

April 29, 2022

Mr. Roger Snyder
Site Office Manager
Fermi Site Office
U.S. Department of Energy
P. O. Box 2000
M/S 118
Batavia, Illinois 60510-5011
U.S.A.

Martha E. Michels
Acting Chief Operating Officer

Office of the Director
P.O. Box 500, MS 200
Kirk Road and Pine Street
Batavia, Illinois 60510-5011
USA

Office: 630.840.3511
martha@fnal.gov

Exposure to Public Concerns

Dear Mr. Snyder,

In your memo **FERMI NATIONAL ACCELERATOR LABORATORY RADIATION PROTECTION PROGRAM**, dated March 29, 2022, you requested a plan from FRA to address the following concerns:

1. Multiple locations of radiation emission above background without signage (in at least an OSHA 1910.145b context) or warning to denote exposure to a hazard or a need to limit exposure times.
2. Bounding radiation exposure potential at up to 25 times the allowed public limit (which is 257 times the minor exposure limit) without positive measures to prevent exposures above the limit to all members of the public or limit exposure to workers.
3. Unmarked and/or segregated locations meeting the definition of controlled areas.
4. Potential for unintended radiological workers or staff routinely in these locations.
5. Multiple definitions of "public" in use at the laboratory with differing degrees of training, access, and exposure potential (for example: the public may or may not include students, users, delivery staff, guests, visitors, vendors, regulators, utility workers, residents, daycare, construction staff, etc. based on the desired approach).

FRA proposes to address these concerns via the following steps:

1. Post outdoor or publicly accessible areas measured by the RPO Routine Area Monitoring Program at or above 25 mrem above background per quarter. Such areas will be posted: "Controlled Area, General Employee Radiological Training (GERT) required for unescorted access to this area. No loitering". Loitering will be specifically defined in FRCM. The area monitor readings are more representative of the potential dose received by an individual than the 2021 beam-on survey readings referred to in Item 2 of the memo. The 2021 beam-on survey readings were scaled to determine a bounding condition and determine where area monitors should be located.

2. Post signs at Lab entrances indicating: 'Fermilab contains operating particle accelerators. Areas posted as Non-Public Areas may contain ionizing radiation levels above background. Please obey all signage.'
3. Update FRCM and Area Monitoring and ASER Dose Assessment SOP to align definitions of members of the "public" with the Policy on Access to Fermilab and clarify training requirements.
4. Inform Business Visitors that they may encounter "Controlled Area, General Employee Radiological Training (GERT) required for unescorted access to this area" signs that they cannot enter without an escort.
5. Update Area Monitoring and ASER Dose Assessment SOPs to include a specific process for corrective actions and dose assignment if an unauthorized access is discovered. The Area Monitoring SOP will also be updated to include discussion that the Site Security Plan provides positive measures (patrols, staffed entrances, cameras) to ensure that individuals are not on site outside of public access hours (dawn to dusk), and that the action level of 25 mrem per quarter is protective of workers outside posted areas as it corresponds to an average dose rate of 11 urem/hr or below.

These actions will be completed by FRA within 90 days.

Sincerely,



Martha E. Michels
Acting Chief Operating Officer
Office of the Director

cc: W. Begner, w/o encl.
L. Merminga, w/o encl.
J. Scott, w/o encl.