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

SEP 10 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) – SITEWIDE DOMESTIC WATER SERVICE (DWS) REPLACEMENT PROJECT

Reference: Letter, J. Anderson to M. Weis, dated August 30, 2012, Subject: National Environmental Policy Act (NEPA) Environmental Evaluation Notification Form (EENF) for the Sitewide Domestic Water Service Replacement Project

I have reviewed the Fermilab EENF for the Sitewide Domestic Water Service Replacement Project. Based on the information provided in the EENF, I have approved the following categorical exclusion (CX):

Project Name	Approved	CX
Sitewide DWS Replacement Project	9/04/2012	B1.3, B1.15

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

Sincerely,

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.

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: Sitewide Domestic Water Service (DWS) Replacement
ES&H Tracking Number: 01098

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 Director: Larry Sliwa (X3582)
Signature and Date_____

Fermilab Project Manager: Steve Dixon (X8501)
Signature and Date_____

Fermilab Project Environmental Officer: Rod Walton (X2565)
Signature and Date_____

I. Description of the Proposed Action and Need

Purpose and Need:

The Facilities Engineering Services Section (FESS) provides overall administrative, technical, and physical support and maintenance of the Laboratory's infrastructure for supplying all utility services critical to the Laboratory's mission.

There is a need to maintain a dependable base from which science programs can be accomplished; this is dependent upon a robust, redundant, maintainable, and flexible utility system. One of the backbones of Fermilab's utility systems is the Domestic Water Service (DWS).

The DWS system consists of the various underground, piping, valves, connections, meters and vaults that provide potable water for the Laboratory. In the early 2000's the Laboratory DWS system shifted from an onsite, well based supply to a municipal supply served by the Village of Warrenville. This provided a reliable source of DWS for the Laboratory. However, the distribution portion of the DWS continues to exhibit detrimental characteristics such as leaks, poor flows and odors.

The purpose of this project is to replace key components of the DWS distribution in order to provide a robust system capable of supporting the Laboratory mission into the future.

Proposed Action:
This project would replace critical components of the DWS distribution system with systems to provide for a reliable means to providing potable water to support the Laboratory mission. This would include the replacement of the existing underground mains along Road A, resized building service taps, upgraded meter vaults and related improvements to the sitewide DWS system. Listed below are the specific areas of the DWS that have been identified for improvements:

Road A Corridor:
The 'Road A' DWS Corridor serves the fixed target area and serves over 20 occupied buildings at the north end of the Fermilab site. The DWS main in this corridor continues to deteriorate and as a result has experienced significant leaks over the past several years. This project would replace the existing DWS main in this corridor with a new main sized for the anticipated use and would be constructed of materials better suited for the corrosive soils at the site. Each service tap to an existing building would be replaced with a modern shutoff device that is able to isolate the DWS service to the building. As part of the base scope, the existing DWS service to the building would remain as currently installed. Considering the length of this corridor and the number of required service taps this scope of work has been identified as the major scope of work for this project.

Village DWS:
In early 2000s, a portion of the DWS system in the Village area of the site was replaced to correct deficiencies related to flow and aging materials. That project replaced approximately half of the below grade mains in the Village. This project would investigate additional improvements that would improve the water quality and maintainability of the DWS system in the Village area. Pending the analysis to be completed during the design phase of the project, this would likely include water main replacement, service taps, water meter vault replacement and related work.

Scope Contingency
Several areas of scope contingency have been identified as possible sources of scope contingency. The items listed below may be added or removed from the base scope of work to provide a balanced project:

1. Building Services - This alternate would allow for the replacement of the existing building services from the connection point of the new water main to a point within the building.

2. Looped Main - Based on an analysis of the DWS system to be conducted during the design phase, additional looped mains may be required to improve the flow characteristics of the system. This alternate would install the piping, valves and connections to provide these improvements.

3. Water Meters - This alternate would install modern water meters at key locations in the DWS system, such as Wilson Hall, to verify usage. These meters would be compatible with the existing site wide monitoring system.

Alternatives
Repairs and modifications on an 'as-needed' basis would negatively impact Laboratory operations and increase the overall cost of the work and therefore is a potential but not viable alternative.

The "no action" alternative would not fulfill the above stated 'purpose and need.'

II. Description of the Affected Environment

The project total area would be greater than one acre; therefore, coverage under the 'Illinois EPA General Stormwater Permit for Construction Activities' is required. A 'Notice of Intent' would be prepared and forwarded to the IEPA.

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 and Excavation
Approximately 1000 cubic yards of spoils would be generated by the installation of the water mains. This material would primarily be used as backfill. Excess materials would be disposed of in approved stockpile locations on the Fermilab site.

Asbestos removal
'Transite pipe', an asbestos containing material, may be discovered during excavation activities. If discovered, the material would be isolated and mitigated in accordance with Fermilab policies and procedures.

New or modified permits
The project total area would be greater than one acre; therefore, coverage under the 'Illinois EPA General Stormwater Permit for Construction Activities' is required. A 'Notice of Intent' would be prepared and forwarded to the site. The aforementioned stormwater general permit, as well as an Illinois EPA permit to construct and operate, would be required.

V. NEPA Recommendation

Fermilab staff have reviewed this proposed action and concluded that the appropriate level of NEPA determination is a 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 B1.3 which states:

"Routine maintenance activities and custodial services for buildings, structures, rights-of-way, infrastructures (including, but not limited to, pathways, roads, and railroads), vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed, provided that the activities would be conducted in a manner in accordance with applicable requirements. Custodial services are activities to preserve facility appearance, working conditions, and sanitation (such as cleaning, window washing, lawn mowing, trash collection, painting, and snow removal). Routine maintenance activities, corrective (that is repair), preventive, and predictive, are required to maintain and preserve buildings, structures, and infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Such maintenance may occur as a result of severe weather (such as hurricanes, floods, and tornados), wildfires, and other such events. Routine maintenance may result in replacement to the extent that replacement is in-kind and is not a substantial upgrade or improvement. In-kind replacement includes installation of new components to replace outmoded components, provided that the replacement does not result in a significant change in the expected useful life, design capacity, or function of the facility. Routine maintenance does not include replacement of a major component that significantly extends the originally intended useful life of a facility (for example, it does not include the replacement of a reactor vessel near the end of its useful life). Routine maintenance activities include, but are not limited to:

a) Repair or replacement of facility equipment, such as lathes, mills, pumps, and presses;
b) Door and window repair or replacement;
c) Wall, ceiling, or floor repair or replacement;
d) Reroofing;
e) Plumbing, electrical utility, lighting, and telephone service repair or replacement
f) Routine replacement of high-efficiency particular air filters;
g) Inspection and/or treatment of currently installed utility poles;
h) Repair of road embankment;
i) Repair of fire protection sprinkler systems;
j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing, and scraping and grading of unpaved surfaces;
k) Erosion control and soil stabilization measures (such as reseeding, gabions, grading, and revegetation);
l) Surveillance and maintenance of surplus facilities in accordance with DOE Order 435.1, "Radioactive Waste Management," or its successor;
m) Repair and maintenance of transmission facilities, such as replacement of conductors of the same nominal voltage, poles, circuit breakers, transformers, capacitors, crossarms, insulators, and downed powerlines, in accordance, where appropriate, with 40 CFR part 761 (Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions) or its successor;
n) Routine testing and calibration of facility components, subsystems, or portable equipment (such as control valves, in-core monitoring devices, transformers, capacitors, monitoring wells, lysimeters, weather stations, and flumes);
o) Routine decontamination of the surfaces of equipment, rooms, hot cells, or other interior surfaces of buildings (by such activities as wiping with rags, using strippable latex, and minor vacuuming), and removable of contaminated intact equipment and other material (not including spent nuclear fuel or special nuclear material in nuclear reactors);
p) Removal of debris."

And Appendix B1.15 which states:

"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 by B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix."

Fermilab NEPA Reviewer: Teri L. Dykhuis
Signature and Date Teri L. Dykhuis 8/30/2012

VI. DOE/CH-FSO NEPA Coordinator Review

Concurrence with the recommendation for determination:

Fermi Site Office (FSO) Manager: Michael J. Weis
Signature and Date 9/6/2012

FSO NEPA Coordinator Reviewer: Rick Hersemann
Signature and Date Rick Hersemann 9/4/12