

April 10, 2013

Dr. Thomas H. Newton
Interim Director of Reactor Operations
Massachusetts Institute of Technology
Research Reactor
MITNRL-NW 12
138 Albany Street
Cambridge, MA 02139

SUBJECT: MASSACHUSETTS INSTITUTE OF TECHNOLOGY – NRC ROUTINE
INSPECTION REPORT NO. 50-020/2013-201

Dear Dr. Newton:

From March 11–14, 2013, the U.S. Nuclear Regulatory Commission (NRC or the Commission) conducted an inspection at the Massachusetts Institute of Technology Research Reactor facility (Inspection Report No. 50-020/2013-201). The enclosed report documents the inspection results, which were discussed on March 14, 2013, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspector reviewed selected procedures and records, observed activities, and interviewed personnel. Based on the results of this inspection, no findings of significance were identified. No response to this letter is required.

In accordance with Title 10 of the *Code of Federal Regulations* Section 2.390, "Public inspections, exemptions, and 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> (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, please contact Johnny Eads at (919) 219-9128 or by electronic mail at Johnny.Eads@nrc.gov.

Sincerely,

/RA/

Gregory T. Bowman, Chief
Research and Test Reactors Oversight Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No.: 50-020
License No.: R-37

Enclosure: NRC Inspection Report No. 50-020/2013-201
cc: See next page

Massachusetts Institute of Technology

Docket No. 50-020

cc:

City Manager
City Hall
Cambridge, MA 02139

Department of Environmental Protection
One Winter Street
Boston, MA 02108

Mr. Robert Gallagher, Acting Director
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Charlestown, MA 02129

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Massachusetts Emergency Management Agency
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Test, Research, and Training
Reactor Newsletter
University of Florida
202 Nuclear Sciences Center
Gainesville, FL 32611

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*** concurrence via e-mail**

TEMPLATE #: NRC-002

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DATE	4/8/2013	4/10/13

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

Docket No.: 50-020

License No.: R-37

Report No.: 50-020/2013-201

Licensee: Massachusetts Institute of Technology

Facility: Nuclear Reactor Laboratory

Location: Cambridge, Massachusetts

Dates: March 11–14, 2013

Inspector: Johnny Eads

Approved by: Gregory T. Bowman, Chief
Research and Test Reactors Oversight Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

EXECUTIVE SUMMARY

Massachusetts Institute of Technology
Nuclear Reactor Laboratory
NRC Inspection Report No.: 50-020/2013-201

The primary focus of this routine, announced inspection was the onsite review of selected aspects of the Massachusetts Institute of Technology (the licensee's) Class I six megawatt research reactor safety program including: (1) organization and staffing, (2) reactor operations, (3) operator requalification, (4) maintenance and surveillance, (5) fuel handling, (6) experiments, and (7) emergency preparedness since the last U.S. Nuclear Regulatory Commission (NRC) inspection of these areas. The licensee's program was acceptably directed toward the protection of public health and safety and in compliance with NRC requirements.

Organization and staffing

- Organizational structure and staffing were consistent with Technical Specification (TS) requirements.

Reactor Operations

- Reactor operations were conducted in accordance with procedure and the appropriate logs were being maintained.

Operator Requalification

- Operator requalification was conducted as required by the Requalification Program and the program was being maintained up-to-date.
- Operators were receiving biennial medical examinations as required.

Maintenance and Surveillance

- The system for tracking and completing maintenance items and surveillance checks and calibrations appeared to be adequate and was being maintained as required.
- Maintenance and surveillance records, performance, and reviews satisfied TS and procedure requirements.

Fuel Handling

- Fuel was being controlled as required and fuel movements were conducted in accordance with TS and procedural requirements.

Experiments

- The program for reviewing and conducting experiments satisfied procedural and TS requirements.

Emergency Preparedness

- The emergency preparedness program was conducted in accordance with the Emergency Plan.
- Emergency response equipment was being maintained and inventoried as required.
- The letters of agreement between the licensee and the City of Cambridge Fire, Police, and Emergency Management Departments, as well as between the licensee and the Massachusetts General Hospital, were being maintained.
- Emergency drills were being conducted annually as required by the Emergency Plan.
- Emergency preparedness training for licensed operators and personnel from various support organizations was being completed as required.

REPORT DETAILS

Summary of Facility Status

The Massachusetts Institute of Technology (MIT or the licensee) Nuclear Reactor Laboratory (NRL) six megawatt research reactor continued to be operated in support of experiments, research and service irradiations, reactor operator training, and periodic equipment maintenance and surveillance activities. The reactor has recently been operating Monday through Friday with operations running 24 hours a day. During the inspection the reactor was operated continuously to support ongoing experiments and material irradiation.

1. Organization and Staffing

a. Inspection Scope (Inspection Procedure (IP) 69006)

The inspector reviewed the following regarding the Massachusetts Institute of Technology Reactor (designated as MITR-II) organization and staffing to ensure that the requirements of Technical Specification (TS) 7.1, "Organization," Revision (Rev.) 6, implemented through renewed Facility Operating License R-37, issued November 1, 2010, were being met:

- Management responsibilities
- Qualifications of facility operations personnel
- MIT NRL Organization Chart, dated March 2013
- Reactor Logbook #126, April 14, 2012, to September 4, 2012
- Reactor Logbook #127, September 4, 2012, to March 12, 2013
- Staffing requirements for reactor operation stated in TS 7.1.3
- Procedure Manual (PM) 1.1, "Organization," which included:
 - PM 1.1.2, "Reactor Division," latest revision dated January 30, 1984
 - Table 1.1.2-1, "Reactor Division," latest revision dated April 13, 2009
- "MIT Research Reactor, Nuclear Reactor Laboratory, Massachusetts Institute of Technology Annual Report to the U.S. Nuclear Regulatory Commission for the Period January 1, 2011, to December 31, 2011," submitted to the U.S. Nuclear Regulatory Commission (NRC) on March 29, 2012

b. Observations and Findings

The inspector noted that the Director of Reactor Operations continued to report to the Director of the MIT NRL, who in turn reported to the President of the university through the Vice President for Research. This organization was consistent with that specified in the TS. The organizational structure and the responsibilities of the reactor staff had not changed since the last inspection.

Staffing levels remained consistent with those noted during the last inspection of the facility. The current reactor operations organization consisted of the Director of Reactor Operations, the Assistant Director of Operations and Requalification

Program Coordinator, the Superintendent of Operations, an Assistant Superintendent of Operations and Training Supervisor, a Quality Assurance Supervisor, and various reactor supervisors, and reactor operators (ROs). The Director of Reactor Operations, the Assistant Director of Reactor Operations, the Superintendent of Operations, the Assistant Superintendent, the Quality Assurance Supervisor, the Training Coordinator, and the majority of the reactor supervisors were qualified senior reactor operators (SROs). It was noted that about one-third of the reactor supervisor and one-half RO positions were full-time, while the others were part-time positions (mostly students). In addition to the operations staff, there were various support groups, including a research staff, a research development group, a reactor engineering staff, maintenance personnel, and a reactor radiation protection group.

Through a review of reactor operations logs for the period from April 2012 through the present, and through interviews with operations personnel, the inspector determined that the licensee operated Monday through Friday, 24 hours a day with three crews and no shift rotation. Each operating crew was staffed with various personnel (with at least two licensed operators on duty at the MITR-II per shift). Operations shifts were scheduled for a period of 8 hours. The review of the reactor (console) logbooks and associated records confirmed that shift staffing during reactor operations met the minimum requirements for duty and on-call personnel specified in TS 7.1.3.

c. Conclusion

The licensee's organization and staffing were in compliance with the requirements specified in TS 7.1.

2. Reactor Operations

a. Inspection Scope (IP 69006)

To verify that the licensee was conducting reactor operations in accordance with TS Sections 2 and 3 and procedural requirements, the inspector reviewed selected portions of the following:

- Reactor Logbook #126, April 14, 2012, to September 4, 2012
- Reactor Logbook #127, September 4, 2012, to March 12, 2013
- PM 2.3, "Reactor Startup Procedure," which included:
 - PM 2.3.1, "Normal Reactor Startup," latest revision dated November 7, 2011
- PM 3.1, "Startup Checklists," which included:
 - PM 3.1.1, "Full Power Start-up Checklist," latest revision dated June 2, 2012
 - PM 3.1.5, "ECP Calculations" latest revision dated June 27, 2011
 - PM 3.1.6, "Restart Following an Unanticipated or Brief Scheduled Shutdown," latest revision date June 27, 2011

- PM 3.5, "Daily Surveillance Check," latest revision dated February 8, 2011
- "MIT Research Reactor, Nuclear Reactor Laboratory, Massachusetts Institute of Technology Annual Report to the U.S. Nuclear Regulatory Commission for the Period January 1, 2011, to December 31, 2011," submitted to the NRC on March 29, 2012

b. Observations and Findings

(1) Reactor Operation

The inspector observed facility activities on various occasions during the week including routine reactor operations and updating the console logs ("taking logs"). Written procedures and checklists were used for each activity as required. It was noted that the reactor operators followed the appropriate procedures, were knowledgeable of the required actions, and professional in the conduct of their duties.

(2) Staff Communication

During the inspection the inspector observed reactor operator turnover activities during the shift. The status of the reactor and the facility was discussed on each occasion as required. The oncoming personnel were briefed on the upcoming activities and scheduled events before assuming the operations duty. Through direct observation and records review, the inspector verified that the content of turnover briefings was appropriate and that shift activities and plant conditions were discussed in sufficient detail.

c. Conclusion

MITR-II reactor operations, as well as turnovers and operator cognizance of facility conditions during routine operations, were acceptable.

3. Operator Licensing, Requalification, and Medical Activities

a. Inspection Scope (IP 69003)

To verify that the licensee was complying with the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55 and TS 7.2.3.b and conforming to Chapter 12, Sections 12.1 and 12.10 of the facility Safety Analysis Report, the inspector reviewed selected aspects of:

- Current status of operator licenses
- Reactor Logbook #126, April 14, 2012, to September 4, 2012
- Reactor Logbook #127, September 4, 2012, to March 12, 2013
- Results of the 2012 annual written examinations
- Reactor operator files maintained in the operations office

- Medical examination records for selected operators for the past 3 years
- “On-the-Job-Training Notebook, Book 1,” documenting reactivity manipulations completed by those operators whose last names began with A through Le
- “On-the-Job Training Notebook, Book 2,” documenting reactivity manipulations completed by those operators whose last names began with Lu through Y
- PM 1.16, “Requalification and Qualification,” which included:
 - Section 1.16.1, “Requalification Program for Licensed Personnel,” latest revision dated February 20, 2013
 - Section 1.16.2, “MITR Operations Qualification Program for Senior Reactor Operators/Shift Supervisors,” latest revision February 20, 2013
 - Section 1.16.3, “MITR Operations Qualification Program for Operators,” latest revision dated February 20, 2013

b. Observation and Findings

There were 23 individuals licensed to operate the reactor at MIT. Of those personnel, 18 were qualified SROs and 5 were ROs. A review of various Requalification Program records indicated that the program was maintained up-to-date and that RO and SRO licenses were current. MITR-II operator files and reactor logbooks also showed that all operators maintained active duty status. A review of the MITR Safety Committee meeting minutes and independent audit results indicated that the program was being audited annually as required by TS 7.2.3.b.

A review of the pertinent logs and records also showed that training was being conducted in accordance with the licensee’s requalification and training program. A series of lectures were given to operators during the 2 year training and requalification cycle. Information regarding facility changes, procedure changes, and other relevant information was routinely routed to all licensed operators for their review. The inspector verified that the required reactor operations, reactivity manipulations, other operations activities, and reactor supervisor activities were being completed and the appropriate records were being maintained. Records indicating the completion of annual supervisory observations and evaluations for each operator were also maintained. The inspector also noted that all operators were receiving biennial medical examinations within the time frame allowed as required by the program.

c. Conclusion

Operator requalification was up-to-date and being completed as required by the MITR-II Operator Requalification Program. Operators were receiving biennial medical examinations as required.

4. Maintenance and Surveillance

a. Inspection Scope (IPs 69006 and 69010)

To verify that the licensee was meeting the surveillance requirements specified in TS Section 4 and that maintenance was being conducted, the inspector reviewed selected aspects of:

- MITR-II Job Workbook
- MITR-II Daily Operations Schedule
- Reactor Logbook #126, April 14, 2012, to September 4, 2012
- Reactor Logbook #127, September 4, 2012 to March 12, 2013
- PM 3.1.1.1, "Mechanical Two Loop Startup Checklist," latest revision dated June 2, 2012
- PM 3.1.1.2, "Instrumentation Two Loop," latest revision dated June 2, 2012
- PM 3.1.1.3, "Full Power Checks," latest revision dated November 16, 2011
- PM 3.1.5, "ECP Calculation," latest revision dated June 27, 2011
- PM 3.1.6, "Restart" latest revision dated June 27, 2011
- PM 3.5, "Daily Surveillance Check," latest revision dated February 8, 2011
- PM 6.1.3, "Calibrations," which included: PM 6.1.3.1 and 6.1.3.2, latest revision dated September 21, 2011
- "MIT Research Reactor, Nuclear Reactor Laboratory, Massachusetts Institute of Technology Annual Report to the U.S. Nuclear Regulatory Commission for the Period January 1, 2011, to December 31, 2011," submitted to the NRC on March 29, 2012

b. Observations and Findings

(1) Maintenance

The inspector reviewed the system that the licensee had developed to track and complete maintenance activities. The system was designed to ensure that all maintenance activities were planned and completed as scheduled, that post maintenance testing was conducted, and that the entire process was documented appropriately. The licensee used a locally developed system called the "Test and Calibration Tracker" which listed nearly all the tests, checks, and calibrations that were due on a monthly basis, as well as MITR-II "Systems, Tests, and Calibrations" notebooks to document completion of the various periodic maintenance and surveillance activities. The inspector noted that all such tasks were tracked through this system. The program appeared to be effective.

(2) Surveillance

Various periodic surveillance verifications and calibration records of equipment, including the testing of various reactor systems, instrumentation, and auxiliary systems were reviewed by the inspector. TS surveillance items were completed on schedule as required by TS and in accordance with licensee procedures. The results of selected tests, checks, and calibrations reviewed by the inspector were noted to be within the TS and procedurally prescribed parameters.

c. Conclusion

The system for tracking and completing maintenance items and surveillance checks and calibrations was adequate and was being maintained as required. Maintenance and surveillance records, performance, and reviews satisfied TS and procedure requirements.

5. Fuel Movement and Handling

a. Inspection Scope (IP 69009)

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

- Reactor Logbook #126, April 14, 2012, to September 4, 2012
- Reactor Logbook #127, September 4, 2012, to March 12, 2013
- PM 1.15 "Refueling," which included:
 - PM 1.15.1 "Removal of Spent Fuel," latest revision dated October 27, 1989
- PM 3.3, "Movement of Fuel," which included:
 - PM 3.3.1, "General Conduct of Refueling Operations," latest revision dated January 10, 1994
- PM 3.3.1, "General Conduct of Refueling Operations," which included:
 - PM 3.3.1.1, "Fuel Element Transfers: Core/Storage Ring/Vault," latest revision dated April 22, 1980
- PM 3.3.2, "General Conduct of Removal of Spent Fuel," which included:
 - PM 3.3.2.1, "Fuel Element Transfers: Storage Ring/Storage Vault," latest revision dated July 28, 1981
- Approved packets for core configurations completed in 2012 and 2013, including:
 - "Fuel Loading Permission" Form (form revision dated September 19, 1979), completed for fuel element transfers in 2012 and 2013 to date

b. Observations and Findings

The inspector reviewed the fuel movement process and verified that fuel moves were conducted according to established procedure and documented on specific

fuel movement sheets developed by the Director of Reactor Operations. The inspector reviewed selected fuel movement sheets for 2012 and to date in 2013. They had been developed and used for each specific core refueling as required.

The inspector reviewed the preparations for, and follow-up to, the refueling activities recorded in the reactor logbook that occurred during 2012. Of particular note was fuel movement associated with the discharge of all 11 fuel elements from the fission converter tank in July 2012, designated as Core 206i. The core configuration package was approved and subsequently used by reactor operators, in addition to the routine procedures, for completing the fuel moves. The inspector noted that fuel moves had been completed as specified and that fuel removed from the fission converter tank was placed in specified locations meeting the requirements of TS 3.1.4. The inspector also compared the location of fuel elements in the reactor core as indicated on the fuel movement/transfer forms for the latest core with the information maintained on the MITR-II fuel status/location board in the control room.

During the fuel movement associated with Core 206i, a problem was noted by operations personnel on the field copy of the fuel transfer schedule for fuel element MIT-309 which stated that "Element came off tool, was recovered with J hook tool into basket." However no mention of the event was documented in the reactor logbook and no other written documentation of the event could be located. Reactor operations personnel who performed the activities and documented the fuel recovery were not available onsite to be interviewed by the inspector. As a result, Inspector Follow-up Item (IFI) 50-020/2013-201-01 has been initiated to follow-up on this event to determine the cause of fuel element coming off the tool, the nature and extent of any potential damage to assembly MIT-309, the results of any visual inspections conducted, and management permissions to place the fuel element back into service.

c. Conclusion

Fuel was being controlled as required and fuel movements were performed in accordance with approved procedures and TS requirements. One IFI was opened to follow-up on a fuel handling issue during a subsequent inspection.

6. Experiments

a. Inspection Scope (IP 69005)

To verify compliance with the licensee's procedures, TS Section 6 and TS 7.5, and 10 CFR 50.59, the inspector reviewed:

- Reactor Logbook #126, April 14, 2012, to September 4, 2012
- Reactor Logbook #127, September 4, 2012, to March 12, 2013
- Experiment Review Process documented in PM 1.10, "Experiment Review and Approval," which included:
 - PM 1.10.7, "Records," latest revision dated March 11, 1988

- “MIT Part I – Irradiation Request Form”
- “MIT Part II – Irradiation Information Form”
- Unusual Occurrence Report 2012-1, “Contamination During Removal of Samples from ICSA.” January 4, 2012
- Unusual Occurrence Report 2012-4, “ Mechanical Damage to HYFI Components,” January 24, 2012
- Unusual Occurrence Report 2012-9, “4DH4 Neutron Test Facility Bismuth Filter Operational Violation,” August 23, 2012

b. Observations and Findings

The inspector reviewed the experimental review and approval process described in PM 1.10. The inspector reviewed selected safety review forms and irradiation request forms for experiments that were currently active. The experimental facilities and/or equipment had been evaluated in accordance with TS requirements and the associated data sheets indicated that the experiments would be within the specified limits. The analysis for each had been performed and the reviews and approvals completed. The appropriate reviews and approvals had also been completed for the samples and/or materials to be irradiated and the experiments were conducted under the cognizance of the reactor supervisor and in accordance with the specified requirements.

During the review of unusual occurrence reports generated by the licensee in 2012, it was noted that three unusual occurrences were associated with ongoing experimental activities in 2012. The inspector reviewed the licensee’s documentation and correction actions associated with the following: (1) Unusual Occurrence Report 2012-1, “Contamination During Removal of Samples from In-Core Sample Assembly,” January 4, 2012; (2) Unusual Occurrence Report 2012-4, “Mechanical Damage to Hydride Fuel Capsule Irradiation Components,” January 24, 2012; and (3) Unusual Occurrence Report 2012-9, “4DH4 Neutron Test Facility Bismuth Filter Operational Violation,” August 23, 2012. In each case the licensee properly self-identified the cause and corrective actions. No non-compliances or TS violations were identified by the inspector associated with these events.

c. Conclusion

Conduct and control of experiments met the requirements of the TS and the applicable facility procedures.

7. Emergency Preparedness

a. Inspection Scope (IP 69011)

The inspector reviewed selected aspects of the following to verify compliance with TS 7.2.3.d and the licensee’s Emergency Plan and associated procedures:

- Training records for MITR Support Personnel
- Review and Critique of the 2012 Medical Emergency Drill
- PM 4.0, "MITR-II Emergency Plan and Procedures," including a draft revision approved October 30, 2012, but awaiting resolution of safety committee comments.
- PM 4.4.4, "Emergency Operating Procedures"

b. Observation and Findings

The inspector reviewed the Emergency Plan (E-Plan) and implementing procedures in use at the reactor and verified that the procedures were reviewed annually by all licensed operators in accordance with the Operator Requalification Program.

Through records reviews and interviews with facility emergency personnel (i.e., licensed operators or emergency responders), the inspector determined that they were knowledgeable of the proper actions to take in case of an emergency. Training for staff members had been conducted annually as required and documented acceptably. Training for City of Cambridge Fire Department (CCFD) personnel was completed periodically.

Emergency training for MIT Police Department personnel was required to be conducted annually by E-Plan Section 4.10.1.1. When the inspector reviewed the training, it was noted that the most recent training had been completed as required.

The inspector verified that letters of agreement (LOA) with CCFD and the Police Department, as well as the LOA with the Massachusetts General Hospital, were on file and being maintained.

Communications capabilities with support groups were acceptable and were verified annually through a communications check with the various organizations. Emergency call lists had been revised and updated as needed and were available in various areas of the facility, including in controlled copies of the Emergency Procedures Manuals. The inspector also verified that emergency equipment was generally being inventoried quarterly as required.

The inspector verified compliance with the E-Plan requirement for annual emergency plan drills. The licensee met this requirement by conducting radiological emergency and medical emergency drills each year or by taking credit for an actual emergency. Following each drill a critique was conducted to identify areas of strength and weakness. Drills and critiques were documented in writing as referenced above. The drills appeared to be challenging and provided a good indication of each organization's responsiveness and capabilities.

The inspector and the MITR Quality Assurance Supervisor visited one of the CCFD fire stations, met with various personnel there, and observed some of the equipment that would be used in response to an emergency at the MITR facility.

During the tour of the fire station, it was noted that the CCFD maintained more than a sufficient amount of equipment to respond to any fire emergency at the MITR.

c. Conclusion

The licensee was maintaining acceptable emergency preparedness in accordance with TS and E-Plan requirements.

8. Exit Interview

The inspection scope and results were summarized on March 14, 2013, with members of licensee management. The inspector described the areas inspected and discussed the preliminary inspection findings. The licensee acknowledged the results of the inspection and did not identify any information to be withheld from public disclosure.

PARTIAL LIST OF PERSONS CONTACTED

Licensee Personnel:

J. Bernard	Senior Advisor, Research Staff
T. Bork	Irradiation Services Coordinator
E. Block	Engineering Supervisor
J. Foster	Superintendent of Operations
E. Lau	Assistant Director of Reactor Operations and Requalification Program Coordinator
W. McCarthy	Reactor Radiation Protection Officer and Deputy Director, MIT Environment, Health, and Safety Office
T. Newton	Director of Reactor Operations and Associate Director, Reactor Engineering
S. Tucker	Quality Assurance Supervisor

Other Personnel:

R. Rossi	Assistant Chief, City of Cambridge Fire Department
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INSPECTION PROCEDURES USED

IP 69003	Class 1 Research and Test Reactor Operator Licenses, Requalification, and Medical Examinations
IP 69005	Class 1 Research and Test Reactor Experiments
IP 69006	Class 1 Research and Test Reactors Organization and Operations and Maintenance Activities
IP 69009	Class 1 Research and Test Reactor Fuel Movement
IP 69010	Class 1 Research and Test Reactor Surveillance
IP 69011	Class 1 Research and Test Reactor Emergency Preparedness

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened:

IFI 50-020/2013-201-01	Follow-up on cause and corrective actions associated with fuel element MIT-309 coming off tool during transfer from the fission converter tank to wet storage ring.
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Closed:

None.

LIST OF ACRONYMS USED

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
ADAMS	Agencywide Documents Access and Management System
CCFD	Cambridge City Fire Department
E-Plan	Emergency Plan
IFI	Inspector Follow-up Item
IP	Inspection Procedure
LOA	Letter of Agreement
MIT	Massachusetts Institute of Technology
MITR-II	Massachusetts Institute of Technology Reactor
NRC	U. S. Nuclear Regulatory Commission
NRL	Nuclear Reactor Laboratory
PM	Procedure Manual
Rev.	Revision
RO	Reactor Operator
SRO	Senior Reactor Operator
TS	Technical Specification