

October 24, 2017

Dr. Cameron Goodwin, Director  
Rhode Island Nuclear Science Center  
16 Reactor Road  
Narragansett, RI 02882-1165

SUBJECT: RHODE ISLAND ATOMIC ENERGY COMMISSION – U.S. NUCLEAR  
REGULATORY COMMISSION ROUTINE INSPECTION REPORT  
NO. 50-193/2017-202

Dear Dr. Goodwin:

From October 2-5, 2017, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Rhode Island Nuclear Science Center reactor facility. The enclosed report documents the inspection results, which were discussed on October 5, 2017, with the Assistant Director for Operations and the Reactor Supervisor.

This 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 observed various activities in progress, interviewed personnel, and reviewed selected procedures and representative records. Based on the results of this inspection, no findings of non-compliance 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, 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).

If you have any questions concerning this inspection, please contact Craig Bassett at 240-535-1842 or by electronic mail at [Craig.Bassett@nrc.gov](mailto:Craig.Bassett@nrc.gov).

Sincerely,

**/RA/**

Anthony J. Mendiola, Chief  
Research and Test Reactors Oversight Branch  
Division of Licensing Projects  
Office of Nuclear Reactor Regulation

Docket No. 50-193  
License No. R-95

Enclosure:  
As stated

cc: See next page

cc:

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SUBJECT: RHODE ISLAND ATOMIC ENERGY COMMISSION – U.S. NUCLEAR  
REGULATORY COMMISSION ROUTINE INSPECTION REPORT  
NO. 50-193/2017-202 DATED: OCTOBER 24, 2017

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

Docket No: 50-193

License No: R-95

Report No: 50-193/2017-202

Licensee: Rhode Island Atomic Energy Commission

Facility: Rhode Island Nuclear Science Center Research Reactor

Location: Narragansett, Rhode Island

Dates: October 2–5, 2017

Inspector: Craig Bassett

Approved by: Anthony J. Mendiola, Chief  
Research and Test Reactors Oversight Branch  
Division of Licensing Projects  
Office of Nuclear Reactor Regulation

## EXECUTIVE SUMMARY

### Rhode Island Atomic Energy Commission Rhode Island Nuclear Science Center Reactor Facility NRC Inspection Report No. 50-193/2017-202

The primary focus of this routine, announced operations inspection was the onsite review of selected aspects of the Rhode Island Atomic Energy Commission's (RIAEC or the licensee) two megawatt Class I research reactor safety program including: (1) organizational structure and staffing, (2) review and audit and design change functions, (3) reactor operations, (4) operator requalification, (5) maintenance and surveillance, (6) fuel handling, (7) experiments, (8) procedures, and (9) emergency preparedness. The review covered the period of time from the last U.S. Nuclear Regulatory Commission (NRC) inspection of these areas to the present. The licensee's program was acceptably directed toward the protection of public health and safety and in compliance with the NRC requirements.

#### Organizational Structure and Staffing

- The organization structure was to be in compliance with technical specifications (TSs) requirement.
- The present staffing level appeared to be adequate for current conditions.

#### Review and Audit and Design Change Functions

- The Nuclear and Radiation Safety Committee was meeting as required, and reviewing the topics outlined in the TSs. Audits were being completed as required.
- Facility modifications and procedure changes were being evaluated in accordance with the requirements specified in Title 10 of the *Code of Federal Regulations* Section 50.59.

#### Reactor Operations

- Reactor operations were conducted in accordance with the applicable procedures and were acceptable.

#### Operator Requalification

- Operator requalification was being completed as required by the licensee's Operator Requalification Program, and the program was being maintained up-to-date.
- Operators were receiving their biennial physical examinations as required.

#### Maintenance and Surveillance

- The maintenance program, established and implemented by the licensee, was being used to effectively complete prescribed activities at the facility.
- The surveillance program currently in use by the licensee satisfied the TSs requirements.

### Fuel Handling

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

### Experiments

- The program for reviewing, authorizing, and conducting experiments satisfied the TSs and procedural requirements.

### Procedures

- The procedural review, revision, and implementation program satisfied the requirements of TSs.

### Emergency Preparedness

- The licensee maintained an effective emergency preparedness program through implementation of the emergency plan and the associated implementing procedure.

## REPORT DETAILS

### Summary of Facility Status

The licensee's Rhode Island Nuclear Science Center (RINSC) two megawatt Class I research reactor continued to be operated in support of research, service, education, training, and surveillance. During the inspection, the reactor was operated to irradiate samples and to conduct an experiment for a class.

#### 1. Organizational Structure and Staffing

##### a. Inspection Scope (Inspection Procedure [IP] 69006)

The inspector reviewed the following regarding the licensee's organization and staffing to ensure that the requirements of Section 6.1 of the RINSC technical specifications (TSs), dated December 19, 2016, (approved as part of the facility license renewal dated January 5, 2017) were being met:

- RINSC organizational structure and staffing
- Reactor Logbook Numbers (Nos.) 62 and 63
- Listing of the members of the Rhode Island Atomic Energy Commission's (RIAEC)
- Listing of the members of the RINSC Nuclear and Radiation Safety Committee (NRSC)

##### b. Observations and Findings

The inspector reviewed the facility organization and staffing. The organization had not changed since the previous inspection and continued to be staffed as required. The Director continued to have responsibility for all activities in the facility as stipulated in the TSs. Also, a licensed senior reactor operator (SRO) was assigned to each shift with the responsibility for all activities during that shift. The organizational structure at the facility was in compliance with the TSs.

The inspector noted that there were three SROs and two reactor operators (ROs) on staff at the facility. The inspector verified that shift staffing met TS requirements. It was noted one new person had joined the reactor staff filling the position left vacant when the previous Reactor Health Physicist left.

The inspector noted that most staff members had collateral duties to perform at the facility. Despite this fact, the inspector concluded that the facility was being operated safely and that the staffing level appeared to be adequate given the current level of activity at the facility. An increase in the workload would necessitate a larger staff.

##### c. Conclusion

The organizational structure was in compliance with TS requirements. The present staffing level appeared to be adequate for current conditions.



## 2. Review and Audit and Design Change Functions

### a. Inspection Scope (IP 69007)

The inspector reviewed selected aspects of the following with respect to the review and audit program and design change activities to ensure compliance with TS Section 6.2:

- NRSC Charter, Revision (Rev.) 4, approval dated November 23, 2015
- NRSC meeting minutes from May 2016 through the date of this inspection
- Title 10 of the *Code of Federal Regulations* (10 CFR) 50.59 screen/review forms for the latest proposed modifications or changes to the facility and/or facility procedures
- RINSC Administrative Procedure (AP) AP-03, "Facility Modifications," Rev. 2
- RINSC Annual Report for the period from July 1, 2015, through June 30, 2016, submitted to the U.S. Nuclear Regulatory Commission (NRC) on August 25, 2016
- RINSC Annual Report for the period from July 1, 2016, through June 30, 2017, submitted to the NRC on July 19, 2017

### b. Observations and Findings

#### (1) Review and Audit Functions

The inspector reviewed the NRSC meeting minutes and associated records from May 2016 through the present. The records showed that meetings were being held and safety reviews and audits were conducted by various members of the NRSC or other designated persons as required, and at the required frequency. Topics of these reviews and audits were consistent with TS requirements to provide guidance, direction, and oversight for the facility, and acceptable use of the reactor.

#### (2) Design Change Functions

The inspector assessed the 10 CFR 50.59 review process used at the facility. It was noted that the licensee's procedure governing design changes provided guidance concerning the review of facility modifications and changes to procedures using the 10 CFR 50.59 review and evaluation process. Also, screening forms were used to determine whether or not a full 10 CFR 50.59 review and evaluation was required for any change being contemplated.

Through interviews with licensee personnel, the inspector determined that various changes had been proposed for implementation at the facility. Following the screening process, the licensee determined that two changes required a review. Those reviews were completed and submitted to the NRSC for review. These changes involved upgrading the stack monitor and changing the coolant temperature scram set point (to comply with the recently approved TSs). It was also noted that the

licensee also provided the NRSC with a synopsis of other changes that had been made at the facility (those that did not require a review) and the current status of each.

c. Conclusion

The NRSC was meeting as required and reviewing the topics outlined in the TSs. Audits were being completed as required. Design changes were being evaluated in accordance with 10 CFR 50.59 requirements.

**3. Reactor Operations**

a. Inspection Scope (IP 69006)

The inspector reviewed selected portions of the following documents to verify that the licensee was operating the reactor and documenting activities in accordance with TS Section 6.1 and procedural requirements:

- Reactor Logbook Nos. 62 and 63
- Selected Pre-Startup Check Sheet (Nuclear Science Center [NSC]-1) forms
- Reactor operations documented on the following:
  - Selected Reactor Operations Request (NSC-49) form
  - Selected RINSC Reactor Operations Data (NSC-18) forms
  - Selected Shift Record Data Sheet (NSC-11) forms
  - Selected Shutdown Check Sheet (NSC-1C) forms
- RINSC Annual Report for the past two reporting periods (as noted in paragraph 2 above)
- Periodic Maintenance Notebook containing the documentation of maintenance items
- Various RINSC Operating Procedures (OP) including:
  - OP-01, "Reactor Operation Request," Rev. 2
  - OP-02, "RINSC Pre-Start Checkout," Rev. 18
  - OP-03, "Reactor Power Changes," Rev. 7
  - OP-04, "Abnormal Procedures," Rev. 4

b. Observations and Findings

The inspector reviewed various forms that were required to be completed to document reactor operations. The inspector also reviewed portions of recent reactor logbooks to verify compliance with the staffing requirements of TS Subsections 6.1.2 and 6.1.3. It was noted that appropriate documentation was being completed and shift staffing was as required by the TSs.

The inspector observed various activities involving the reactor including a reactor start-up and reactor operation in support of an experiment for a class. An SRO and a RO were properly assigned for those operations. Reactor operations were conducted in an appropriate manner and in accordance with procedure.

c. Conclusion

Reactor operations were conducted in accordance with the applicable procedures and were acceptable.

4. **Operator Requalification**

a. Inspection Scope (IP 69003)

The inspector reviewed selected aspects of the following to ensure compliance with the licensee's operator requalification program outlined in RINSC AP-02, "Reactor Operator Requalification," Rev. 4:

- Reactor Logbook Nos. 62 and 63
- Individual RO and SRO requalification files containing copies of the following:
  - Operator Requalification Program Checklist forms
  - Annual Operational Requalification Exam forms
  - Biennial Operator Requalification Examinations
  - Letters from the NRC to the licensed operators documenting the issuance of an RO or SRO license
- Copies for each individuals' NRC Form 396, "Certification of Medical Examination by Facility Licensee"
- American National Standards Institute/American Nuclear Society-15.4-2007, "Selection and Training of Personnel for Research Reactors," Section 7, "Medical certification and monitoring of licensed personnel"

b. Observations and Findings

As noted previously, there were three licensed SROs and two ROs on staff at the facility. One other person, a student, was also licensed to operate the facility reactor. The licenses of these operators were reviewed and determined to be current.

A review of the logs and records showed that training was being conducted in accordance with the licensee's requalification and training program. Procedure reviews and examinations had been documented as required. Information regarding facility changes and other relevant information had been routed to all licensed operators who then acknowledged their review of this information.

The inspector verified that quarterly reactor operations, reactivity manipulations, other required operations activities, and reactor supervisor activities were being completed as required, and the appropriate records were being maintained. All these activities were tracked, documented, and signed off by the Reactor Supervisor.

Records indicating the successful completion of the annual operations tests and supervisory observations were also maintained. Biennial written exams were also being administered to the qualified operators as well. All operators were current and had completed those tests and exams. The inspector also noted that all operators were receiving biennial medical examinations within the allowed

time frame as required. The inspector determined that the program was being maintained up-to-date. No problems or anomalies were noted.

c. Conclusion

Operator training and requalification was being conducted in accordance with the licensee's Operator Requalification Program. Operators were receiving their biennial physical examinations as required.

**5. Maintenance and Surveillance**

a. Inspection Scope (IP 69006, 69010)

The inspector reviewed the following to verify compliance with the Limiting Conditions for Operation specified in TSs Sections 3.1-3.9 and to determine if periodic surveillance tests of selected safety systems were performed as stipulated in TSs Section 4.1-4.9:

- RINSC Maintenance Board for 2016 (spreadsheet) and 2017
- Reactor Data Notebook and associated records documenting various surveillance items
- RINSC Annual Report for the past two reporting periods (as noted in paragraph 2 above)
- Confinement System Notebook and associated documents
- Primary Water Analysis Notebook and associated documents
- Secondary Water Analysis Notebook and associated documents
- Instrumentation Calibration Notebook and associated documents including:
  - Nuclear Instrument Calibration forms
  - Calibration forms of various Monitors
- Maintenance Notebook and associated documents including:
  - RINSC Emergency Generator Maintenance Checklist forms (NSC-44)
  - Alarm, Scram, and Interlock Check Sheet forms (NSC-1A)
  - Completion of Testing Reactor Parameters forms (NSC-43)
- Various RINSC Reactor Parameter Testing Procedures (TP) including:
  - TP-01, "Shim Safety Rod Drop Time Measurement," Rev. 2
  - TP-03, "Control Rod Reactivity Worths," Rev. 1
  - TP-04, "Control Rod Reactivity Insertion Rates," Rev. 3
  - TP-05, "Determining Shutdown Margin and Excess Reactivity," Rev. 0

b. Observations and Findings

(1) Maintenance

The inspector reviewed the licensee's tracking mechanism for maintenance and surveillance activities. The inspector verified that the activities being tracked were completed in accordance with TSs and licensee procedures, and that the results met procedural requirements.

The maintenance records indicated that problems were addressed and preventive maintenance operations were completed, as required by

procedure. Records showed that routine maintenance activities were conducted at the required frequencies and in accordance with the TSs and/or the applicable procedure.

(2) Surveillance

The inspector reviewed various surveillance records including nuclear instrumentation calibration forms, shim safety blade inspection forms, reactivity worth calculation forms, and alarm, scram, and interlock check sheets. The data recorded in the reactor logbooks and on the surveillance records indicated that the verifications and calibrations had been completed on schedule and in accordance with licensee procedures. The results reviewed by the inspector were noted to be within the TSs and procedurally-prescribed parameters. Maintenance and surveillance activities ensured that equipment remained consistent with the safety analysis report, as well as with TS requirements.

c. Conclusion

The program for conducting maintenance and for completing surveillance activities was being carried out in accordance with TS and procedural requirements.

**6. Fuel Handling**

a. Inspection Scope (IP 69009)

The inspector reviewed the following to verify compliance with TS Subsections 4.9.2 and 6.8.1, which require visual inspection of fuel elements every 5 years on a rotating basis and maintenance of records associated with fuel inventories and transfers, respectively:

- Reactor Logbook Nos. 62 and 63
- RINSC, IP-01, "Core Element Movement and Inspection," Rev. 2
- Reactor Data Notebook containing the fuel element inspection sheets, the rotating inspection schedule for inspecting the elements, and the inspection 10 year forecast

b. Observations and Findings

The inspector reviewed the licensee's fuel handling process and verified that fuel was moved according to an established protocol and inspected in accordance with a specific inspection schedule. The inspector reviewed documentation of selected fuel movements and interviewed facility staff about the process. A plan for each series of fuel movements was developed prior to the activity and used for core refueling, core rearrangement, and performing inspections of fuel elements. It was noted that fuel inspections had been completed as scheduled in previous (i.e., through 2016) and that the inspection documents contained descriptions of fuel conditions including discolorations and markings. No fuel inspection had been completed to date in 2017. The licensee indicated that they planned to conduct the inspections later this year.

The inspector also compared the location of fuel elements in the reactor core with the information maintained on the fuel status board in the control room and on the fuel movement sheets for the latest core, low-enriched uranium Core No. 6. No problems or anomalies were noted. It was also noted that the fuel handling equipment was properly stored and secured.

c. Conclusion

Fuel movements were conducted in accordance with written procedures that met TS requirements. Fuel inspections were being completed annually as required.

**7. Experiments**

a. Inspection Scope (IP 69005)

The inspector reviewed selected aspects of the following to verify that the licensee was in compliance with TS Sections 3.1, 3.8, 4.1, 4.8, and 4.9:

- Reactor Logbook Nos. 62 and 63
- Operating Data Notebooks for 2017 containing completed copies of the following:
  - Reactor Operations Request forms (NSC-49)
  - Pre-Start Checkout forms (OP-02)
  - Shift Record Data Sheets (NSC-11)
  - RINSC Reactor Operations Data sheets (NSC-18)
  - Shutdown Check Sheets (NSC-1C)
- Experiment approval, authorization, administrative controls and precautions documented on the appropriate forms including:
  - Reactor Experiment Request Forms (NSC-42)
  - Reactor Experiment Approval forms (NSC-47)
  - Reactor Operations Request forms (NSC-49)
- Various RINSC Operating Procedures including:
  - OP-01, "Reactor Operation Request," Rev. 2
  - OP-02, "RINSC Pre-Startup Checkout," Rev. 18
  - OP-03, "Reactor Power Changes," Rev. 7
- Various RINSC Experiment Procedures (XP) including:
  - XP-01, "Reactor Experiment Request," Rev. 2
  - XP-02, "Reactor Experiment Approval," Rev. 5
  - XP-03, "Rabbit Irradiations," Rev. 1
  - XP-04, "Incore Irradiations," Rev. 1
  - XP-10, "Dry Irradiation Facility Irradiations," Rev. 0
  - XP-12, "Gamma Tube Irradiations," Rev. 1

b. Observations and Findings

The majority of the experiments conducted at the facility were ones that have been in place for several years. However, since the last inspection in this area, four new experiments had been proposed. These new experiments involved irradiation of food, topaz, arsenic in a liquid, and fruit flies. The inspector verified that each of the experiment proposals included a discussion of the proposed

experiment, as well as the hazards involved and the anticipated results. The experiments had been reviewed and approved by the reactor staff and were subsequently reviewed and approved by the NRSC as required.

The inspector verified that the appropriate irradiation request forms for the various experiments were completed and approved as required prior to reactor operations. The inspector also noted that all experiments were being conducted using approved methods and with the cognizance of the SRO on duty in accordance procedural requirements. The experiments were documented on the appropriate forms and in the operations log as required. Engineering and radiation protection controls were implemented as required to limit exposure of the workers handling the irradiated samples.

c. Conclusion

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

**8. Procedures**

a. Inspection Scope (IP 69008)

To verify that facility procedures were being prepared, reviewed, revised, and implemented as required by TSs Section 6.4, the inspector reviewed selected aspects of:

- Reactor Logbook Nos. 62 and 63
- Recently approved procedures including:
  - RINSC Radiation Safety (RS) Procedure, RS-24, "Ludlum Model 3 Electronic Calibration," Rev. 0, NRSC approval dated September 5, 2017
  - RINSC Reactor Parameter Testing Procedure, TP-02, "Determining Cold, Clean, Critical Rod Heights," Rev. 0, NRSC approval dated September 1, 2017
  - RINSC Reactor Parameter Testing Procedure, TP-05, "Determining Shutdown Margin and Excess Reactivity," Rev. 0, NRSC approval dated September 1, 2017
- NRSC meeting minutes from May 2016 through the date of this inspection

b. Observations and Findings

Procedures had been developed for the safe, routine operation of the reactor. Records showed that procedures for potential malfunctions (e.g., radioactive releases and contaminations, and abnormal events) had also been developed and were available for use if needed. The inspector verified that substantive procedural changes, as well as all new procedures, were being screened in accordance with the licensee's 10 CFR 50.59 process. Following that, the procedures were reviewed and approved by the NRSC as required by TSs.

Through observation of various activities at the facility, including reactor operation, the inspector determined that licensee personnel conducted activities in accordance with applicable procedures.

The inspector verified that, following the facility's license renewal and issuance of the new TSs, many procedures needed to be revised to reflect the proper TS references and, in some cases, revised requirements that are now applicable. Most procedures had been revised as of the date of the inspection but some remained to be reviewed. The licensee indicated that the remainder of the procedures were scheduled to be revised by the end of the year. The licensee was informed that this issue will be tracked by the NRC as an Inspector Follow-up Item (IFI) and will be reviewed during a future inspection (IFI 50-193/2017-202-01).

c. Conclusion

The procedural review, revision, and implementation program satisfied the TS requirements.

**9. Emergency Preparedness**

a. Inspection Scope (IP 69011)

The inspector interviewed staff members and reviewed various documents to verify compliance with regulatory requirements and the RINSC emergency plan (E-Plan) Rev. 6 (approved by the NRC as part of the facility license renewal dated January 5, 2017):

- Emergency Preparedness Notebook containing documentation of various activities including:
  - Fire Alarms Tests
  - Completion of annual Emergency Supply Inventories documented on Form NSC-83
  - Emergency training and drills conducted during the past two years
  - Emergency Communication Tests conducted with various support agencies
- RINSC Emergency Procedure (EP), EP-01, "Emergency Plan Implementing Procedures," Rev. 4
- Letter of Agreement between Narragansett Police Department and RINSC, signed by Mr. M. J. Davis and by Chief S. Corrigan, dated March 10, 2016
- Letter of Agreement for Medical Services, signed by L. Sivaprasad, MD, Vice President of Medical Affairs and Chief Medical Officer, Rhode Island Hospital, addressed to Dr. C. Goodwin, RIAEC, dated June 23, 2016
- Letter of Agreement between Narragansett Fire Department and RINSC, signed by Mr. M. J. Davis and Chief S. Partington on December 15, 2015

b. Observation and Findings

The inspector reviewed the E-Plan in use at the reactor and verified that it was being reviewed and updated biennially as required. The inspector reviewed the associated implementing procedures as well, and noted that they were also reviewed biennially and revised as needed.



Through records review and interviews with staff personnel (e.g., emergency responders), the inspector determined that they were knowledgeable of the proper actions to take in case of an emergency. Training for these individuals was accomplished annually typically following the evacuation and emergency drills. Training for support organization personnel was provided whenever those organizations were available and/or requested such training.

The documentation of the training and drills conducted during the past 2 years was reviewed. Through drill scenarios and records review, and personnel interviews, off-site emergency responders were determined to be knowledgeable of the appropriate actions to take when responding to an emergency at the RINSC facility. Emergency and evacuation drills had been conducted annually as required by the E-Plan. Critiques following each drill had been conducted as required and the results documented. Recommendations were made to correct any deficiencies noted during the drill.

The inspector verified that the Letters of Agreement between the RINSC facility and the Narragansett Police Department and Narragansett Fire Department remained in effect. These agreements stipulated that police and fire personnel would respond during an emergency and would provide support for the facility. The inspector also verified that the agreement between the reactor facility and Rhode Island Hospital remained in effect. That agreement ensured that the hospital would provide RINSC personnel with needed support in case a staff member became contaminated and also needed emergency medical care.

Communications capabilities with support groups were acceptable and the various items of equipment (e.g., telephones and the building public address system) were in use daily. Portable radios were also available for use as needed and were checked annually. Emergency call lists had been revised and were available in the control room and in various areas around the facility as required, as well as in the Emergency Support Center. The call list was being updated annually as required.

The inspector visited the facility Emergency Support Center located in a separate building and observed the emergency supplies, instruments, and information maintained in the locker located there. Everything there was in accordance with the E-Plan. The inspector also reviewed the records indicating that the emergency supplies were inventoried on an annual basis as part of the surveillance program required by the E-Plan. No problems or deficiencies were noted.

c. Conclusion

The licensee maintained an effective emergency preparedness program through implementation of the E-Plan and the associated implementing procedure.

**10. Exit Interview**

The inspector presented the inspection results to licensee management at the conclusion of the inspection on October 5, 2017. The inspector described the areas inspected, and discussed in detail the inspection observations. The licensee acknowledged the findings presented and did not identify as proprietary any of the material provided to or reviewed by the inspector during the inspection.

## **PARTIAL LIST OF PERSONS CONTACTED**

### **Licensee Personnel**

|              |   |
|--------------|---|
| J. Davis     | Assistant Director for Operations and SRO   |
| C. Goodwin   | Director, RINSC, and SRO  |
| M. Marrapese | Principle Reactor Operator  |
| P. Martin    | Reactor Supervisor and SRO  |
| S. Nam       | Assistant Director for Radiation and Reactor Safety and<br>University of Rhode Island Campus Radiation Safety Officer |
| A. Olson     | Health Physicist  |
| B. Sirr      | Facility Engineer and RO  |

## **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 Reactor Organization and Operations and Maintenance Activities       |
| IP 69007 | Class I Research and Test Reactor Review and Audit and Design Change Functions                 |
| 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**

|                     |     |   |
|---------------------|-----|---|
| 50-193/2017-2012-01 | IFI | Follow-up on the licensee's actions to revise those procedures that needed to be revised to reflect the proper TS references that are now applicable as a result of the newly issued TSs. |
|---------------------|-----|---|

### **Closed**

None

## **LIST OF ACRONYMS USED**

|        |  |
|--------|--|
| 10 CFR | Title 10 of the <i>Code of Federal Regulations</i> |
| AP     | Administrative Procedure                           |
| EP     | Emergency Procedure                                |
| IP     | Inspection Procedure                               |
| Nos.   | Numbers  |
| NRC    | U.S. Nuclear Regulatory Commission                 |
| NRSC   | Nuclear and Radiation Safety Committee             |
| NSC    | Nuclear Science Center                             |
| OP     | Operating Procedure                                |
| RIAEC  | Rhode Island Atomic Energy Commission              |
| RINSC  | Rhode Island Nuclear Science Center                |

|     |                              |
|-----|------------------------------|
| RO  | Reactor Operator             |
| RS  | Radiation Safety (Procedure) |
| SRO | Senior Reactor Operator      |
| TP  | Testing Procedure            |
| TSs | Technical Specifications     |
| XP  | Experiment Procedure         |