



[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket No. 50-193; NRC-2016-0213]

Rhode Island Atomic Energy Commission

AGENCY: Nuclear Regulatory Commission.

ACTION: License renewal; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) has issued a renewal of Facility Operating License No. R-95, held by the Rhode Island Atomic Energy Commission (RINSC or the licensee) for the continued operation of its Rhode Island Nuclear Science Center reactor for an additional 20 years from the date of issuance. The facility is located on the Narragansett Bay Campus of the University of Rhode Island in Narragansett, Rhode Island.

DATE: The renewed facility operating license No. R-95 is effective on January 5, 2017.

ADDRESSES: Please refer to Docket ID **NRC-2016-0213** when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2016-0213**. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):**

You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. For the convenience of the reader, the ADAMS accession numbers are provided in a table in the "Availability of Documents" section of this document.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Patrick G. Boyle, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-3936; e-mail: Patrick.Boyle@nrc.gov.

SUPPLEMENTARY INFORMATION:

The NRC has issued renewed Facility Operating License No. R-95, held by the licensee, which authorizes continued operation of the RINSC reactor, located on the Narragansett Bay Campus of the University of Rhode Island in Narragansett, Rhode Island. The RINSC reactor is a heterogeneous open pool-type, natural and forced convection, light-water cooled and shielded reactor. The renewed license authorizes the licensee to operate the RINSC reactor up to a steady-state power level of 2 megawatts thermal. The renewed Facility Operating License No. R-95 will expire 20 years from its date of issuance, January 5, 2017.

The renewed facility operating license complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in chapter I of title 10 of the *Code of Federal Regulations* (10 CFR), and sets forth those findings in the renewed facility operating license. The agency afforded an opportunity for hearing in the Notice of Opportunity for Hearing published in the *Federal Register* on October 24, 2016 (81 FR 73148). The NRC received no request for a hearing or petition for leave to intervene following the notice.

The NRC staff prepared a safety evaluation report (SER) – Renewal of the Facility Operating License for the Rhode Island Nuclear Science Center Reactor related to the renewal of Facility Operating License No. R-95 and concluded, based on that evaluation, that the licensee can continue to operate the facility without endangering the health and safety of the public. The NRC staff also prepared an environmental assessment and finding of no significant impact regarding the renewal of the facility operating license, noticed in the *Federal Register* on January 5, 2017 (82 FR 1364), and concluded that renewal of the facility operating license will not have a significant impact on the quality of the human environment.

Availability of Documents

The documents identified in the following table are available to interested persons through ADAMS accession numbers, as indicated. The SER, prepared by the NRC staff for the license renewal, is available in ADAMS under Accession No. ML16337A325.

"Rhode Island Atomic Energy Commission – 'Requesting Renewal of Operating License R-095 (Enclosure 2)' [REDACTED Safety Analysis Report]," May 3, 2004	ML14038A386
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"Rhode Island Atomic Energy Commission, Requesting Renewal of Operating License R-095," May 3, 2004	ML041270519
"Response to Request for Additional Information Concerning Plans for Decommissioning Facility at the End of Useful Life Ref Item 3 Parts a, b, and c," January 19, 2010	ML100270176
"Rhode Island Nuclear Science Center, Appendix A to Safety Analysis Report, Information on Ar-41 and N-16," (received December 5, 2016), February 4, 2010	ML16340A068
"Rhode Island Nuclear Science Center Reactor Submittal of Response to Request for Additional Information Re License Renewal," August 6, 2010	ML102240257
"Responding to Requests for Additional Information (RAI) regarding our Analysis of the Maximum Hypothetical Accident (MHA) for Renewal of License R-95," August 18, 2010	ML102360440
"Memorandum Steady-State Thermal-Hydraulic Analysis for Forced-Convective Flow in the Rhode Island Nuclear Science (RINSC) Reactor," September 3, 2010	ML16062A376
"Rhode Island Atomic Energy Commission, Fourth Response to Request for Additional Information dated April 23, 2010 (Redacted)," September 8, 2010	ML16279A516
Argonne National Laboratory Intra-Laboratory Memo from Earl E. Feldman and M. Kalimullah to James E. Matos Regarding Steady-State Thermal-Hydraulic Analysis for Natural-Convective Flow in the Rhode Island Nuclear Science Center (RINSC) Reactor, November 8, 2016	ML16343A144
"Rhode Island Atomic Energy Commission Fifth Response to April 13, 2010 Request for Additional Information (Regarding License Renewal redacted)," November 26, 2010	ML16279A518
"Rhode Island Atomic Energy Commission - Response to Requests for Additional Information Regarding Aging Issues Raised in RAIs," December 7, 2010	ML103490242
"Rhode Island Atomic Energy Commission Response to April 13, 2010, Request for Additional Information Regarding License Renewal Technical Specifications (Redacted)," December 14, 2010	ML16279A519
"Reply to your Request for Additional Information (RAI) dated April 13, 2010, regarding License Renewal for the Rhode Island Nuclear Science Center Reactor (RINSC)," January 24, 2011	ML110320416

“Letter re: Request for Additional Information dated April 13, 2010 Regarding License Renewal for the Rhode Island Nuclear Science Center Reactor (RINSC),” February 24, 2011	ML110600699
“Rhode Island Atomic Energy Commission Response to Request for Additional Information Regarding License Renewal,” July 15, 2011	ML11202A287
“Rhode Island Atomic Energy Commission Tenth Response to the April 13, 2010, Request for Additional Information Regarding License Renewal (Redacted),” July 5, 2011	ML16279A520
“Rhode Island Atomic Energy Commission Responses to Request for Additional Information Regarding License Renewal (Redacted),” July 15, 2011	ML16279A521
“Rhode Island Nuclear Science Center Tenth Response to NRC Request for Additional Information dated April 13, 2010, Pages 126 Through 204,” July 15, 2011	ML11202A290
“Response to NRC's Request for Additional Information Regarding Rhode Island Nuclear Science Center Reactor License Renewal,” March 15, 2013	ML13080A361
“Response to NRC’s Request for Additional Information Regarding Rhode Island Nuclear Science Center Reactor License Renewal,” March 15, 2013	ML13080A362
“Response to NRC's Request for Additional Information Regarding Rhode Island Nuclear Science Center Reactor License Renewal, Proposed Technical Specification 130314,” March 15, 2013	ML13080A364
“Response to Request for Additional Information Regarding Financial Qualifications for the RINSC Reactor License Renewal,” September 16, 2013	ML13260A474
“Rhode Island Atomic Energy Commission License Renewal Historical Resource Impact Response Letter,” December 19, 2013	ML14006A420
“Response to Request for Additional Information Regarding Requalification Plan for the RINSC Reactor License Renewal,” February 24, 2014	ML14057A639
“Compilation of All Submitted Requests for Additional Information for the Rhode Island Nuclear Science Center Reactor License Renewal. Part 1 of 3,” April 28, 2014	ML14126A192
“Rhode Island Atomic Energy Commission Consolidated Responses to Request for Additional Information Regarding License Renewal. Part 2 of 3 (Redacted),” April 28, 2014	ML16279A523

"Compilation of All Submitted Requests for Additional Information for the Rhode Island Nuclear Science Center Reactor License Renewal. Part 3 of 3," April 28, 2014	ML14126A195
"Rhode Island Nuclear Science Center Reactor - Updated Proposed Technical Specifications," June 30, 2014	ML14184B361
"Rhode Island Nuclear Science Center Updated Technical Specifications," August 7, 2015	ML15223A953
"Rhode Island Nuclear Science Center Submittal of Updated Proposed Technical Specification," August 11, 2015	ML15223A952
"Summary of Changes to the Proposed Technical Specifications," August 11, 2015	ML15223A954
"Contractor Comments and Responses," August 11, 2015	ML15223A955
"Rhode Island Nuclear Science Center Transient Analyses Revised January 20, 2016," January 20, 2016	ML16062A378
"Rhode Island Nuclear Science Center Technical Specifications," February 26, 2016	ML16062A380
"Rhode Island Atomic Energy Commission - Response to Requests for Additional Information dated September 3, 2015," March 1, 2016	ML16062A373
"Fuel Failure Addendum 160229," March 1, 2016	ML16062A381
"New Transient Analysis Results 160226," March 1, 2016	ML16062A379
"150903 RAI Responses 160301," March 1, 2016	ML16062A374
"Core Change Summary for Conversion from RINSC LEU Core #5 to LEU Core #6," March 1, 2016	ML16062A375
"[RINSC] Fuel Failure Analysis [Dose Table]," March 1, 2016	ML16062A382
"Request for Change to License for the Rhode Island Atomic Energy Commission," April 21, 2016	ML16112A071
"Rhode Island Atomic Energy Commission Research Reactor - Responses to NRC Staff Request for Additional Information for License Renewal Review (Redacted Version)," July 20, 2016	ML16202A008
"State of Rhode Island and Province Plantations - Response to Request for Additional Dated August 3, 2016, Rhode Island Nuclear Science Center Response to NRC Request for Additional Information Regarding the Renewal, and Rhode Island Nuclear Science Center Technical Specifications," October 6, 2016	ML16280A420

“State of Rhode Island and Providence Plantations - Response to Request for Additional Information Regarding Calculations for Fuel Element Failure Accident Scenario,” Letter and Responses, November 1, 2016	ML16306A063
“Rhode Island Atomic Energy Commission - Transmittal of Supplemental Information in Support of Relicensing for the Rhode Island Nuclear Science Center (R-95),” Letter and Responses, November 14, 2016	ML16319A298
Rhode Island Nuclear Science Center – “Supplemental Information for the Relicensing of the Rhode Island Atomic Energy Commission, Rhode Island Nuclear Science Center - Safety Analysis Report, and Rhode Island Nuclear Science Center - Technical Specifications,” December 1, 2016	ML16336A734
State of Rhode Island and Province Plantations – “Supplemental Information Regarding Relicensing for the Rhode Island Nuclear Science Center,” December 8, 2016	ML16343A851
Rhode Island December 13, 2016 Conversation Record, December 13, 2016	ML16351A003
Supplemental Information Re: Relicensing for the Rhode Island Nuclear Science Center (R-95), December 15, 2016	ML16350A042
Rhode Island December 15 2016 Conversation Record, December 15, 2016	ML16351A012
Rhode Island Nuclear Science Center - Supplemental Information Regarding Relicensing, December 15, 2016	ML16350A256
Rhode Island Atomic Energy Commission – Issuance of Renewed Facility Operating License No. R-95 for the Rhode Island Nuclear Science Center Reactor (TAC No. ME1598) January 5, 2017	ML16337A322

Dated at Rockville, Maryland, this 5th day of January, 2017.

For the Nuclear Regulatory Commission

Michael Balazik, Chief (Acting),
Research and Test Reactors Licensing Branch,
Division of Policy and Rulemaking,
Office of Nuclear Reactor Regulation.

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