

OCT 21 2013

Ms. Victoria A. White  
Chief Operating Officer  
Fermilab  
P.O. Box 500  
Batavia, IL 60510

Dear Ms. White:

SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) DETERMINATION AT  
FERMI NATIONAL ACCELERATOR LABORATORY (FERMILAB) – NEPESE  
MARSH UPGRADES

Reference: Letter, from V. White to M. Weis, dated October 14, 2013, Subject: NEPA  
Environmental Evaluation Notification Form (EENF) for the Nepese Marsh  
Upgrades

I have reviewed the Fermilab EENF for the Nepese Marsh Upgrades. Based on the information  
provided in the EENF, I have approved the following categorical exclusion (CX):

<u>Project Name</u>	<u>Approved</u>	<u>CX</u>
Nepese Marsh Upgrades	10/17/2013	B2.5

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,



Michael J. Weis  
Site Manager

Enclosure:  
As Stated

cc: N. Lockyer, w/o encl.  
M. Michels, w/encl.  
T. Dykhuis, w/encl.  
R. Walton, w/o encl.

bc: P. Siebach, CH-STC, w/encl.  
M. McKown, CH-OCC, w/o encl.  
J. Scott, FSO, w/o encl.  
R. Hersemann, FSO, 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:** Nepese Marsh Upgrades  
**ES&H Tracking Number:** 01111

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:** David Shemanske (X3303)

**Signature and Date**

*David Shemanske* 10/9/2013

**Fermilab ES&H Officer:** Rod Walton (X2565)

**Signature and Date**

*Rod Walton* 10/10/13

## I. Description of the Proposed Action and Need

### Purpose and Need:

Nepese marsh is currently completely land-locked by an artificial earthen berm; therefore, the only input of water into the marsh is from direct precipitation. If the water level becomes too high, it must be reduced by mechanical pumping. This proposed action is intended to allow for passive inlet of surface water and a passive discharge of water from Nepese to DUSAF Pond. This would eliminate the need for active pumping of water from the marsh to DUSAF Pond and allow a more natural hydrologic regime.

### Proposed Action:

The proposed action would involve installation of approximately 50 feet of 18 inch culvert (see Exhibit A) in the existing berm at the northwest corner of the marsh to accept water flow from the Village surface water drainage. The pipe elevation would be set to capture flows greater than the base flow and direct them into the marsh. A swale (see Exhibit A) would be constructed by excavating the berm on the south side of the marsh to allow water to flow from the marsh into DUSAF Pond. Excess flow (baseflow) would continue to be routed to DUSAF Pond in the existing ditch to the west of the marsh. The bottom elevation of the swale would be set to maintain the optimal water depth within the marsh. Approximately 60 cubic yards of material would be removed from the berm and placed on either side to create diversity in the bottom elevation.

### Alternatives Considered:

There are no alternatives that do not involve some kind of mechanical active pumping. Taking no action would leave the system as it is now, which wastes resources on pumping and creates a less than optimal hydrologic regime in the marsh.

## II. Description of the Affected Environment

This project is designed to alter the surface water hydrology in the area, however, the modifications are minor relative to the total hydrologic regime in the area, and would create positive impacts. Excavated materials would be used to enhance the bottom elevation of the marsh and adjacent wetlands in DUSAF

Pond. The project would require a permit from the U.S. Army Corps of Engineers under the Clean Water Act section 404 wetland program. It is expected that the Chicago District Corps of Engineers would consider a regional permit for wetland enhancement or issue a letter of no objection to the project, since the expected effects of the project would be positive. The area contains habitat for the Illinois Endangered species, black-crowned night heron (*Nycticorax nycticorax*). This would be considered, during the 404 permitting process, with the Illinois Natural History Survey, which is the branch of the Illinois Department of Natural Resources that reviews protected species.

**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.**

**Threatened or Endangered Species**

The area contains habitat for the Illinois Endangered species, black-crowned night heron (*Nycticorax nycticorax*). This would be considered, during the 404 permitting process, with the Illinois Natural History Survey, which is the branch of the Illinois Department of Natural Resources that reviews protected species.

**Wetlands/Floodplain**

The project would require a permit from the U.S. Army Corps of Engineers under the Clean Water Act section 404 wetland program. It is expected that the Chicago District Corps of Engineers would consider a regional permit for wetland enhancement or issue a letter of no objection to the project, since the expected effects of the project would be positive.

**Clearing and Excavation**

Excavated materials would be used to enhance the bottom elevation of the marsh and adjacent wetlands in DUSAF Pond. No materials would be removed from the site.

**Liquid Effluent**

This project is designed to alter the surface water hydrology in the area, however, the modifications are minor relative to the total hydrologic regime in the area, and would create positive impacts.

**New or Modified Permits**

See Wetland/Floodplain above.

**V. NEPA Recommendation**

Fermilab staff has reviewed this 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 B2.5 which states:

B2.5 Safety and environmental improvements of a facility (including, but not limited to, replacement and upgrade of facility components) that do not result in a significant change in the expected useful life, design capacity, or function of the facility and during which operations may be suspended and then resumed. Improvements include, but are not limited to, replacement/upgrade of control valves, in-core monitoring devices, facility air filtration systems, or substation transformers or capacitors; addition of structural bracing to meet earthquake standards and/or sustain high wind loading; and replacement of aboveground or belowground tanks and related piping, provided that there is no evidence of leakage, based on testing in accordance with applicable requirements (such as 40 CFR part 265, "Interim status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities" and 40 CFR part 280, "Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks"). These actions do not include rebuilding or modifying substantial portions of a facility (such as replacing a reactor vessel).

Fermilab NEPA Program Manager: Teri L. Dykhuis  
Signature and Date Teri L. Dykhuis 10/10/2013

**VI. DOE/FSO NEPA Coordinator Review**

Concurrence with the recommendation for determination:

Fermi Site Office (FSO) Manager: Michael J. Weis  
Signature and Date [Signature] 10/21/2013

FSO NEPA Coordinator: Rick Hersemann  
Signature and Date Rick Hersemann 10/17/2013

**Exhibit A – Approximate locations for the proposed culvert and swale to connect Nepese Marsh with DUSAF Pond**

