

**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 Policy 451.1**

Project/Activity Title: Long Baseline Neutrino Facility Far Site Process Wastewater for Underground Discharge

ES&H Tracking Number: 01150

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: Joshua Willhite (605-571-2425 X616)

Signature and Date _____

I. Description of the Proposed Action and Need

Purpose and Need:

The purpose in discharging/diverting Long Baseline Neutrino Facility (LBNF) Far Site process wastewater (WW) to the 17 Ledge is to minimize impacts to all stakeholders. The need to discharge/divert process wastewater to the 17 Ledge is to avoid negative impacts in overloading the Wastewater Treatment Plant (WWTP) with excessive Total Suspended Solids(TSS)/Total Dissolved Solids(TDS) and high pH, which could in turn cause the Sanford Underground Research Facility (SURF) to be out of compliance with their National Pollutant Discharge Elimination System (NPDES) permit and/or mechanical issues in the WWTP.

Proposed Action:

The proposed action is that of the LBNF Far Site WW for Underground Discharge. This process WW would originate from equipment generated drilling water; equipment washdown water; rock face washdown water, including ammonia and blasting agents; dust suppression water; solids from the shotcreting process, and shotcrete finishing chemicals. It is then piped through pneumatic pressure to the 17 Ledge. The logic behind discharging water to the 17L is that it goes to a pool that isn't connected to the pool that discharges to the SURF WWTP. The 17L pool is also not connected to any drinking groundwater aquifer. The map detailing the proposed location of the discharge is found in Section VII.

Alternatives Considered:

There was an alternative method discussed. The alternative method involved upgrading the SURF WWTP which was deemed cost prohibitive as the frequency of need didn't justify the WWTP plant upgrades or an NPDES permit modification. The science based proposed action of discharging underground mine process wastewater to the 17 Ledge was chosen because nearly zero impacts are projected to the SURF WWTP and/or the environment.

The 'No Action' alternative would not meet the purpose and need for this proposed activity.

II. Description of the Affected Environment

Specific environmental effects are presented 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.

Chemical use or storage

Chemicals dispensed and utilized in the 4850L underground would be shotcrete additive chemicals and lubricating oils. There may be some small spills underground at the 4850 Level. These small spills would all be reported and cleaned up in a timely manner. The spills would also all be internally reportable with no outside agency reporting. The EPA "List of Lists" would be utilized to research Reportable Quantities (RQs) based on quantities of chemical spilled. The hydrocarbon spills would all be under the South Dakota Department Administration of Natural Resources (SDDANR) reporting threshold of 25 gallons or greater and there have been no oil sheen impacts on surface waters.

The Subcontractor, Thyssen Mining Inc. (TMI) would have a fully signed Tier 1 Spill Prevention Control and Countermeasure plan. The plan would be signed by a TMI Professional Engineer (PE), which is above and beyond regulation due to TMI not meeting the PE signature obligation of storing >10,000 gallons of total hydrocarbons and having no single storage tank >5,000 gallons.

V. NEPA Recommendation

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

B1.6 Tanks and equipment to control runoff and spills - Installation or modification of retention tanks or small (normally under one acre) basins and associated piping and pumps for existing operations to control runoff or spills (such as under 40 CFR part 112). Modifications include, but are not limited to, installing liners or covers. (See also B1.33 of this appendix.)

Fermilab NEPA Program Manager: Teri L. Dykhuis

Signature and Date _____

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 Policy 451.1), 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 _____

VII. Diagram

