

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-312/83-02

Docket No. 50-312 License No. DPR-54 Safeguards Group _____

Licensee: Sacramento Municipal Utility District (SMUD)

P. O. Box 15830

Sacramento, California 95813

Facility Name: Rancho Seco Unit 1

Inspection at: Herald, California (Rancho Seco Site)

Inspection conducted: January 3 to 31, 1983

Inspectors: Talbot Young Jr. for 2-9-83
Harvey L. Canter, Senior Resident Inspector Date Signed

Talbot Young Jr. for 2-9-83
John O'Brien, Unit Resident Inspector Date Signed

Approved by: Talbot Young Jr. 2-9-83
T. Young, Jr., Chief, Reactor Projects Section 2 Date Signed
Reactor Projects Branch 1

Summary:

Inspection between January 3-31, 1983 (Report No. 50-312/83-02)

Areas Inspected:

Operational safety verification; maintenance observations; surveillance observations; implementation of the Quality Assurance Audit Program; licensee event report (LER) follow-up; follow-up on a significant event; follow-up on Regional requests; follow-up on Headquarters's requests, and independent inspection effort. The inspection activities involved 190 inspector-hours by two resident inspectors.

Results: Of the nine areas inspected, one Severity Level V item of noncompliance was identified (see paragraph 7).

DETAILS

1. Persons Contacted

- *R. Rodriguez, Manager, Nuclear Operations
- #*P. Oubre', Plant Superintendent
- *D. Blachly, Operatins Superintendent
- *N. Brock, Electrical/I&C Maintenance Supervisor
- #*R. Colombo, Technical Assistant
- # G. Coward, Maintenance Superintendent
- #*S. Crunk, Associate Nuclear Engineer
- D. Eliot, Quality Assurance Inspector
- #*D. Gardiner, Senior Chemical and Radiation Assistant
- J. Jewett, Quality Assurance Engineer
- W. Jurkovich, Supervising Resident Construction Engineer
- *F. Kellie, Assistant Chemical and Radiation Superintendent
- *J. Mau, Training Superintendent
- #*R. Miller, Chemistry/Radiological Superintendent
- #*T. Perry, On-site Quality Assurance Supervisor
- J. Price, Surveillance Test Coordinator
- *J. Reese, Plant Health Physicist
- # L. Schwieger, Quality Assurance Director
- B. Spencer, Assistant Operations Superintendent
- T. Tucker, Planner/Scheduler
- J. Uhl, Mechanical Engineer
- # D. Whitney, Engineering and Quality Control Superintendent
- B. Wichert, Plant Mechanical Engineer
- W. Wilson, Senior Chemical and Radiation Assistant

The inspectors also talked with and interviewed several other licensee employees, including members of the engineering, maintenance, operations and quality assurance (QA) organizations.

*Denotes those attending the Exit Interview on January 24, 1983.

#Denotes those attending the Exit Interview on January 31, 1983.

2. Operational Safety Verification

The plant operated at or near 90 percent full power for the entire inspection period. Coastdown at the end of this fuel cycle began on January 13, 1983. The licensee has elected to reduce both power and average primary coolant temperatures (TAVE) to achieve proper fuel burnout. The refueling outage is expected to commence around February 18, 1983.

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of the auxiliary building and turbine building were conducted to observe plant equipment conditions, including

potential fire hazards, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector verified that the physical security plan was being implemented in accordance with the station security plan.

The inspector examined plant housekeeping/cleanliness conditions and verified the implementation of radiation protection controls. The inspector also walked down the accessible portions of the auxiliary feed system and emergency power system to verify operability, and witnessed portions of the radioactive waste system controls associated with radwaste barreling.

No items of noncompliance or deviations were identified.

3. Maintenance Observations

The inspectors observed portions of the maintenance activities listed below and verified that work was accomplished in accordance with approved procedures, that work was accomplished by qualified personnel, that provisions for stationing a fire watch to over-see activities involving welding and open flame were complied with and that LCO requirements were met during repair.

- a. Auxiliary building ventilation system modifications.
- b. Nuclear Service "B" battery charger repair.
- c. Spent fuel pool cooler inspection and repair.
- d. Fire suppression system repair and inspection.

No items of noncompliance or deviations were identified.

4. Surveillance Observations

The inspectors observed portions of the below listed surveillance testing to verify that the tests were covered by properly approved procedures; that the procedures used were consistent with technical specification requirements; that a minimum crew requirements were met; that test prerequisites were completed; that special test equipment was calibrated and in service; and that the test results were adequate.

- a. SP206.03B - Monthly "B" Diesel Generator Test.
- b. I109B - Monthly Channel "B" Reactor Protection System Instrument Check.
- c. SP200.18 - Monthly Auxiliary Feed Pump P-319 Operational Verification Test.
- d. SP207.04 - Weekly RCS Leakage Evaluation.
- e. SP203.02C - Quarterly and Annual Makeup Pump and Valves Inspection and Surveillance Test.

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5. Implementation of the Quality Assurance Audit Program

An inspection was performed to ascertain whether the licensee is conducting routine audits by qualified personnel, and to assure that activities are in conformance with regulatory requirements, commitments in the application and industry guides or standards.

The following documents were used as reference documents for this inspection:

- a. ANSI N18.7-1972: Administrative Controls for Nuclear Power Plants
- b. ANSI N45.2.12-1977: Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants
- c. ANSI N45.2.23-1978: Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants
- d. Technical Specification 6.5.2.8: Audits
- e. Updated Safety Analysis Report (USAR) Appendix 1B: Quality Assurance Program
- f. QAP 19: System Auditing
- g. QCI 2: SMUD Nuclear Operations Quality Assurance Audit Program

The following documents were examined:

- a. Audit 0-419: ECCS Technical Specifications
- b. Audit 0-456: RCS Leakage
- c. Audit 0495: Reactor Startup
- d. Audit 0-496: Configuration Control
- e. Audit 0-497: Western States Joint Utility Audit
- f. Audit 0-498A: General Warehousing
- g. Audit 0-499: Records of personnel Performing Audits
- h. Audit 0-500: Reactor and CRD System
- i. Audit 0-502: Backshift and Weekend Program Visit

- j. Audit 0-503: Packaging of Low Level Radioactive Waste for Transportation and Burial
- k. Audit 0-505: Nonconformances
- l. Audit 0-507: Special on QAP 4
- m. Audit 0-509: Corrective Action
- n. Audit 0-511: ALARA Program
- o. Audit 0-512: Special on Tri-State Motor Transport Company
- p. Audit 0-515: ECCS
- q. Audit 0-517: RSC Surveillance and Augmented ISI

The inspector witnessed the performance of an Operations audit conducted by QA personnel dealing with Degraded Plant Operations on January 18, 1983. The person involved in this audit was qualified in accordance with ANSI N45.2.23 requirements. The audit was conducted in conformance with Technical Specification requirements and other commitments given in implementing procedures and the USAR.

In general, the audits examined by the inspector indicated that the content of the audit reports clearly defined the scope of the audit and the results. They also were conducted by trained personnel not having direct responsibility in the area being audited, and the frequency of audits followed the QCI 2 requirements. In addition, the inspector noted that over 100 Technical Specification line items were reviewed by auditors in the above listed audits.

By comparing the requirement in ANSI N45.2.12-1977 with the published SMUD QA Program, the inspector noted that post-audit conference with management of the audit organization are not required at Rancho Seco at the conclusion of the audit process. Post-audit conferences are held with cognizant individuals who are subjects of the audit, however, this item was discussed with QA department personnel. The licensee contends that the Quality Assurance Department management and the Nuclear Operations Department management do discuss audit results frequently and that this satisfies the stated requirement. The inspector has verified by direct observation and discussions with personnel involved in this issue that these discussions do occur, so that no further questions exist at this time.

An area of concern on the part of the inspector deals with follow-up action taken by the audited and auditing organizations. There appears to be corrective actions which have been signed off as completed by the QA department without the action actually being completed in accordance with the ANSI standard. For example, in Audit 0-515 the QA auditor noted the ANSI standard. For example, in Audit 0-515 the QA auditor

response on the part of the Nuclear Operations Department was transferred to the Generation ENgineering Department. As of November, 1982, when Audit O-515 was conducted, the item was still open. The QA department closed the original response from the Nuclear Operations Department when transferred to Generation Engineering, even though Generation Engineering never responded. The audited and auditing organization have certain responsibilities under the ANSI standard. The audit group has the responsibility to provide a follow-up report stating the date corrective action was completed and the auditing group has the responsibility to confirm that corrective action is accomplished as scheduled. In this case, neither group appeared to meet their ANSI N45.2.12-1977 requirements for follow-up action.

In addition to this example of inadequate follow-up action, the following examples were noted:

- a. In Audit O-503, four procedures required Nuclear Operations Changes. The QA Director appeared to close the corrective action response without the QA department tracking the final actions to completion.
- b. In Audit O-498A, the response for Item 9.3 listed as inadequate, yet the corrective action was apparently closed without follow-up.
- c. In Audit O-497, Items F3, F5, F8, F9, and F10, and numerous recommendation responses appear to require follow-up action, yet there is apparently no documentation of completion in the QA files.
- d. In Audit O-495, the auditor discovered that Technical Specification Amendment 31 changes had not been incorporated into B.1, the plant startup procedure. The response to this finding was that the Plant Review Committee (PRC) will be contacted on this issue by November 1, 1982. This response was acceptable to the auditor in that he stated he would look at the change at the next reactor startup in June 1983. However, two reactor startups have occurred since the audit date and there appears to be no documentation in the QA files that this was completed by the PRC. The QA department was tracking this issue on their follow-up list for June 1983.

In summary, the above listed actions indicate to the inspector that corrective action is not always verified in a timely manner by the auditing or audited organizations required by ANSI N45.2.12-1977.

Discussions with the QA Director on the above problem generated the following commitments:

- a. The QA Department personnel will be instructed to utilize their computerized follow-up list to track corrective action to completion.

- b. The QA Follow-up List will be audited quarterly to verify the completion status of these items.
- c. QCI 2 will be modified to address these changes in follow-up actions.
- d. Items a, b, and c, listed directly above, will be implemented by the end of July 1983.
- e. Follow-up on the examples of untimely corrective actions mentioned in this report will be taken as appropriate. (The QA Department has reviewed and taken action on some of the items as of this writing.)

The inspector will review the implementation of these commitments. This item will remain an Unresolved Item (83-02-01) until the review is complete.

No items of noncompliance or deviations were identified.

6. Licensee Event Report Follow-up (LER)

The resident inspectors performed an examination of the following LERs to ascertain whether additional inspection effort or other IE response is warranted, whether corrective action discussed in the licensee's report appears appropriate, and whether the information reported to the NRC appears to satisfy reporting requirements. In addition, the inspectors attempted to ascertain whether these events involved continued operations in violation of regulatory requirements or license conditions.

a. Item 81-19-LO (CLOSED): Degradation of Post Accident Sampling System

The licensee has completed their study, and concluded that there is no safe way to install nonfoul suction. Closeout procedures for the Reactor building have been revised to ensure attention will be paid to these suction in the future.

b. Item 82-20-LO (CLOSED): Introduction of RCS Coolant into the Nitrogen System; Item 82-23-LO (CLOSED); Xenon Contamination of the Nitrogen System; and, Item 82-27-L2 (CLOSED); Contamination of the Nitrogen System

The licensee has implemented the program committed to in the above LERs. The program identified the leaking check valves, improperly installed jumpers, and a problem with the pressure differential between systems supplied and operating system pressure for the nitrogen system. The licensee submitted a follow-up report on December 29, 1982, and the inspector verified corrective actions described have been implemented and have been effective in eliminating the above deficiencies. These items are CLOSED.

c. Item 82-22-LO (CLOSED): "A" Diesel Generator Air Start Motor Failure

The inspector verified the licensee has repaired the air start system, and increased the preventive maintenance effort concerning this system on both diesel generators.

d. Item 82-24-LO (OPEN): Class I Cable Tray Support was Distrubed

The inspector verified corrective actions described in the September 15, 1982 report were performed. This item will remain open pending licensee submittal of the follow-up LER mentioned in that report.

e. Item 82-31-TO (CLOSED): Tube Leak in the "A" Once-Through-Steam-Generator

The inspectors verified that corrective actions described in the LER and follow-up report were completed, and are satisfactory. Information concerning the event and a copy of the trip report was transmitted to various NRC Headquarters offices.

f. Item 82-35-LO (OPEN): Late Vessel Specimen Report

This event is a repeat of an event that took place in 1981. At that time, the corrective action was to write LER 81-58 and, of course, to submit the proper report to the NRC. The QA organization discovered the 1981 event and found the same problem again for this event. However, LER 82-35 does not address corrective action to prevent recurrence per the NUREG-0161 requirements. Therefore, this item will remain OPEN until the proper information is submitted.

g. Item 83-04-LO (CLOSED): Radiological Release

The inspectors verified that corrective actions described in the LER is being completed satisfactory.

No items of noncompliance or deviations were identified.

7. Follow-up on Significant Event

On January 20, 1983, about 2,000 to 3,000 gallons of Tritiated water spilled into the storm drain system at Rancho Seco. The water came from an overflowing Miscellaneous Waste Water Holdup Tank in the Tank Farm area. The apparent cause was operator error. Licensee estimates the total time of spillage into the drain system to be 30 minutes. The radiological aspects of this event are discussed in Inspection Report 50-312/83-01.

The Resident inspectors examined the operational portions of this event. The licensee has apparently determined that the problem occurred due to communications difficulties between an auxiliary operator and control room personnel. Procedure A.17, Section 4.4 applies to the operation in question, that of transferring water from the Miscellaneous Wastes Condensate Storage Tank(s) (T-674 A&B) to the Miscellaneous Waste Water Holdup Tank (T-993). There is no indication that this procedure was violated.

A review of the Control operator and Shift Supervisor Logs for the period of this event indicates that at 5:00 p.m. on January 20, 1983, Control Room personnel had information from chemical analysis results of various water samples at the site boundary and the tank farm that the release which had occurred between about 3:50 p.m. and 4:20 p.m. represented an unmonitored and unplanned radioactive release. Even though the release was well below Technical Specification and 10 CFR 20 limits for Tritium, 10 CFR 50.72 requires licensee action. That action is to notify the NRC Operations Center within one hour by telephone for any accidental, unplanned or uncontrolled radioactive release. It was not until 8:30 p.m. that licensee personnel informed the NRC by telephone. (83-02-02)

8. Follow-up on Regional Requests

During the month of January 1983, personnel from the Region V office of the NRC in Walnut Creek, California, requested information from the Resident Inspectors regarding the operation and maintenance of the Rancho Seco power plant. Information was obtained and transmitted to the Region V office concerning:

- a. Site visits by regional personnel.
- b. IAEA visit and setup for refueling, 1983.
- c. On January 5, 1983, the Region V staff met with the licensee management to discuss the results of the Systematic Assessment of Licensee Performance (SALP) Report for the period of July 1, 1981 to September 30, 1982.

No items of noncompliance or deviations were identified.

9. Follow-up on Headquarter's Requests

During the month of January, 1983, personnel from the NRC Headquarters in Bethesda, Maryland, requested information from the Resident Inspectors about the operation, design and maintenance of the Rancho Seco power plant. Information was obtained and transmitted to the NRC Headquarters on:

- a. Site tour setup for visiting Headquarter's personnel.
- b. IAEA inspection, inventory, and setup for refueling 1983.
- c. A meeting which was held at Rancho Seco between SMUD and NRC personnel on January 11, 1983, to discuss a proposed Civil Penalty which was issued in June 1982. The subject of the proposed Civil Penalty was the inoperability of a Diesel Generator and a High Pressure Injection Pump. Among others, the SMUD General Manager, the NRC Director of Inspection and Enforcement, and the Region V Administrator discussed the decision to not mitigate the \$120,000 fine.
- d. HPI vibration questions with AEOD personnel.

No items of noncompliance or deviations were identified.

10. Independent Inspection Effort

Discussions were held between the Resident Inspectors and operations, security and maintenance personnel in an attempt to better understand problems they may have which are related to nuclear safety. These discussions will continue as a standard practice.

On numerous occasions, during the month of January, 1983, the Resident Inspectors attended operations status meetings. These meetings are held by the Operations Supervisor to provide all disciplines onsite with a update on the plant status and ongoing maintenance work.

In addition to the above, independent inspection effort was performed on the following items:

- a. A scheduling meeting with the NRR Project Manager and SMUD licensing personnel was attended by a Resident Inspector.
- b. NSEB and Diesel Building construction activities.
- c. New Auxiliary Feed header component procurement.
- d. Auxiliary building ventilation system modifications.
- e. Miscellaneous plant procedure reviews.

f. Unresolved Item 80-21-02 (CLOSED) Processing Vendor Bulletins and Circulars:

On January 3, 1983, AP.46 was issued. AP.46, Nuclear Operations Technical Manual Control Procedure, is designed to provide a control system for vendor manuals that pertain to the operation and maintenance of plant equipment. With the implementation of this procedure, the original concerns are resolved. This item is CLOSED.

g. Follow-up Item 80-34-02 (CLOSED) Vendor/Technical Manual Control System:

This is essentially the same item as discussed above for unresolved Item 80-21-02. The above named solution therefore applies in this case. Therefore, this item is CLOSED.

h. The Ray Miller, Inc. problem. (Discussed in various newspaper accounts, the nuclear industries Notepad Computer Information System and Information Notice 83-01.) This deals with fraudulently labeled pipe. Rancho Seco appears to be clear of problems associated with this company as a prime supplier.

No items of noncompliance or deviations were identified.

11. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 5.

12. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection on January 31, 1983, and summarized the scope and findings of the inspection activities. The licensee acknowledged the inspectors findings.

The NRC inspectors were asked to comment on two items of Licensing Branch interest. One item dealt with the definition of a "refueling interval." The other item dealt with the requirements of 10 CFR 50.59 versus the apparent requirements listed in NUREG 0737, clarification of TMI Action Plan Requirements. After some discussion, the inspectors stated that these issues may be more aptly discussed with the NRR Project Manager. A licensee representative acknowledged this comment.

One item of noncompliance was identified and discussed in paragraph 7. One unresolved item was identified and discussed in paragraph 5.