Department of Energy
Fermi Site Office
Post Office Box 2000
Batavia, Illinois 60510

DEC -3 2015

Ms. Martha E. Michels
Chief Safety Officer
Fermilab
P.O. Box 500
Batavia, IL 60510

Dear Ms. Michels:

SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT DETERMINATION AT FERMI NATIONAL ACCELERATOR LABORATORY – INTEGRATED ENGINEERING RESEARCH CENTER

Reference: Letter, from M. Michels to R. Hersemann, received November 25, 2015, Subject: National Environmental Policy Act Environmental Evaluation Notification Form for the Integrated Engineering Research Center

The Fermi Site Office (FSO) has reviewed the National Environmental Policy Act (NEPA) Environmental Evaluation Notification Form (EENF) for the Integrated Engineering Research Center. Based on the information provided in the EENF, the following categorical exclusion (CX) is approved:

Project Name	Approved	CX
Integrated Engineering Research Center	12/1/2015	B1.15

Enclosed is signed copy of the EENF for your records. No further NEPA review is required. This project falls under categorical exclusions provided in 10 *CFR* 1021, as amended in November 2011.

Sincerely,

for

Michael J. Weis
Site Manager

Enclosure:
As Stated

cc: N. Lockyer, w/o encl.
J. Lykken, w/o encl.
T. Meyer, w/o encl.
A. Kenney, w/o encl.
T. Dykhuis, w/encl.

FERMILAB ENVIRONMENTAL EVALUATION NOTIFICATION FORM (EENF) for documenting compliance with the National Environmental Policy Act (NEPA), DOE NEPA Implementing Regulations, and the DOE NEPA Compliance Program of DOE Order 451.1B

Project/Activity Title: Integrated Engineering Research Center
ES&H Tracking Number: 01135

I hereby verify, via my signature, the accuracy of information in the area of my contribution for this document and that every effort would be made throughout this action to comply with the commitments made in this document and to pursue cost-effective pollution prevention opportunities. Pollution prevention (source reduction and other practices that eliminate or reduce the creation of pollutants) is recognized as a good business practice which would enhance site operations thereby enabling Fermilab to accomplish its mission, achieve environmental compliance, reduce risks to health and the environment, and prevent or minimize future Department of Energy (DOE) legacy wastes.

Fermilab Action Owner: Kate Pripusich-Sienkiewicz (X8053)
Signature and Date 11/18/15

I. Description of the Proposed Action and Need

Purpose and Need:
The purpose of the Integrated Engineering Research Center (IERC) would be to provide mixed-used space of offices, technical benches, small laboratories, and large laboratories to consolidate engineering and technical teams, facilitate international interdisciplinary collaborations, leverage laboratory capabilities and expertise, avoid duplicating capabilities, and increase efficiency.

A mission need has been identified for a collaborative, multi-divisional, and interdisciplinary engineering research center to close the capability and infrastructure gaps at Fermilab by reducing the overall footprint of outdated facilities, integrating and collocating functions onto a central location, and improving operational efficiency of research and support activities. The older existing facilities would be retired, resulting in reduced maintenance and energy costs, and the geographically consolidated spaces would result in increased efficiencies and improved collaboration time between engineers, researchers, and users. An IERC would, therefore, provide the Department of Energy Office of Science with necessary capabilities and help develop the next generation of scientific users and engineers to advance neutrino research and technology, as well as help establish an international neutrino program and support other High Energy Physics science opportunities described in the P5 report.

Proposed Action:
A project site map is found in the appendix. The proposed action would construct an approximately 100,000 square foot building and surface level parking to the northeast of Wilson Hall. The multiple story building would be constructed to allow for flexible and sustainable office and laboratory space to enhance a collaborative environment between engineers, technicians, scientists, project teams and visitors. Construction activities would include removal of the existing built environment and excavation. The new building would connect to Wilson Hall on the ground floor and atrium level, and existing utilities around the building. Standard utility connections are expected, for example: domestic water, industrial cooling water, sanitary sewer, electrical, gas, communications, and storm sewer.

Alternatives Considered:
Five alternate options considered were the following:

Alternative 1: Improve existing buildings with intermittent renovations to the facilities to improve functionality. Intermittent renovations included minimal space quality improvements; correct critical deficiencies; upgrade building mechanical, electrical, plumbing and life safety systems to a level close to that of IERC.

Alternative 2: Renovate existing buildings to improve functionality; demolish Lab C, CD, and D in the SciDet facility and replace with new, higher efficiency high bay and clean room areas.

Alternative 3: Construct a multi-use building.

Alternative 4: Retain the building and laboratory space status quo, including regular maintenance of the facilities (No Action Alternative).

Alternative 5: Construct the Integrated Engineering Research Center at another DOE laboratory.

Alternatives #4 and #5 were discounted because they did not meet the purpose and need of the action to bring resources at Fermilab closer together in a collocated, high efficiency office and laboratory environment to enable more effective communication among Fermilab groups and project teams. Of the alternatives left, the results of a Life Cycle Analysis indicated that #3 was the most economically feasible solution.

II. Description of the Affected Environment

The affected natural environment has been previously disturbed. The affected areas include the eastern reflecting pond to the northeast of Wilson Hall, the turfed area between the fixed target beamline to the south of Road D, and the turfed area between A1 and A2 service buildings along Main Ring Road. Any impacts to wetlands would be identified via a wetland delineation during the detailed design phase and appropriate permits would be attained as necessary.

There would be impact to on-site utilities, new connections and locations which would be finalized in the detailed design phase. No impacts to utilities external to Fermilab are expected.

Additional environmental effects are highlighted in Section III.

III. Potential Environmental Effects (If the answer to the questions below is "yes", provide comments for each checked item and where clarification is necessary.)

A. Sensitive Resources: Would the proposed action result in changes and/or disturbances to any of the following resources?

- ☐ Threatened or endangered species
- ☐ Other protected species
- ☐ Wetland/Floodplains
- ☐ Archaeological or historical resources
- ☐ Non-attainment areas

B. Regulated Substances/Activities: Would the proposed action involve any of the following regulated substances or activities?

- ☒ Clearing or Excavation
- ☐ Demolition or decommissioning
- ☐ Asbestos removal
- ☐ PCBs
- ☐ Chemical use or storage
- ☐ Pesticides
- ☒ Air emissions
- ☒ Liquid effluents
- ☐ Underground storage tanks
- ☒ Hazardous or other regulated waste (including radioactive or mixed)
- ☐ Radioactive exposures or radioactive emissions
- ☐ Radioactivation of soil or groundwater

C. Other Relevant Disclosures: Would the proposed action involve any of the following actions/disclosures?

- ☐ Threatened violation of ES&H permit requirements
- ☐ Siting/construction/major modification of waste recovery or TSD facilities
- ☐ Disturbance of pre-existing contamination
- ☐ New or modified permits
- ☐ Public controversy
- ☐ Action/involvement of another federal agency
- ☐ Public utilities/services
- ☐ Depletion of a non-renewable resource

IV. Comments on checked items in section III.

Clearing or Excavation
Excavation for an approximate building footprint of 30,000 square feet is anticipated, including a 20 feet excavation offset on all sides of the building. Excavation would also take place to remove and reroute utilities, parking lots, and the eastern reflecting pond to the northeast of Wilson Hall. Affected area is highlighted in the graphic shown in the appendix. Disposition of spoils would follow Fermilab procedures. Detailed information on the volume and disposition of spoils would be determined in the detailed design phase. A 25 feet standoff distance from surrounding beamlines would be established as a project constraint.

The affected area is greater than 1 acre; therefore, a Storm Water Pollution Prevention Plan would be developed during the detailed design phase.

Air Emissions
A permanent diesel generator, in the range of 250 KW, is anticipated.

Liquid Effluents
The new building would require new connections to the sanitary and storm sewers. Additionally, existing sanitary and storm sewers would be rerouted as necessary.

Waste
Typical construction and demolition waste is anticipated. Recycling of waste material would follow Fermilab procedures. Detailed information on types and quantities of demolition waste would be determined in the detailed design phase.

V. NEPA Recommendation

Fermilab staff has evaluated the proposed action and believe a Categorical Exclusion is appropriate. It is believed that the proposed action meets the description found in DOE's NEPA Implementation Procedures, 10 CFR 1021, Subpart D, Appendix B1.15 as follows.

B1.15 Support Buildings
Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities, such as activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix.

Fermilab NEPA Program Manager: Teri L. Dykhuis
Signature and Date Teri L. Dykhuis 11/25/2015

VI. DOE/Fermi Site Office (FSO) NEPA Review

Based upon my review of information conveyed to me and in my possession concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1A), I have determined that the proposed action fits within the specified class of actions, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

FSO NEPA Compliance Officer: Rick Hersemann
Signature and Date Rick Hersemann 12/1/2015

VII. Appendix

Drawing of Proposed Action