

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50-18, 50-73 and 50-183; NRC-2015-0169]

**GE Hitachi Nuclear Energy; Vallecitos Nuclear Center,
Partial Site Release**

AGENCY: Nuclear Regulatory Commission.

ACTION: Environmental assessment and finding of no significant impact; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing an environmental assessment and finding of no significant impact regarding a partial site release for license Nos. DPR-1 (Vallecitos Boiling Water Reactor), R-33 (GE-Hitachi Nuclear Test Reactor), and DR-10 (Empire State Atomic Development Agency Vallecitos Experimental Superheat Reactor), issued to GE Hitachi Nuclear Energy at the Vallecitos Nuclear Center in Sunol, California.

DATES: The environmental assessment and finding of no significant impact set forth in this document is available on May 12, 2016.

ADDRESSES: Please refer to Docket ID NRC-2015-0169 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-2015-0169. 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. The ADAMS accession number for each document referenced in this document (if that document is available in ADAMS) is provided the first time that a document is referenced.

- **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: Jack Parrott, Division of Decommissioning, Uranium Recovery, and Waste Programs, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-00001; telephone: 301-415-6634; e-mail: Jack.Parrott@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction.

The NRC received, by letter dated April 24, 2015 (ADAMS Accession No. ML15114A437), a request from GE Hitachi Nuclear Energy (GEH or licensee) to approve a

partial site release of a portion of its Vallecitos Nuclear Center (VNC) site located at 6705 Vallecitos Road, Sunol, California. The April 24, 2015 letter transmitted a report, entitled “Release of North Section of Vallecitos, California Site,” prepared by GEH evaluating the proposed release (ADAMS Accession No. ML15114A438). The VNC site contains four reactor units. Two of the four units are licensed as power reactors under part 50, “Domestic Licensing of Production and Utilization Facilities,” of title 10 of the *Code of Federal Regulations* (10 CFR part 50). These two units are the Vallecitos Boiling Water Reactor (VBWR), NRC License DPR-1, Docket 50-18, and the Empire State Atomic Development Agency Vallecitos Experimental Superheat Reactor (EVESR), NRC License DR-10, Docket 50-183. In accordance with 10 CFR 50.4(b)(8)-(9), the licensee has certified, pursuant to 10 CFR 50.82(a)(1), that both units have permanently ceased operation and that all nuclear fuel has been removed from the respective reactor vessels of both units. These units are presently in “SAFSTOR”¹ status awaiting the termination of the power reactor licenses.

The third reactor unit is a shutdown testing facility (also called a test reactor), the General Electric Test Reactor (GETR), NRC License TR-1, Docket 50-70. The GETR has also been defueled and is in a SAFSTOR status. The fourth reactor unit is a currently operating research reactor, the Nuclear Test Reactor (NTR), NRC License R-33, Docket 50-73. The NRC is considering a license amendment application for the NTR that would modify the site description to remove the portion of the site requested by the licensee for release (see the connected action section of this notice).

Research reactors and testing facilities are non-power reactors that are used for research and development, non-power commercial activities, medical therapy, education and training.

¹ SAFSTOR is the decommissioning method in which a nuclear facility is placed and maintained in a condition that allows the safe storage of radioactive components of the nuclear plant and subsequent decontamination to levels that permit license termination.

Non-power reactors differ from power reactors in a number of significant ways. The purpose of a power reactor is to generate steam, which can be used to generate electricity; the purpose of a non-power reactor is to generate radiation for purposes of experimentation, research and development, commercial activities, medical therapy, education, and training. Therefore, non-power reactors operate at significantly lower power than power reactors and at lower temperatures and pressure. For these reasons, non-power reactors have smaller safety and environmental footprints than power reactors.

In accordance with 10 CFR 50.83, "Release of part of a power reactor facility or site for unrestricted use," the licensee requested release from the NRC licenses, for unrestricted use, an approximately 247-hectare (610-acre) parcel in the northern section of the approximately 647-hectare (1,600 acre) VNC site. The licensee is declaring the parcel as a "non-impacted area," which is defined in 10 CFR 50.2 to mean an area "with no reasonable potential for residual radioactivity in excess of natural background or fallout levels." If approved, the 247-hectare (610-acre) parcel will no longer be considered part of the licensed site and thus, no longer under NRC jurisdiction. Once released, the 247-hectare (610-acre) parcel will be available for unrestricted use. In this regard, GEH has indicated that it intends to sell the 247-hectare (610-acre) parcel to a non-GEH controlled entity.

The NRC is considering approval of the requested partial site release for the VBWR and EVESR licenses at the VNC site. Therefore, in compliance with the National Environmental Policy Act, as amended, 42 USC 4321 *et seq.* (NEPA), and its NEPA implementing regulations in 10 CFR Part 51, the NRC has prepared this Environmental Assessment (EA). The NRC is preparing this EA because the site was licensed prior to the enactment of NEPA, and as such, a Final Environmental Statement (FES) or an Environmental Impact Statement (EIS) were never prepared by the NRC's predecessor agency, the Atomic Energy Commission (AEC), when the site was first licensed. In accordance with 10 CFR 50.83(b)(5), if a FES or EIS had been

previously prepared, and if the licensee had demonstrated that the environmental impacts associated with the proposed partial site release were bounded by the FES or EIS, then the preparation of an EA would not be necessary. As the EA preparation here is due simply to the absence of a FES or an EIS, the preparation of this EA should not be taken as precedent-setting for future NRC approvals of 10 CFR 50.83 partial site releases of non-impacted land where the NRC or the AEC had previously prepared a FES or an EIS and the licensee has demonstrated that any environmental impacts associated with the partial site release are bounded by that FES or EIS. Based on the results of the EA that follows, the NRC has determined not to prepare an EIS for the partial site release, and is issuing a finding of no significant impact.

II. Environmental Assessment.

Description of the Proposed Action

The proposed action would approve the release of a 247-hectare (610-acre), non-impacted parcel, located in the northern section of the approximately 647-hectare (1,600) acre VNC site, for unrestricted use. Once released, the 247-hectare (610-acre) parcel would no longer be part of the licensed site and thus, no longer under NRC jurisdiction.² Under the applicable NRC regulation, 10 CFR 50.83(b), a licensee may submit a written request for the release of non-impacted land if a license amendment is not otherwise required. Pursuant to 10 CFR 50.83(c), the NRC can approve such a partial release of non-impacted land for unrestricted use in writing.

² The NRC's organic statutory authority is the Atomic Energy Act of 1954, as amended, 42 USC 2011 *et seq.* (AEA). Under the AEA, the NRC's jurisdiction is limited to matters of radiological health and safety, for both members of the public and occupational workers, and of physical security for NRC licensed facilities and radioactive materials possessed by NRC licensees. The NRC holds no property interest in licensee owned or controlled lands nor does the NRC have any land or natural resources management authority.

Need for the Proposed Action

The licensee has requested the release of the 247-hectare (610-acre), non-impacted parcel as the licensee has no current or projected operational need for this parcel at the licensed site. In fact, the licensee has never used the 247-hectare (610-acre) parcel for licensed operations. The licensee intends to sell the parcel to a non-GEH controlled entity. Once the NRC has approved the release, the 247-hectare (610-acre) parcel can be made available for another use.

VNC Site

VNC is located near the center of the Pleasanton quadrangle of Alameda County, California. The site is east of San Francisco Bay, approximately 56 air kilometers (35 air miles) east-southeast of San Francisco and 32 air kilometers (20 air miles) north of San Jose. The properties surrounding the site are primarily used for agriculture and cattle raising, with some residences, which are mostly to the west of the property. The nearest sizeable towns are Pleasanton located 6.6 kilometers (4.1 miles) to the north-northwest and Livermore located 10 kilometers (6.2 miles) to the northeast.

The site is on the north side of Vallecitos Road (State Route 84), which is a two and four-lane paved highway. A Union Pacific railroad line lies about three kilometers (two miles) west of the site. There is light industrial activity within a 16-kilometer (10-mile) radius of the plant. San Jose (32 kilometers (20 miles) south), Oakland (48 kilometers (30 miles) northwest) and San Francisco (56 kilometers (35 miles) northwest) are major industrial centers. The property boundary, which has not changed since the original property purchase in 1956, is fenced and posted "No Trespassing." A security gate at the entrance provides access control to

the active area of the site. The GEH evaluation report provides additional information about the site (ADAMS Accession No. ML15114A438).

Safety Evaluation of the Proposed Action

The NRC staff evaluated the safety impacts of the proposed action and concludes that the requirements of 10 CFR 50.83, 10 CFR 50.59, and other applicable NRC regulations have been met (see ADAMS Accession No. ML16007A348).

Environmental Impacts of the Proposed Action

The NRC staff evaluated the environmental impacts of the proposed action and concludes that the release of the 247-hectare (610-acre) parcel will not have any adverse environmental impacts. The 247-hectare (610-acre) parcel is located in the northern portion of the site. The parcel consists of undeveloped land and is currently used for cattle grazing. The land has not been used for the processing or storage of radioactive material. The properties surrounding the site are primarily used for agriculture and cattle raising, with some scattered residences mostly to the west of the property. The power reactors at the site have permanently ceased operations and are being maintained in a possession-only SAFSTOR status. The release of the 247-hectare (610-acre) parcel will not impact the shutdown reactors. The licensee notes that the 247-hectare (610-acre) parcel has never been used for licensed activity. The 247-hectare (610-acre) parcel is topographically uphill from the shutdown reactors so any surface or subsurface transport of liquid effluents from the active area of the site could not have impacted the parcel.

There is no evidence of any radiological impact on the 247-hectare (610-acre) parcel. Samples taken in the area do not indicate impact from licensed activities. The licensee measured direct dose in and around the 247-hectare (610-acre) parcel and found that all

measurements were consistent with a background direct dose measurement of approximately 0.7 mSieverts/yr (70 mRem/yr) (GEH Annual Report for 2014, ADAMS Accession No. ML15069A472). The NRC verified that the area to be released was not radiologically impacted by licensed site activities, as described in NRC inspection report 050-00018/15-001 (ADAMS Accession No. ML15303A361) dated October 30, 2015.

The NRC staff reviewed the 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 is within the scope of the evaluation performed in NUREG-0586. The NRC staff concludes that the proposed release of the 247-hectare (610-acre) parcel is bounded by NUREG-0586.

The NRC has determined that the proposed release of the 247-hectare (610-acre) parcel is wholly procedural and administrative in nature, that the parcel is radiologically non-impacted, and that the licensee has no safety, physical security, or emergency preparedness need to retain the parcel. The environmental impacts associated with the shutdown power reactors will not change as a result of the proposed release of the 247-hectare (610-acre) parcel. The proposed release will not result in public or environmental exposure to radioactive contamination. There are no known records of any spills, leaks, or uncontrolled release of radioactive material on the 247-hectare (610-acre) parcel. The 247-hectare (610-acre) parcel was not used for any activities that could have contaminated the property. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential non-radiological impacts, the proposed release of the 247-hectare (610-acre) parcel from NRC jurisdiction does not involve or authorize any construction activities, renovation of buildings or structures, ground disturbing activities or other alteration to land. The proposed release of the 247-hectare (610-acre) parcel will not result in any change to current licensed activities on that portion of the site that will remain under NRC jurisdiction and therefore, will not result in any changes to the workforce or vehicular traffic. Furthermore, as the NRC has determined that the proposed release of the 247-hectare (610-acre) parcel is an administrative action, it is not a type of activity that has the potential to cause effects on historic properties or cultural resources, including traditional cultural properties. Similarly, the NRC staff has determined that the proposed release of the 247-hectare (610-acre) parcel will have no effect on listed species or critical habitat. In addition the proposed release of the 247-hectare (610-acre) parcel will not result in any change to non-radiological plant effluents and thus, will have no impact on either air or water quality. Therefore, there are no significant non-radiological environmental impacts associated with the proposed release of the 247-hectare (610-acre) parcel.

Accordingly, the NRC staff concludes that there are no significant environmental impacts associated with the proposed action.

Connected Action

In accordance with 10 CFR 50.90, GEH has also requested the amendment of its operating research reactor license for the NTR, NRC License R-33, Docket 50-73 to reflect the release of the 247-hectare (610-acre) parcel. Specifically, GEH has requested an amendment to the license's site description section. GEH submitted that license amendment request on February 16, 2015 (ADAMS Accession No. ML15048A008; attachments to the February 16, 2015 request are at ADAMS Accession Nos. ML15048A007, ML15048A009, ML15048A010,

ML15048A011). The NRC approval or disapproval of the proposed NTR license amendment request will be handled administratively as a separate licensing matter. However, the NRC considers that this EA encompasses and otherwise bounds the environmental impacts of the proposed NTR license amendment request. As discussed in Section I, "Introduction," of this notice, a non-power reactor has a much smaller safety and environmental footprint than a power reactor. In this regard, the NTR operates at a power level of 100 kilowatts-thermal. In contrast, the VBWR, the largest of the decommissioned power reactors at the site, operated at a much higher power level, 50 megawatts-thermal. As a further, comparison, a typical commercial nuclear power reactor is rated at 3000 megawatts-thermal, and provides enough electricity to power 200,000 households in the peak summer months. Because of this large difference in thermal power generated, the consequence of an accident at a non-power reactor is much lower when compared to a commercial power reactor. For this reason, the NTR research reactors' emergency planning zones (EPZ) to protect the public from potential radiological accidents is well within the owner-controlled areas – and is the boundary of the room in which the reactor is housed. In accordance with the guidance of ANSI/ANS 15.16-1982, "Emergency Planning for Research Reactors", the operations boundary is defined as the EPZ boundary for each reactor facility. For the NTR, the operations boundary is defined by the portions of Building 105 occupied by NTR facilities. The NRC staff has concluded that the environmental impacts of reducing the licensed site would be similarly bounded and that there would be no environmental impact associated with the continued operation of the NTR in relation to the proposed release of the 247-hectare (610-acre) parcel.

The shutdown, defueled testing facility, the GETR, NRC License TR-1, Docket 50-70 is not the subject of any license amendment request. The GETR is in SAFSTOR status. The GETR license does not contain a site description and as such, there is no need to amend the GETR license to reflect the release of the 247-hectare (610-acre) parcel. In any event, the NRC

staff considers this EA to encompass and bound any environmental impacts resulting from the proposed release of the 247-hectare (610-acre) parcel in relation to the ongoing shutdown, SAFSTOR status of the GETR.

Environmental Impacts of the Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC staff considered denial of the proposed release of the 247-hectare (610-acre) parcel (i.e., the “no-action” alternative). Denial of the request would result in the 247-hectare (610-acre) parcel remaining part of the licensed site and subject to NRC jurisdiction. As the licensee has no need for the parcel, its current use as a site for cattle grazing would most likely continue. As there is no policy or regulatory reason for the NRC to require a licensee to retain land that is not radiologically impacted and for which the licensee has no further operational need, the no-action alternative is not further considered.

Conclusion

The NRC staff has concluded that the proposed action will not significantly impact the quality of the human environment, and that the proposed action is the preferred alternative.

Agencies and Persons Consulted

The NRC contacted the California Department of Public Health concerning this request. There were no comments, concerns or objections from the State official.

A public meeting to obtain comments on the release approval request was announced on the NRC public meeting Web site on July 7, 2015 (ADAMS Accession No. ML15188A344). A notice of GEH’s request to release the 247-hectare (610-acre) parcel and the public meeting, including a request for comment, was also published in the Tri-Valley Herald, Livermore, CA on July 15, 2015 (ADAMS Accession No. ML15292A519). The NRC staff published a notice of the

receipt of GEH's request, including a request for comment, in the *Federal Register* on July 20, 2015 (80 FR 42846). The NRC staff conducted the public meeting in Pleasanton, CA on July 22, 2015. 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.

ML15260A199. No comments were made on the Federal Rulemaking Web site, or were received by mail or e-mail, and all questions asked at the meeting were answered in the meeting.

III. Finding of No Significant Impact.

The NRC staff has prepared this EA as part of its review of the proposed action. On the basis of this EA, the NRC finds that there are no significant environmental impacts from the proposed action, and that preparation of an environmental impact statement is not warranted. Accordingly, the NRC has determined that a finding of no significant impact (FONSI) is appropriate. In accordance with 10 CFR 51.32(a)(4), this FONSI incorporates the EA set forth in this notice by reference.

Dated at Rockville, Maryland, this 4th day of May 2016.

For the Nuclear Regulatory Commission.

/RA/

John R. Tappert, Director,
Division of Decommissioning, Uranium Recovery,
and Waste Programs
Office of Nuclear Material Safety
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