

Environment, Safety, and Health for Project X

DRAFT 3/13/09

Protection of the environment is of paramount importance for Project X and therefore consideration of environmental factors, as required by the National Environmental Policy Act (NEPA), will be included in the planning as well as implementation of the project. The NEPA review process is initiated as soon as possible after the DOE proposes (or is presented with a proposal for) an action [10 CFR 1021.200]. Initially, the level of NEPA review and subsequent NEPA documentation must be determined. Fermilab will recommend to DOE whether either Project X fits within a category of activities that are excluded by regulation from requiring the preparation of a NEPA Environmental Assessment (EA) or Environmental Impact Statement (EIS) or an EA or EIS should be developed [10 CFR 1021.300]. If DOE concurs then DOE, supported by Fermilab, will prepare the necessary NEPA documentation.

A NEPA EA likely will need to be prepared for Project X. An EA would identify and analyze environmental effects from the project and discuss options for minimizing them. In addition, planning is needed to obtain or amend State and Federal environmental permits, as appropriate, prior to construction and/or operation. If prepared, the EA would serve as the basis for determining whether Project X will require an EIS or if a Finding of No Significant Impact (FONSI) can be issued in accordance with Federal regulations and DOE guidance, implementing NEPA. A FONSI would enable the project to proceed without preparing an EIS.

Environment, safety, and health (ES&H) requirements will be systematically integrated into management and work practices at all levels so that Project X is executed in a manner that protects the public, the project workers, Fermilab contractor and DOE community members, and the environment. Potential ES&H risks will be managed to ensure that impacts are minimized both on and off the site.

Project X Safety Management System documents and policies will make it clear that the responsibility for safety and environmental protection starts with the Project X Manager and flows through the management chain to project staff, line supervisors, and project workers. Project X management is responsible for working with Fermilab Division/Section line management to ensure that staff are both trained and responsible for ES&H in their assigned areas. The Project X work at Fermilab will be executed in accordance with Fermilab policies as specified in the Fermilab Environment, Safety, and Health Manual (FESHM) inclusive of the Fermilab Radiological Control Manual (FRCM) to ensure hazards are identified and mitigated; work is authorized after analysis of potential ES&H impacts is completed; and proper oversight of work is conducted by Project X and Fermilab line management and staff. The Fermilab ES&H Section will provide technical support to the project and conduct independent oversight and review of project activities. Approval of the Project X Construction Safety and Health Plan will be obtained from DOE.

Specific ES&H hazards and the means for their mitigation will be detailed in the Project X safety assessment process as specified in DOE O 420.2B, *Safety of Accelerator Facilities*. The Project X Preliminary Safety Assessment Document (PSAD) will address ES&H considerations in the design, fabrication, and installation of the project. The PSAD will be completed prior to starting Project X construction (i.e., before CD-3b). The PSAD will include the preliminary Hazard Analysis (HA). The final Safety Assessment Document (SAD) for Project X will evaluate in greater depth the ES&H considerations for operation of Project X and will be completed prior to operation. The SAD will incorporate the updated Hazard Analysis and serve as the basis of the Accelerator Safety Envelope (ASE), the DOE-approved physical and administrative bounding conditions for safe operation of Project X, and the Accelerator Readiness Review (ARR). The ARR will be accomplished in phases prior to commissioning and completed prior to starting operations (e.g., before CD-4). As part of this process, a complete evaluation of all worker safety, fire protection, radiation safety, electrical safety, and industrial hygiene hazards will be reviewed and potential impacts mitigated. Specifically, a fire hazard analysis (FHA) and radiation shielding assessment will be performed and included in the SAD.