**Department of Energy**
Washington, DC 20585

OCT 6 2014

Dr. Nigel Lockyer
Fermi National Accelerator Laboratory
P.O. Box 500 MS - 105 (WH 2E)
Batavia, Illinois 60510-5011

Dear Dr. Lockyer:

The Office of High Energy Physics (OHEP) of the Department of Energy (DOE) has scheduled the Institutional Review of the Fermi National Accelerator Laboratory for February 10-13, 2015. The office conducts Institutional reviews of each national laboratory with a high energy physics program every three or four years. This review will cover the entire HEP program at the laboratory, all major research efforts as well as facilities and operations of those facilities. The review will include all aspects of the laboratory that are normally covered in the annual Science & Technology (S&T) Review of the laboratory's facilities, so this review will also serve as the S&T review for 2015. As part of this review, the laboratory should present its proposed performance metrics for NuMI in FY 2015 and FY 2016.

This Institutional Review is the first such review at Fermilab since the OHEP began its regular Comparative Reviews of the National Laboratories. These reviews closely examine each laboratory's research efforts in the various frontiers, theory, and computation. In light of these separate in-depth reviews, the focus of the upcoming Institutional Review will be modified to avoid duplicating those efforts and will instead examine crosscuts of the laboratories program to judge the coordination, coherence and efficiency of those efforts. For example, one crosscut will be the Compact Muon Selenoid (CMS) where we will want to judge how well CMS operations and research work together with Theory, Computing and the university community to produce a coordinated, coherent and efficient subprogram. The primary purpose of these crosscuts is to allow the reviewers and the OHEP to assess the laboratory's integration of its support efforts into its physics research program, while also engaging our community of universities and the expertise of the other laboratories with HEP programs.

The specific crosscuts we would like you to address are:

1. CMS operations and research, Theory, Computing, University involvement.
2. Cosmic Frontier Program, Theory, Computing, Detector R&D, University and other laboratory involvement.
3. Neutrino Program, related Accelerator Programs, Theory, Computing, Detector R&D, University and other laboratory involvement.
4. Muon Program, related Accelerator Programs, Theory, Computing, Detector R&D, University and other laboratory involvement.

5. Technology R&D as it relates to Fermilab facilities.

In order to plan and organize this review, please work with the OHEP to devise a coordinated agenda for the review. Our goal is to judge the Fermilab Program and its synergies that make it more than the "sum of its parts". As always, the review will assess the merit, effectiveness and impact of both the program at Fermilab and the laboratory's contributions to the national program. We expect that the reviewers will be given adequate material to evaluate the current performance of the facility, the science resulting from the experiments that are served by the facility, and plans for future improvements to the facility, where the facility is the Accelerator Complex which consists of the Main Injector, Booster and Linac, the NuMI beam, and all other beams provided to experiments.

Within this new format, each panel member will be asked to evaluate and comment on:

- The quality and significance of the laboratory's recent scientific and technical accomplishments within each of the crosscuts identified above that comprise its entire physics program; and the merit, feasibility and projected impact of its future planned physics program and its alignment with OHEP future plans as expressed in the P5 report;

- The effectiveness and efficiency of facility operations, and the planning for future facility upgrades to support the research program as organized into the crosscuts, including appropriateness of the proposed performance metrics in terms of being realistic and maximizing the scientific productivity of the facility;

- The effectiveness of current laboratory management in strategic planning, developing appropriate core competencies, implementing a prioritized and optimized program, and promoting and implementing a safe work environment;

- The effectiveness of laboratory development and oversight of projects, including the laboratory's efforts to integrate its project efforts with active university and other HEP laboratories involvement;

- The leadership, creativity, and productivity of the facility's scientific and technical staff in carrying out the above activities;

- The quality and appropriateness of the laboratory's interactions with, and nurturing of its scientific community; and

- The laboratory's response to recommendations made in the 2013 S&T review.

The first, second, and third day of the review will consist of presentations by the laboratory and executive sessions. Breakout sessions in addition to the traditional plenary talks are encouraged. The fourth day will be used for an executive session and

preliminary report writing; a brief close-out will take place in the late morning. Preliminary findings, comments, and recommendation will be presented at the close-out.

Dr. John Kogut will chair the review and serve as our contact on all aspects of the review. He can be reached at (301) 903-1298 or John.Kogut@science.doe.gov. Please work with him and other members of the OHEP to develop the agenda for the review. In addition, materials for the review committee should be posted on a review website at least two weeks before the review. These materials should include review reports from recent comparative reviews as well as project and other related reviews.

Given the breadth of the program at Fermilab and the new organization of this review, we are also requesting that the laboratory prepare a document of up to 25 pages summarizing the current Fermilab program, recent accomplishments, near-term plans, and longer-term strategic vision for each of the crosscuts identified above. All requested materials for the review committee should be uploaded to the review website no later than Tuesday, January 27, 2015.

Each panel member is being asked to review all aspects of the HEP program at Fermilab. In addition, each panel member will be asked to evaluate in greater detail those parts of the program in which they have specialized expertise. They will be asked to write individual letters on their findings. The Chairman will accumulate these letters and compose a DOE report based on the information in the letters.

I greatly appreciate your efforts in preparing to present your laboratory's activities before this Institutional Review. It is an important process that allows our office to understand the accomplishments, quality, needs, and plans of Fermilab. I look forward to a very informative and stimulating visit.

Sincerely,

James Siegrist

James Siegrist
Associate Director of Science
for High Energy Physics

cc: Michael Procario, SC-25.2
Glen Crawford, SC-25.1
Michael Weiss, FSO