



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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July 9, 2004

Mr. James Shetler, Assistant General Manager
Energy Supply
Sacramento Municipal Utility District
6201 'S' Street
P.O. Box 15830
Sacramento, California 95852

SUBJECT: NRC INSPECTION REPORT 050-00312/04-002; 072-00011/04-003

Dear Mr. Shetler:

An NRC inspection was conducted June 7-10, 2004, at your Rancho Seco Nuclear Generating Station. On June 10, 2004, at the conclusion of the inspection, an exit briefing was conducted with Mr. Steve Redeker, Plant Manager, and other members of your staff. The enclosed report presents the scope and results of that inspection.

The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection included reviews of your organization and staffing; operation of your Independent Spent Fuel Storage Installation; the status of decommissioning activities; occupational radiation exposure and effluent and environmental monitoring. No violations of NRC regulations were identified during the inspection.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, please contact Emilio M. Garcia at (530) 756-3910 or the undersigned at (817) 860-8191.

Sincerely,

/RA/

D. Blair Spitzberg, Ph.D., Chief
Fuel Cycle and Decommissioning Branch

Docket Nos.: 050-00312
072-00011
License Nos.: DPR-54
SNM-2510

Enclosure:

NRC Inspection Report

050-00312/04-002;072-00011/04-003

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ENCLOSURE
U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket Nos.: 050-00312; 072-00011

License Nos.: DPR-54; SNM-2510

Report Nos.: 050-00312/04-002; 072-00011/04-003

Licensee: Sacramento Municipal Utility District

Facility: Rancho Seco Nuclear Generating Station

Location: 14440 Twin Cities Road
Herald, California

Dates: June 7-10, 2004

Inspectors: Emilio M. Garcia, Health Physicist
Scott P. Atwater, Health Physics Inspector-In-Training

Approved By: D. Blair Spitzberg, Ph.D., Chief
Fuel Cycle and Decommissioning Branch

Attachments: Supplemental Information
Partial List of Documents Reviewed

ADAMS Entry : IR 05000312-04-002; 0720011-04-03 on 06/07-10/04; Sacramento
Municipal Utility District; Rancho Seco Nuclear Generating Station.
Decommissioning Report; No Violations.

EXECUTIVE SUMMARY

Rancho Seco Nuclear Generating Station
NRC Inspection Reports 050-00312/04-002; 072-00011/04-003

All spent fuel had been removed from the spent fuel pool to the Independent Spent Fuel Storage Installation. The reactor vessel head had been segmented into five parts and shipped to a low-level waste disposal site. The pressurizer and the pressurizer drain tank had also been removed and shipped to a disposal site. The licensee was continuing its dismantling activities in the reactor, auxiliary, and spent fuel buildings and outdoor areas.

Organization, Management and Cost Controls

- All the managerial positions were staffed with individuals with many years of service with the licensee and they were familiar with their responsibilities. The organization and staffing were as required by the Rancho Seco Quality Manual (Section 1.1).
- Revisions to the emergency plan and its implementing procedures did not decrease the effectiveness of the emergency plan. The emergency plan continued to meet the requirements of 10 CFR 50, Appendix E (Section 1.2).

Operation of an Independent Spent Fuel Storage Installation

- The licensee was maintaining the Independent Spent Fuel Storage Installation in good condition. The horizontal storage modules were monitored within the required surveillance intervals (Section 2.1).
- Maintenance work orders were being written, approved, implemented and closed in accordance with the applicable procedure (Section 2.1).
- The safety screens reviewed were performed in accordance with the applicable procedure and met the requirements of 10 CFR 50.59, 10 CFR 72.48 and 10 CFR 71.107(c) (Section 2.2).
- The quality assurance audit program as it relates to the Independent Spent Fuel Storage Installation had been effectively implemented (Section 2.3).

Decommissioning Performance and Status Review

- The licensee continued to conduct its dismantlement activities in the reactor, auxiliary, spent fuel buildings and other areas of the site in a safe manner (Section 3).
- The reactor vessel head, the pressurizer and the pressurizer relief tank had been removed from the reactor building and shipped for disposal (Section 3).
- All major components had been removed and disposed from the auxiliary building. Scoping radiation surveys had been initiated in the auxiliary building (Section 3).

- With the exception of the corner plates and the shelf liner plates, all liner plates had been removed from the walls in the spent fuel pool (Section 3).

Occupational Radiation Exposure

- The audit and surveillance of the occupational radiation exposure program were performance-based, and their overall quality was very good (Section 4.1).
- Changes made to the occupational radiation protection program did not decrease its effectiveness (Section 4.2).
- The licensee was maintaining an effective program to monitor occupational radiation exposures. Occupational exposures for calendar year 2003 were below regulatory limits (Section 4.3).

Effluent and Environmental Monitoring

- The audit and assessments of the effluent and environmental monitoring program were performance-based, and their overall quality was very good (Section 5.1).
- The licensee had appropriately revised its offsite dose calculation manual and an associated procedure to remove the water process tanks that were no longer needed or in service (Section 5.2).
- The Annual Radiological Environmental Operating Reports for calendar years 2002 and 2003 were submitted on a timely basis and met applicable requirements. The observed potential radiological impacts were either not detectable or a small fraction of the applicable limits (Section 5.3).
- The 2003 Annual Radioactive Effluent Release Report was submitted on a timely basis and met applicable requirements. The report concluded that the releases of radioactivity in gaseous and liquid effluents in 2003 did not exceed the limits (Section 5.4).

Report Details

Summary of Facility Status

The Rancho Seco facility was undergoing active decommissioning with dismantlement work in progress in the auxiliary, reactor and spent fuel buildings and outdoor areas. All major components in the auxiliary building have been removed, packaged and shipped for disposal. In the reactor building, most of the major piping, the four reactor coolant pumps, core flood tanks, reactor vessel head, pressurizer, and pressurizer drain tank had been removed, packaged and disposed.

The licensee had removed all 493 spent fuel assemblies from the spent fuel pool. Twenty-one canisters had been loaded with spent fuel and transferred to the Independent Spent Fuel Storage Installation (ISFSI). In the fuel handling building, the spent fuel pool water had been processed and released offsite. The cutting and removal of the pool liner plates was in progress.

1 Organization, Management and Cost Controls (IP 36801)

1.1 Organization

a. Inspection Scope

The inspectors reviewed the licensee's organizational structure to ascertain if it was as required by the Rancho Seco Quality Manual (RSQM), Section I, Organization.

b. Observations and Findings

The licensee's principal organization remained as described in Section 1.2a of Inspection Reports 50-312/2003-01 and 50-312/2003-004, and as required by the Rancho Seco Quality Manual, Section I, Organization. There had been no changes to procedure RSAP 0101, "Nuclear Organization Responsibilities and Authorities," nor to procedure RSAP-0260, "Commitment Management Review Group and Commitment Tracking System."

The licensee had issued an updated Rancho Seco Management Organization Chart to reflect the individuals assigned to each position. This organization chart was dated June 2004 and the inspectors noted several changes in the lower levels of the organization reflecting retirements and departures. At the time of the inspection, all the managerial positions were staffed with individuals with many years of service with the licensee. All the managers were familiar with their responsibilities. The inspectors concluded that the organization and staffing were as required by the RSQM.

c. Conclusion

All the managerial positions were staffed with individuals with many years of service with the licensee and they were familiar with their responsibilities. The organization and staffing were as required by the Rancho Seco Quality Manual.

1.2 Emergency Plan

a. Inspection Scope

The inspectors reviewed a recent audit of the emergency preparedness program and updates to the emergency plan and emergency procedures.

b. Observations and Findings

Audits

The inspectors reviewed audit Report 04-A-001, Emergency Preparedness Program. This audit was conducted February 25 through March 25, 2004, and the report was issued on April 5, 2004. This audit was performed to satisfy the requirements of 10 CFR 50.54(t) and RSQM Section XVII, paragraph 6.1.e. The individual that conducted the audit was independent of the function being audited. The audit included an approved checklist. The auditor was qualified and authorized to perform the audit in the area audited. The audit did not identify any item that constituted a potential deviation from quality (PDQ), but seven recommendations were made. The recommendations were being addressed by the licensee. The audit was conducted in a timely manner and was overall of very good quality.

Copies of the audit report were submitted to the State of California and the County of Sacramento to meet the 10 CFR 50.54(t) requirement that evaluations involving the adequacy of the interface with state and local governments be available to state and local governments.

Emergency Plan Update

Revision 1 to the Emergency Plan Change 5 was implemented on January 27, 2004. As required by 10 CFR 50.54(q), the licensee reported this revision to the NRC within 30 days of the effective date. The inspectors reviewed the changes and noted that most of them were made to clarify response activities since all the spent fuel had been relocated to the ISFSI. Some changes were made to simplify emergency response activities onsite. A significant change was redefining the Technical Support Center as a function rather than a physical location, thus permitting the emergency response organization to coordinate the response from the incident site. The inspectors concluded that these changes did not decrease the effectiveness of the emergency plan, and the emergency plan continued to meet the requirements of 10 CFR Part 50, Appendix E, and 10 CFR 72.32.

Emergency Procedures

Emergency Plan Implementing Procedure EPIP-01 was revised with the revision of the Emergency Plan. The new revision was identified as EPIP-01, Revision 1, and replaced EPIP-0, Change 5. This procedure identifies the emergency actions and responsibilities of the emergency response organization personnel upon declaration of an emergency. This revision consolidated checklists, forms, emergency response actions for both 10 CFR 50 and 10 CFR 72 events. The procedure also added checklists for other emergency response organization positions in addition to the incident commander. The inspectors reviewed this revision and concluded that it did not decrease the effectiveness of the emergency plan. The emergency plan continued to meet the requirements of 10 CFR Part 50, Appendix E.

c. Conclusion

Revisions to the emergency plan and its implementing procedures did not decrease the effectiveness of the emergency plan. The emergency plan continued to meet the requirements of 10 CFR 50, Appendix E.

2 Operation of an ISFSI (60855)

2.1 ISFSI Operation and Maintenance

a. Inspection Scope

The inspectors toured the ISFSI and reviewed records of surveillances and work packages associated with the ISFSI.

b. Observations and Findings

A tour of the ISFSI pad, berm and secondary alarm station (SAS) was conducted. The horizontal storage module (HSM) front wall and roof bird screens were clear and the tack welds on the closure plates were intact. The berm walkway was clear, the eight optically stimulated luminescent (OSL) dosimeters on the fence were weathertight, and the fence was intact with no significant erosion underneath. The SAS was manned and the plant integrated computer system (PICS) was on line. The ISFSI was being well maintained.

Technical Specification 5.5.3, "HSM Thermal Monitoring Program," required the following surveillance every 24 hours on the HSMs:

- HSM temperature less than 225 °F
- HSM 24 hour temperature rise less than an 80 °F
- HSM front wall and roof bird screens not blocked

Surveillance procedure SP.10, "ISFSI & Instrument Checks & System Verification Daily Surveillance", Rev. 1, provided instructions for completing the surveillance and the data was recorded on Data Sheet 1. A sampling of completed SP-10 data sheets was reviewed and found to be complete and within the technical specification interval. Technical Specification 5.5.3 was being met.

The four ISFSI related work orders closed between January 1 and June 9, 2004, were:

- 18008800 Replace the south inner gate position switch (GPS-001) with a temporary switch. GPS-001 had sustained water damage and indicates the gate was open when it is closed.
- 18009240 Perform annual testing on ISFSI Fire System in accordance with Surveillance Procedure SP.366, Rev. 2.
- 18009322 Replace the south inner gate position temporary position switch (GPS-001) with a switch of weatherproof design. (Sentrol Model 2747A)
- 18009441 Install the door position switch (GPS-003) on the new ISFSI personnel gate.

A review of these work orders indicated they were written, approved, implemented and closed in accordance with RSAP-0803, "Work Requests", Rev.17.

c. Conclusion

The licensee was maintaining the Independent Spent Fuel Storage Installation in good condition. The horizontal storage modules were monitored within the required surveillance intervals.

Maintenance work orders were being written, approved, implemented and closed in accordance with the applicable procedure.

2.2 Safety Reviews - 10 CFR 50.59/72.48/71.107(c) Screening and Evaluation

a. Inspection Scope

The inspectors reviewed the Rancho Seco Biennial Report and recent safety screens and evaluations related to the ISFSI.

b. Observations and Findings

The Rancho Seco Biennial Report dated May 27, 2004, was reviewed. The following 10 CFR 50.59, 10 CFR 72.48, and 10 CFR 71.107(c) safety screens and evaluations were performed between May 1, 2002, and April 30, 2004:

- Design Change Package (DCP) R-03-0006 installed a personnel gate at the ISFSI to lessen cycling of the vehicle gates. The modification was consistent with the vehicle gate design basis and did not reduce the effectiveness of the Physical Protection Plan (PPP).
- Operating procedure OP-C.53, Rev. 14, "Medical Emergency," was revised to reflect the current organization roles and responsibilities of the ISFSI supervisor, ISFSI technician, and SAS personnel in a medical emergency. Revision 14 did not reduce the effectiveness of the medical emergency plan.
- RSAP-0115, Rev. 1, "Fire Protection Plan," reduced the frequency of the hose station valve testing from 2 to 5 years. The hose stations no longer serve areas with personnel and this change brought the plan into alignment with the Insurance and Decommissioning Order.

c. Conclusion

The safety screens reviewed were performed in accordance with the applicable procedure and met the requirements of 10 CFR 50.59, 10 CFR 72.48 and 10 CFR 71.107(c).

2.3 Quality Assurance Audits

a. Inspection Scope

The inspectors reviewed recent surveillances of activities related to the operation of the ISFSI.

b. Observations and Findings

Surveillance report #03-S-070 was reviewed. This surveillance evaluated the work orders used to weld Dry Shielded Canisters (DSCs) 1-10. All work orders were written and implemented in accordance with RSAP-0803, "Work Requests", Rev. 17. Technical Specification 5.4.1.h requiring written procedures for maintenance activities was met.

Surveillance Reports 03-S-061 and 04-S-014 were reviewed . Both of these surveillances were performed on special nuclear material (SNM) data calculations. Surveillance 03-S-061 was performed on October 15-16, 2003, and Surveillance 04-S-014 was performed on April 7-8, 2004. The data was consistent between semi-annual cycles.

The Sacramento Municipal Utility District (SMUD) had submitted to the NRC, proposed changes to the Rancho Seco Quality Assurance Program (QAP). The submittal was contained in SMUD letter MPC&D 04-030 dated April 7, 2004. The SMUD proposal reduces the frequencies of several audits performed under the Quality Manual (RSQM), Section XVIII, Audits," and it eliminates a portion of the fire protection program audit. This proposal constitutes a reduction in the Quality Assurance Program (QAP) commitments and as such requires NRC approval prior to implementation as specified

in 10 CFR 50.54(a)(4) and 10 CFR 50.4(b)(7). At the time of the inspection, the proposed changes were under NRC review.

c. Conclusion

The quality assurance audit program as it relates to the ISFSI has been effectively implemented.

3 Decommissioning Performance and Status Review (IP 71801)

3.1 Inspection Scope

The licensee's dismantlement activities were reviewed. Tours of the site were conducted to observe work activities underway, including observation of housekeeping, safety practices, fire loading and radiological controls.

3.2 Observations and Findings

Tours of the reactor, auxiliary, and spent fuel buildings, and other areas of the plant were conducted to observe dismantling and decommissioning activities in progress. The work observed was being conducted in a safe and orderly manner. Radiological controls, including postings and barriers, were in place as needed. The inspectors noted good housekeeping, radiological, emergency and fire protection practices in all areas. Major activities observed are noted below.

a. Reactor Building

The pressurizer relief tank had been removed from the building. Removal of miscellaneous structural steel from the A and B rings was continuing. The inspectors noted the addition of emergency flash lights at each elevation of the building to supplement emergency lighting.

b. Auxiliary Building

All major components had been removed from the auxiliary building. Electrical equipment, cabling, heating, ventilation, and air conditioning ducting was being removed from various elevations in the building. The licensee had initiated characterization radiation surveys at the minus 47-foot elevation.

c. Fuel Handling Building

Work was proceeding on milling and removing the spent fuel pool liner plates corner pieces and log stop shelf liner plate. The liner plates had been removed from the walls.

3.3 Conclusion

The licensee continued to conduct its dismantlement activities in the reactor, auxiliary, spent fuel buildings and other areas of the site in a safe manner. The reactor vessel head, the pressurizer and the pressurizer relief tank had been removed from the reactor building and shipped for disposal. All major components had been removed and disposed from the auxiliary building. Scoping radiation surveys had been initiated in the auxiliary building. With the exception of the corner plates and the shelf liner plates, all liner plates had been removed from the walls of the spent fuel pool.

4 **Occupational Radiation Exposure (83750)**

4.1 Audits and Surveillances

a. Inspection Scope

The inspectors reviewed audit Report 03-A-006, Radiological Safety and Control and ALARA Program, issued on September 3, 2003, and Surveillance Report 03-S-053. These were the only audits and surveillances conducted in 2003 and 2004 in the area of occupational radiation exposure. The audit report was reviewed to determine implementation of the commitments made in the Section XVIII, Audits, of the Rancho Seco Quality Manual, as it relates to the occupational radiation safety. The inspectors also reviewed the qualification records for the individual involved in the audit and surveillance.

b. Observations and Findings

This audit was conducted June 19 through August 7, 2003, and the report was issued on September 3, 2003. The inspectors confirmed that the audit was conducted per the commitments in the Rancho Seco Quality Manual. The individual that conducted the audit was independent of the function being audited. The audit included an approved checklist. The auditor was qualified and authorized to perform the audit in the area audited. The audit did not identify any item that constituted a potential deviation from quality. The audit was conducted in a timely manner and was overall of very good quality.

The surveillance was conducted on August 5, 2003, and consisted of a plant tour. No negative findings related to occupational radiation exposure were identified by this surveillance. The surveillance report was issued on August 12, 2003.

c. Conclusions

The audit and surveillance of the occupational radiation exposure program were performance-based, and their overall quality was very good.

4.2 Changes

a. Inspection Scope

The inspectors discussed and reviewed major changes since the last inspection in the areas of organization, personnel, facilities, equipment, programs and procedures with cognizant licensee staff to determine if these changes negatively affected occupational radiation protection.

b. Observations and Findings

The major change that had occurred since the last inspection was that the plant chemistry specialist had announced his resignation effective June 17, 2004. The licensee intended to fill the position with an internal promotion. This internal promotion would result in a net reduction of one chemistry radiation decommissioning technician. If needed, the licensee could supplement their radiation protection staff with contract personnel. The plant chemistry position manages the National Pollutant Discharge Elimination System (NPDES), Waste Water Treatment, and Water Distribution Systems. The inspectors concluded that since the licensee could supplement their radiation protection staff with contract personnel the net reduction of one in-house radiation decommissioning technician would not have a negative effect on occupational radiation protection.

Two radiation work permits (RWPs) were revised at the beginning of 2004 to permit access into the radiological control area (RCA) without wearing digital alarming dosimeters (DAD). RWPs 04-002 and 04-101 permitted access to the RCA without a DAD as long as access to a radiation area or high radiation area was not required. Individuals would still need to wear optically stimulated luminescent dosimeters (OSL). The licensee used OSLs as the dosimeter of record. The licensee had placed 15 additional area OSLs for additional monitoring of areas in the RCA that were outside of a radiation area or high radiation area. The inspectors concluded that this change would not have a negative effect on occupational radiation protection.

c. Conclusions

Changes made to the occupational radiation protection program did not decrease its effectiveness.

4.3 External and Internal Exposure Control and Other Radiation Protection Inspection Areas

a. Inspection Scope

The licensee's personnel radiation monitoring program and associated reports submitted were inspected for compliance with applicable requirements and commitments.

b. Observations and Findings

The licensee was continuing to use optically stimulated luminescence (OSL) dosimeters for evaluating beta/gamma external doses, and neutron dosimeters provided by a vendor which was accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) for the type of dosimeters used. In addition, the licensee used electronic dosimeters for controlling the day-to-day personnel exposures. The licensee continued to use a vendor supplied computerized dose tracking system for reading the electronic dosimeters and automatically assigning the estimated dose to the individual. As noted in Section 4.2, electronic dosimeters were no longer required for entries into the radiologically controlled area that did not involve entries into radiation or high radiation areas.

During calendar year 2003 and as of June 10, 2004, no individual had been classified as a declared pregnant worker, and no planned special exposures had been conducted.

On April 5, 2004, the licensee submitted its annual report of individual monitoring for calendar year 2003, to the NRC as an electronic data file. The inspectors noted that the report was submitted on a timely basis as required by 10 CFR 20.2206(c). The inspectors reviewed the dosimetry files of selected individuals to determine if the required information had been submitted in the report. This information was compared to a printout maintained by the licensee of the electronic data file. The electronic data for the individuals selected for review were complete and included all the information required. The inspectors concluded that the licensee was meeting the requirements of 10 CFR 20.2206(b) and the Rancho Seco Quality Manual, Appendix A, Section 1.5.2.1.

Records maintained by the licensee indicated that the total effective dose equivalent (TEDE) received by occupationally exposed individuals was below the regulatory limit of 5 rem. Dose measurements for shallow dose, lens of the eye dose, internal dose, and extremity dose were all below applicable limits.

Appendix A, Section 1.5.2.2, of the Rancho Seco Quality Manual requires that an annual exposure report for the previous year be submitted to the Commission within the first quarter of each calendar year in accordance with the guidance contained in Section 1.b.(3) of Regulatory Guide 1.16, Reporting of Operating Information. The licensee submitted its annual exposure report for year 2003 on March 9, 2004. The inspectors determined that the report was timely and met the applicable requirements.

The inspectors inquired from the licensee staff if any plant area had become unusable as a result of any operational occurrences. No plant areas had become unusable as a result of operational occurrences.

c. Conclusions

The licensee was maintaining an effective program to monitor occupational radiation exposures. Occupational exposures for calendar year 2003 were below regulatory limits.

5 Effluent and Environmental Monitoring (84750)

5.1 Audits and Surveillances

a. Inspection Scope

The inspectors reviewed audit Report 03-A-011, Offsite Dose Calculation Manual, issued on November 12, 2003, and Surveillance Report 03-S-024. The audit report was reviewed to determine implementation of the commitments made in the Section XVIII, Audits, of the Rancho Seco Quality Manual as it relates to the effluents and environmental monitoring. The inspectors also reviewed qualification records for individual involved in the audit and surveillance.

b. Observations and Findings

This audit was conducted on October 9 through November 5, 2003, and the report was issued on November 12, 2003. The inspectors confirmed that the audit was conducted per the commitments in the Rancho Seco Quality Manual. The individual that conducted the audit was independent of the function being audited. The audit included an approved checklist. The auditor was qualified and authorized to perform the audit in the area audited. The audit did not identify any item that constituted a potential deviation from quality. The audit was conducted in a timely manner and was overall of very good quality.

The surveillance was conducted on April 10, 2003, and consisted of a review and comment on the Annual Radiological Operating Report, January - December 2002. No negative findings related to occupational radiation exposure were identified by this surveillance. The surveillance report was issued on April 14, 2003.

c. Conclusions

The audit and assessments of the effluent and environmental monitoring program were performance-based, and their overall quality was very good.

5.2 Changes in the Offsite Dose Calculation Manual

a. Inspection Scope

The inspectors discussed the changes to the ODCM with the radiation protection/chemistry supervisor and reviewed the current ODCM.

b. Observations and Findings

Once the licensee completed processing and releasing the spent fuel pool water the water process tanks were no longer required and were removed from the ODCM. The removal of the tanks required the revision of Chemistry Administrative Procedure CAP-008, Offsite Releases of Radioactivity in Liquid Effluents.

c. Conclusions

The licensee had appropriately revised its offsite dose calculation manual and an associated procedure to remove the water process tanks that were no longer needed or in service.

5.3 Process and Effluent Radiation Monitors

a. Inspection Scope

The inspectors toured the locations of the effluent radiation monitors and discussed the monitors with cognizant licensee staff.

b. Observations and Findings

On June 9, 2004, the inspectors observed that the liquid effluent monitor R15017A was operational. This monitor was located in an enclosure protected from the elements. Records reviewed by the inspectors indicated that this monitor had last been calibrated on July 1, 2003, and the last ODCM required quarterly testing of the alarms and discharge trip relay had been conducted on March 18, 2004. The calibration record and test record indicated that the instrument as found was within calibration and was functioning properly.

On June 10, 2004, the inspectors observed that the auxiliary building and reactor building gaseous effluent were being sampled by two air samplers. These air samplers were operational and stickers indicated they were in calibration. As noted in Inspection Report 50-312/2003-02, the licensee was no longer required to monitor the gaseous effluent pathway but had decided to continue sampling the air particulate effluents even if not required.

c. Conclusions

The required liquid effluent monitor was operational and in calibration. Although no longer required, the licensee was continuing to monitor air particulate effluents from the auxiliary and reactor buildings.

5.4 Annual Radiological Environmental Operating Report

a. Inspection Scope

The inspectors reviewed the 2002 and 2003 Annual Radiological Environmental Operating Reports and discussed these reports with the radiation protection/chemistry supervisor.

b. Observations and Findings

Step 1.5.2.3 of Appendix A to the Rancho Seco Quality Manual requires that the Annual Radiological Environmental Operating Report covering the previous year be submitted before May 1 of each year. On April 22, 2003, the licensee submitted the 2002 report and on April 20, 2004, the 2003 report. These reports indicated that atmospheric, terrestrial and aquatic environments and the land use adjacent to Rancho Seco Nuclear Station were being monitored. Radioactivity levels in the sampled media were consistent with previous years evaluations and were below the NRC required reportable levels. Both reports concluded that the operation of Rancho Seco Nuclear Station had no significant radiological impact on the environment.

c. Conclusions

The Annual Radiological Environmental Operating Reports for calendar years 2002 and 2003 were submitted on a timely basis and met applicable requirements. The observed potential radiological impacts were either not detectable or a small fraction of the applicable limits.

5.5 Annual Radioactive Effluent Release Report for 2003

a. Inspection Scope

The inspectors reviewed the 2003 Annual Radioactive Effluent Release Report and discussed it with the radiation protection/chemistry supervisor.

b. Observations and Findings

Step 1.5.3 of Appendix A to the Rancho Seco Quality Manual requires that Annual Radioactive Effluent Release Report covering the previous 12 months be submitted within 90 days of January 1 of each year. On March 18, 2004, the licensee submitted the 2003 Annual Radioactive Effluent Release Report on a timely basis. The report included summaries of radioactive liquid releases from the regenerant holdup tanks and from the retention basins. The regenerant holdup tanks contents were released to the retention basins and the retention basins were discharged offsite. All calculations required by 10 CFR Part 50 were based on the retention basin discharges. In 2003, there were 28 regenerant holdup tanks batch releases and 28 retention basins discharges.

The regenerant holdup tanks were permanently removed from service on October 1, 2003. Previously the regenerant holdup tanks were released to the retention basins and the 10 CFR 50, Appendix I, dose calculations were based on the regenerant holdup tanks releases. 10 CFR Part 20 calculations were based on the retention basins discharges. After October 1, 2003, all 10 CFR 50, Appendix I, dose calculations and 10 CFR Part 20 calculations were based on the retention basins discharges. There were no unplanned liquid or gaseous releases that occurred in 2003.

Technical Requirement 6.12.3 of the licensee's Offsite Dose Calculation Manual specifies effective dose commitments from liquid effluents to members of the public at or beyond the site boundary. These limits are based on the numerical guidelines of 10 CFR 50, Appendix I, which are 3 millirem per calendar year to the total body or 10-millirem to any organ. The annual calculated total effective dose commitment due to liquid effluents was 6.66E-01 millirem or approximately 22.2 percent of the applicable limit. The maximum calculated annual organ dose commitment was 1.26 millirem or approximately 12.6 percent of the applicable limit.

Technical Requirement 6.12.7 of the licensee's Offsite Dose Calculation Manual specifies effective dose commitments from gaseous effluents to members of the public at or beyond the site boundary. These limits are based on the numerical guidelines of 10 CFR 50, Appendix I, which for Tritium are 7.5 millirem per calendar quarter to any organ and 15-millirem per calendar year to any organ. There were no fission or activation gases nor particulate airborne releases. The annual calculated dose at the site boundary due to tritium was 6.98E-02 millirem which is less than 0.5 percent of the annual limit.

In 2003, there were 63 shipments of solid waste made. All solid waste shipments were transported by highway. Fifty-two of the shipments went to a licensed low-level radioactive waste disposal facility. Eleven shipments went to a licensed material recovery facility. Based on the information provided, the inspectors calculated that the total volume of waste shipped was 845.2 m³ with a total activity of 16.2 curies.

The report concluded that the releases of radioactivity in gaseous and liquid effluents did not exceed the limits of 10 CFR 20 or the numerical guidelines of 10 CFR 50, Appendix I.

c. Conclusions

The 2003 Annual Radioactive Effluent Release Report was submitted on a timely basis and met applicable requirements. The report concluded that the releases of radioactivity in gaseous and liquid effluents in 2003 did not exceed the limits.

6 Followup (92701)

(Discussed) Inspection Followup Item 50-312/0401-01: Corrective actions to assure that reports required by regulations are submitted on a timely basis.

Deviation From Quality (DQ) Report 03-0016, "Annual ISFSI Radiological Effluent Report Not Submitted Within Time Limit," and DQ Report 04-0008, "ISFSI Effluent Report Not Submitted For 2001 And Not Submitted On Time For 2003," were reviewed. These DQs required revisions to CAP-0013, "Preparation of Annual Radioactive Effluent Release Report," and to RSAP-0903, "External Plant Reports and Posting of Notices." Further, both DQs required training to be conducted on the procedures. At the time of this inspection, all corrective actions had been completed. Revision 6 to CAP-0013 became effective on July 16, 2003. Revision 21 to RSAP-0903 became effective on

May 11, 2004. Personnel had been trained on the requirements of both procedures. This item will remain open pending submission of the next Annual Radiological Effluent Release Report due by March 1, 2005.

7 Exit Meeting Summary

The inspectors presented the inspection results to the plant manager and other members of licensee staff at the exit meeting on June 10, 2004. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspectors.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Sacramento Municipal Utility District

M. Bua, Radiation Protection/Chemistry Superintendent
M. Braun, Sr. Nuclear Engineer
J. Delezenski, Quality Assurance/Licensing/Administration/Training Superintendent
L. England, Project Controls
D. Gardner, Decommissioning Project Manager
D. Koontz, ISFSI Supervisor
R. Jones, Sr. Nuclear Engineer
S. Nicolls, Radiological Health Supervisor
S. Redeker, Manager, Plant Closure and Decommissioning
G. Roberts, Maintenance Superintendent

INSPECTION PROCEDURES USED

IP 36801 Organization, Management, and Cost Controls
IP 60855 Operation of an ISFSI
IP 71801 Decommissioning Performance and Status Review
IP 83750 Occupational Radiation Exposure
IP 84750 Radioactive Waste Treatment, Effluent and Environmental Monitoring
IP 92701 Follow-up on Open Items

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

072-00011/2004-01-01	IFI	Corrective actions to assure that reports required by regulations are submitted on a timely basis.
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LIST OF ACRONYMS

DAD	Digital Alarming Dosimeters
DQ	Deviation From Quality
EPIP	Emergency Plan Implementing Procedure
HSM	Horizontal Storage Module
IFI	Inspection Followup Item
ISFSI	Independent Spent Fuel Storage Installation
NPDES	National Pollutant Discharge Elimination System
PDQ	Potential Deviation from Quality
ODCM	Offsite Dose Calculation Manual
OSL	Optically Stimulated Luminescent dosimeters
RCA	Radiological Control Area
RSQM	Rancho Seco Quality Manual
RWP	Radiation Work Permit
TEDE	Total Effective Dose Equivalent

ATTACHMENT 2

PARTIAL LIST OF DOCUMENTS REVIEWED

Audits and Surveillances

- 2003 Quality Audit Log.
- 2003 Surveillance Log.
- 2004 Quality Audit Log as of June 8, 2004.
- 2004 Surveillance Log as of June 8, 2004.
- Audit 03-A-006, Radiological Safety and Control and ALARA Program, issued on September 3, 2003.
- Audit 03-A-011, Offsite Dose Calculation Manual (ODCM), issued on November 12, 2003.
- Surveillance Report 03-S-024, Review and Comment on the Annual Radiological Operating Report, January - December 2002, issued on April 14, 2003.
- Surveillance Report 03-S-053, Plant Tour, issued on August 12, 2003.

Correspondences and Memorandums

- MPC&D 03-051 dated April 22, 2003, from Manager, Plant Closure & Decommissioning to U. S. Nuclear Regulatory Commission, Subject: 2002 Annual Radiological Environmental Operating Report.
- MPC&D 04-027, March 18, 2004, from Manager, Plant Closure & Decommissioning to U. S. Nuclear Regulatory Commission, Subject: 2003 Annual Radioactive Effluent Release Report.
- MPC&D 04-028, March 11, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: March 7 through March 13, 2004.
- MPC&D 04-029, March 18, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: March 14 through March 20, 2004.
- MPC&D 04-033, March 25, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: March 21 through March 27, 2004.
- MPC&D 04-035, April 1, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: March 28 through April 3, 2004.
- MPC&D 04-037, April 8, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: April 4 through April 11, 2004.

- MPC&D 04-039, April 20, 2004, from Manager, Plant Closure & Decommissioning to U. S. Nuclear Regulatory Commission, Subject: 2003 Annual Radiological Environmental Operating Report.
- MPC&D 04-040, April 15, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: April 12 through April 18, 2004.
- MPC&D 04-044, April 22, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: April 19 through April 24, 2004.
- MPC&D 04-049, April 29, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: April 25 through May 1, 2004.
- MPC&D 04-050, May 6, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: May 1 through May 6, 2004.
- MPC&D 04-052, May 13, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: May 7 through May 15, 2004.
- MPC&D 04-055, May 20, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: May 16 through May 22, 2004.
- MPC&D 04-056, May 27, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: May 23 through May 29, 2004.
- MPC&D 04-058, June 3, 2004, Office Memorandum from Steve Redeker to Jim Shetler, Subject: Rancho Seco Weekly Update: May 30 through June 5, 2004.
- NQA 04-014, February 9, 2004, from Superintendent, Quality/Licensing/Administration to U. S. Nuclear Regulatory Commission, Subject: Report of Emergency Plan Changes.
- NQA 04-019, March 9, 2004, from Superintendent, Quality/Licensing/Administration to REIRS Project Manager, Office of Nuclear Regulatory Research, U. S. Nuclear Regulatory Commission, Subject: Regulatory Guide 1.16 Annual Exposure Report.
- NQA 04-026, April 5, 2004, from Superintendent, Quality/Licensing/Administration to REIRS Project Manager, Office of Nuclear Regulatory Research, U. S. Nuclear Regulatory Commission, Subject: 10 CFR 20.2206 Annual Report of Individual Monitoring.
- NQA 04-030, April 5, 2004, from Superintendent, Quality/Licensing/Administration to State of California, Governor's Office of Emergency Services, Subject: Quality Audit of the Rancho Seco Emergency Preparedness Program.
- Watts Happening Newsletter, June 1, 2004 issue.

Procedures and Data Sheets

- Chemistry Administrative Procedure CAP-008, Offsite Releases of Radioactivity in Liquid Effluents, Revision 23, effective April 13, 2004.
- Emergency Plan, Revision 5, effective January 27, 2004.
- Emergency Plan Implementing Procedure EPIP-01, Emergency Actions, Revision 1, effective January 27, 2004.
- Rancho Seco Administrative Procedure RSAP 0101, Nuclear Organization Responsibilities and Authorities, Revision 29, effective September 4, 2003.
- Rancho Seco Administrative Procedure RSAP 0260, Commitment Management Review Group, Revision 12, effective September 4, 2003.
- Surveillance Procedure SP.418A, Quarterly Test of Liquid Effluent Radiation Monitor (R-15017A), Revision 19, effective January, 8, 2004. Data Sheet for March 18, 2004, surveillance.
- Surveillance Procedure SP.488A, Refueling Interval Calibration of the Liquid Effluent Radiation Monitor (R15017A), Revision14, effective May 13, 2003. Data Sheet for July 1, 2003, surveillance.

Deviation from Quality (DQ) Reports

- DQ Report 03-0016, "Annual ISFSI Radiological Effluent Report Not Submitted Within Time Limit."
- DQ report 04-0008, "ISFSI Effluent Report Not Submitted For 2001 And Not Submitted On Time For 2003."