



DPG 12-285

May 31, 2012

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

Docket 50-312  
Rancho Seco Nuclear Generating Station  
License DPR-54

Docket 72-11  
Rancho Seco Independent Spent Fuel Storage Installation  
License SNM-2510

#### **RANCHO SECO BIENNIAL REPORT**

Attention: John Hickman  
Attention: William Allen

In accordance with 10 CFR 50.59(d)(2); Rancho Seco Quality Manual Appendix A, Sections 1.5.4 and 1.5.6b; and 10 CFR 72.48(d)(2), we are submitting the enclosed Rancho Seco biennial report covering the period May 1, 2010 through April 30, 2012.

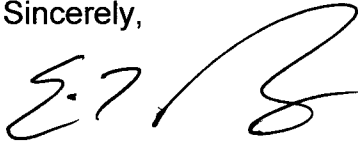
For 10 CFR Part 50 decommissioning activities, the enclosed report includes:

1. Shutdown statistics,
2. A narrative summary of shutdown activities,
3. Environmental report information, and
4. A summary of safety evaluations documented pursuant to 10 CFR 50.59 and 10 CFR 72.48.

NM5501

If you or members of your staff require additional information or clarification, please contact me at (916) 732-4817.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. T. Ronningen', with a stylized flourish at the end.

Einar T. Ronningen  
Superintendent, Rancho Seco Assets

Attachment

cc w/Att.: Region IV Administrator, NRC, Arlington Texas  
Part 50 Project Manager  
Part 72 Project Manager  
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## **Shutdown Statistics**

1. On June 7, 1989, Rancho Seco permanently ceased nuclear power operations.
2. On December 8, 1989, Rancho Seco staff completed de-fueling the nuclear reactor.
3. On March 17, 1992, the NRC amended the Rancho Seco 10 CFR Part 50 operating license to a Possession-Only license
4. On March 20, 1995, the NRC issued the Rancho Seco Decommissioning Order. The Order authorized the decommissioning of Rancho Seco and accepted the Rancho Seco decommissioning funding plan.
5. In March 1997, SMUD revised the Rancho Seco Decommissioning Plan to conform to the content requirements of the Post Shutdown Decommissioning Activities Report (PSDAR).
6. On June 30, 2000, the NRC issued Material License No. SNM-2510 for the Rancho Seco Independent Spent Fuel Storage Installation (ISFSI), a 10 CFR Part 72 facility located adjacent to the Rancho Seco 10 CFR Part 50 nuclear facility.
7. On April 2, 2001, Rancho Seco staff began loading spent nuclear fuel stored in the Rancho Seco spent fuel pool into canisters for transfer to the ISFSI.
8. On August 21, 2002, Rancho Seco staff completed the transfer of all spent nuclear fuel from the Rancho Seco spent fuel pool to the ISFSI.
9. On April 12, 2006, Rancho Seco staff submitted the License Termination Plan (LTP) for the Rancho Seco Nuclear Generating Station (License DPR-54) and associated proposed license amendment No. 199.
10. On August 22, 2006, the GTCC canister was loaded into the 22<sup>nd</sup> HSM on the ISFSI pad.
11. On November 27, 2007, the NRC approved the LTP.
12. In December 2008, all physical decommissioning activity was completed for Phase I of the LTP.
13. On June 8, 2009, SMUD submitted a letter to the NRC requesting release of the site under Phase I of the decommissioning process following completion of Final Status Surveys.

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14. On August 11, 2009, Amendment 3 to the ISFSI Technical Specifications was approved by the NRC. This amendment addresses issues with misclassification of some fuel that is damaged and is stored in non-designated canisters. The amendment indicates that the fuel is being stored safely.
15. On September 25, 2009, the NRC approved release of the land as requested. As of this date, the land licensed under 10 CFR 50 is an approximately 1-acre fenced parcel containing the Interim Onsite Storage Building that houses the stored low-level radioactive waste. The 10 CFR 72 licensed area for storage of the used nuclear fuel and GTCC material remains unchanged.

### **Summary of Shutdown Activities**

1. SMUD currently stores all the Rancho Seco used nuclear fuel in 21 canisters (20 canisters containing 24 fuel assemblies and one canister containing 13 fuel assemblies) at the Rancho Seco ISFSI. The GTCC material is also stored at the ISFSI in a single canister.
2. On September 25, 2009 the NRC issued a letter approving the request to remove most of the facility land and structures from the 10 CFR 50 license. The facility remaining under license consists of the Interim Onsite Storage Building (IOSB) and approximately 1-acre of land surrounding the building. The IOSB was built specifically for the storage of low-level radioactive waste, and the waste Class B and Class C materials resulting from decommissioning are stored in the building until a suitable disposition option becomes available. Following offsite disposition of the materials, Phase II of decommissioning will be conducted that will result in termination of the 10 CFR Part 50 license.
3. With completion of Phase I of decommissioning, the licensed facilities are in a stable configuration with a focus on monitoring the materials at the two facilities to ensure continued safe storage of that material. All of the material stored in both facilities is packaged for eventual shipment, although the damaged fuel stored in non-designated canisters requires additional evaluation prior to eventual shipment.
4. In November 2009, the NRC issued new security orders for radioactive materials in quantities of concern. The material in storage at the IOSB meets the definitions for that material. All upgraded security measures were implemented by March 2010 in accordance with the orders.
5. In November 2010, staffing changes were implemented at the facility. Onsite security was transitioned to a contracted security force and the "ISFSI Technician" and "ISFSI Supervisor" positions were eliminated.

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SMUD security continues to staff the Primary Alarm Station. With no requirement to maintain an onsite staff to perform fuel handling activities, the ISFSI Technician and Supervisor positions were focused on maintenance activities which have been assumed by the corporate Facilities Maintenance group. The onsite security force now includes a Security Shift Supervisor who assumes the onsite management responsibilities of the ISFSI Technician.

### **Environmental Reports**

With the change in the scope of the Rancho Seco facility under NRC license as of September 25, 2009, there are no longer any permits or certificates for protection of the environment required by Federal, State, local or regional authorities associated with the nuclear facilities in their current configurations.

### **10 CFR 50.59(d)(1) and 10 CFR 72.48(d)(1) Safety Evaluation Summary**

The following is a summary of facility changes, tests, and experiments that required a documented evaluation pursuant to 10 CFR 50.59(d)(1) or 10 CFR 72.48(d)(1). No changes were implemented that required prior NRC approval.

1. Emergency Plan, Change 6, Revision 1, reflects the change in the onsite organization. The Security Shift Supervisor assumes the Emergency Coordinator position from the ISFSI Technician. The Emergency Preparedness On-Call Duty Officer was added as the corporate liaison for coordinating offsite support.
2. Emergency Plan Implementing Procedure EPIP-01, Revision 7 implements the organizational changes made in Emergency Plan, Change 6, Revision 1.
3. Independent Spent Fuel Storage Installation Final Safety Analysis Report, Revision 4 was completed as the required biennial update. The changes made reflect the current onsite organization.
4. Physical Protection Plan and Contingency Plan, Amendment 5 changes allow the use of a contracted security force to implement the required security functions. The procedure format was revised for clarity, and specific descriptive information was added to clarify information that had been previously included in with general language. No changes were made to the Contingency Plan.
5. Security Plan Implementing Procedure SPIP-01, ISFSI Alarm Response, Revision 2 implements the use of a contracted security force onsite and

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SMUD security at the Primary Alarm Station (PAS), and the changes to the Physical Protection Plan.

6. Security Plan Implementing Procedure SPIP-02, Security Lock and Key System, Revision 2 implements the use of a contracted security force onsite and SMUD security at the PAS, and the changes to the Physical Protection Plan.
7. Security Plan Implementing Procedure SPIP-03, ISFSI Access Control Procedures – Protected Area, Revision 3 implements the use of a contracted security force onsite and SMUD security at the PAS, and the changes to the Physical Protection Plan.
8. Security Plan Implementing Procedure SPIP-04, ISFSI Security Records Maintenance, Revision 2 implements the use of a contracted security force onsite and SMUD security at the PAS, and the changes to the Physical Protection Plan.
9. Security Plan Implementing Procedure SPIP-05, ISFSI Security Equipment Operational Testing, Revision 4 implements the use of a contracted security force onsite and SMUD security at the PAS, and the changes to the Physical Protection Plan.
10. Security Plan Implementing Procedure SPIP-06, ISFSI Communications, Revision 2 implements the use of a contracted security force onsite and SMUD security at the PAS, and the changes to the Physical Protection Plan.
11. Security Plan Implementing Procedure SPIP-07, ISFSI Patrol Officer, SAS and PAS Operator Duties, Revision 3 implements the use of a contracted security force onsite and SMUD security at the PAS, and the changes to the Physical Protection Plan.
12. Security Plan Implementing Procedure SPIP-08, ISFSI Weapons & Equipment Safety and Issuance, Revision 0 was written to proceduralize safe weapons handling practices and implement the use of a contracted security force onsite and SMUD security at the PAS.
13. The ISFSI Training and Qualification Plan, Revision 4 was implemented to reflect the use of a contracted security force onsite and SMUD security at the PAS
14. Rancho Seco Administrative Procedure RSAP-1004, Access Authorization, Revision 17 was implemented to reflect the current onsite organization and the status of the facility. Added "Security Areas" as locations that require controlled access. These areas house sensitive equipment that supports the security function but does not reside in areas currently under NRC license.

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15. Rancho Seco Nuclear Administrative Procedure RSNAP-010, Nuclear Procedure Administration, Revision 0, was written to implement a new procedural hierarchy that reflects the current site organization. It provides a process where procedures will be consolidated into a single set of manuals reflective of the site conditions that will replace the extensive number of manuals more reflective of an operating facility.
16. Rancho Seco Administrative Procedure RSAP-0500, Review, Approval and Changes of Procedures, Revision 21 was voided. This procedure has been replaced by RSNAP-010, Nuclear Procedure Administration, Revision 0.
17. Rancho Seco Administrative Procedure RSAP-0506, Procedure Review, Revision 10 was voided. This procedure has been replaced by RSNAP-010, Nuclear Procedure Administration, Revision 0.