

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

<p>1. LICENSEE/CERTIFICATE HOLDER</p> <p>GE-Hitachi Nuclear Energy Americas, LLC 3901 Castle Hayne Road Wilmington, NC 28401</p> <p>REPORT NUMBER(S) 71-0170/2011-201</p>	<p>2. NRC/REGIONAL OFFICE</p> <p>Division of Spent Fuel Storage and Transportation U. S. NRC M/S EBB-3D-02M Washington, DC 20555-0001</p>
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<p>3. LICENSEE/CERTIFICATE NUMBER(S)</p> <p>QAP Approval 71-0170 CoC 71-9228</p>	<p>4. INSPECTION LOCATION</p> <p>Vallecitos Operation, Sunol, CA</p>	<p>5. DATE(S) OF INSPECTION</p> <p>01/10-13/2011</p>
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The inspection was an examination of the activities conducted under your NRC-approved 10 CFR Part 71 Quality Assurance Program Approval as they relate to safety and compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your Certificate of Compliance (CoC). The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspectors. The inspection findings are as follows:

- 1. Based on the inspection findings, no violation or nonconformances were identified.
- 2. Previous violations(s) or nonconformance(s) closed.
- 3. The violation(s), specifically described to you by the Inspector as non-cited violations, are not being cited because they were self-identified non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, NUREG-1600, to exercise discretion, were satisfied.

_____ Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):
- 4. During this inspection certain of your activities, as described below and/or attached, were in violation or nonconformance of NRC requirements and are being cited. This is a NOTICE OF VIOLATION which may be subject to posting in accordance with 10 CFR19.11.

A. 10 CFR 71.119, "Control of special processes," states, in part, that a certificate holder shall establish measures to ensure that special processes, including welding, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

Contrary to the above, during an inspection conducted January 10 through 13, 2011, at the GE Vallecitos facility of GE-Hitachi Nuclear Energy Americas, LLC, the NRC identified that during the replacement of energy absorber angles in the Model GE-100, s/n 107, overpack pallet base plate, GE Vallecitos personnel failed to document the filler metal and weld procedure that was used, and the weld was performed by an individual whose welder qualification continuity records had not been formally tracked or maintained by GE Vallecitos personnel to establish that the welder was currently qualified to perform the welding activity.

This is a Severity Level IV Violation (Supplement V)

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STATEMENT OF CORRECTIVE ACTIONS

- I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violation(s) identified. This statement of corrective actions I made is in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested; OR
- Written Response requested in 30 days Yes No

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE	DONALD R. KRAUSE	<i>Donald R. Krause</i>	11 Feb 11
NRC INSPECTOR	Robert Temp	<i>Robert Temp</i>	02/11/11

NRC FORM 591S PART 2
(8-2002)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

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AND COMPLIANCE INSPECTION**

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<p>3. LICENSEE/CERTIFICATE NUMBER(S)</p> <p>QAP Approval 71-0170 CoC 71-9228</p>	<p>4. INSPECTION LOCATION</p> <p>Vallecitos Operation, Sunol, CA</p>	<p>5. DATE(S) OF INSPECTION</p> <p>01/10-13/2011</p>
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B. 10 CFR 71.133, "Corrective action," states, in part, that a certificate holder shall establish measures to assure that conditions adverse to quality are promptly identified and corrected.

Contrary to the above, during an inspection conducted January 10 through 13, 2011, at the GE Vallecitos facility of GE-Hitachi Nuclear Energy Americas, LLC, the NRC identified that conditions adverse to quality identified during the previous NRC inspection at the GE Vallecitos facility, and documented in NRC Inspection Report 71-0170/2005-201, had not been corrected because GE Vallecitos personnel failed to enter them into the corrective action program.

This is a Severity Level IV Violation (Supplement V)

INSPECTOR NOTES COVER SHEET

Licensee/Certificate Holder	GE-Hitachi Nuclear Energy America, LLC 3901 Castle Hayne Road Wilmington, NC 28401
Licensee/Certificate Holder contact/address	Donald Krause Manager, Regulatory Compliance and EHS Vallecitos Nuclear Center 6705 Vallecitos Road Sunol, CA 94586
Docket No.	07100170
Inspection Report No.	2011201
Inspection Dates	January 10-13, 2011
Inspection Location	Vallecitos Operation, Sunol, CA
Inspectors	Robert Temps Jim Pearson Earl Love
Summary of Findings and Actions	<p>The purpose of this routine inspection was to assess the compliance of GE-Hitachi Nuclear Energy America, LLC (GEH), at the Vallecitos facility, to the requirements of 10 CFR Parts 71 and 21. The inspection activities focused on management, design, and maintenance activities. No significant design activities were taking place for Vallecitos related GEH Certificate of Compliance packagings.</p> <p>The team identified two violations of NRC requirements as cited in the attached Form 591 and as described in the following inspector notes. Overall, GEH's implementation of their NRC-approved Part 71 Quality Assurance Program at the Vallecitos facility was assessed to be adequate.</p>
Lead Inspector Signature/Date	Robert Temps  02/15/11
Inspector Notes Approval Branch Chief Signature/Date	Eric Benner  2/15/11

1. MANAGEMENT CONTROLS

Quality Assurance Policy

The inspection team reviewed QAP-1, "Quality Assurance Program for Shipping Packages for Radioactive Material," Revision 9, dated May 2008. QAP-1 is used at the Vallecitos Nuclear Center (VNC) with regard to activities subject to 10 CFR Part 71, Subpart H. The team determined that QAP-1 adequately addressed the eighteen Subpart H quality assurance (QA) criteria.

Audits

The team reviewed VNC Procedure No. 70.1, "Quality Audit System," and several audit reports to verify compliance with the procedure. The team reviewed internal audit report VNC-08-01 for the year 2008. The scope of the audit was focused on the adequacy, effectiveness and implementation of the shipping container quality program at VNC. The team noted that one Corrective Action Request (CAR) was issued in regard to a finding related to the shelf life of cask gaskets, and a second CAR was issued based on a recommendation to require Engineering Change Notices (ECNs) be reviewed by QA. The team noted that all 18 Subpart H quality criteria were evaluated and that the audit check list questions were adequate to assess implementation. The team also reviewed internal audit report VNC-2009-001; the audit scope was the same as the 2008 audit. The audit identified one finding and three recommendations resulting in initiation of four CARs. Lastly, the team reviewed internal audit report VAL-22010-01 for VNC shipping containers. The team noted that the report identified 1 finding, 1 concern, and 3 recommendations resulting in the issuance of five CARs. The team reviewed the 2009 and 2010 audit schedules and verified that the 10 CFR Part 71 audits were scheduled in June of each year; the team noted the 2011 audit is also scheduled for June.

The team reviewed GEH common procedure CP-18-02, "Supplier Audits and Commercial Grade Surveys," and CP-18-103, "Supplier Surveillance." The team reviewed an audit for a safety related supplier and noted that the audit indicated that the supplier did not provide reasonable assurance that acceptable safety related components could be consistently supplied. The audit resulted in the identification of ten findings and three observations. The findings included programmatic issues related to the supplier's QA program as well as in the areas of dedication and procurement. The team noted that specific restrictions were placed on the vendor to compensate for the audit findings. The team reviewed the current Approved Vendors List (AVL) used by GEH and VNC and verified it included all the restrictions necessary to compensate for the vendor's weak QA program. The team also reviewed a calibration services supplier audit report. The team noted that the audit resulted in three findings and one concern. The team reviewed supplier CAR reports 47186 through 47190 issued as a result of the supplier audit. The team questioned how GEH/VNC was able to close three of the CARs based on the level of detail documented in them. The team was provided additional information by the quality program manager that substantiated the closure; however, this information had not been documented in support of GEH's closure of the supplier's CAR. VNC issued CAR 53845 to address the team's observation.

The team reviewed GEH Engineering Operating Procedure (EOP) 75-2.00, "Qualification and Certification of Personnel," and noted that the procedure provides direction and control of lead auditors, inspection and test personnel. The team reviewed GEH Nuclear Energy Test Procedure 386HA480, "Certification of Nondestructive Test Personnel," that guides and controls the process for nondestructive examination (NDE) personnel certification. The team also reviewed GEH VNC Quality Assurance Manual Procedure 10.4, "Qualification and Certification of Nondestructive Test and Inspection Personnel." The team reviewed the certificates of qualification for a magnetic particle inspector, two mechanical inspectors and two liquid penetrant test inspectors. The team also reviewed the certificates of qualification for two lead auditors against the requirements and controls of EOP 75-2. The team reviewed a lead auditor's Certificate of Qualification and the auditor's experience summary. No concerns were identified.

Nonconformance Controls

The team reviewed and assessed the status of the corrective action program used by VNC through review of corrective action program administrative procedures and by review of CARs and deviation reports (DRs). The team reviewed GEH/VNC Procedure No. QP 50.1, "Nonconformances," the DR log, and VNC Procedure No. 60.3, "Corrective Action Request," that basically refers to the use of GEH Common Procedure CP-16-01, "Corrective Action Process," for the processing of CARs. The team reviewed the last three years of Part 71 related CARs and noted they were all generated as a result of GEH/VNC audits. No significant concerns were identified in the processing or technical resolution of the reviewed CARs. Overall, the team assessed that the administrative procedures governing the corrective action program were adequate.

The team reviewed VNC's corrective actions taken to address conditions adverse to quality identified during the previous NRC Part 71 inspection, conducted in 2005, as documented in NRC inspection report 71-0170/2005-201. The team identified that the conditions adverse to quality had not been corrected because VNC personnel failed to enter them into the corrective action program for formal tracking and resolution. The team identified this as a violation of 10 CFR 71.133, "Corrective action," that states, in part, that a certificate holder shall establish measures to assure that conditions adverse to quality are promptly identified and corrected. The violation is cited in the attached Form 591.

10 CFR Part 21 Postings and Procedures

The team verified the presence of required Part 21 postings in two locations in building 102, which is the office location for many of the personnel associated with Part 71 shipping activities. The team reviewed the GEH procedure 70-42, "Reporting of Defects and Non conformance Under 10 CFR Part 21." The team verified that for the most recent Part 71 related purchase order, Part 21 requirements were imposed. The team determined that these documents provided acceptable controls for identification and handling of Part 21 issues.

Documentation and Record Controls

The team reviewed the procedures and methods that GEH/VNC use to control the initiation, revision, and distribution of controlled documents. From the various procedures and drawings

that the team reviewed during the inspection, no concerns were identified with regard to document controls.

The team reviewed records related to the export of shipments in Type B packagings conducted by GEH/VNC. 10 CFR Part 71 requires such records to be kept for three years. The team verified that GEH/VNC met this requirement. The shipment records were also reviewed for overall compliance with 10 CFR 71.21 requirements, as well as requirements for certain notifications to be made in accordance with 10 CFR Part 110 and the NRC's Radioactive Material Quantities of Concern (RAMQC) orders. No significant concerns were identified; the team did identify that a single drawing related to a Croft Associates Type B package was not the most current revision and VNC initiated CAR 53848 to address this observation.

2. DESIGN CONTROLS

At the time of the inspection, no current or planned design activities were taking place for GEH/VNC Certificate of Compliance (CoC) packaging designs. The team reviewed GEH EOP 20-4.30, "GEH and VO Interface Agreement," that the team was informed would be used to guide the development of any new package designs or the modification of current designs. Section 3, "Design Control," of QAP-1 was also reviewed. No concerns were identified by the team with regard to design controls

3. FABRICATION CONTROLS

The team determined that there have been no recent or past fabrication related activities for packaging CoCs held by GEH/VNC.

4. MAINTENANCE CONTROLS

The team reviewed the site packaging operating and maintenance procedures to ensure that they incorporated all aspects of the operating and maintenance procedures referenced in the CoCs for the packagings for which GEH/VNC holds the CoC. The packagings reviewed included the following models:

- GE-100 (CoC 5926)
- 1500 (CoC 5939)
- 2000 (CoC 9228)

The team noted that CoC 9228 is the only current CoC that GEH/VNC holds. The CoC 5926 and 5939 packaging CoCs have expired; however, further use of these packagings (pending approval of replacement designs) has been permitted through authorization for limited shipments to specific users that meet requirements for such authorization. Because all three packaging designs are in active use, the team reviewed maintenance activities and records related to all of the packagings used for shipments by VNC.

Model 2000 (CoC 9228)

The team reviewed VNC's records for the performance of annual inspection and maintenance activities performed on two of the Model 2000 packagings [serial numbers (SN) 2001 and 2002],

performed July 2 and 16, 2010, respectively. The team noted that the annual inspection and maintenance activities were conducted in accordance with Chapter 10 of GEH Specification No. 22A9380, "Operations and Maintenance of Model 2000 Transport Package." The team noted that the Specification provides users with information, procedures and documentation to properly operate and maintain the packaging in accordance with the requirements of Chapters 7 and 8 of the Model 2000 Package Safety Analysis Report (SAR). The team compared the requirements of Chapter 10 of the Specification with the package current CoC, and determined that the Specification complied with the CoC requirements. The team reviewed drawings related to the use and maintenance of the packaging, as contained in the Specification, to the drawings referenced in the CoC. Specifically, the team verified that routine (each loading and assembly) and periodic (once within 12-months) maintenance inspections were conducted in accordance with the Specification and CoC 9228 design drawing Nos. 129D4946, "Model 2000 Transport Container," 101E8718, "Model 2000 Shipping Cask," and 101E8719, "Model 2000 Cask Overpack" (applicable to SN 2001), and 129D4946, "Model 2000 Transport Container," 101E9520, "Model 2000 Shipping Cask," and 101E9521, "Model 2000 Cask Overpack" (applicable to SN 2002). Overall, no concerns were identified with regard to maintenance of the Model 2000 packagings used by VNC.

Model 1500 (CoC 5939)

The team reviewed VNC's records for the annual inspection and maintenance on the Model 1500 Packaging, SN 1507, performed on August 5, 2010. The team noted that the annual inspection and maintenance activities were contained in GEH Specification 120P030, "Generic Model 1500 Shipping Package Loading/Unloading Handling Procedures." The team noted that the contents of the inspection report included an engineering release that authorized and outlined the required maintenance activities to be performed. The team noted that the maintenance work-scope included inspection of gasket, closure bolts, jacket bolts, base hex nuts, and energy absorbing tubing as well as angle. The team noted that the annual report satisfactorily documented the rejection and replacement of the cask seal gasket and six (6) base hex nuts. Based on its review of the annual inspection report, the team determined that VNC complied with the maintenance requirements of CoC No. 5939 and no concerns were identified.

Model GE-100 (CoC 5926)

The team reviewed VNC's records for the annual inspection and maintenance on the Model GE-100 Packaging, SN 102, performed on June 28, 2010. The team noted that the annual inspection and maintenance activities were specified in Specification 120P025, "Generic Model 100 Shipping Package Loading/Unloading Handling Procedure." The team noted that the contents of the report included an engineering release which authorized and outlined the required maintenance activities to be performed. The team noted as part of the inspection and maintenance activities that the cask seal was replaced and leak tested, as required, and that the work-scope and inspection attributes included the performance of weld inspections, closure bolts, jacket bolts, base hex nuts, and energy absorbing tubing as well as angle. The annual report satisfactorily documented the rejection and replacement of six (6) closure bolts, two (2) jacket hex bolts, and two (2) base nuts. Lastly, the team verified the performance of annual maintenance activities were conducted in accordance with design Drawing Nos. 129D4729, "Model 100 Protective Jacket," 129D4730, "Model 100 Shipping Cask," and 129D4731, "Model 100 Cask

Liners," as referenced in CoC 5926. Based on its review of the annual inspection report, the team determined that VNC complied with the maintenance requirements of CoC No. 5926 and no concerns were identified.

Maintenance materials/traceability

The team inspected VNC's designated and controlled materials storage area (Building 104) and noted that it was controlled by VNC's QA group. The area was locked against unauthorized entry. The team noted that components (i.e., a limited number of gaskets, bolts, and hex nuts) were stored in such a manner as to prevent damage and that all the components were suitably identified and tagged with acceptance stickers. The team noted satisfactory compliance to governing Procedure Nos. 10.3 and 10.5, "Inspection Reporting" and "Controlled Material Storage," respectively. No concerns were identified.

Maintenance personnel/training and qualification

The team reviewed DR 04733 that documented the replacement of energy absorber angles in the Model GE-100, SN 107, overpack pallet base plate. The report included instructions to rework by welding replacement angles to the base plate. The team verified that the rework was performed in accordance with engineering instructions and Engineering Release No. 101238, Design Drawing No. 153F902, "Base, Model 100 Cask," and Specification No. 22A9284, "Energy Absorbing Angles for Mild Steel Quality Attribute Specification." The team noted that the specification covered quality attributes of the material, receiving inspection, fabrication, and acceptance criteria of the angle sections attached to the base. The team reviewed the rework records and noted that VNC's quality control system failed to provide objective evidence of a quality record that provided traceability to the Weld Procedure Specification and filler metal used to conduct the rework. Although evidence of the procedure and filler metal used did not exist, VNC advised the team that welding of the angles to the base plate was performed using the shielded metal-arc welding process using 1/8" diameter, E7018 electrode, Heat No. 38819 and that the welds were performed in accordance with detailed Weld Procedure No. P8GYR88, "Combination of GTAW and SMAW." The failure of GE to record the use of the weld procedure and filler metal used in the performance of the weld repair activity is a violation of 10 CFR 71.119, "Control of special processes," and is cited in the attached Form 591.

The team reviewed the qualification record of the welder who performed the above weld repair on the Model GE-100, SN 107, packaging. The team noted that VNC's quality control system failed to provide objective evidence that formally ensured current qualification of the welder for the process used to perform the weld repair rework. This failure constitutes a violation of 10 CFR Part 71.119, "Control of special processes," and is cited in the attached Form 591.