machine assembly, to support the estimate?
- 2. Is the contingency supported by and consistent with an appropriate project-wide risk analysis? Is there adequate cost and schedule contingency in the new proposed baseline to achieve a high level of confidence in completing the project successfully?
- 3. Has the Project adequately incorporated developmental and fabrication experiences in the bottoms-up estimate as to increase the success of machine assembly and improve reliability during research operations?
- 4. Is the project being properly managed and organized at this point, and are future staffing plans at both PPPL and ORNL adequate? What is the level of confidence that the NCSX project team can complete the project within the proposed baseline? Is there adequate support from PPPL and ORNL management?



5. What is the planning level cost and schedule estimate that will be required for the NCSX project to perform Phase III (which includes implementation of all scope that was removed after CD 2) research activities?

Barry Sullivan, the NCSX Program Manager, will work closely with you as necessary to plan and carry out this review. I would appreciate receiving your Committee's report within 15 days of the conclusion of the review. This review will play an important role in ensuring that the NCSX project can be completed within the cost and schedule that they are proposing.

Thank you for your help in this matter. If you have any questions or need additional information, please contact Barry at (301) 903-8438.

cc:

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