



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

March 11, 2021

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

SUBJECT: GE-HITACHI NUCLEAR ENERGY AMERICAS LLC - RECEIPT AND
SUPPLEMENTAL INFORMATION NEEDED FOR RENEWAL REVIEW OF
GE-HITACHI NUCLEAR ENERGY AMERICAS LLC NUCLEAR TEST
REACTOR FACILITY OPERATING LICENSE NO. R 33
(EPID: L-2020-RNW-0038)

Dear Mr. Feyrer:

By letter dated November 19, 2020 (Agencywide Documents Access and Management System Accession No. ML21053A071), GE-Hitachi Nuclear Energy Americas, LLC submitted a license renewal application (LRA) for renewal of Facility Operating License No. R-33 for its Nuclear Test Reactor. The renewed license would authorize continued operation of the facility for a period of 20 years from the date of issuance of the Renewed Facility Operating License.

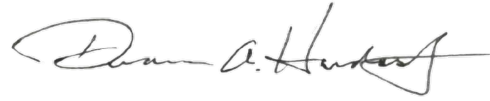
The U.S. Nuclear Regulatory Commission (NRC) staff performed an initial review of the LRA and determined that the additional information described in the enclosure to this letter is needed for the NRC staff to begin its detailed review. The NRC staff discussed the information in this enclosure with David Heckman of your staff on March 12, 2021.

The NRC staff may require additional information to complete the detailed technical review. If needed, the NRC staff will request this information by separate correspondence within approximately 120 days of the date of this letter.

At this time, the NRC staff expects to complete its review and make a final determination on the LRA by January 9, 2023. This date could change due to several factors, including requests for additional information, unanticipated changes to the scope of the review, unsolicited supplements to the LRA, and others. If the forecasted date changes, the NRC staff will notify you in writing of the new date and an explanation of the reason for the change.

If you have any questions, please contact me at (301) 415-3724, or by electronic mail 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 at the end.

Duane A. Hardesty, Acting Chief
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

Enclosure:
As stated

cc: See next page

GE-Hitachi Nuclear Energy Americas LLC

Docket No. 50-073

cc:

Jeffrey Smyly, Manager
Regulatory Compliance
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Nuclear Test Reactor
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David Heckman
Vallecitos Reg Affairs & Licensing Lead
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6705 Vallecitos Road
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Commissioner
California Energy Commission
1516 Ninth Street, MS-34
Sacramento, CA 95814

California Department of Health
ATTN: Chief
Radiologic Health Branch
P.O. Box 997414, MS 7610
Sacramento, CA 95899-7414

Test, Research and Training
Reactor Newsletter
Attention: Ms. Amber Johnson
Dept of Materials Science and Engineering
University of Maryland
4418 Stadium Drive
College Park, MD 20742-2115

SUBJECT: GE-HITACHI NUCLEAR ENERGY AMERICAS LLC - RECEIPT AND
SUPPLEMENTAL INFORMATION NEEDED FOR RENEWAL REVIEW OF
GE-HITACHI NUCLEAR ENERGY AMERICAS LLC NUCLEAR TEST REACTOR
FACILITY OPERATING LICENSE NO. R 33 (EPID: L-2020-RNW-0038)
DATED: MARCH 11, 2021

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ADAMS Accession No. ML21062A250**NRR-106**

OFFICE	NRR/DANU/UNPL/PM	NRR/DANU/UNPL/LA	NRR/DANU/UNPL/BC (A)
NAME	LTran	NParker	DHardesty
DATE	3/11/2021	3/11/2021	3/11/2021

OFFICIAL RECORD COPY

OFFICE OF NUCLEAR REACTOR REGULATION
SUPPLEMENTAL INFORMATION NEEDED FOR
THE REVIEW OF LICENSE RENEWAL REQUEST
GE-HITACHI NUCLEAR ENERGY AMERICAS LLC
NUCLEAR TEST REACTOR
LICENSE NO. R-33; DOCKET NO. 50-073

By letter dated November 19, 2020 (Agencywide Documents Access and Management System Accession No. ML20325A194), GE-Hitachi (GEH) Nuclear Energy Americas LLC a request for renewal of its Nuclear Test Reactor (NTR). The U.S. Nuclear Regulatory Commission (NRC) staff performed an initial review of the license renewal application and determined that the information requested below is needed for the NRC staff to begin its detail technical review.

Financial Qualification

1. Title 10 of the *Code of Federal Regulations* (10 CFR) 50.33, "Contents of applications; general information," paragraph (f)(2) states, in part:

The applicant shall submit estimates for total annual operating costs for each of the first five years of operation of the facility. The applicant shall also indicate the source(s) of funds to cover these costs. ... Applicants to renew or extend the term of an operating license for a nonpower reactor shall include the financial information that is required in an application for an initial license.

Provide the following information:

- (a) Projected operating costs of the GEH NTR for each of the fiscal years 2021 through 2026 (the first five-year period after the projected license renewal).
 - (b) GEH NTR's source of funding to cover the operating costs for the above fiscal years.
2. The regulations in 10 CFR 50.75, "Reporting and recordkeeping for decommissioning planning," paragraph (d) states, in part:
 - (1) Each non-power reactor applicant for or holder of an operating license for a production or utilization facility shall submit a decommissioning report ...
 - (2) The report must:
 - (i) Contain a cost estimate for decommissioning the facility;
 - (ii) Indicate which method or methods ... will be used to provide funds for decommissioning; and
 - (iii) Provide a description of the means of adjusting the cost estimate and associated funding level periodically over the life of the facility.

Enclosure

Provide the following information:

- (a) A current decommissioning cost estimate in 2021 dollars for the GEH NTR to meet the NRC's radiological release criteria for decommissioning the facility. Accordingly, describe the basis on how the decommissioning cost estimate was developed.
 - (b) A summary of total decommissioning costs broken down into the categories of labor, waste disposal, other items in current dollars, and a contingency factor.
 - (c) A statement of the decommissioning method to be used.
 - (d) A description of the means of adjusting the cost estimate and associated funding level periodically over the life of the facility, pursuant to 10 CFR 50.75(d)(2)(iii).
 - (e) A numerical example showing how the decommissioning cost estimate will be updated periodically in the future.
3. The regulations in 10 CFR 50.22, "Class 103 licenses; for commercial and industrial facilities," states:

A class 103 license will be issued, to an applicant who qualifies, for any one or more of the following: To transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, or use a production or utilization facility for industrial or commercial purposes; *Provided, however,* That in the case of a production or utilization facility which is useful in the conduct of research and development activities of the types specified in section 31 of the Act, such facility is deemed to be for industrial or commercial purposes if the facility is to be used so that more than 50 percent of the annual cost of owning and operating the facility is devoted to the production of materials, products, or energy for sale or commercial distribution, or to the sale of services, other than research and development or education or training.

Provide a confirmatory statement identifying the percentage of the facility that is devoted to the production of materials, products, or energy for sale or commercial distribution, or to the sale of services, other than research and development or training.

4. Section 106 of the Nuclear Energy Innovation and Modernization Act amends the Atomic Energy Act by adding the following text to the end of Section 104(c):

The Commission is authorized to issue licenses under this section for utilization facilities useful in the conduct of research and development activities of the types specified in section 31 in which the licensee sells research and testing services and energy to others, subject to the condition that the licensee shall recover not more than 75 percent of the annual costs to the licensee of owning and operating the facility through sales of nonenergy services, energy, or both, other than research and development or education and training, of which not more than 50 percent may be through sales of energy.

Provide the following information:

- (a) Provide a statement identifying whether the percentage of the annual costs of owning and operating the facility are recovered through sales of nonenergy services, energy, or both, other than research and development or education and training, is 75 percent or less.
- (b) Provide a statement identifying whether 50 percent or less of the annual costs is from sales of energy.

Physical Security Plan

5. The regulations in 10 CFR 73.67, "Licensee fixed site and in-transit requirements for the physical protection of special nuclear material of moderate and low strategic significance," paragraph (c)(1), states, in part:

Submit a security plan or an amended security plan describing how the licensee will comply with all the requirements of paragraphs (d), (e), (f), and (g) ...

The regulations in 10 CFR 73.67(e) states, in part:

In-transit requirements for special nuclear material of moderate strategic significance.

The regulations in 10 CFR 73.67(g) states, in part:

In-transit requirements for special nuclear material of low strategic significance.

Provide a statement that GEH will comply with the requirements under 10 CFR 73.67(e) and 10 CFR 73.67(g) as appropriate.