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U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Subject: Annual Report for EVESR, 2010
Reference: License DR-10, Docket 50-183
Enclosure: Annual Report No. 43

Enclosed is the Annual Report No. 43 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 above.

Sincerely Yours,

 Digitally signed by
David W. Turner
Date: 2011.03.31
14:29:57 -07'00' 

David W. Turner
Manager, Vallecitos Nuclear Center

cc: John Buckley, NRC (by e-mail)
Robert Evans, Region IV (by e-mail)

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*Vallecitos Nuclear Center
Sunol, California*

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

**ANNUAL REPORT NO. 43
FOR THE YEAR 2010**

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

MARCH 2011

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

ANNUAL REPORT NO. 43

GE Hitachi Nuclear Energy (GEH) has maintained the ESADA Vallecitos Experimental Superheat Reactor (EVESR) in a deactivated status under the authority of Amendment No. 7 to License DR-10, Docket 50-183, issued December 1, 2008. In this annual report, a summary of the status of the facility for the period of January 1, 2010 to December 31, 2010 is presented, as required by Amendment 7, Appendix A, Technical Specifications, section C. 1.

1.0 SUMMARY

Component removal activities began in 2008 above the 549 foot level. Tech Spec changes issued in Amendment 7 December 1, 2008 authorize the removal of systems beside the reactor vessel and bio-shield below the 549 level. Component removal continued in 2009 and concluded (current scope) in 2010. 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. Contamination levels are up slightly, reflecting the ongoing equipment removal activities.

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 remain in place.

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. Component removal and downsizing was continued.

5 mCi of material in 3,868 ft³ were removed and disposed in at the facility in Clive, Utah, owned and operated by Energy Solutions.

The equipment disposal concluded during 2010. The crane failure (details in report No. 42 submitted March 2010) limited items removed to smaller items. GEH concluded the current work as the majority of items able to be removed with the current lift capacity have already been removed.

5.0 ORGANIZATION



The organizational structure is the same as at the conclusion of 2009. The Site Manager is D. W. Turner. EVESR Facility Manager is M. R. Schrag. The Manager, Regulatory Compliance and EHS is D. R. Krause.

6.0 CONCLUSION

GE Hitachi Nuclear Energy concludes that the deactivated ESADA-Vallecitos Experimental Superheat Reactor is being maintained in a safe shutdown condition with component removal activities in progress. 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.

GE Hitachi Nuclear Energy
Vallecitos Operations

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D. W. Turner
Manager Vallecitos Nuclear Center

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

Report Year	Contamination Levels					
	Radiation Levels (mR/h Gamma)		Surface Smears Beta-Gamma (dpm/ft ²)		Airborne Beta-Gamma ¹ ($\mu\text{Ci/cc} \times 10^{-10}$)	
	2009	2010	2009	2010	2009	2010
Reactor Enclosure						
Top of spent fuel pool (main floor)	<1	<1	500	200		
549-ft level (main floor)	<1	<1	75	300	2.18	0.01
534-ft level	<1.5	<1	1000	500		
519-ft level	<1	<1	500	1500	0.69	0.02
503-ft level (maximum pipe reading)	<1	<1	500	ND*		
487-ft level (basement)	<1	<1	750	5000	0.68	1.39

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.

Survey Dates:

2009 - 01/12/2010

2010 - 12/08/2010

* ND - No Data taken, access to area blocked by scaffolding.

¹ 24-hour decayed values