U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-312/82-38

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

Licensee: Sacramento Municipal Utility Dustrict

P. O. Box 15830

Sacramento, California 95813

Facility Name: Rancho Seco Unit 1

Inspection at: Herald, California (Rancho Seco Site)

Inspection conducted: October 1 to November 4, 1982

Inspectors: Talbert Young Jr. for 11-15-82
Harvey L. Carter, Senior Resident Inspector Date Signed

Talbert Young Jr. for 11-15-82
John P. O'Brien, Unit Resident Inspector Date Signed

Date Signed

Approved by: Talbert Young Jr. 11-15-82
T. Young, Jr., Chief, Reactor Projects Section No. 2 Date Signed
Reactor Projects Branch No. 1

Date Signed

Summary:

Inspection between October 1 thru November 4, 1982
(Report No. 50-312/82-38)

Areas Inspected: Operational safety verification; maintenance observations; surveillance observations; review of plant operations; follow-up on significant events; Licensee Event Report follow-up; follow-up on regional requests; follow-up on Headquarter's requests; and, independent inspection effort. The inspection involved 196 inspector-hours performed by the Resident Inspectors.

Results: Of the nine areas inspected, one item of noncompliance in one area was identified (failure to log changes in plant status, Paragraph 6).

RV Form 219 (2)

DETAILS

1. Persons Contacted

*R. Rodgriguez, Manager, Nuclear Operations
P. Oubre', Plant Superintendent
*D. Blachly, Operating Superintendent
E. Bradley, Emergency Plan Coordinator
*R. Colombo, Technical Assistant
*G. Coward, Maintenance Superintendent
*S. Crunk, Associate Nuclear Engineer
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
*R. Miller, Chemistry/Radiological Superintendent
J. Newey, Senior Chemical and Radiation Assistant
*T. Perry, On-site Quality Assurance Supervisor
J. Price, Surveillance Test Coordinator
*J. Reese, Health Physicists
S. Rutter, Quality Assurance Engineer
L. Schwieger, Quality Assurance Director
B. Spencer, Shift Supervisor
T. Tucker, Planner/Scheduler
J. Uhl, Mechanical Engineer
*D. Whitney, Engineering and Quality Control Superintendent
*W. Wells, Senior Administrative Assistant
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 licensee personnel attending the Exit Interview on November 4, 1982.

2. Operational Safety Verification

The plant operated at 95 percent, 870 MWe during the report period. Minor pertubations in this power level existed at times while plant personnel pursued main condenser air inleakage problems.

On October 5, 1982, the licensee received a letter informing them that the Civil Penalty for failure to install the Early Warning System (EWS) by the deadline dictated by the NRC had been mitigated. On October 26, 1982, EWS Siren 5 alarmed early in the morning in Ione, California, about 12 miles east of Rancho Seco. The malfunction was related to the effects of heavy rainstorms in the area. Both items received media attention.

Changes were made to the titles of various plant supervisors such that changes to the administrative section of the technical specifications will be necessary. These include changing the word "Supervisor" to "Superintendent" for the Engineering and Quality Control Supervisor; the Supervisor, Nuclear Maintenance; the Supervisor, Nuclear Operations; and the Chemical and Radiation Supervisor. Also, the Training Supervisor is now titled the Nuclear Training Superintendent. Another technical specification change may be required in that the Management Safety Review Committee is being chaired by the Assistant General Manager, Operations, while the technical specification named Chief Engineer acts for the General Manager. The change is allowed by Technical Specification 6.5.2.3 in that an alternate Chairman may be appointed in writing. This condition may remain in effect until the permanent General Manager is appointed in November 1982.

The licensee plans to shut the plant down on January 22, 1983, for a refueling and major maintenance outage. The outage is expected to last about six months.

The inspectors observed control room operations, reviewed applicable logs and conducted discussions with control room operators. The inspectors 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. The latter included inspections in all safety-related switchgear and battery rooms.

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 oversee activities involving welding and open flame were complied with, and that LCO requirements were met during repair.

a. Emergency diesel-generator air start motors repairs.

b. Fire suspression system inspection and pipe removal work.

c. Containment isolation valve repairs for the reactor building drain header.

d. Tank farm excavation and paving around safety-related equipment.

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 pre-requisites were completed; that special test equipment was calibrated and in service; and that the test results were adequate.

a. SP208.04B, Monthly Test of "B" CRD Breaker

b. SP210.01B, Quarterly Motor Driven A.F.P. (P.319) Surveillance

c. SP200.02, RCS Daily Leakage Check (SP207.04A)

d. SP207.04B, Weekly RCS Leakage Test

No items of noncompliance or deviations were identified.

5. Review of Plant Operations

a. Security

The inspectors witnessed portions of the performance of weapons qualification and physical fitness tests for three members of the plant guard force, reviewed the records for the above testing for the remaining personnel, and verified acceptable scores were achieved in all areas. Further the inspectors observed a training lecture provided to physical security personnel, and verified that lesson plan objectives and the lecture schedule were met.

b. Corrective Action

The inspectors reviewed the Occurrence Description Reports (AP-22s) generated over approximately two months, reviewed corrective actions taken by the licensee pertaining to various plant problems, and verified the proper resolution of the identified discrepancies involving safety-related components.

c. Review and Audit

The inspector attended, as an observer, Plant Review Committee meetings on October 18, 21, and 22, 1982. The main subjects discussed were N_2 system contamination, unidentified leakage measurements and Dresser safety valve problems. Follow-up actions by the licensee on these items were appropriate.

No items of noncompliance or deviations were identified.

6. Follow-up on Significant Event

At 7:15 a.m. on Saturday, October 16, 1982, the licensee determined that the primary plant's unidentified leakage had exceeded the Technicial Specification 3.1.6.2 requirement of 1 gpm. An unusual event was declared and the NRC Incident Response Center in Bethesda, Maryland, was notified via an Emergency Notification System phone call at 8:15 a.m. By 9:30 a.m. an NRC resident inspector was on his way to the site and the Region V Incident Response Center was manned minimally. The inspector was on site unitl 9:30 p.m., witnessing the licensee's response to the event and communicating with the NRC as various actions were taken to identify the leak.

The licensee began issuing press releases at 11:15 a.m. After about three hours, the press releases were stopped until the cause of the leak was discovered. The leak was quantified at about 1.7 gpm into the Reactor Coolant Drain System. This system is designed to handle coolant and return it to the Reactor Coolant System, if necessary. Therefore, Technical Specification 3.1.6.8 allows such leakage to be less than 30 gpm. The licensee secured from the unusual event at 3:05 a.m. on October 17, 1982.

The plant was operating at 95 percent reactor power during the event. Plant shut down would have been required by 7:15 a.m. on October 17, 1982, had the leak not been identified.

The licensee has not identified the exact source of the leakage into the drain system, but will search for it during a future plant shutdown. In the interim, the Plant Review Committee (PRC) decided in meetings on October 18 and 22, 1982, that continued operation was acceptable, as long as the more detailed long form surveillance procedure for leakage rate detection (SP207.04B) is performed daily rather than weekly. The inspector attended both PRC meetings.

During this event, two items of interest occurred. First, the reactor operators did not log some significant events that took place while attempting to find the leak. This was discussed with operators. Specifically, some radiation monitors alarmed while pursuing a potential leak path in the letdown system. The R15007, a series of radiation monitors which sense various auxiliary building locations, alarmed at about 12:46 p.m. and 4:55 p.m. on October 16, 1982. Also, the Auxiliary Building radiation monitors, R15002 A and B, alarmed at about 2:28 p.m. on the same date. Neither the

times of these alarms nor the times they cleared were placed in the Shift Supervisor or Control Operator Logs.

Technical Specification 6.8.1 requires written procedures to be established, implemented, and maintained covering the activities referenced in Appendix A of Regulatory Guide 1.33, November 1972. Item A.8 in that appendix, talks to an administrative procedure for "Log Entries and Record Retention."

Administrative Procedure 23, Control Room Watchstanding (Revision 11 dated (July 8, 1982) addresses log entries. Step 3.3.2.5 states that the minimum requirements for the Shift Supervisor's Log are all plant operating information, including but not limited to changes in status of critical plant components, any safety or radiation hazards; and such other items as the Shift Supervisor may deem necessary to provide adequate information to the following shifts and management or that could be of significant historical value.

The same procedure in Step 3.3.3.5 requires minimum requirements for the Control Operator's Log in that the operators are to chronologically log all plant and equipment status changes, major annunciator alarms, and clearing of these alarms.

Contrary to the above requirements, at the times mentioned, none of these items were complied with. This represents a Severity Level V item of noncompliance (82-38-01). It should be noted that there may be computer generated records available to pinpoint the exact time of various events described above, but these records were not utilized at the time of the events, nor do procedures cover their specific use in this case.

The second item of interest dealt with the cause and effect of the plant manipulations which may have given the alarms mentioned in the violation above. An NRC Health Physics inspector examined this issue and will document his results in NRC Report No. 50-312/82-37.

One item of noncompliance and no deviations have been documented in this report with respect to the follow-up on the unidentified leak event of October 16, 1982 (Item 82-38-01).

7. Licensee Event Report Follow-up

a. LER 80-23-TO (OPEN): Dresser Code Safety Valve and Power Operated Relief Valve Operability

The licensee, in the subject LER, stated, "If at the conclusion of the EPRI test program, corrective action is warranted, a follow-up report to this LER will be submitted delineating the necessary corrective action." The EPRI test program referred

to here is EPRI NP-2628-LD dated September 1982. This report references potential deficiencies concerning the effects of ring settings on Dresser safety valves of the 2 1/2-inch and 6-inch size. Rancho Seco has 3-inch Dresser safety valves on their pressurizer, and consequently have contracted with a couple of companies to study the EPRI report to see if Rancho Seco is adversely affected. The Sacramento Municipal Utility District expects results from these studies sometime in early 1983. At that time, if any pertinent information is obtained with respect to the LER 80-23-TO statement quoted above, then the NRC will be notified. In the meantime, the licensee has informed NRR by letters dated October 19 and 21, 1982, of their current position on ring settings for the Dresser safety valves.

This item will remain open pending receipt of further information by the licensee and the inspectors.

b. LER 79-13-TI (CLOSED): Degraded Grid Voltage

c. LER 81-34-LO (CLOSED): Degraded Grid Voltage

d. LER 81-39-LO (OPEN): Degraded Grid Voltage

The three LERs listed above all deal with the adequacy of station electrical distribution voltages. In a letter to the licensee dated September 20, 1982, from NRR, a number of items are listed which must be completed by the licensee before the subject can be closed.

In a discussion with a licensee representative, it was determined that some of these items will not be accomplished until the 1983 refueling outage. Consequently, LER 81-39-LO will remain OPEN pending completion of the committed items and follow-up by the inspectors.

e. LER 81-47-XI (CLOSED): Loose Wires in Square D Class 8501 Breakers

The inspectors reviewed the circumstances behind this report and consider the licensee's corrective actions to be appropriate. This item is CLOSED.

f. LER 82-25-TO (CLOSED): Low Oxygen Level in Hadselville Creek

The inspectors reviewed the circumstances behind this report and consider the licensee's corrective actions to be appropriate. This item is CLOSED, however, the licensee will submit a revised report because of the failure in the cover letter to reference and describe the specific requirements for reporting the occurrence.

No items of noncompliance or deviations were identified.

8. Follow-up on Regional Requests

During the inspection period, 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. ICC/ATOG procedures for securing Reactor Coolant Pumps.

b. Temporary storage area modifications.

No items of noncompliance or deviations were identified.

9. Follow-up on Headquarter's Requests

During the inspection period, 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. Copies of iso-drawings of the Auxiliary Feedwater System (before and after modification) were obtained and sent to the NRC Headquarters.

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 October 1982, the resident inspectors attended operations status meetings. These meetings are held by the Plant Superintendent to provide all disciplines onsite with a update on the plant status and on-going maintenance work.

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

a. West Coast Joint Utility Audit.

b. Fire system coating flakes.

c. License DPR-14 changes.

d. Health Physics retraining.

e. Reviewed Administrative Procedure and Emergency procedure changes (AP.1, AP.3, D.5)

f. Reviewed SECY 82-111B and Abnormal Transient Operator Guideline documents.

g. Safety Valve ring settings.

h. Degraded grid voltage issues.

i. Three Mile Island modification scheduling.

No items of noncompliance or deviations were identified.

11. Licensee Action on Previous Inspection Findings

a. Conflict with ANSI N45.2.2 Commitment (Item 80-36-03: CLOSED)

By letter dated January 5, 1981, the licensee informed NRR that they take exception to the necessity of having a classification system defining specific protective levels for equipment as outlined in ANSI N45.2.2.

The present Quality Assurance program at Rancho Seco in QAP 2, QAP 6, QAP 15, and QAP 19 addresses the licensees present commitment to environmental packaging and storing requirements.

This item is CLOSED.

b. Auxiliary Dual Unit Feed Pump Turbine Trip Alarm (Item 80-23-06: CLOSED)

On August 6, 1982, work was completed on ECN package A-3673. This ECN was generated to install an alarm in the control room when the P-318 (a dual unit auxiliary feedwater pump) turbine has tripped. The trip is mechanically derived at the pump overspeed trip level. When tripped, the turbine inlet valve (FV 30801) is prevented from opening on its actuation signal. Therefore, the reason for this design change is to alert the control room operator of the need to reset the trip mechanism in order to be able to open FV 30801 and make the pump turbine operable. It also provides the operator a warning of a loss of auxiliary feedwater flow and pressure so that the P-318 electric motor can be energized to maintain flow and pressure at required values.

Installation of this non class IE equipment satisfies the inspector's concerns so that item 80-23-06 is CLOSED.

c. Identification of QA Class Components (Item 79-20-01: CLOSED)

In NRC Inspection Report Nos. 50-312/79-20, 80-09, 80-21, 80-31, and 81-01, the NRC inspectors have documented a problem with the control of the determination of QA classes. On March 1, 1982, Administrative Procedure 42 (AP.42) came into effect which firmly defines the the authority to enter or change information relative to QA classes. QAP-3, QA Classification, Revision a, dated September 23, 1982, clearly states that the "QA class will be determined by Generation Engineering." QAP-3 also states that a "... quality classification list is maintained by Generation Engineering listing the major components in use at Rancho Seco No. 1"

AP.42, Maintenance Information Management System (MIMS), defines the use of the Master Equipment List (MEL) which is the document referred to in QAP-3. Specific criteria are listed in AP.42 that must be satisfied to change QA classifications. In accordance with AP.42, all changes are now required to receive Generation Engineering and Quality Assurance approvals prior to implementation.

This item is CLOSED (79-20-01).

d. Instrument Air System Problems (Item 81-31-01: CLOSED)

In September 1981, the licensee reported to the NRC a problem with a safety-related air operated valve (LER 81-37). Further investigation revealed that the problem could be related to dew point and desiccant breakthrough problems that the licensee had experienced with the Instrument Air system. In the NRC Inspection Report No. 50-312/81-31, the resident inspectors outlined the commitments the licensee had made to resolve this issue. The resident inspectors had verified that the commitments to be done by the end of November 1981 were completed and reported this in NRC Inspection Report No. 50-312/81-33. The remainder of the commitments have been completed, and the resident inspectors provide the following comments:

(1) The Preventive Maintenance Program was revised, so that each set of Instrument Air filters are replaced at least every 90 days with the high temperature filters. The inspector verified that this requirement was performed over the last year.

(2) The system was blown down every two weeks until April 1982. The licensee performed an engineering evaluation of this operation, and in May 1982 the Plant Review Committee approved a new maintenance procedure that requires monthly blowdown of the Instrument Air system.

(3) The licensee has monitored the dew point of the discharge Instrument Air dryer on a once-per-shift bases, and has developed, approved (September 1982), and is following an alarm response procedure.

(4) Since commencing this special program, the licensee has not experienced any safety-related valve operator failures associated with the Instrument Air system.

This item is CLOSED.

No items of noncompliance or deviations were identified.

12. Exit Interview

The inspectors met with the licensee representatives (denote in paragraph 1) on November 3, 1982. The scope of the inspection, and the observations and findings of the inspectors were discussed, and the licensee representative acknowledged the inspectors' observations.

One item of noncompliance was identified as a Level V citation. The licensee acknowledged the inspectors comments on this item (paragraph 6 for details).