



# Rensselaer

DEPARTMENT OF MECHANICAL,  
AEROSPACE, AND NUCLEAR ENGINEERING

RCF 22-01  
Feb 28, 2022

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Re: Operations Report for the Rensselaer Polytechnic Institute Reactor Critical Facility, NRC License CX-22, Docket Number 50-225.

To Whom It May Concern:

This document constitutes the calendar year (CY) 2021 Operations Report of the Rensselaer Polytechnic Institute (RPI) Reactor Critical Facility (RCF) to the USNRC, and to Rensselaer management.

The RCF was operated successfully during CY2021. The facility staff maintained three Senior Reactor Operators with staffing changes planned for the coming year. On January 1<sup>st</sup>, 2022, Mr. Peter Kowal will replace Dr. Jason Thompson as the RCF Operations Supervisor. Dr. Jason Thompson will continue as a Senior Reactor Operator at the facility. On October 25<sup>th</sup>, 2021, Ms. Ginger Carvalho was appointed as the new Radiation Safety Officer.

A licensing amendment, denoting the revised exclusion zone and restricted zone boundaries of the RCF, was issued on September 28<sup>th</sup>, 2021. The appropriate changes have been made to the RCF license and technical specifications.

A NRC inspection was performed in October 2021. NRC findings and the RPI response have been reported in other correspondence.

Training and proficiency requirements for all licensed operators have been reviewed and are current. The Technical Specifications, App. A to USNRC License CX-22 require reporting the following operational items:

1. Changes to facility design: No changes to the facility were made during CY2021.
2. Significant maintenance, repairs or other work performed on RCF systems: None.
3. Changes in operating procedures which relate to the safety of RCF operations: None.
4. Surveillance checks, tests, and calibrations were conducted and logged as required. The results were satisfactory. On September 11<sup>th</sup>, 2021, an emergency preparedness drill was conducted at the RCF.



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5. Changes, tests or experiments requiring authorization from the USNRC under 10CFR50.59 a or b: None
6. Calculated integrated thermal power: Approximately  $1.92 \times 10^{-2}$  kw-hr for all of 2021.
7. There were no unplanned scrams in the report interval.
8. Maintenance operations were carried out and logged with satisfactory results.
9. There were no discharges of radioactive effluents.
10. Environmental monitor dosimetry is performed at the exclusion area fence (EM1 through EM4), and at the site boundary fence (EM5 and EM6). These results have not been received and RPI will resubmit this report once these results have been received.
11. Facility personnel exposures were all less than 10 mrem (the minimum detectable exposure) for the first three quarters of 2021 with the exception of one SRO receiving a dose of 17 mrem in quarter three. Results of the fourth quarter have not been received and RPI will resubmit this report once these results have been received.

Sincerely,

A handwritten signature in black ink, appearing to read "Wei Ji".

Dr. Wei Ji, Facility Director  
School of Engineering  
Rensselaer Polytechnic Institute

cc:

Dr. Shekhar Garde, Dean, School of Engineering

Dr. Suvranu De, Head, Department of Mechanical, Aerospace, and Nuclear Engineering

Dr. Hyun Kang, NSRB Chair

Ms. Ginger Carvalho, RPI Radiation Safety Officer

Mr. Peter Kowal, Reactor Critical Facility (RCF) Operations Supervisor