



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

September 22, 2020

Mr. John P. Foster, Director  
of Reactor Operations  
Nuclear Reactor Laboratory  
Massachusetts Institute of Technology  
138 Albany Street, MS NW12-116A  
Cambridge, MA 02139

SUBJECT: MASSACHUSETTS INSTITUTE OF TECHNOLOGY – U.S. NUCLEAR  
REGULATORY COMMISSION ROUTINE INSPECTION REPORT  
NO. 05000020/2020201 AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Foster:

From August 3-6, 2020, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at the Massachusetts Institute of Technology reactor facility. The enclosed report documents the inspection results which were discussed on August 6, 2020, with you, members of your staff, and Dr. Gordon Kohse, Managing Director for Operations at the Nuclear Reactor Laboratory.

The inspection examined activities conducted under your license, as they relate to public health and safety, by confirming compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel. Based on the results of this inspection, one finding of non-compliance was identified. However, after considering the facts and circumstances of the events, and in consultation with the Director of the NRC's Office of Enforcement, the NRC is exercising enforcement discretion in accordance with Section 3.5, "Violations Involving Special Circumstances," of the Enforcement Policy. Therefore, no violation will be issued regarding this matter and no response to this letter is required.

In accordance with Title 10 of the *Code of Federal Regulations*, Section 2.390, "Public inspections, exemptions, requests for withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (Agencywide Documents Access and Management System (ADAMS)). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Should you have any questions concerning this inspection, please contact Mr. Michael Takacs at (301) 415-2042, or by electronic mail at [Michael.Takacs@nrc.gov](mailto:Michael.Takacs@nrc.gov).

Sincerely,

*/RA/*

Travis L. Tate, Chief  
Non-Power Production and Utilization  
Facility Oversight Branch  
Division of Advanced Reactors and Non-Power  
Production and Utilization Facilities  
Office of Nuclear Reactor Regulation

Docket No. 50-020  
License No. R-37  
Enforcement Action No. EA-20-109

Enclosure:  
As stated

cc: See next page

Massachusetts Institute of Technology

Docket No. 50-020

cc:

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Mr. Jack Priest, Director  
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Test, Research and Training  
Reactor Newsletter  
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Ms. Sarah M. Don, Reactor Superintendent  
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138 Albany Street, MS NW12-116B  
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SUBJECT: MASSACHUSETTS INSTITUTE OF TECHNOLOGY – U.S. NUCLEAR  
 REGULATORY COMMISSION ROUTINE INSPECTION REPORT  
 NO. 0500020/2020201 AND EXERCISE OF ENFORCEMENT DISCRETION  
 DATED: SEPTEMBER 22, 2020

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**ADAMS Accession No.: ML20248H568                      \*concurred via e-mail                      NRC-002**

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DATE	9/10/2020	9/8/2020	9/10/2020	9/22/2020

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**U.S. NUCLEAR REGULATORY COMMISSION**  
**OFFICE OF NUCLEAR REACTOR REGULATION**

Docket No.: 50-020

License No.: R-37

Report No.: 05000020/2020201

Enforcement Action No.: EA-20-109

Licensee: Massachusetts Institute of Technology

Facility: Massachusetts Institute of Technology Reactor

Location: Cambridge, Massachusetts

Dates: August 3-6, 2020

Inspector: Michael Takacs

Approved by: Travis L. Tate, Chief  
Non-Power Production and Utilization  
Facility Oversight Branch  
Division of Advanced Reactors and Non-Power  
Production and Utilization Facilities  
Office of Nuclear Reactor Regulation

Enclosure

## EXECUTIVE SUMMARY

Massachusetts Institute of Technology  
Massachusetts Institute of Technology Reactor  
Inspection Report No. 05000020/2020201

The primary focus of this announced, routine inspection was the onsite review of selected aspects of the Massachusetts Institute of Technology (MIT, licensee's) Class I, 6-megawatt research reactor safety program, including: (1) operator licenses, requalification, and medical examinations, (2) experiments, (3) organization and operations and maintenance activities, (4) procedures, (5) fuel movement, (6) surveillance, and (7) emergency preparedness. The review covered the period from the date of the last U.S. Nuclear Regulatory Commission (NRC) inspection of these areas to the present. The NRC staff determined that the licensee's program was acceptably directed toward the protection of public health and safety and in compliance with NRC requirements. Because of the ongoing restrictions due to the Coronavirus Disease 2019 (COVID-19) public health emergency (PHE), MIT has established specific restrictions to the number of employees permitted access to the MIT campus, including the research reactor. At the time of this inspection, all MIT students (including licensed reactor operator (RO) students) were not permitted access to the campus or the reactor facility by a directive issued by the MIT president.

### Operator Licenses, Requalification, and Medical Examinations

- Operator licenses were in accordance with the requirements specified in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 55.53, "Conditions of licenses," with the exception of operator licenses of MIT students. All MIT students were forbidden to return to the MIT campus due to the COVID-19 PHE, therefore, MIT students who are licensed operators were not able to perform the required minimum operator functions of four hours per calendar quarter to maintain their active operator status. Active operator status for these MIT students will be reestablished after the COVID-19 PHE has ended.

### Experiments

- The program for reviewing, authorizing, and conducting experiments satisfied technical specification (TS) and procedural requirements.

### Organization and Operations and Maintenance

- Organizational structure and staffing were consistent with TS requirements.
- Operational activities were consistent with applicable TS and procedural requirements.
- Maintenance activities were conducted in accordance to licensee procedural requirements with the exception of one minor violation regarding the lockout/tagout program.

### Procedures

- The licensee's procedural review, revision, and implementation program satisfied the requirements of TS.

### Fuel Movement

- Fuel movements were conducted in accordance with TS and procedural requirements.
- Fuel inspections were completed annually as required by TS.

### Surveillance

- The surveillance program was conducted in accordance with TS and licensee procedural requirements with the exception of one TS surveillance delay due to the COVID-19 PHE. For this issue, enforcement discretion will be exercised in lieu of issuing a Severity Level IV violation consistent with provisions in the Enforcement Policy.

### Emergency Preparedness

- The emergency preparedness program was conducted in accordance with the Emergency Plan (E-Plan).
- Emergency response equipment was maintained and inventoried as required by the E-Plan.
- Emergency drills were conducted annually as required by the E-Plan.
- Emergency preparedness training for licensed operators was completed as required by the E-Plan.

## REPORT DETAILS

### Summary of Facility Status

The MIT Class I, 6 megawatt research reactor typically operated 24 hours a day, 7 days a week in support of educational experiments, research and service irradiations, and reactor operator training. However, due to the COVID-19 PHE, the reactor was shutdown on March 13, 2020. Since then, the reactor was operated for only short durations (i.e., June 23-25, 2020, and July 20-24, 2020) in order to perform required reactor TS surveillances and support the requalification program for both licensed RO and licensed senior reactor operators (SROs). During the inspection, the reactor was shutdown and had been shutdown since July 24, 2020, in order to support the installation of the new digital nuclear safety system (NSS) approved by the NRC, on December 4, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19123A212).

### 1. Operator Licenses, Requalification, and Medical Examinations

#### a. Inspection Scope (Inspection Procedure (IP) 69003)

To verify that the licensee complied with the requirements of 10 CFR Part 55, "Operators' Licenses," and TS Section 7.1.5, the inspector reviewed selected aspects of the following:

- current status of operator licenses
- reactor digital logbook covering the period from October 2019 to the present
- results of the annual written examinations completed in 2019
- medical examination records for selected operators for the past year
- procedure manual (PM) 1.16.2, "Requalification Program," latest revision dated February 20, 2013
- NRC exemption approval letter regarding exemption from medical examination and licensed operator active status requirements, dated May 15, 2020 (ADAMS Accession No. ML20135H188)

#### b. Observations and Findings

The inspector noted that there were 25 individuals licensed to operate the MIT reactor. The inspector's review of operator records and the operations log indicated that the program was maintained up-to-date and that all SRO and RO MIT employees had maintained their license in active status. In discussion with the reactor training supervisor, the inspector was informed that five MIT students, who are licensed ROs, were not able to maintain their operator license in active status due to the directive from the MIT president prohibiting all MIT students from returning to the campus as a result of COVID-19 PHE. In accordance with the NRC exemption approval letter referenced above, the licensee indicated to the inspector that it had implemented the appropriate compensatory measures (i.e., refresher training) to the MIT students who are licensed ROs during the exemption period and will have them perform six hours of licensed duties after the exemption term has expired. In addition, the inspector was informed that MIT student access to the reactor facility was temporarily suspended until the students are permitted to return to the MIT campus by the MIT president.



The inspector's review of operator training records verified that training was conducted in accordance with the licensee's requalification and training program. The reactor training supervisor indicated to the inspector that monthly training lectures were given by various licensed operators during the two-year training and requalification cycle. The inspector verified that information regarding facility changes, procedure changes, and other relevant information was routinely routed to all licensed operators for their review. The inspector also noted that all licensed operators had completed their biennial medical examinations within the required frequency.

c. Conclusion

The inspector determined that the licensee conducted licensed operator training and requalification in accordance with its NRC approved requalification program. The inspector noted that all licensed operators have also completed their biennial medical examinations as required. Due to the COVID-19 PHE, five MIT students could not maintain their operator licenses in active status. The licenses will be restored to active following the conclusion of the COVID-19 PHE and the approval for the students to return to campus is granted by the MIT president.

**2. Experiments**

a. Inspection Scope (IP 69005)

To verify compliance with the licensee's procedures, TS Sections 6 and 7.5, the inspector reviewed the following:

- reactor digital logbook covering the period from October 2019 to the present
- PM 1.10, "Experiment Review and Approval," dated August 17, 2018
- MIT annual report to the NRC for 2019

b. Observations and Findings

The inspector reviewed selected safety review forms and irradiation request forms for experiments in the past year. The inspector verified that experiments were reviewed and evaluated in accordance with TS requirements and the associated data sheets indicated that the reactivity worths of the experiments were within specified TS limits. The inspector also verified appropriate reviews and approvals were completed for the samples and/or materials to be irradiated under the cognizance of the reactor supervisor. The inspector also verified that the licensee had a copy of the State-issued radioactive material (RAM) license for an offsite recipient regarding a recent transfer of irradiated material from an experiment, and that the RAM was within the offsite recipient's license limits for possession.

c. Conclusion

The inspector determined that the licensee's program for reviewing, authorizing, and conducting experiments satisfied the TS and procedural requirements.

**3. Organization and Operations and Maintenance Activities**

a. Inspection Scope (IP 69006)

To verify that the licensee complied with the requirements for organization, operations, and maintenance activities, as specified in TS Sections 2, 3, 7.1, and licensee procedural requirements, the inspector reviewed selected aspects of the following:

- MIT nuclear reactor laboratory organization chart, dated August 4, 2020
- reactor digital logbook covering the period from October 2019 to the present
- reactor job workbook
- reactor tagout logbook
- reactor digital daily operations schedule
- reactor annual report to the NRC for 2019
- reactor operating data logs (hourly readings)
- PM 1.14.3, "Equipment Tagout and Lockout Program," dated February 20, 2013
- PM 1.14.4, "Industrial Safety Guidelines," dated July 1, 2019

b. Observations and Findings

(1) Organization

The inspector noted that the MIT reactor organization was consistent with that specified in the TS. The inspector also noted that the MIT reactor operations organization consisted of the Director of Reactor Operations (DRO), the Assistant Director of Operations (ADRO), the Superintendent of Operations, the Training Supervisor, a Quality Assurance Supervisor, and various reactor supervisors, and ROs. In addition to the operations staff, the inspector noted that there were various reactor support groups which included research, engineering, maintenance, and radiation protection.

(2) Operations

Through a review of the digital logbook for reactor operations, covering the period from October 2019 to the present, and through interviews with the ADRO, the inspector noted that the reactor was normally operated 24 hours a day, 7 days a week. The inspector also noted that each operating crew was staffed with various personnel, with at least two licensed operators on duty per shift and each shift scheduled for a period of 8 hours. The inspector verified through a review of the reactor digital logbook that shift staffing during reactor operations met the minimum

requirements for duty and on-call personnel as specified in TS Section 7.1.3.

The inspector determined, through a review of the digital logbook and discussion with the ADRO, that the reactor was shutdown on March 13, 2020, due to the COVID-19 PHE. The inspector also determined that since March 13, 2020, the reactor was operated for short durations (i.e., June 23-25, 2020, and July 20-24, 2020) in order to perform required reactor TS surveillances and support the requalification program for both licensed ROs and licensed SROs. The inspector reviewed the hourly reactor operating data logs for various shifts and verified that two TS parameters (i.e., recombiner temperature and primary coolant conductivity) were maintained within TS limits.

(3) Maintenance

During the inspection, the inspector noted that the reactor was shutdown and had been shutdown since July 24, 2020, in order to support the installation of the new digital NSS approved by the NRC, on December 4, 2019 (ADAMS Accession No. ML19123A212). The inspector, along with the ADRO, performed a walk-through of the ongoing installation of the new NSS system. During the walk-through, the inspector interviewed the special projects engineer involved in the installation of the new digital NSS system and noted that the engineer was very thorough and knowledgeable regarding the installation process.

While performing the facility tour with the ADRO, the inspector was informed that the containment polar crane had maintenance performed on it by an MIT approved outside contractor in January 2020. The inspector noted that this involved replacement of the crane's electrical collector shoes which would require isolating electrical power to the crane motor. The inspector verified that the crane maintenance activity was recorded in the digital logbook on January 2, 2020, and it was indicated that the crane power supply breaker was locked out. However, the inspector reviewed the tagout logbook in the control room and found that no entry was recorded regarding the crane power supply breaker being locked open and tagged. The inspector informed the ADRO that this issue should have been logged into the tagout logbook as required by PM 1.14.3. The inspector also informed the ADRO that, although this record keeping issue constitutes a violation of minor significance, it is not subject to enforcement action in accordance with Section 2 of the Enforcement Policy.

c. Conclusion

The inspector determined that the licensee's organization and staffing were in compliance with the requirements specified in TS Section 7.1, and that operational and maintenance activities were also consistent with applicable TS and procedural requirements. The inspector also determined that a minor violation occurred due to a record keeping issue regarding a maintenance activity that was not recorded in the tagout logbook as required by PM 1.14.3.

#### 4. Procedures

##### a. Inspection Scope (IP 69008)

To verify that the licensee met the requirements of TS Section 7.4, the inspector reviewed selected aspects of the following:

- reactor digital logbook covering the period from October 2019 to the present
- reactor annual report to the NRC for 2019
- reviewed various procedures including:
  - PM 1.14.3, "Equipment Tagout and Lockout Program," dated February 20, 2013
  - PM 6.1.1, "Emergency Cooling System," dated September 21, 2011
  - PM 6.1.2.4, "Test of Vacuum Breaker Setpoints," dated September 21, 2011
  - PM 1.14.4, "Industrial Safety Guidelines," dated July 1, 2019
  - PM 6.6.2.4, "Inventory of Emergency Supplies and Equipment," dated July 3, 2019

##### b. Observations and Findings

The inspector noted that procedure revisions were reviewed and approved by the DRO and submitted to the MIT Reactor Safety Committee for review, and that all procedure changes were routinely routed to all licensed operators for review as well. The inspector also noted that procedures were reviewed annually by all licensed operators as required and revised when needed.

##### c. Conclusion

The inspector determined that the licensee's program for procedural review, revision, and implementation program satisfied TS requirements.

#### 5. Fuel Movement

##### a. Inspection Scope (IP 69009)

To ensure that the licensee followed the requirements of TS Sections 3.1.4, 3.1.6, 4.1.5, and 5.4, the inspector reviewed selected aspects of the following:

- reactor digital logbook covering the period from October 2019 to the present
- PM 1.15, "Fuel Loading Permission Form," dated February 20, 2013
- PM 3.3.1, "General Conduct of Refueling Operations," dated April 16, 2016

##### b. Observations and Findings

The inspector reviewed the fuel movement process and verified that fuel manipulations were conducted in accordance with established procedures. The inspector also reviewed records of selected fuel movements and interviewed the ADRO about the process. The inspector noted that a plan for each series of fuel

movements was developed prior to the activity and were used for core refueling, core rearrangement, and inspections of fuel elements.

c. Conclusion

The inspector determined that the licensee conducted fuel movements in accordance with written procedures and the TS requirements, and that fuel inspections were also completed annually as required.

**6. Surveillance**

a. Inspection Scope (IP 69010)

To verify that the licensee met the surveillance requirements specified in TS Section 4, the inspector reviewed selected aspects of the following:

- reactor job workbook
- reactor digital daily operations schedule
- reactor digital logbook covering the period from October 2019 to the present
- MIT annual report to the NRC for 2019
- MIT logbook "System Tests and Calibration Logbook" (in the control room)
- PM 6.1.1, "Emergency Cooling System," dated September 21, 2011
- PM 6.1.2.4, "Test of Vacuum Breaker Setpoints," dated September 21, 2011

b. Observations and Findings

With the reactor shutdown and limited staffing due to the COVID-19 PHE, the inspector, along with the ADRO, performed a walkthrough of two TS required annual surveillances: PM 6.1.1 and PM 6.1.2.4. The inspector noted that these TS surveillances were successfully completed in 2020 and properly documented in the control room logbook, "System Tests and Calibration Logbook."

The inspector noted that on March 16, 2020, MIT notified their NRC project manager that the reactor was shut down and the building was closed due to the COVID-19 PHE and that all MIT staff were ordered to commence fulltime telework by the MIT president until further notice. The inspector also noted that since that time, MIT has maintained constant communication with the NRC regarding challenges in meeting the annual TS test & calibration surveillances for the reactor power measuring channels. However, the inspector determined that the licensee failed to complete an annual TS required surveillance for the reactor power measuring channels on the required due date. The following bullets represent the communications to the NRC (in chronological order) leading up to the delay in completing the annual TS required surveillance:

- On April 27, 2020, MIT contacted the NRC and identified areas where regulatory relief would be requested as a result of the COVID-19 PHE restrictions, specifically, concerns and difficulty in meeting certain annual TS surveillance requirements.

- On June 11, 2020, MIT notified the NRC that it was planning a limited reopening of its campus beginning on June 15, 2020, with research labs limited to 25 percent staffing. As such, some reactor staff would be allowed to return to work, but on a strictly voluntary basis, with requirements for physical distancing, face coverings, and filling out an online daily health attestation. Furthermore, licensee management would define work tasks for the day, with specific staff members assigned for the tasks. All scheduled work would take place between 0800 and 1600, Monday through Friday.
- On June 15, 2020, MIT notified the NRC that they have administered a limited reopening of its campus, and that the reactor staff would be working to restart the reactor the following week. MIT stated that they would continue to keep the NRC updated on the reactor status.
- By letter dated June 18, 2020 (ADAMS Accession No. ML20178A159), MIT applied for an amendment to Facility Operating License No. R-37 for the MIT reactor. The license amendment request proposed a change to the surveillance requirement frequency allowing the surveillance to be deferred while the reactor is shutdown. The proposed change would allow deferral, during times of reactor shutdown of certain reactor TS-required test & calibration procedures (i.e. surveillances), to be performed when the reactor has returned to an operating status which is a required condition for their performance. Specifically, PM 6.1.3.1B, "Channel Plateau Checks," PM 6.5.16.1, "Regulating Rod Calibrations," and PM 6.5.16.2, "Shim Blade Calibrations," are to be performed with the reactor at power, and had due dates ranging from June 27, 2020, to July 1, 2020. These procedures could not be done while the reactor was shut down since March 13, 2020, due to the COVID-19 PHE but were currently scheduled to be performed just prior to these deadlines.
- On June 25, 2020, MIT informed the NRC that the MIT reactor was started up on June 23, 2020, to low power operations for performance of test and calibration procedures for the regulating rod and shim blade calibrations. The two surveillances were completed successfully, meeting their deadline of July 1, 2020. However, MIT was not able to complete the channel plateau curves (due by June 27, 2020). MIT started the channel plateau curve surveillance, but the reactor scrambled on a loss of offsite power. Upon subsequent reactor restart, MIT discovered a power supply was damaged due to a power surge that occurred following the loss of offsite power and subsequent restoration. The problem would be further complicated by the delay in receiving a replacement part(s) due to the COVID-19 PHE impact on shipping and receiving. Ultimately, the annual TS surveillance for the reactor channel plateau checks would not be completed by its June 27, 2020, due date but would actually be completed on July 23, 2020.
- On July 23, 2020, MIT informed the NRC that the reactor was restarted on July 20, 2020, to 5.7 megawatts. After a few days of steady-state operation, the reactor reached thermal equilibrium, which provided the

needed conditions for completing PM 6.1.3.1B. MIT reported that they had successfully completed the channel plateau checks on July 23, 2020.

As specified in the MIT Facility Operating License No. R-37, Section 2.C.2, "Technical Specifications," states the following: "The Technical Specifications contained in Appendix A, as revised through Amendment 44, are hereby incorporated in the license. The Massachusetts Institute of Technology shall operate the facility in accordance with the Technical Specifications." The MIT TS, Section 4.2.6., requires that neutron flux level instruments be calibrated at least annually. Contrary to this TS requirement, the licensee did not complete the annual TS required surveillance for PM 6.1.3.1B by its scheduled due date of June 27, 2020. Therefore, the inspector has determined that this issue constitutes a Severity Level IV violation consistent with Section 6.1.d.1 of the NRC Enforcement Policy. However, after considering the facts and circumstances of the events outlined in the bullets above, and in consultation with the NRC's Office of Enforcement, the NRC is exercising enforcement discretion in accordance with Section 3.5, "Violations Involving Special Circumstances," of the Enforcement Policy. Therefore, no violation will be issued regarding this matter.

c. Conclusion

The inspector noted that the licensee completed all TS required surveillances within the required frequency with the exception of the channel plateau checks discussed above. The inspector also noted in lieu of issuing a violation, the NRC is exercising enforcement discretion regarding this issue, which will be documented as enforcement action number EA-20-109.

## 7. **Emergency Preparedness**

a. Inspection Scope (IP 69011)

The inspector reviewed selected aspects of the following to verify compliance with the licensee's E-Plan and associated procedures:

- training records for MIT staff
- annual exercise critiques of the radiation emergency exercise and the medical emergency exercise conducted in 2019
- PM 4.0, "MITR Emergency Plan and Procedures," revision dated June 20, 2013
- PM 6.6.2.4, "Emergency Supply Inventory" (posted on emergency supply cabinets)
- letter of agreement (LOA) with Massachusetts General Hospital, dated April 11, 2016
- LOA with Mount Auburn Hospital, dated December 1, 2013
- LOA with City of Cambridge Fire Department, dated January 15, 2016
- LOA with City of Cambridge Police Department, dated February 12, 2016
- LOA with Professional Ambulance company, dated May 31, 2013

b. Observations and Findings

The inspector reviewed the MIT E-Plan and implementing procedures and verified, through discussions with the licensee, that no changes to the E-Plan have occurred since the last inspection in accordance with 10 CFR 50.54(q) "Emergency plans." The inspector also reviewed the training records and noted that all licensed operators had completed their annual emergency preparedness training, which included a written exam, as required by the licensed operator requalification program. Through discussion with the ADRO, the inspector verified that the MIT Police have also received their annual emergency response training for the MIT reactor. The inspector verified that LOAs with various offsite emergency support organizations were on file and maintained, and that communication capabilities with offsite emergency support organizations were verified annually through a communications check. The inspector determined that emergency call lists were revised and updated as needed and were posted in various locations throughout the facility. The inspector also verified that emergency equipment was inventoried quarterly as required, and, along with the ADRO, the inspector performed an inventory of one of the emergency supply cabinets and found all items on the inventory list to be accounted for. An inventory of the emergency radiological instrument containers, used by MIT police for radiological emergencies, was also performed by the inspector and it was noted that all radiological instrument calibrations were current. The inspector verified that the licensee met the requirement for conducting radiological emergency and medical emergency exercises annually as required by the E-Plan.

c. Conclusion

The inspector concluded that the licensee maintained its emergency preparedness program in accordance with its E-Plan requirements.

**8. Exit Interview**

The inspector presented the inspection results to licensee management and staff at the conclusion of the inspection on August 6, 2020. The inspector reiterated the areas inspected and discussed the inspection observations. The licensee acknowledged the results of the inspection and did not identify as proprietary any of the material provided to or reviewed by the inspector during the inspection.



## LIST OF PERSONS CONTACTED

### Licensee Personnel:

G. Kohse	Managing Director for Operations at the Nuclear Reactor Laboratory
J. Foster	Director of Reactor Operations
E. Lau	Assistant Director of Reactor Operations
S. Don	Superintendent of Operations
W. McCarthy	Reactor Radiation Protection Officer and Deputy Director, MIT Environment, Health, and Safety Office
S. Tucker	Quality Assurance Supervisor
T. Bork	Reactor Utilization Manager
M. Wade	Training Supervisor
D. Kouttron	Special Projects Engineer

## INSPECTION PROCEDURES USED

IP 69003	Class I Research and Test Reactor Operator Licenses, Requalification, and Medical Examinations
IP 69005	Class I Research and Test Reactor Experiments
IP 69006	Class I Research and Test Reactors Organization and Operations and Maintenance Activities
IP 69008	Class I Research and Test Reactor Procedures
IP 69009	Class I Research and Test Reactor Fuel Movement
IP 69010	Class I Research and Test Reactor Surveillance
IP 69011	Class I Research and Test Reactor Emergency Preparedness

## ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened:

None

### Closed:

None

### Discussed:

None

## LIST OF ACRONYMS USED

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
ADRO	Assistant Director of Reactor Operations
COVID-19	Coronavirus Disease 2019
E-Plan	Emergency Plan
IP	Inspection Procedure
LOA	Letter of Agreement
MIT	Massachusetts Institute of Technology
NRC	U.S. Nuclear Regulatory Commission
PHE	Public Health Emergency
PM	Procedure Manual
RAM	Radioactive Material
RO	Reactor Operator
SRO	Senior Reactor Operator
TS	Technical Specification