



Department of Energy

Fermi Site Office
Post Office Box 2000
Batavia, Illinois 60510

JUL 15 2010

Dr. Bruce Chrisman
Chief Operating Officer
Fermilab
P.O. Box 500
Batavia, IL 60510

Dear Dr. Chrisman:

SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) DETERMINATION AT FERMILAB NATIONAL ACCELERATOR LABORATORY (FERMILAB) – D-ZERO EXPERIMENT EMERGENCY GENERATOR FUEL TANK

Reference: Letter, B. Chrisman to M. Bollinger, dated July 9, 2010, Subject: National Environmental Policy Act (NEPA) Environmental Evaluation Notification Form (EENF) for the D-Zero Experiment Emergency Generator Fuel Tank

I have reviewed the Fermilab EENF for the D-Zero Experiment Emergency Generator Fuel Tank. 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>
D-Zero Experiment Emergency Generator Fuel Tank	7/13/2010	B1.3

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 1997.

Sincerely,

Mark E. Bollinger
Acting 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

Project/Activity Title: D-Zero Experiment Emergency Generator Fuel Tank Replacement Project

ES&H Tracking Number: 01088

Funding Source: General Plant Project Funds

Fermilab Environmental Officer (submitted PIF): Angela Sands (X3701)

Fermilab Project Lead: Eric McHugh (X3199)

I hereby certify via my signature that every effort would be made throughout this project 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 DOE legacy wastes.

Fermilab Project Lead: Eric McHugh

Signature



Date

7.6.10

Fermilab NEPA Reviewer: Teri L. Dykhuis

Signature



Date

7/8/2010

I. Description of the Proposed Action and Need

Purpose and Need:

The generator at the Fermilab D-Zero Experiment Building provides emergency back-up power for the detector and other systems. The current diesel-powered generator fuel tank is a single-walled tank which does not meet the new requirements of the Spill Prevention Control and Countermeasure (SPCC) regulations found at 40 CFR 112.8(c)(2). To ensure that the generator is in compliance, measures need to be taken to provide adequate secondary containment should the fuel tank sustain a leak.

Alternative options that were reviewed include the following:

- 1) Addition of a secondary containment structure around the generator. A secondary containment structure would pose a maintenance issue due to its location in proximity to underground electrical and the need for personnel to periodically drain rainwater and remove snowfall. Estimates for this option ranged from \$5500 to \$20,000 which was comparable to replacing the fuel tank, however, this option was dismissed due to the maintenance issues.
- 2) Replacing the current generator with a new generator that has a double-walled tank. The price estimates were approximately \$100,000. Since this option is substantially more costly than replacing the fuel tank only and the current generator is fully functional and adequate for future needs, this option was dismissed.
- 3) Taking 'no action.' This would not fulfill the purpose stated above.

Proposed Action:

It is proposed that the current back-up emergency generator single-walled fuel tank be replaced with a new 390 gallon capacity double-walled fuel tank that would retain the diesel fuel should the inner tank

rupture. The current fuel tank would be emptied prior to replacement and this process would be conducted by a subcontractor, who would utilize secondary containment for spill mitigation. The fuel would be collected in 55-gallon drums, which would be stored in secondary containment inside the D-Zero assembly building during the fuel tank replacement. The subcontractor would disconnect fuel lines, generator cables, etc.; remove the generator from the existing fuel tank; and install the new fuel tank to the generator. It would be placed on the existing concrete pad and a rupture basin alarm would be installed on the new double-walled fuel tank to give warning if the tank should rupture. The fuel would be transferred from the 55-gallon drums into the new fuel tank, again utilizing secondary containment during the transfer. The original fuel tank would be triple rinsed and sent to storage prior to being recycled and the rinsate would be collected and disposed of as a hazardous waste. It is anticipated that this work would be completed during the accelerator shutdown to minimize disruption.

II. Description of the Affected Environment

No soil would be excavated and utility lines would not be modified. Secondary containment would be utilized to prevent the possibility of a spill into a waterway. In addition, the fuel tank rinsate would be properly disposed according to Illinois environmental regulations.

III. Potential Environmental Effects (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

- 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

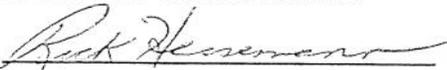
IV. NEPA Recommendation

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 applicable requirements 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 (e.g., pathways, roads, and railroads), vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed. 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, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. 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 if 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 of facility equipment, such as lathes, mills, pumps, and presses; (b) Door and window repair or replacement; (c) Wall, ceiling, or floor repair; (d) Reroofing; (e) Plumbing, electrical utility, and telephone service repair; (f) Routine replacement of high-efficiency particulate air filters; (g) Inspection and/or treatment of currently installed utility poles; (h) Repair of road embankments; (i) Repair or replacement of fire protection sprinkler systems; (j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing; (k) Erosion control and soil stabilization measures (such as reseeding and revegetation); (l) Surveillance and maintenance of surplus facilities in accordance with DOE Order 5820.2, "Radioactive Waste Management"; (m) Repair and maintenance of transmission facilities, including replacement of conductors of the same nominal voltage, poles, circuit breakers, transformers, capacitors, crossarms, insulators, and downed transmission lines, in accordance, where appropriate, with 40 CFR part 761 (Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions); (n) Routine testing and calibration of facility components, subsystems, or portable equipment (including but not limited to, control valves, in-core monitoring devices, transformers, capacitors, monitoring wells, lysimeters, weather stations, and flumes); and (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), including removal of contaminated intact 20 equipment and other materials (other than spent nuclear fuel or special nuclear material in nuclear reactors)."

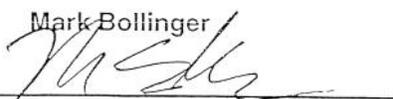
V. DOE/CH-FAO NEPA Coordinator Review

Concurrence with the recommendation for determination:

NEPA Coordinator Reviewer, U.S. DOE FSO: Rick Hersemann

Signature 
Date 7/13/10

Acting Fermi Site Office Manager: Mark Bollinger

Signature 
Date 7/13/2010

VI. Comments on checked items in section III

Chemical use or storage

Diesel fuel would be transferred from the old fuel tank into 55-gallon drums and then transferred from the 55-gallon drums into the new fuel tank. Secondary containment would be utilized during transfer and storage.

Hazardous or other regulated waste

Fuel tank rinsate would be disposed of per Illinois environmental regulations.

