DOE F 1325.8
(08-93)

United States Government **Department of Energy**

memorandum

DATE: September 10, 2015

REPLY TO
ATTN OF: Office of Basic Energy Sciences, SC-22

SUBJECT: DEPARTMENT OF ENERGY INDEPENDENT PROJECT REVIEW FOR THE NATIONAL SYNCHROTRON LIGHT SOURCE II EXPERIMENTAL TOOLS (NEXT) PROJECT

TO: Stephen Meador, Director, Office of Project Assessment, SC-28

I request that you organize and conduct an Independent Project Review of the NEXT project at the Brookhaven National Laboratory on November 3-4, 2015 for the Office of Basic Energy Sciences. This review is to assess the current status of the NEXT project and identify any concerns that could prevent the project from successfully completing within the approved baseline.

The performance baseline for NEXT (CD-2) was approved October 9, 2013 with a Total Project Cost of $90M and a CD-4 date of September 30, 2017 along with authorization for Long Lead Procurements (CD-3A) in the amount of $16M. CD-3, Start of Construction, was approved on July 7, 2014. In the two years since the baseline was established, over 60 project change requests (PCRs) have been submitted by the project, and approved by the Federal Project Director. The net result, including estimated cost variances, is a growth in the estimated cost at completion of the project from $68.1M to nearly $85.6M, leaving only $4.4M in unencumbered contingency (July 2015 data). With the project only 54% complete, and two years until CD-4, contingency usage needs a critical examination.

The objective of NEXT is to provide NSLS-II with a minimum of five "best-in-class" beamlines. This will enable exploration of the unique scientific opportunities offered by the new NSLS-II facility beyond those provided by its initial beamlines.

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

1. Project Scope: Is the project executing its technical baseline in a manner to provide world-class beamlines at project completion? Is the cost of the scope additions in line with the technical performance enhancements expected?

2. Cost and Schedule: Are the cost and schedule performance, including contingency utilization, adequately understood, controlled and reasonable based on project performance to date? Is contingency usage appropriate for this stage of the project and adequate to complete the project successfully?

3. Management: Is the project being effectively and efficiently managed? Is the utilization plan for the remaining contingency well-defined and appropriate?

4. Environment, Safety & Health and Quality Assurance (ES&H/QA): Are the ES&H/QA requirements being properly addressed given the project's current stage of development?

5. Recommendations: Has the project responded appropriately to previous review recommendations?

Philip F. Kraushaar, the NEXT Program Manager, will serve as the Office of Basic Energy Sciences point of contact for this review. I would appreciate receiving your committee's report within **60 days** of the review's conclusion.

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