



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 31, 2018

Dr. Lin-wen Hu, Director
of Research and Services
Massachusetts Institute of Technology
Nuclear Reactor Laboratory
Research Reactor
138 Albany Street, MS NW12-116A
Cambridge, MA 02139

Mr. Alberto Queirolo, Director
of Reactor Operations
Massachusetts Institute of Technology
Nuclear Reactor Laboratory
Research Reactor
138 Albany Street, MS NW12-116A
Cambridge, MA 02139

SUBJECT: MASSACHUSETTS INSTITUTE OF TECHNOLOGY – RESPONSE TO REQUEST FOR REVIEW OF LOW-ENRICHED URANIUM CONVERSION PRELIMINARY SAFETY ANALYSIS REPORT FOR THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY RESEARCH REACTOR (EPID NO. L-2017-LLA-0445)

Dear Dr. Hu and Mr. Queirolo:

By letter dated October 24, 2018 (Agencywide Documents Access and Management System Accession No. ML18302A128), Massachusetts Institute of Technology (MIT) staff submitted a revised preliminary safety analysis report (PSAR) for the conversion of the MIT reactor from highly enriched uranium (HEU) to low-enriched uranium (LEU) fuel to the U.S. Nuclear Regulatory Commission (NRC) staff for review and comment. This letter provides the results of the NRC staff's initial review, which was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to begin its detailed review. As noted in the letter from the MIT staff, the LEU fuel has not been approved for use, and MIT is not prepared to convert from HEU to LEU fuel at this time. As such, no licensing action is being requested by MIT at this time.

The NRC staff has reviewed your PSAR and concluded that it does provide technical information in sufficient detail and will allow the NRC staff to perform a review following the guidance of NUREG-1537, "Guidelines for Preparing and Reviewing Applications for the Licensing of Non Power Reactors," Parts 1 and 2, Chapter 18, "Highly Enriched to Low-Enriched Uranium Conversions."

If you have any questions please contact me at 301-415-3936 or by electronic mail at Patrick.Boyle@nrc.gov.

Sincerely,

/RA/

Patrick G. Boyle, Project Manager
Research and Test Reactors Licensing Branch
Division of Licensing Projects
Office of Nuclear Reactor Regulation

Docket No. 50-20
License No. R-37

cc: See next page

Massachusetts Institute of Technology

Docket No. 50-20

cc:

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Ms. Sarah M. Don, Reactor Superintendent
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*concurred via e-mail

NRR-106

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DATE	10/30/2018	10/30/2018	10/31/2018	10/31/2018

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