NOV 15 2012

Mr. Jack W. Anderson
Chief Operating Officer
Fermilab
P.O. Box 500
Batavia, IL 60510

Dear Mr. Anderson:

SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) DETERMINATION AT FERMI NATIONAL ACCELERATOR LABORATORY (FERMILAB) – CULTURAL RESOURCES TESTING AND PRESERVATION PROJECT, IN SUPPORT OF THE ANTICIPATED LONG BASELINE NEUTRINO EXPERIMENT

Reference: Letter, from J. Anderson to M. Weis, dated November 7, 2012, Subject: NEPA Environmental Evaluation Notification Form (EENF) for the Cultural Resources Testing and Preservation Project, in Support of the Anticipated Long Baseline Neutrino Experiment

I have reviewed the Fermilab EENF for the Cultural Resources Testing and Preservation Project, in support of the anticipated Long Baseline Neutrino Experiment. Based on the information provided in the EENF, I have approved the following categorical exclusion (CX):

Project Name	Approved	CX
Cultural Resources Testing and Preservation Project, in Support of the Anticipated Long Baseline Neutrino Experiment	11/14/2012	B3.1, B3.3

I am returning a 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,

Original Signed by
Mark E. Bollinger
Deputy Manager

Michael J. Weis
Site Manager

Enclosure:
As Stated

cc: P. Oddone, w/o encl.
Y. - K. Kim, w/o encl.
N. Grossman, w/encl.
T. Dykhuis, w/encl.
R. Walton, w/encl.

bc: P. Siebach, CH-STS, w/encl.
M. McKown, CH-OCC, w/o encl.
J. Scott, w/o encl.
R. Hersemann, w/encl.
P. Carolan, 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 451.1

Project/Activity Title: Cultural Resources Testing and Preservation Project, in support of the anticipated Long Baseline Neutrino Experiment

ES&H Tracking Number: 01100

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 Project Manager: Rodney Walton (X2565)
Signature and Date Rod Walton 11/7/12

I. Description of the Proposed Action and Need

Purpose and Need:
The purpose of the proposed action/project is to conduct cultural resources testing and preservation work in accordance with requirements and in support of the anticipated Long Baseline Neutrino Experiment. 'Cultural resources' include 'historic properties' as defined by the National Historic Preservation Act (NHPA); 'archaeological resources' as defined by the Archaeological Resources Protection Act (ARPA); and 'cultural items' as defined in the American Graves Protection and Repatriation Act (NAGPRA).

This action/project is needed to maintain compliance with DOE Order 141.1, which states the following: "The preservation and protection of America's cultural heritage are important functions and responsibilities of the Federal government for properties under its control or jurisdiction. This Policy helps ensure that DOE maintains a program that reflects the spirit and intent of the legislative mandates." These legislative mandates include the NHPA, the ARPA, and the NAGPRA.

In addition to compliance, an Archaeological Phase I (investigation) of twelve potential sites is needed to determine whether these are in fact cultural resource sites. And an Archaeological Phase II (evaluation) of two established cultural resource sites is needed in order to determine whether there are any resources of significance that would be eligible for inclusion in the National Register of Historic Places (NRHP), prior to initiating site preparation work for the Long Baseline Neutrino (LBNE) Project.

Proposed Action:
This action/project would include five distinct tasks including the following:

1. Record all historic properties (primarily farm sites that were on the property prior to the establishment of Fermilab) identified to date.

2. Locate (non-invasive Archaeological Phase I) all potential sites, which were not captured in the original 1990 survey.

3. Review all historic farm buildings (350) and structures (77) that due to the age of the lab may now meet the 50-year threshold of consideration for inclusion on the National Register of Historic Properties (NRHP).

4. Evaluate (invasive Archaeological Phase II study) of two known cultural resource sites, near the proposed LBNE site. The two sites are the 'Frog' and 'Tadpole' as identified in the Fermilab CRMP and the total area for the two sites would be less than 1 acre. The Tadpole site would be plowed and the Frog site, because it is forested, would be shovel tested and then both would be examined by consultants, who are certified archaeologists, for artifacts and/or cultural features. It is expected that a portion of these sites would be stripped for more extensive research. The consultants would prepare a report for Fermilab, and draft correspondence for DOE to forward to the Illinois State Historic Preservation Office (SHPO) to make a NRHP status determination of the sites.

5. Update the Fermilab Cultural Resources Management Plan (originated September 13, 2002) to incorporate site data discovered since development of the original CRMP and data found via tasks 1-4.

Alternatives Considered
The only alternative is to take 'no action.' However, this would not allow for Fermilab to fulfill the purpose and need stated above and thereby prevent fulfillment of laws and requirements governing cultural resources as well as the obligation of the DOE, as a Federal agency, to preservation. Also, with regard to Task 4, if no action is taken then the evaluation, to determine whether there are resources of significance, could not be concluded and therefore the two sites would need to be protected during all phases of the LBNE site preparation and construction. There would, however, still be an increased potential for unintended damage so the best approach to ensure preservation of any potentially significant resources here is removal prior to any construction in the vicinity.

II. Description of the Affected Environment

Tasks 1-3 would have minimal to no environmental impact. Task 2 includes the Phase I archaeological survey of twelve potential sites. This is non-invasive and comprised of background research, which includes documentary review of background studies on the historical development in the area and research including historic maps and any previous documentation, to determine context and the likelihood for resource identification; field reconnaissance, or walk-over, to note any disturbances or surface evidence of cultural resources and then determination of whether there are 'archaeologically sensitive areas' that could be subjected to a Phase II archaeological survey.

For Task 4, the Phase II archaeological survey, the total area of disturbance of the two sites (see Appendix A) would be less than 1 acre and the Frog site area would be plowed to enable surface reconnaissance. Approximately 10% of the area would be sampled more intensively by stripping the top 12-18 inches of soil to enable the researchers to look for artifacts/features. Soil would be immediately replaced. At the conclusion of the study, the area would be re-graded and restored to its previous profile and then re-seeded. There would be no net spoils created by the work.

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?

- [x] Clearing or Excavation
- [ ] Demolition or decommissioning
- [ ] Asbestos removal
- [ ] PCBs
- [ ] Chemical use or storage
- [ ] Pesticides
- [x] Air emissions
- [x] 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.

Archaeological and historical resources
The requirements outlined in 36 CFR Part 800–Protection of Historic Properties and 43 CFR part 7-Protection of Archaeological Resources would be followed.

Clearing or Excavation
The Archaeological Phase II would include excavation and appropriate erosion control devices would be utilized as necessary.

Air Emissions
Typical internal combustion engine emissions from construction vehicles, most likely an excavator, would result from excavation for the Phase II work but these would be mobile sources, which are exempt from permitting.

Liquid Effluents
Erosion control devices would be utilized to prevent sediment accumulation in storm water runoff.

V. NEPA Recommendation

Fermilab staff have reviewed this proposed action and concluded that the appropriate level of NEPA determination is Categorical Exclusion. The conclusion is based on the proposed action meeting the description found in DOE's NEPA Implementation Procedures, 10 CFR 1021, Subpart D, Appendix B3.1 and B3.3 which states:

B3.1 Site characterization and environmental monitoring, (including but not limited to siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such

activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging or boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

B3.3 Field and laboratory research, inventory, and information collection activities that are directly related to the conservation of fish and wildlife resources or to the protection of cultural resources, provided that such activities would not have the potential to cause significant impacts on fish and wildlife habitat or population or to cultural resources.

Fermilab NEPA Program Manager: Teri L. Dykhuis
Signature and Date Teri L. Dykhuis 11/7/2012

VI. DOE/FSO NEPA Coordinator Review

Concurrence with the recommendation for determination:

Fermi Site Office (FSO) Manager: Michael J. Weis
Signature and Date M E Weis for 11/15/2012

FSO NEPA Coordinator: Rick Hersemann
Signature and Date Rick Hersemann 11/14/2012

Appendix A

Map from the Fermilab Cultural Resources Management Plan indicating the location of the 'Frog' and 'Tadpole' cultural resource sites