



DPG 14-145

July 24, 2014

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, 2012 through April 30, 2014.

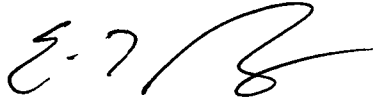
For 10 CFR Part 50 decommissioning activities, the enclosed report includes:

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.

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MMSS26

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

Sincerely,



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
RIC

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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 22nd 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.

6. On March 19, 2014, 10 CFR Part 37 became effective, with new security requirements for the material in storage at the IOSB. Some of these new security requirements were different than those required by the orders issued in November 2010. SMUD implemented all of the required security measures before the implementation date of March 19, 2014.
7. In March 2014, the Post-Shutdown Decommissioning Activities Report was revised and provided to the NRC in April 2014. This revision reflects the updated schedule for shipping the Class B and Class C low-level radioactive waste generated during Phase I of decommissioning to the recently licensed disposal facility near Andrews, TX and operated by Waste Control Specialists, Inc. The updated schedule reflects disposal of the stored material in 2014, followed by the completion of license termination activities for the remaining infrastructure under the Part 50 license over the next two to three years.

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. Physical Protection Plan, Amendment 6, was processed to reflect a minor change in the vehicle access of the outer barrier outside of the protected area.
2. Physical Protection Plan, Amendment 7, was processed to change "door" to "physical barrier" in one section to reflect current site conditions for support equipment.

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3. Post-Shutdown Decommissioning Activities Report, Amendment 5 was made to update the schedule of decommissioning activities to reflect that a disposal facility suitable for the Class B and Class C waste resulting from prior decommissioning activities had been licensed and was available to SMUD. While NRC notification of the schedule change was required, the change to the PSDAR did not require prior NRC approval.
4. Radioactive Material Storage and Decommissioning Safety Analysis Report was revised in Amendment 1. The change added the License Termination Plan to the list of License Basis Documents to ensure organizational knowledge of the status of the document. The change also included updating the procedural naming conventions now being used at Rancho Seco. The new procedural hierarchy institutes a condensed procedural grouping convention that better reflects the current organizational structure and is an administrative change that does not affect the implementation of the procedures.
5. The Rancho Seco Quality Manual was changed to reflect the current organization and was incorporated into the new procedural hierarchy and given a procedure designation as RSLBD-010, Rancho Seco Quality Manual, Revision 0 (RSLBD = Rancho Seco License Basis Document). The Quality Assurance Policy was updated to reflect that Quality Assurance is provided by the SMUD Audit and Quality Assurance Department, maintaining the organizational structure which provides Quality Assurance with the freedom to perform oversight of the facility operations independently of operational requirements. Incorporation into the new procedural hierarchy also resulted in some formatting changes that did not affect the content of the Quality Manual.
6. RSLBD-010, Rancho Seco Quality Manual was updated in Revision 1 to include a Table of Contents. When the Quality Manual was incorporated into the new hierarchy format, what had been 19 separate documents were incorporated into a single procedure and a Table of Contents was an administrative change allowing users to better access the contents in the document.