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

September 30, 2019

Mr. David J. Heckman
Vallecitos Licensing Lead
Regulatory Affairs
GE Hitachi Nuclear Energy
6705 Vallecitos Rd
Sunol, CA 94586

SUBJECT: RELEASE OF NON-IMPACTED SECTION OF VALLECITOS NUCLEAR CENTER SITE FROM U.S. NUCLEAR REGULATORY COMMISSION LICENSES DPR-1 AND DR-10 (DOCKET NOS. 50-18 AND 50-183) (EPID NO. L-2019-DSR-0000)

Dear Mr. Heckman:

By letter dated December 14, 2018 (Agencywide Documents Access and Management System [ADAMS] Accession Nos. ML18348A425), as supplemented by letter dated February 28, 2019 (ADAMS Accession No. ML19057A466), GE Hitachi Nuclear Energy (GEH) requested to release, for unrestricted use, approximately seven acres of the GEH Vallecitos Nuclear Center (VNC) property in Sunol, CA, within a construction easement along Vallecitos Road (California State Route 84) that is to be made available to Alameda County Transportation Commission (ACTC) to support road development and widening.

This request was made under the provisions of section 50.83 of Title 10 of the *Code of Federal Regulations* (10 CFR) for approval of the release of non-impacted areas of power reactor sites. This request was made relative to the two shutdown power reactors at the VNC site, the Vallecitos Boiling Water Reactor (VBWR), Nuclear Regulatory Commission (NRC) License No. DPR-1, and the Empire State Atomic Development Agency Vallecitos Experimental Superheat Reactor (EVESR), License No. DR-10. In addition, the NRC licenses for both the VBWR and the EVESR contain a condition that states:

> GE-Hitachi shall not dispose of the facility or the property occupied by the facility without prior approval of the Commission, except that GE-Hitachi may dispose of any component parts or devices from the VBWR [or EVESR] facility in accordance with the provisions of 10 CFR Part 20.

Under the provisions of 10 CFR 50.83, and the respective license conditions for the VBWR and EVESR facilities, the NRC staff is approving the request. For the release of non-impacted areas under the provisions of 10 CFR 50.83, a license amendment is not required.

The NRC staff reviewed GEH's request documentation to determine if all of the requirements of 10 CFR 50.83 were addressed. The NRC staff's analysis appears below.

§ 50.83(a) ***Prior written NRC approval is required to release part of a facility or site for unrestricted use at any time before receiving approval of a license termination plan.***

Section 50.75 specifies recordkeeping requirements associated with partial release. Nuclear power reactor licensees seeking NRC approval shall--

(1) Evaluate the effect of releasing the property to ensure that--
(i) The dose to individual members of the public does not exceed the limits and standards of 10 CFR Part 20, Subpart D;

The power reactors in question have permanently ceased operations and are being maintained in a possession-only SAFSTOR status. The licensee measured direct dose on the VNC property at what would be the new property line near Vallecitos Road. These measurements are consistent with background. The licensee stated that soil within the easement does not contain radioactive material that exceeds background screening levels according to analysis performed for the ACTC by Baseline Environmental Consulting (ADAMS Accession No. ML19057A466).

The NRC staff verified that the area to be released was not radiologically impacted by licensed site activities, as described in an independent assessment conducted for the NRC by the Oak Ridge Institute for Science and Education (ORISE). ORISE performed independent assessment activities during the period of February 5–6, 2019. The results of the ORISE independent assessment is in a report to the NRC staff dated August 13, 2019 (ADAMS Accession No. ML19239A118). Confirmatory survey activities included gamma walkover scanning, gamma direct measurements, and soil sampling in the applicable land area. Based on these measurements, the NRC staff concludes that the dose to individual members of the public does not exceed the limits and standards of 10 CFR Part 20, Subpart D.

(ii) There is no reduction in the effectiveness of emergency planning or physical security;

The licensee states that the area being released on the southern site boundary has no unique function in the VNC emergency or security plans and that no changes are necessary to the Emergency Plan or the Physical Security Plan, or to make editorial adjustments to those plans.

The NRC staff confirmed that the operations boundary (essentially the reactor buildings) for each of the 10 CFR Part 50 licensed facilities is the respective emergency planning zone. Therefore, the emergency planning zone for each of the shutdown reactors is within the area to be retained. In addition, this change to the site boundary will not reduce the effectiveness of the Physical Security Plan as the staff has confirmed that the current security areas for each shutdown reactor are within the area of the site that will be retained.

Based on these findings, the NRC staff finds that there will be no reduction in the effectiveness of the emergency plan or physical security plan from the removal of the proposed area of the site.

(iii) Effluent releases remain within license conditions;

The shutdown power reactors at the site are maintained in a possession-only SAFSTOR status with limited air and effluent emissions. The slight change to the boundary of the site proposed in this partial site release will not change effluent releases from the shutdown facilities so they will remain within license requirements.

(iv) The environmental monitoring program and offsite dose calculation manual are revised to account for the changes;

The VNC is not required to have an offsite dose calculation manual. Effluent release monitoring at the site is described in annual site Effluent Monitoring and Environmental Surveillance Program annual report to the NRC. The latest annual report, dated February 28, 2019 (ADAMS Accession No. ML19060A134), identifies the environmental monitoring points at the site. The project to widen the highway will result in the southern site boundary being moved slightly closer to the developed area of the site where all licensed activities take place but will have no effect on the ability to measure effluent releases. Location adjustments may be necessary to one liquid effluent sample station and one environmental air monitoring station during construction. In addition, the traditional vegetation sample points along Vallecitos Road will be relocated; however, these adjustments will have no impact on the ability to monitor air or effluent releases and no revision to VNC's environmental monitoring program is necessary. Therefore, the NRC staff finds that the environmental monitoring program and offsite dose calculation manual will be revised to account for the changes.

(v) The siting criteria of 10 CFR Part 100 continue to be met;

The purpose of 10 CFR Part 100 is to establish approval requirements for proposed sites for stationary power and testing reactors subject to 10 CFR Part 50. Section 50.83(a)(1)(v) requires licensees to evaluate the effect of releasing property to ensure continued compliance with the Part 100 siting criteria that were used to license the plant. As described in 10 CFR 100.1(c), the primary siting factors that determine public health and safety are those that consider the reactor design, construction and operation. Siting factors and criteria are important in assuring that radiological doses from normal operation and postulated accidents will be acceptably low, that natural phenomena and potential man-made hazards will be appropriately accounted for in the design of the plant, that site characteristics are such that adequate security measures to protect the plant can be developed, and that physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans are identified.

10 CFR 100.10 explains that the factors considered in the evaluation of sites include those relating both to the proposed reactor design and the characteristics peculiar to the site such that their design, construction and operation provide an extremely low probability for accidents that could result in release of significant quantities of radioactive fission products. In addition, the site location and the engineered features included as safeguards against the hazardous consequences of an accident, should one occur, should insure a low risk of public exposure. The siting factors in § 100.10, "Factors to be considered when evaluating sites," and § 100.11, "Determination of exclusion area, low population zone, and population center distance," are considered in determining the acceptability of a site for a power or test reactor.

The factors in § 100.10 include: the characteristics of reactor design and proposed operation related to operational power levels and nature of contained radioactive materials; the use of engineering standards in the reactor design; features having significant bearing on the probability or consequences of accidental release of radioactive materials; and the safety features and barriers that must be breached as a result of an accident before a release of radioactive material to the environment can occur.

The shutdown reactors at the VNC site are no longer operational and their reactor fuel has been removed from the reactors and from the site. Therefore, the characteristics of the reactor

design and operations are no longer relevant to the evaluation of the site for the release of significant quantities of radioactive fission products.
Other factors related to the evaluation of sites are: population density and use characteristics of the site environs, including the exclusion area, low population zone, and population center distance; and physical characteristics of the site, including seismology, meteorology, geology, and hydrology.

These siting factors are only important relative to postulated accidents that could happen at an operational reactor. Because the shutdown reactors at VNC are no longer operational and their fuel has been removed from the site, radioactive materials from those reactors cannot be released into the environment from the postulated accidents. Thus, these siting factors are no longer relevant and will not be affected by releasing a remote part of the site. The physical characteristic siting factors will not change with a release of part of the site and in any case are only relevant to the health and safety consequences of an escape of radioactive material from an operational reactor.

Similarly, the evaluation of the factors in § 100.11 first assume a fission product release from the core of the reactor. This cannot happen at the shutdown reactors at the VNC for the reasons described above.

Because the accidents that form the basis for the siting criteria in part 100 can no longer occur, the NRC staff finds that the relevant siting criteria of 10 CFR Part 100 will continue to be met, in accordance with 10 CFR 50.83(a)(1)(v).

(vi) All other applicable statutory and regulatory requirements continue to be met.

The NRC staff reviewed the requirements of the conditions, technical specifications and commitments in the licenses (DPR-1 and DR-10) and the applicable regulations in 10 CFR Parts 20, 30, and 50 for any potential change in the ability of the licensee to meet all the other applicable statutory and regulatory requirements upon release of the requested part of the site from the licenses. The NRC staff's review determined that those requirements will continue to be met because the licensee's ability to meet those requirements is unchanged by the approval of the release of this non-impacted area.

(2) Perform a historical site assessment of the part of the facility or site to be released;

The licensee stated that consistent with the MARSSIM approach (NUREG-1575, ADAMS Accession No. ML082310759), the site to be released has been determined to be non-impacted based on four sources of information: visual inspection; historical records review; process knowledge; and the results of sentinel measurements.

The licensee conducted an environmental assessment of the area proposed to be released. The results of the assessment were that no adverse or recognized environmental conditions were identified on the site other than the recognized environmental condition of the VNC operational area being within one-half mile of the site to be released.

No historical recognized environmental conditions were found on the site based on the review of aerial photographs, site records and interviews with site personnel.

The NRC staff verified this information during the site visit of February 5–6, 2019 to observe the confirmatory survey by ORISE (ADAMS Accession No. ML19239A118). The NRC staff finds that the licensee has met 10 CFR 50.83(a)(2).

(3) Perform surveys adequate to demonstrate compliance with the radiological criteria for unrestricted use specified in 10 CFR 20.1402 for impacted areas.

This requirement is not applicable because the area is being released is a non-impacted area.

§ 50.83(b) For release of non-impacted areas, the licensee may submit a written request for NRC approval of the release if a license amendment is not otherwise required. The request submittal must include--

(1) The results of the evaluations performed in accordance with paragraphs (a)(1) and (a)(2) of this section;

The results of the evaluations performed by the licensee are described above.

(2) A description of the part of the facility or site to be released;

A description of the part of the site to be released was provided in the licensee submittals of December 14, 2018, and February 28, 2019. The area to be released is an approximately 7-acre irregularly shaped strip of land along the southern edge of the VNC site. GEH intends to make this parcel a construction easement along Vallecitos Road (State Route 84) available to the Alameda County Transportation Commission (ACTC) to support road development and widening of State Route 84. The land is currently either undeveloped grassland road frontage, a small landscaped area that forms the highway entrance to the VNC site or is undeveloped land adjacent to the VNC wastewater retention basins or a sprinkler irrigation field for wastewater discharges. This parcel is at least 1000 feet from the developed portion of the site. There is no evidence of pre-existing industrial structures indicative of radiological work. An existing liquid effluent and air monitoring station may need to be moved to accommodate the highway widening.

(3) The schedule for release of the property;

The licensee has indicated in the submittal dated December 14, 2018, that the property will be released as soon as approval is received from the NRC. The property will then be expediently afforded to the ACTC.

(4) The results of the evaluations performed in accordance with § 50.59;

The results of the 10 CFR 50.59 analysis were provided in the December 14, 2018, submittal from the licensee. The licensee evaluated the potential release of this property against the criteria for evaluating changes, tests, and experiments found in § 50.59(c)(2) to see if implementing any change would require a change to the licensing basis for the VBWR or EVESR. The licensee found that area to be released is not explicitly used in any of the analyses supporting the licensing basis of either VBWR or EVESR. The NRC staff reviewed this evaluation and the licensing basis for the shutdown reactors and concurs with the finding that the area to be released is not used to support the licensing basis.

(5) A discussion that provides the reasons for concluding that the environmental impacts associated with the licensee's proposed release of the property will be bounded by appropriate previously issued environmental impact statements.

The licensee notes that the proposed area to be released has never been used for licensed activity. The power reactors are shut down and there is no evidence of historic impact on the area. Samples taken in the area do not indicate impact from licensed activities.

The NRC staff reviewed this request and concluded that the environmental impacts associated with this request remain bounded by the environmental impacts evaluated in the previously issued "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," NUREG-0586, Supplement 1, Volume 1 (http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0586/s1/v1/index.html). NUREG-0586 evaluated the environmental impacts of the decommissioning of entire power reactor sites and facilities that have been impacted by operations. The release of a part of a power reactor site that has been demonstrated to not have been impacted by operations, like the shutdown reactors at the VNC, is within the scope of the evaluation performed in NUREG-0586.

In accordance with 10 CFR 50.83(b)(5), if a Final Environmental Statement (FES) or an Environmental Impact Statement (EIS) had been previously prepared, then the licensee would have been required to discuss whether the environmental impacts associated with the proposed partial site release were bounded by a previous EIS. If those impacts were bounded, then the preparation of an EA would not be necessary. However, because the VNC site was licensed prior to the enactment of NEPA, no EIS was prepared when the VNC site was first licensed, and there is no other appropriate EIS that could bound these impacts. Therefore, the NRC has prepared an EA for this partial site release request (ADAMS Accession No. ML19249C371). Based on the results of that EA, the NRC has determined not to prepare an EIS for the partial site release and is issuing a finding of no significant impact.

§ 50.83(c) ***After receiving an approval request from the licensee for the release of a non-impacted area, the NRC shall--***

(1) Determine whether the licensee has adequately evaluated the effect of releasing the property as required by paragraph (a)(1) of this section;

Based on the review described above, the NRC staff finds that the licensee has adequately evaluated the effect of releasing the property as required by 10 CFR 50.83(a)(1).

(2) Determine whether the licensee's classification of any release areas as non-impacted is adequately justified;

The NRC reviewed the licensee's submittal and performed independent surveys to verify the licensee's conclusions about the classification of the proposed release areas as non-impacted. The NRC verified the proposed release areas as non-impacted during the site visit of February 5-6, 2019.

(3) Upon determining that the licensee's submittal is adequate, inform the licensee in writing that the release is approved.

This letter serves to inform the licensee that the release is approved.

§ 50.83(f) ***The NRC shall notice receipt of the release approval request or license amendment application and make the approval request or license amendment application available for public comment. Before acting on an approval request or license amendment application submitted in accordance with this section, the NRC shall conduct a public meeting in the vicinity of the licensee's facility for the purpose of obtaining public comments on the proposed release of part of the facility or site. The NRC shall publish a document in the Federal Register and in a forum, such as local newspapers, which is readily accessible to individuals in the vicinity of the site, announcing the date, time, and location of the meeting, along with a brief description of the purpose of the meeting.***

A public meeting to obtain comments on the release approval request was announced on the NRC public meeting Web site on March 18, 2019 (ADAMS Accession No. ML19077A149). A notice of GEH's request to release the 7-acre parcel and the public meeting, including a request for comment, was also published in "The Independent," Livermore, CA on March 21, 2019. The NRC staff published a notice of the receipt of GEH's request, including a request for comment, in the Federal Register on March 27, 2019 (84 FR 11578). The NRC staff conducted the public meeting in Dublin, CA on March 28, 2019. A summary of the public meeting, which includes copies of the presentations made and a copy of the transcript of the meeting, is available in ADAMS at Accession No. ML19239A043. No comments were made on the Federal Rulemaking Web site, or received by mail or e-mail, and all questions asked at the meeting were answered in the meeting.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's document 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 regarding this matter, please contact me by telephone at 301-415-6634, or e-mail at Jack.Parrott@nrc.gov.

Sincerely,

//RA//

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Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket Nos.: 50-18 and 50-183
License Nos. DPR-1 and DR-10

cc: GE Vallecitos mailing list

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