

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. FN-312/80-31
Docket No. 50-312 License No. DPR-54 Safeguards Group _____
Licensee: Sacramento Municipal Utility District
P. O. Box 15830
Sacramento, California 95813

Facility Name: Rancho Seco
Inspection at: Clay Station, California

Inspection Conducted: November 12-19, 1980

Inspectors: G. B. Zwetzig Dec. 16, 1980
G. B. Zwetzig, Reactor Inspector Date Signed

Date Signed

Date Signed

Approved By: B. H. Faulkenberry 12/16/80
B. H. Faulkenberry, Chief, Reactor Projects Section 2 Date Signed
Reactor Operations and Nuclear Support Branch

Summary: Reactor Operations and Nuclear Support Branch

Inspection on November 12-19, 1980 (Report No. 50-312/80-31)

Areas Inspected: Routine, unannounced inspection of the facility QA Program, instrument calibration, the facility maintenance program, followup on previously identified items, and followup on IE Bulletins and Circulars. The inspection involved 32 inspector-hours onsite by one inspector. In addition, as a result of Systematic Appraisal of Licensee Performance (SALP) findings for Rancho Seco, the following areas were also inspected: design changes, the audit program and non-licensed operator training. This SALP portion of the inspection involved 10 inspector-hours onsite by one inspector.

Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

- *D. Blachly, Operations Supervisor
- N. Brock, I&C Maintenance Supervisor
- D. Cass, Mechanical Maintenance Supervisor
- *R. Colombo, Technical Assistant
- *G. Coward, Maintenance Supervisor
- D. Gouker, Shift Supervisor
- R. Hollingsworth, Engineering Technician
- J. Jewett, Senior Quality Assurance Engineer
- R. Low, Electrical Engineering Associate
- J. Mattimoe, Assistant General Manager and Chief Engineer
- *J. Mau, Training Supervisor
- *J. McColligan, Engineering and Quality Control Supervisor
- *R. Miller, Chemical & Radiation Supervisor
- *R. Oubre, Plant Superintendent
- J. Price, Surveillance Coordinator
- *R. Rodriguez, Manager, Nuclear Operations Department
- *L. Schwieger, Manager, Quality Assurance Department
- D. Wiles, I&C Foreman

*Denotes those present at exit meeting on November 19, 1980.

2. Licensee Action on Previous Inspection Findings

- a. (Closed) Followup Item (50-312/79-22-03): Design Review Form in Quality Assurance Procedure No. 2 did not include consideration of the effect of plant modifications on the fire hazards analysis referenced by Amendment No. 19 to the facility license. The inspector determined that the Design Review Form had been revised to include reference to the above fire hazards analysis.

3. Quality Assurance Program

No NRR-approved changes to the QA program had been made since the previous inspection of this area (October, 1979). A number of changes to implementing procedures, however, had been made by the licensee during this period. A total of 18 Quality Assurance Procedures and 6 Quality Control Instructions had been affected by these changes. All of these changes were examined by the inspector, but none which would affect the substance of the QA program were identified. It was noted that a number of the changes were made to respond to concerns previously expressed by the inspector.

The only procedure change which was questioned by the inspector dealt with a change in the definition of "defective material" as stated in QA Procedure No. 27. The intent of the change was to exclude non-functional discrepancies from the definition, e.g. wrong paint color, etc. The inspector observed, however, that the particular wording chosen could be ambiguous when applied to supplies such as liquids. The licensee noted the inspector's observation.

During the inspection, the inspector emphasized to licensee QA personnel that in accordance with recent guidance received from I&E headquarters, future changes to QA procedures must be processed in accordance with the provisions of 10 CFR 50.59. The inspector also noted that a draft proposed regulation would require NRC review of changes in the QA program prior to implementation.

No items of noncompliance or deficiencies were noted.

4. Instrument Calibration

The inspector verified on a 50% sampling basis that the instrument tests and calibrations required by Technical Specifications Table 4.1-1 were performed at the specified intervals. The inspector also reviewed the test documentation for a number of these tests, and verified that it was complete, that acceptance criteria had been met, that the proper revision of the procedure had been used and that qualified personnel had performed the tests and reviewed the results. In one instance where a pump had failed to start, the inspector verified that this had been appropriately reported by means of a Licensee Event Report.

The inspector reviewed the contents of the procedures listed below on a sampling basis and verified that the procedures had been reviewed and approved as required by the technical specifications, that procedures contained controls as necessary to assure that limiting conditions for operation were met during calibration, that "as-found" and "as-left" conditions were recorded as appropriate, that acceptance values for trip settings were in accord with Technical Specifications requirements, that calibration equipment was identified and currently calibrated, and calibration sheets had been initialled:

- SP 200.08A Monthly RPS Channel A Surveillance
- I-108A RPS Channel A Test
- SP 203.01B SFAS Digital Channel 1B Refueling Test
- SP 200.12B Monthly Power Range Surveillance Calibration
- I-103 Power Range Calibration
- SP 200.13 SFAS Surveillance Calibration
- I-201 SFAS Calibration
- I-200A/B/C SFAS Analog Channel A/B/C Test
- I-200D SFAS Digital Channel Test

The inspector examined the calibration records for three laboratory standards consisting of a deadweight pressure tester, a digital voltmeter and a resistance decade box. The records indicated that these standards were regularly calibrated and that the present calibration was current. Calibration was performed by an outside laboratory with standards traceable to the National Bureau of Standards. Storage of these standards appeared acceptable in that they were normally retained within the I&C shop.

On the basis of a recent inspection (see Inspection Report 50-312/80-24) and discussions with a licensee representative it was determined that no significant backlog existed for calibration of instruments not covered by technical specifications requirements. The inspector also verified that the instruments located at the Rancho Seco remote shutdown panels, which are not included in the calibration requirements of the Rancho Seco Technical Specifications, were in fact included in the calibration program. It was also verified that appropriate procedures had been developed for calibration of these instrument channels and that the procedures had been completed. No instances of a significant out-of-calibration condition were identified.

No items of non-compliance or deviations were identified.

5. Maintenance Program

The inspector determined that the licensee's controls for performing corrective maintenance were defined in facility Administrative Procedure No. 3 (AP.3). This procedure was reviewed to verify that responsibilities for review and approval of work requests had been established and (except as noted below) criteria had been established for determining if the work was or was not safety related.

The exceptions referred to above are as follows: (a) the procedure continues to refer the Scheduling Office to an uncontrolled "Master Equipment List" for determination of QA class; and (b) during non-working hours the Shift Supervisor is authorized, without qualifications, to establish engineering requirements and perform inspections when engineering and inspection personnel cannot be obtained.

Regarding item (a), this is a continuation of an unresolved item first addressed in Inspection Report 50-312/79-20. The inspector stated that use of an uncontrolled document in determining QA class was not acceptable. The inspector added that any determination of QA class should reference a controlled document such as QAP-3 which defines QA class by system, and the licensee's response to IE Bulletin 79-01B which defines safety-related systems requiring environmental qualification. In addition, the work request procedure should be revised per IE Circular 80-10 to ensure that environmental qualification is not negated by replacement of instruments or repair activities. The licensee agreed to look into this matter. This continues as an unresolved item. (79-20-01)

Regarding item (b), the licensee's procedure for non-working hours maintenance allows the Shift Supervisor to determine the engineering requirements for a work request (if Engineering cannot be contacted) and to serve as quality control inspector (if an inspector for the correct discipline cannot be contacted). The inspector stated that although there may be circumstances when such authority is warranted, such as when the safety of the public or plant personnel is threatened, the blanket granting of such authority during non-working hours was inappropriate. The inspector therefore recommended that the licensee define more specifically when such authority could be exercised, but the licensee did not acknowledge the need for such definition. This matter is unresolved. (80-31-04)

The inspector verified that the work request procedure included provisions for inspection planning, inspection during maintenance and subsequent functional testing. The procedure also included provisions for review and storage of records of safety-related maintenance.

A formal program of trend analysis of corrective maintenance was not implemented. This was discussed with licensee representatives who stated that because of the compact size of the maintenance professional staff and because only one nuclear unit was involved, the staff was highly aware of equipment problems. Accordingly, they believed that a formal trend analysis program was not warranted.

Regarding work involving welding, open flames and other ignition sources, the inspector determined that these activities are controlled by Administrative Procedure 29, "Use and Control of Combustible Materials and Ignition Sources" which references Maintenance Procedure M.113, "General Welding Standard." Among other things, M.113 requires posting of a firewatch with the capability for communication with the control under appropriate fire hazard conditions.

The inspector verified that appropriate measures for releasing equipment for maintenance and for restoration to service were provided by the licensee's Administrative Procedure 4, "Administrative Clearance Procedure."

The inspector verified that the licensee was aware of the provisions of the ASME Code Section XI which, pursuant to 10 CFR 50.55a(g)(4), requires specified types of testing of pumps and valves following maintenance. The licensee representative stated that surveillance testing is routinely performed following the repair of pumps and valves and that the surveillance procedures had been modified to reflect ASME Section XI requirements.

The inspector determined that the licensee's preventive maintenance program was documented in Administrative Procedure 650, "Preventive Maintenance Program." Based upon review of this document the inspector determined that the procedure did not specify the individual responsible for the overall program, nor the person responsible for establishing calibration frequencies. The inspector also noted there was no requirement for auditing conformance with this procedure. The licensee was informed of these observations and agreed to look into the matter. These findings will be followed up at a subsequent inspection. (80-31-01)

The inspector determined that the licensee's measures for control of special processes were set forth in Quality Assurance Procedure (QAP) 9 and a number of Quality Control Instructions (QCIs). QAP 9 requires that only qualified procedures and personnel will be used when special processes are utilized. Files were also maintained for use in identifying qualified welders and inspectors. In addition, special processes were documented in the General Welding Standard, M.113 and in QCIs 101, 106, 111, 112 and 114. The inspector could not locate, however, a licensee requirement for auditing conformance with these documents. The licensee was advised of this finding. This matter will be followed up at a subsequent inspection. (80-31-02)

With respect to cleanliness controls, the inspector determined that this matter was covered by the licensee's procedures AP.35, "Tools and Equipment Control," and M.114, "Maintenance Cleanliness Control." Based on review of these procedures the inspector identified no conditions or provisions, other than that noted below, which were inconsistent with maintenance of appropriate levels of cleanliness.

The one area where the licensee's cleanliness program did not appear to meet the intent of the applicable ANSI standard (ANSI N45.2.3) was in the area of Housekeeping Controls. Specifically, ANSI N45.2.3 is directed toward preventing entry of dirt, tools, etc., into safety systems. To meet this goal, the standard specifies measures to be taken which are commensurate with the degree of cleanliness required. These measures may include special outer clothing, filtered air supply, personnel and tool accountability, etc. The licensee's program to respond to this guidance, however, was not appropriate in that its primary focus was upon radioactive contamination. This matter was brought to the attention of the licensee who agreed to look into the matter. This item will be followed up at a subsequent inspection. (80-30-03)

6. Systematic Appraisal of Licensee Performance (SALP) Inspections.

By letter dated August 28, 1980, J. L. Crews of Region V advised J. J. Mattimoe of SMUD of aspects of Rancho Seco operations which would be receiving an increased frequency and/or scope of inspection as a result of the Region V SALP review. These areas were Design Changes and Modifications, Quality Assurance Audits, Training and Quality Control and Maintenance. The inspections performed during the present visit pursuant to the SALP evaluation are reported below.

a. Design Changes (SALP)

One of the concerns of the SALP Board was that past inspections had concentrated primarily on modifications to Class I systems, and that limited attention had been given to the effect on plant safety of modifications to Class II and III systems. Accordingly, the inspector examined the design documentation for five recent modifications

to Class II and III systems. In two of these cases the inspector also examined the as-modified installation. No adverse effects of these modifications on safety related systems were identified.

No items of noncompliance or deviations were identified.

b. QA Audits (SALP)

As a first step in performing additional inspection of the QA Audit area, the inspector examined during this visit the licensee's overall audit program several months in advance of its normally scheduled date.

The inspection included examination of the scope of the audit program to determine if it was consistent with technical specification and other regulatory requirements. The scope of the audit program was defined in the licensee's documents QAP 19, "System Auditing" and Quality Control Instruction No. 2 (QCI-2), "SMUD Nuclear Operations Quality Assurance Audit Program."

The inspector examined the above documents and, except as noted, found the program to conform to regulatory requirements. One exception related to Technical Specification 6.5.2.8 which states in part, "Audits...shall encompass:...d. The performance of all activities required by the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR 50, at least once per two years." This is also related to Criterion XVIII of Appendix B of 10 CFR 50 which states, in part, "...audits shall be carried out to verify compliance with all aspects of the quality assurance program...."

Review of the licensee's audit program indicated that although the program called for auditing most of the areas identified in the technical specifications and Appendix B, the following areas were not explicitly included: Criterion VI, Document Control; Criterion IX, Control of Special Processes; and Criterion X, Inspection. In addition, review of the licensee's maintenance program (Paragraph 5, above) indicated that no audits were required in the quality assurance areas of preventive maintenance and housekeeping.

When the licensee was advised of these findings, he responded that auditing conformance to Appendix B was left to a Joint Utility Audit group as permitted by Section 5.6 of QCI-2. The inspector responded that this did not appear to be consistent with the other portions of QCI-2 which called for internal auditing of most other Appendix B criteria. This item is unresolved and will be examined further at a subsequent inspection. (80-31-05)

The other exception to regulatory requirements dealt with the absence of provisions for auditing conformance to the technical specifications. This was previously identified as an item of noncompliance (see Inspection Report 50-312/80-24).

In addition to examining the scope of the audit program the inspector reviewed the implementing procedures for the program. These included assignment of responsibility for determining the qualification and independence of audit personnel, for issuance of audit reports and for assuring corrective actions are taken. These procedures also defined administrative channels for taking corrective actions, required the audited organization to respond in writing to audit findings, and required the use of written checklists in performance of audits.

No new items of noncompliance or deviations were identified.

c. Non-licensed Personnel Training (SALP)

The Region V SALP evaluation of Rancho Seco noted deficiencies in the training of both licensed and non-licensed personnel. This inspection visit examined only non-licensed personnel training. The inspection consisted of discussions with supervisory and instructor personnel and general observations. In the latter category the inspector noted an apparent substantial increase in the effort devoted to training. This increase was seen in the form of a new double-trailer which was being installed as a classroom, a greater quantity of classes listed on the monthly training schedule, an internal memorandum directing personnel from one department to attend certain training, and a review of attendance sheets for certain QA lectures.

A previous inspection (see Report No. 50-312/80-27) noted that a major reason for the limited effectiveness of the training program was that supervisors had not defined the training they desired their employees to receive. The inspector asked licensee management if supervisors were now preparing training plans. The licensee's representatives stated that, with the exception of the Chemical and Radiation Protection organization, such plans were not yet being prepared. The delay is attributed to a shortage of personnel. The licensee's representative stated that a member of the training staff is currently being trained as a senior reactor operator. When that training is completed in February, 1981 this individual will then work with each supervisor in developing appropriate training plans for the various categories of employees. The licensee's representative stated that preparation of these plans and full implementation of the training program was scheduled to be completed by the end of 1981.

During a recent inspection (see Report No. 50-312/80-27) it was noted that except for safety, security and emergency training (which is provided to all persons working at the Rancho Seco site) the formal training program set forth in AP.700 is only applicable to persons in the Nuclear Operations Department. This raised the question as to the training of personnel outside the Nuclear Operations Department who performed activities covered by the facility license. During this visit the inspector questioned a licensee management representative concerning this matter. The response was that the individuals involved had little need for training because they were operating on a daily basis within the constraints of the applicable procedures. If the need for training became apparent, however, training was scheduled as appropriate.

No items of noncompliance or deviations were identified.

7. Followup on IE Bulletins and Circulars

a. IE Bulletin 79-14 (Closed)

Inspection report no. 50-312/80-24 identified certain information concerning stress problems nos. 60ABC and 73 which was needed to close this bulletin. The information needed concerning problem 60ABC and a portion of the information needed for problem 73 was supplied by the licensee's letter of October 10, 1980. The balance of the information needed concerning problem 73 was provided by the licensee's letter of November 21, 1980. This resolves the unresolved item discussed Inspection Report No. 50-312/80-09.

b. IE Bulletin 80-18 (Closed)

By letter dated October 27, 1980 the licensee reported that the calculations specified by the bulletin had been performed and that the calculations indicated that adequate minimum flow could be maintained through the centrifugal charging pumps.

c. IE Circular 80-05 (Open)

The inspector discussed the contents of this circular, which deals with addition of lube oil to GM diesels, with the Operations Supervisor and the Supervisor of Mechanical Maintenance to verify their familiarity with its contents. The inspector did not determine if a measurement of lube oil consumption had been obtained and correlated with guidance relating to the quantity of lube oil available on site. This will be determined at a subsequent inspection.

d. IE Circular 80-12 (Closed)

The inspector reviewed a licensee internal memorandum which stated that the problem of loss of a key from a vertical keyway was not a problem at Rancho Seco due to the use of woodruff keys. This circular is closed.

8. 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. Unresolved items disclosed during the inspection are discussed in Paragraphs 5 and 6.

9. Exit Meeting

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on November 19, 1980. The inspector summarized the purpose and the scope of the inspection and the findings. The findings were acknowledged by the licensee.