

## SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/CERTIFICATE HOLDER  
General Electric Company  
Vallecitos Nuclear Center  
6705 Vallecitos Road  
Sunol, CA 94586

2. NRC/REGIONAL OFFICE  
Spent Fuel Project Office  
M/S O13D13  
Washington, DC 10555-0001

REPORT NUMBER(S) 71-0170/05-201

3. LICENSEE/CERTIFICATE NUMBER(S)

71-5926, 71-5939, 71-9228

4. INSPECTION LOCATION

Sunol, CA

5. DATE(S) OF INSPECTION

November 14-<sup>17</sup>~~18~~, 2005

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license or Certificate of Compliance (CoC). The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- ☒ 1. Based on the inspection findings, no violations or nonconformances were identified.
- ☐ 2. Previous violation(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):

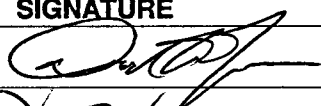

- ☐ 4. During this inspection certain of your activities, as described below and/or attached, were in violation or nonconformance of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION OR NONCONFORMANCE, which may be subject to posting in accordance with 10 CFR 19.11.

(Violations, Nonconformances, and Corrective Actions)

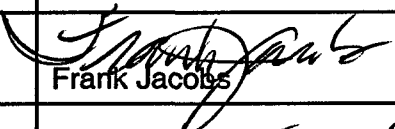
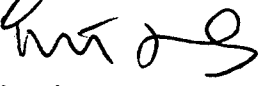
### STATEMENT OF CORRECTIVE ACTIONS

☐ I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified. This statement of corrective actions is made 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	David Turner, Manager Regulatory Compliance & EHS		11/17/2005
NRC INSPECTOR	Frank Jacobs		11/17/05

## INSPECTOR NOTES COVER SHEET

Licensee/Certificate Holder	General Electric Company Vallecitos Nuclear Center 6705 Vallecitos Road Sunol, CA 94586
Licensee/Certificate Holder contact and phone number	David Turner 925-862-4360
Docket No.	07100170
Inspection Report No.	2005201
Inspection Dates	November 14-17, 2005
Inspection Location	Sunol, CA
Inspectors	Frank Jacobs Robert Temps Jessica Umana
Summary of Findings and Actions	<p>The purpose of this routine inspection was to assess the compliance of Vallecitos Nuclear Center (VNC) with the requirements of 10 CFR Parts 71 and 21. The inspection activities focused on management controls and maintenance activities. No significant design activities were taking place for VNC Certificate of Compliance packaging designs, although VNC is currently engaged in the design of a new packaging for a client. VNC was not involved in any current or recent fabrication activities. The inspection team noted a number of minor discrepancies, but none appeared to be repetitive or safety significant. No significant adverse findings were noted and no cited or uncited violations were identified.</p> <p>Overall, VNC's activities were found to be in compliance with 10 CFR Parts 71 and 21.</p>
Lead Inspector Signature/Date	 Frank Jacobs 11/28/05
Inspector Notes Approval Branch Chief Signature/Date	 Robert J. Lewis 12/5/05

## 1. MANAGEMENT CONTROLS

### Quality Assurance Policy

The inspection team reviewed the General Electric Company, Vallecitos Nuclear Center (VNC) quality assurance (QA) plan QAP-1, "Quality Assurance Program for Shipping Packages for Radioactive Material," Revision 8, July 2004. Paragraph 1.3.7 of QAP-1 states certain activities are delegated to General Electric Nuclear Energy (GENE), San Jose QA and Engineering, and that these activities are delegated in writing. This delegation was found in a letter dated March 30, 2000, "Quality Assurance-Related Support to Vallecitos Operations," that stated activities of GENE San Jose organizations are to be conducted per the applicable requirements of the latest revision of QAP-1. These activities concerning the procurement of safety-related materials are evaluated in VNC annual audits, as evidenced in QA Audits 04-01 and 05-01 discussed below. No concerns were identified by the team.

The team reviewed training and qualification records for selected auditors and inspection personnel. No discrepancies were noted.

The team reviewed GENE Engineering Operating Procedure EOP 65-2.20, "Dedication of Commercial Grade Items," Revision 14, September 30, 2004. The team reviewed the dedication package for the Model 2000 Cask Seal for the 2001 Cask Annual inspection of August 15, 2005, which included Test Instruction TI 4491, "Dedication of Model 2000 Cask Seal per Drawing 183C8275," and Specification No. 22A9360, "Acceptance Criteria Test for Model 2000 Transport Package Seal," Revision 2, January 28, 1999. As noted above, TI 4491 did not have an approval signature or date issued for Revision 2. The team noted several apparent discrepancies in the dedication documentation. Specification No. 22A9360, paragraph 4.2 specifies test media to be "mixture of 10% He + 90% N<sub>2</sub>." Use of this media was not reflected in the acceptance documentation, and VNC stated this was not the practice. Paragraphs 4.1, 4.2, and 4.3 test specifications for normal, high-temperature, and low-temperature environments specify a pressure of 15±1 psi across the seal for each test. The dedication package documentation has entries of 15 psig, full flow, and 5 psi for the respective tests. The record for the low-temperature test indicated a temperature of less than or equal to 40°F, but stated the temperature could not be verified as the instrument range did not go below -40°F. The requirement was -40±10°F. The team also noted typographical errors on ER 100473, Revision 0, 2/12/04, in references to markings for the seals. VNC acknowledged the discrepancies and was to determine appropriate actions.

### 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 corrective action requests (CARs) and deviation reports (DRs). The team reviewed procedure QP 50.1, "Nonconformances," and the DR log. A sample of DRs related to transportation packagings was reviewed by the team and no significant concerns were identified in the processing or technical resolution of the reviewed DRs. For CARs, the team reviewed procedure EOP 75-3.00, "Self-Assessment, Corrective Actions & Audits," and a limited number of transportation packaging related CARs. 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 and met the 10 CFR Part 71 requirements for corrective action programs.

The team reviewed Nuclear Energy P&P Procedure 70-42, "Reporting of Defects and Noncompliance Under 10 CFR Part 21," and observed in conspicuous locations the postings required by Part 21. Notification of Part 21 applicability was observed in procurement documents as required by Part 21 and GENE procedures. The team determined that these documents provided acceptable controls for identification and handling of Part 21 issues.

#### Documentation Controls

The team reviewed the Engineering Practices and Procedures Manual (EPP) which establishes the methods for initiating, reviewing, approving, controlling, distributing, and revising engineering documents. The team discussed the process for document control with VNC and reviewed selected documents. GE's Operating and Maintenance Manual (O & M Manual) for the Model 2000 Cask was found to contain Revision 20 of Certificate of Compliance No. 9228. The current revision for Certificate of Compliance No. 9228 is Revision 22. Also, references in the O & M Manual to the DOT regulations were incorrect. VNC stated that a disclosure would be added in the beginning of the manual to clarify VNC's practice that certain portions of the O & M Manual, specifically Chapter 2 and Appendix G, were updated only when changes to Chapters 7 and 8 of the SAR were approved by NRC. The incorrect references to the DOT regulations were noted by VNC and will be corrected in a revision to the O & M Manual.

The team noted the use of correction fluid (white-out) on the "Type B Container Maintenance/Inspection Training Matrix." This was the only incidence observed and VNC acknowledged that this practice was not acceptable for quality records.

In a commercial grade dedication package reviewed by the team, a copy of Test Instruction TI 4491, "Dedication of Model 2000 Cask Seal per Drawing 183C8275," did not have an approval signature or date issued for Revision 2. VNC acknowledged the discrepancy and was to determine appropriate action.

#### Audit Program

The team reviewed the Vallecitos Nuclear Center Internal Audit Schedules for audits performed in calendar years 2003, 2004, and 2005. An audit of Engineering and Material Services for 10 CFR Part 71 Shipping Containers had been scheduled to be performed in the second quarter of each year, and each audit covered activities performed in the previous calendar year. The stated purpose of the audit performed in 2005 (QA Audit 05-01) was to examine the adequacy, effectiveness, and implementation of the Shipping Container Quality Program at Vallecitos, QAP-1, Revision 7, and to evaluate the performance of components at Vallecitos Nuclear Center, and GENE Nuclear Services Quality as it regards their services in purchasing safety-related materials. The announced start date for the audit was May 16, 2005, and the audit report was dated August 30, 2005. The audit had been performed using a prepared checklist that covered the 18 criteria of 10 CFR Part 71. The audit had two findings documented in CARs AI10444, regarding visual and dimensional inspection performed by an inspector with suspended certification, and AI10445, regarding biennial "Shipping Container Maintenance Training" not being performed. The audit assessed the overall adequacy and effectiveness of the QA program to be satisfactory. The team reviewed the internal audit performed in 2004

(QA Audit 04-01) and found the checklist to be the same as that used for 2005. The announced start date for the audit was June 30, 2004, and the audit report was dated September 16, 2004. QA Audit 04-01 had no findings.

Overall, the team considered QA Audits 05-01 and 04-01 to be adequate. However, the team noted some minor discrepancies in internal audit documentation that were addressed and corrected by the QA manager. QA Audit 05-01 stated that annual GENE QA training was accomplished on 9/27/03, but QA Audit 04-01 stated the annual training was accomplished on 9/30/03. Nuclear Energy P&P Procedure 70-14 required audit records to contain a reference to lists of persons contacted, but QA Audit 05-01 did not contain such a reference or list. Procedure 70-14 required audit records to include the record of completion of corrective/preventive actions. The file for QA Audit 05-01 did not contain the corrective actions for the two findings identified in the audit.

The team also noted several areas in internal auditing with potential for improvement. The QA manager evaluated the areas discussed, initiated some changes during the inspection, and was considering others.

- Each member of the audit team performed selected portions of the internal audits to provide necessary independence from the activities being evaluated. The audit reports did not clearly identify the portions each auditor performed such that the independence was readily verifiable.
- QAP-1 specifies that an annual inspection is to be performed by the QA function which includes assuring that storage areas are labeled properly and that parts are not damaged. The 2004 and 2005 checklists and audit reports did not appear to address the specific requirements for storage area labeling and part damage.
- Internal audits were scheduled to be performed in the second quarter of each year and covered activities performed from January to December in the previous calendar year. The audits for calendar years 2003 and 2004 were started in June 2004 and May 2005, respectively, and the reports were issued in September 2004 and August 2005, respectively. The team discussed with VNC how the long time period in this practice may not facilitate timely identification and corrective action for potential quality problems. Also, evaluation of activities being performed at the time of the audit could provide a more performance-based assessment of activities affecting quality.
- VNC has used the same internal audit checklist for several years. The VNC checklist contained several attributes similar to verifying that a procedure exists to control a specified process. Using the same checklist attributes of this type each year is often found to produce the same observations each year. The checklist could be enhanced by ensuring attributes provide for appropriate evaluation of the current implementation and effectiveness of the various QA criteria.

The team reviewed the vendor audit of Parker Composite, Sealing System Division, San Diego, CA. The audit was performed by GENE Quality on August 18 - 21, 2003. The NIAC checklist was used and the vendor was found to be acceptable, although one CAR was issued regarding supplier qualifications. The audit appeared to be thorough and effective.

## **2. DESIGN CONTROL**

At the time of the inspection, no significant design activities were taking place for VNC Certificate of Compliance (CoC) packaging designs, although VNC is currently engaged in the design of a new packaging for a client for which the client will hold and maintain the CoC when issued. VNC's design activities specific to the client were not reviewed during this inspection. The team reviewed the administrative procedures that VNC has in place regarding design controls as well as design modifications and determined they were appropriate and consistent with 10 CFR 71 Subpart H requirements for these activities. The team reviewed selected CoC drawings and determined that appropriate design and licensing requirements had been included in the respective fabrication drawings.

## **3. FABRICATION CONTROLS**

VNC had no current or recent fabrication activities.

## **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 VNC holds the CoC. The packagings reviewed included the following models:

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

The team determined that the operating and maintenance procedures were detailed and that they incorporated appropriate requirements from their respective CoCs. The team requested maintenance records for one of the Model 2000 packagings. The team also observed maintenance inspection operations for a Model GE-100 packaging that was being prepared for shipment and interviewed the technician performing the maintenance activity. All of the observed operations and maintenance activities agreed with the operating procedures and maintenance programs referenced in the CoCs for the packagings reviewed. The technician performing the packaging maintenance activity appeared knowledgeable and carried out the inspection in a detailed and meticulous manner. The team also observed the demonstration of a fluorescent dye penetrant nondestructive examination test used on certain components of transportation packagings. The individual performing the test was a qualified inspector and appeared very knowledgeable of the procedure and process.

The team held discussions with responsible VNC personnel concerning the use of packagings for which they are not the CoC holder. All packagings, whether VNC CoC or others, are inspected prior to use using generic checklists that specify inspection attributes for the packaging overpacks (VNC uses the term fire shield) as well as the internal cask structures. All packagings also undergo routine determinations required by 10 CFR 71.87 prior to shipment. For packagings leased by VNC, the normal procurement process is followed which includes procuring packages from vendors on the Approved Suppliers List. For shipment in customer supplied packagings, VNC normally performs only the generic checklist inspections and the 10 CFR 71.87 determinations.

The team reviewed records for shipments made in customer-provided packagings and noted a concern with one of the shipments. Specifically, the team identified that for a shipment in a CoC 5979 packaging, an older revision of the operating and maintenance inspection procedure had been used rather than the revision specified in the CoC. The team identified that four other shipments had also been made using the incorrect revision of the CoC 5979 procedures. VNC entered this issue into their corrective action system through issuance of a Corrective Action Report. The team determined that the five shipments involved domestic shipments only between NRC Agreement States and therefore the failure to follow the CoC conditions was not subject to NRC enforcement action; however, VNC was made aware of the fact that they will need to determine whether the noncompliances are reportable to the U.S. Department of Transportation or any of the Agreement States for shipment under those entities' respective regulations. VNC stated that such action would be reviewed as part of their corrective actions for this issue. No other concerns were identified by the team.

The team inspected a materials storage area for transportation packaging parts and selected five items for traceability with regard to purchase orders, receipt inspection, inventory control and conformance to design specifications. Three gaskets, one for each of the Model GE-150, 1500, and 2000 packagings, and two types of bolts were selected for review. All of the items were traceable to purchase orders. Two of the gaskets had been ordered as commercial grade items and underwent commercial grade dedication and the other three items were procured as safety-related items and their purchase orders were verified to have invoked Part 21 reportability requirements. Material receipt inspection reports were produced for all of the items and inventory controls were assessed to be adequate. No concerns were identified by the team with respect to the VNC procurement process.