
February 13, 2002

MEMORANDUM FOR DANIEL R. LEHMAN, DIRECTOR

CONSTRUCTION MANAGEMENT SUPPORT DIVISION

FROM: N. Anne Davies (original signed)

Associate Director for Fusion Energy Sciences

SUBJECT: Office of Science Conceptual Design Report Review for
the National Compact Stellarator Experiment project

I would like to request that Jim Carney from your office organize and lead an Office of Science Conceptual Design Report (CDR) review of the National Compact Stellarator Experiment (NCSX) project.

The purpose of the review is to assess all aspects of the Conceptual Design Report - technical, cost, schedule, management, and ES&H. The review should be held at PPPL on May 21-23, 2002. The NCSX project has a DOE approved Mission Need (CD-0), and the project has successfully completed a Physics Validation Review (PVR).

In carrying out its charge, the review committee should also respond to the following items:

1. Comment on the progress made by the project to address and resolve the comments from the PVR pertaining to NCSX design and fabrication. Also, comment on the likelihood of the project to meet the NCSX technical mission based upon physics analysis completed and physics analysis planned for the future.

2. With regard to the engineering design, fabrication and commissioning of NCSX, comment on the likelihood of the project to meet the NCSX technical mission considering (a) the current status and future plans for completing the design and (b) R&D results and future plans for additional R&D, if any. Also, comment on manufacturability and constructability of the critical systems and plans for commissioning.

3. With regard to the cost, schedule and management aspects of the project, comment on the cost and schedule estimates for the project, including (a) adequacy of the contingency estimates considering the current stage of project definition, and (b) the management plans and procedures identified for carrying out the project.

4. Are ES&H aspects being properly addressed given the project's current stage of development?

5. Although not part of a Major Item of Equipment project such as NCSX, and therefore not addressed in the CDR, the preparations made during the fabrication phase for the subsequent operations phase are important. Therefore, please comment separately on the plans and estimates to be presented by the project for such preparations including (a) diagnostic capability during operations, and (b) planning and analysis for the NCSX research program.

Warren Marton of my staff will work closely with you as necessary to plan and carry out this review. I would appreciate your committee's report by June 21, 2002.