

Matthew Quinn  
Senior Radiation Safety Officer

**ES&H Division**  
P.O. Box 500, MS 371  
Kirk Road and Pine Street  
Batavia, Illinois 60510-5011  
USA  
Office: 630.840.5175  
[mquinn@fnal.gov](mailto:mquinn@fnal.gov)

**Date:** March 5, 2024

**To:** Alexander Valishev, Head – AD

**From:** Matthew Quinn, Senior Radiation Safety Officer

*Matthew Quinn*

**Re:** Approval of Main Injector - Recycler Maximum Credible Incident Document

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**Message:**

I have reviewed the document *Main Injector/Recycler Ring Maximum Credible Incident*, version 2.0 dated March 5, 2024. This analysis details the maximum credible incident for the Main Injector and Recycler of 2.83 E17 protons at 120 GeV in one hour and the required credited controls to ensure doses are kept below 5000 mrem inside of buildings, 500 mrem outside of buildings, and 100 mrem to members of the public. As sufficient passive shielding exists to protected areas at these levels, no active interlocked detectors are required to meet these dose limits. I concur that the analysis is satisfactory in terms of methodology, completeness, and compliance with the Fermilab Accelerator Safety Envelope dose requirements, and thus approve of this MCI analysis and planned operations within its scope.

Cc:

M. Clay

M. Convery

J. Fulgham

K. Hazelwood

J. Malo

M. Murphy

W. Schmitt

M. Schoell