

GE Energy

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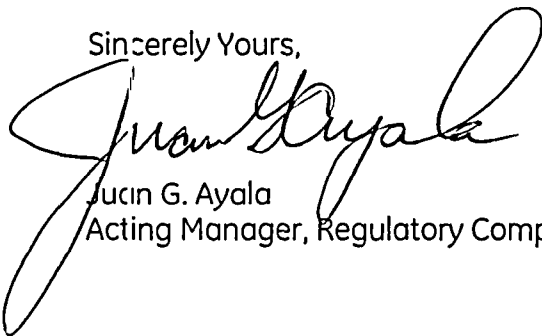
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Washington, D.C. 20555

Subject: Annual Report for EVESR, 2005  
Reference: License DR-10, Docket 50-183  
Enclosure: Annual Report No. 38 (3 copies)

Enclosed are three signed copies of Annual Report No. 38 for the deactivated ESADA-Vallecitos Experimental Superheat Reactor (EVESR) located at Vallecitos Nuclear Center near Sunol, California.

If there are any questions or additional information required, please contact me at the number below.

Sincerely Yours,



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***GE Nuclear Energy***

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*Vallecitos Nuclear Center  
General Electric Company  
Sunol, California*

**ESADA-VALLECITOS EXPERIMENTAL  
SUPERHEAT REACTOR  
(DEACTIVATED)**

**ANNUAL REPORT NO. 38  
FOR THE YEAR 2005**

**LICENSE DR-10  
DOCKET 50-183**

**MARCH 2006**

## **ESADA-Vallecitos Experimental Superheat Reactor (Deactivated)**

### **Annual Report No. 38**

General Electric Company has maintained the ESADA Vallecitos Experimental Superheat Reactor (EVESR) in a deactivated status under the authority of Amendment No. 3 to License DR-10, Docket 50-183, issued June 11, 1976. In this annual report, a summary of the status of the facility for the period of January 1, 2005 to December 31, 2005 is presented, as required by paragraph 3.E.2. of the license.

#### **1.0 SUMMARY**

The facility remains in essentially the same condition described in Annual Report No. 37. Entry into the containment building was made for routine radiation surveys and a general examination of conditions throughout the building. In accordance with written procedures, the Facility Manager controls access to the containment building.

Radiation levels remain essentially unchanged.

#### **2.0 STATUS OF FACILITY**

The facility continues to be in deactivated status. The plugs to the reactor vessel and head storage shield, the wooden cover over the fuel storage pool, and the locked covers for the personnel and equipment hatchways remain in-place except during maintenance or inspection activities.

#### **3.0 RADIATION AND CONTAMINATION**

Complete radiation and contamination surveys of the facility indicate that levels remain low. Results of the surveys are presented in Table 1. The radiation/contamination levels listed are representative but not necessarily maximum values.

#### **4.0 ACTIVITIES**

Routine inspections were conducted during this report period. There were no preventive or corrective maintenance activities performed having safety significance during the reporting period.

## 5.0 ORGANIZATION

The management and operations organization for the EVESR is described in Technical Specification IX of License DR-10. The organizational structure remained the same. The Site Manager was S. A. Bump. C. W. Bassett was the EVESR Facility Manager.

## 6.0 CONCLUSION

The General Electric Company concludes that the deactivated ESADA-Vallecitos Experimental Superheat Reactor is being maintained in a safe shutdown condition. The inspections, access control, and administratively controlled activities ensure maximum protection for the public health and safety. The procedures will be continued to maintain this high level of protection.

GENERAL ELECTRIC COMPANY  
Vallecitos Operations



Chuck Bassett

Digitally signed by Chuck Bassett  
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ou=Vallecitos Operations,  
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C. W. Bassett, Manager  
Facilities Maintenance & QA

**Table 1**  
**Radiation and Contamination Level Data**  
**ESADA-Vallecitos Experimental Superheat Reactor (Deactivated)**

Date of Measurement:	Contamination Levels					
	Radiation Levels (mR/h Gamma)		Surface Smears Beta-Gamma* (cpm/ft <sup>2</sup> )		Airborne Beta-Gamma† (μCi/cc x 10 <sup>-10</sup> )	
	12/04	12/05	12/04	12/05	12/04	12/05
Reactor Enclosure						
Top of spent fuel pool (main floor)	0.7	<1	200	500	--	--
54.9-ft level (main floor)	<1	<1	200	500	0.009	0.014
53.4-ft level	<1-2	<1	200	4000	--	--
51.9-ft level	<1-2	<1	200	<100	0.006	0.011
50.3-ft level (maximum pipe reading)	0.7	<1	200	300	--	--
48.7-ft level (basement)	<1-1.5	<1	100	<100	0.013	0.016

**Note:**

Radiation levels, surface smears, and air samples may vary from survey to survey as they are taken in general areas rather than at specific locations.

\* For conversion to d/m, assume an instrument efficiency of 20%.

† 24-hour decayed values