



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

June 29, 2023

Mr. Carlos Martinez, Site Manager
GE Hitachi Nuclear Energy
Vallecitos Nuclear Center
6705 Vallecitos Road
Sunol, CA 94586

SUBJECT: GE-HITACHI NUCLEAR ENERGY AMERICAS, LLC – ISSUANCE OF RENEWED FACILITY OPERATING LICENSE NO. R-33 FOR THE NUCLEAR TEST REACTOR (EPID L-2020-RNW-0038)

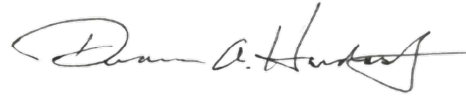
Dear Mr. Martinez:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Renewed Facility Operating License No. R-33 for the GE-Hitachi Nuclear Energy Americas, LLC (GEH) Nuclear Test Reactor (NTR) in response to the application for license renewal dated November 19, 2020, as supplemented by letters dated September 22, December 3, and December 16, 2021; April 4, April 22, and September 15, 2022; and January 27, March 24, April 21, April 27, and June 15, 2023. The renewed facility operating license is effective on the date of issuance, and shall expire at midnight, 20 years from the date of issuance, unless terminated sooner.

In accordance with agency practice, the renewed facility operating license issued by the NRC has restated the license in its entirety, incorporating all changes and amendments made since the issuance of the original license, as appropriate. Also enclosed with the renewed facility operating license is the safety evaluation report that documents the NRC's license renewal review. A Notice of Issuance for Renewed Facility Operating License No. R-33 has been sent to the Office of the Federal Register for publication. The Environmental Assessment and Finding of No Significant Impact for the renewal of the NTR license was published in the *Federal Register* on March 22, 2023 (88 FR 17274), with a minor correction published on June 1, 2023 (88 FR 35933).

If you have any questions, please contact me at (301) 415-3724 or by email at Duane.Hardesty@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Duane A. Hardesty". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Duane A. Hardesty, Senior Project Manager
Non-Power Production and Utilization Facility
Licensing Branch
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

Docket No. 50-073
License No. R-33

Enclosures:

1. Renewed Facility Operating
License No. R-33
2. Safety Evaluation Report

cc w/enclosures: GovDelivery Subscribers

SUBJECT: GE-HITACHI NUCLEAR ENERGY AMERICAS, LLC – ISSUANCE OF RENEWED FACILITY OPERATING LICENSE NO. R-33 FOR THE NUCLEAR TEST REACTOR (EPID L 2020-RNW-0038)
 DATED: JUNE 29, 2023

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

GE-HITACHI NUCLEAR ENERGY AMERICAS, LLC

DOCKET NO. 50-73

RENEWED FACILITY OPERATING LICENSE FOR THE NUCLEAR TEST REACTOR

License No. R-33

1. The U.S. Nuclear Regulatory Commission (“the Commission” or “NRC”) has found that:
 - A. The application for license renewal filed by GE-Hitachi Nuclear Energy Americas, LLC (“the licensee”) on November 19, 2020, as supplemented on September 22, December 3, and December 16, 2021; April 4, April 22, and September 15, 2022; and January 27, March 24, April 21, April 27, and June 15, 2023 (“the application”), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (“the Act”), and the Commission’s rules and regulations as set forth in Title 10 of the *Code of Federal Regulations* (10 CFR) Chapter I;
 - B. Construction of the Nuclear Test Reactor (“the facility,” “the reactor,” or “NTR”) was completed in substantial conformity with Construction Permit No. CPRR-19 dated October 24, 1957, the provisions of the Act, and the rules and regulations of the Commission;
 - C. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - D. There is reasonable assurance (i) that the activities authorized by this license can be conducted without endangering the health and safety of the public and (ii) that such activities will be conducted in compliance with the Commission’s regulations;
 - E. The licensee is technically and financially qualified to engage in the activities authorized by this license in accordance with the rules and regulations of the Commission;
 - F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, “Financial Protection Requirements and Indemnity Agreements,” of the Commission’s regulations;
 - G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. The issuance of this license is in accordance with 10 CFR Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions,” of the Commission’s regulations and all applicable requirements have been satisfied; and

- I. The receipt, possession, and use of byproduct and special nuclear materials as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material," and 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material."
2. Accordingly, Facility Operating License No. R-33 is hereby renewed in its entirety to read as follows:
 - A. This license applies to the NTR, which is owned by GE-Hitachi Nuclear Energy Americas, LLC and located at its Vallecitos Nuclear Center in Alameda County, California, and described in the application for license renewal dated November 19, 2020, as supplemented.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses GE-Hitachi Nuclear Energy Americas, LLC:
 - (1) Pursuant to Section 104c of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the reactor as a utilization facility at the designated location in Alameda County, California, in accordance with the procedures and limitations described in the application and set forth in this license.
 - (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use in connection with the operation of the reactor:
 - a. but not separate, up to 4 kilograms of contained uranium-235 of an enrichment of 20 percent or greater in the isotope uranium-235, in the form of in-core reactor fuel;
 - b. but not separate, up to 350 grams of contained uranium-235, that is not to be used as in-core fuel. This material can be used in the reactor cell, south cell, north room, and control room but not in the experimental facilities of the NTR.
 - c. but not separate, such special nuclear material as may be produced by the operation of the reactor.
 - (3) Pursuant to the Act and 10 CFR Part 30, to receive, possess, and use in connection with the operation of the facility:
 - a. up to 2,000 curies of either activated solids as contained in such items as encapsulating materials, structural material and irradiated components;
 - b. up to 0.2-curie radium-beryllium sealed startup source, and up to 0.03 curies of byproduct materials, in the form of sealed sources, for instrument calibration and source checks; and
 - c. but not to separate (except for byproduct material produced as allowed for experiments), such byproduct material as may be produced by the operation of the reactor.

- C. This license shall be deemed to contain and is subject to the conditions specified in 10 CFR Parts 20, 30, 50, 51, 55, 70, and 73 of the Commission's regulations; is subject to all applicable provisions of the Act, and to the rules, regulations, and orders of the Commission now, or hereafter in effect, and to the additional conditions specified below:

(1) Maximum Power Level

The licensee is authorized to operate the reactor at steady-state power levels not in excess of 100 kilowatts (thermal) in accordance with the limitations in the Technical Specifications.

(2) Technical Specifications

The Technical Specifications contained in Appendix A are hereby incorporated in their entirety in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Physical Security Plan

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security plan, including amendments and changes made pursuant to the authority of 10 CFR 50.54, "Conditions of licenses," paragraph (p). The approved physical security plan, entitled "VNC Site Physical Security Plan," dated April 4, 2022, consists of documents withheld from public disclosure pursuant to 10 CFR 73.21, "Protection of Safeguards Information: Performance requirements."

- (4) GE-Hitachi Nuclear Energy Americas, LLC, as stated in the General Electric Company's (GE's) application dated January 19, 2007, and supplemented on January 25, 2007, February 23, 2007, March 2, 2007, March 26, 2007, May 16, 2007, May 18, 2007, June 4, 2007, July 6, 2007, and August 9, 2007, will abide by all commitments and representations previously made by GE with respect to the license. These include, but are not limited to, maintaining decommissioning records, implementing decontamination activities, and eventually decommissioning the facility.

- (5) The Manager of the Vallecitos Nuclear Center, the Vice-President, Reactor Facility Safety and Security of GE-Hitachi Nuclear Energy Americas, LLC, and the Manager of GE-Hitachi Nuclear Energy Americas, LLC shall be U.S. citizens. These individuals shall have the responsibility and exclusive authority to ensure and shall ensure that the business and activities of GE-Hitachi Nuclear Energy Americas, LLC, with respect to this license, are at all times conducted in a manner consistent with the protection of the public health and safety and the common defense and security.

(6) The commitments/representations made in the GE's application dated January 19, 2007, and supplemented on January 25, 2007, February 23, 2007, March 2, 2007, March 26, 2007, May 16, 2007, May 18, 2007, June 4, 2007, July 6, 2007, and August 9, 2007, regarding reporting relationships and authority over safety and security issues and compliance with NRC requirements shall be adhered to and not be modified without the prior written consent from the Director, Office of Nuclear Reactor Regulation, or designee.

(7) GE-Hitachi Nuclear Energy Americas, LLC shall cause to be transmitted to the Director, Office of Nuclear Reactor Regulation within 30 days of filing with the U.S. Securities and Exchange Commission (SEC), any schedule 13D or 13G filed pursuant to the Securities Exchange Act of 1934 that discloses beneficial ownership of a registered class of General Electric stock.

D. This license is effective as of the date of its issuance and shall expire at midnight, 20 years from its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Attachment:
Appendix A, Technical Specifications

Date of Issuance: June 29, 2023