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

REGION V

Report No. 50-312/80-08

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: Rancho Seco Site

Inspection conducted: March 4-5, 1980

Inspectors: PP Narbut 3/17/80  
P. P. Narbut, Reactor Inspector Date Signed

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Date Signed

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Date Signed

Approved By: R T Dodds 3/20/80  
R. T. Dodds, Chief, Reactor Engineering Support Branch, Date Signed  
Reactor Construction and Engineering Support Branch

Summary:

Inspection on March 4-5, 1980 (Report No. 50-312/80-08)

Areas inspected: Routine, unannounced inspection by regional based inspectors of the licensee's activities performed in response to IE Bulletin 79-u2, "Pipe Support Base Plate Design Using Concrete Expansion Anchor Bolts". The inspection involved 16 inspector-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified as a result of the inspections.

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## DETAILS

### 1. Persons Contacted

#### a. Sacramento Municipal Utility District (SMUD)

- \* R. Columbo, Technical Assistant
- \* J. Sullivan, Quality Assurance
- \* G. A. Coward, Maintenance Supervisor
- \* H. Heckert, Nuclear Engineer Technician
  - J. Dowson, QC Coordinator
  - D. Raasch, Generation Engineering
- \* L. Schwieger, QA Director

\*Denotes those attending the exit interview on March 5, 1980 which was attended by H. L. Cantor, J. O'Brien and G. Zwetzig of the NRC.

#### b. Bechtel

R. Benson, Civil Engineer

### 2. Licensee Action on previous Inspection Findings

- #### a. (Open) Open Item: Acceptance criteria for concrete expansion anchor expansion was not established and inspection data had not been evaluated (Item 50-312/79-17/01).

The inspector examined the acceptance criteria established by the licensee for the acceptable degree of anchor expansion. The acceptance criteria were derived from a University of Tennessee study and appeared to be reasonable. The inspector had no further questions regarding the acceptance criteria. The acceptance criteria had not been applied to all the anchor inspection data, at the time of the inspection. At the exit interview on March 5, 1980, the inspector discussed the potential for additional work that might be identified as a result of the remaining data review. Licensee management restated their intention to complete the data review and take appropriate actions in accordance with the bulletin requirements prior to the end of the current refueling outage. The item will be inspected further on a future inspection.

- b. (Open) Unresolved Item: Sliding supports had been modified by the addition of non-sliding bracing (item 50-312/79-17/07)

The cognizant engineer stated that the commitment to remove Concreasive buildup from the faying surfaces of sliding supports would be accomplished during a planned support by support walkdown.

This aspect will be inspected further on a future inspection.

In regards to the need to provide periodic lubrication for sliding supports, the cognizant licensee engineer provided a letter BSL-978 of February 5, 1980 which stated periodic lubrication was not required since the design accounted for friction coefficients for metal to metal contact surfaces. The inspector had no further questions on this aspect of the item.

Based on the fact that the support design was based on metal to metal friction factors, the fact that the supports observed did not experience large thermal differentials between operation and shutdown, the fact that the supports observed did not have long pipe runs from fixed points, and the consideration that the supports may have been installed for seismic movements rather than thermal growth, the inspector had no further questions. This aspect of the item is considered closed.

- c. (Closed) Unresolved Item: The effectiveness of Quality Assurance in Maintenance/Modification work was questioned (Item 50-312/79-17/08)

The question of quality assurance effectiveness, as it is related to the control of maintenance and modification work, was discussed with several supervisory licensee personnel including quality assurance, quality control and engineering. The licensee personnel stated that several actions were underway which included a planned increase in the staffing of the quality assurance group and the quality control group. Other actions included the hiring of engineering assistance for the purpose of reviewing maintenance procedures for current technical requirements and for the adequacy of inspection callouts. An additional action underway is the rewriting of standard inspection instructions. This item will be inspected further in the normal course of future inspections. Therefore this item is closed.

- d. (Closed) Open Item: Anchor shell standoff is not limited in the procedure for inspection grouted supports.

Revision 3 to Procedure MT.017 Inspection of Concrete Fasteners of 2/1/80 added a requirement to verify that the anchor shell does not stand out above the concrete.

In addition it was determined by discussion with the Quality Control Coordinator that the inspectors involved with anchor bolt inspection had been specifically trained to inspect for sleeve standoff. Therefore this item is closed.

3. IE Bulletin 79-02 "Pipe Support Base Plate Designs Using Concrete Expansion Anchor Bolts".

The inspector examined the licensee's activities in the area of insuring that all seismic category 1 pipe supports using concrete anchor bolts had been identified for test and analysis. The question arose as a result of the licensee's analytical activities in response to IE Bulletin 79-14 "Seismic Analyses for As-Built Safety-Related Piping Systems" wherein 89 additional supports were identified as applicable to Bulletin 79-02 and required analysis to the requirements of Bulletin 79-02. Cognizant licensee personnel stated that a list of applicable supports had been generated during the system walk downs done for Bulletin 79-14. This complete list of pipe supports generated for Bulletin 79-14 was being used as a source document to generate a complete list of those particular pipe supports which used concrete anchor bolts (Bulletin 79-02). This list of supports, which used anchor bolts, will be used to verify that the lists of supports which had been: (1) tested and, (2) analyzed for Bulletin 79-02 was, in fact, complete. The cognizant licensee personnel stated this review and any consequently identified actions would be completed prior to the end of the current refueling outage. This item will be inspected further during a future inspection (Item 50-312/80-08/01).

The inspector examined supports 5G 29120-1 (CBS Aux Bldg) and 1U-29122-4 (CBS Containment) which were two of approximately 20 supports identified as having inaccessible anchor bolts. The Region V immediate action letter of January 14, 1980 recorded the agreement reached between the NRC and the licensee. The letter stated, in part that the licensee would perform inspections to the extent possible on those anchors determined to be inaccessible. The concrete anchors listed as inaccessible on support 1U-29122-4 were accessible for inspection. Further questioning of cognizant licensee personnel determined that the instructions given to anchor bolt inspection personnel were that anchors which were not accessible for repair should not be tested, even if there was sufficient accessibility for testing. It was further determined that all the supports with anchor bolts listed as inaccessible were being reanalyzed

without taking credit for the inaccessible anchor bolts to determine if the remaining anchor bolts were capable of carrying the design load within the bulletin required factors of safety. At the time of inspection, all supports so analyzed met the factor of safety requirements.

At the exit interview of March 5, 1980, the licensee management committed that the above approach would continue to be used and any instance where bulletin requirements were not met would be identified to the NRC with appropriate justification prior to the end of the current refueling outage. This item will be inspected further in a future inspection (Item 50-312/80-08/02).

4. Exit Interview

The inspector met with the licensee representatives denoted in paragraph 1 on the date indicated. The scope of inspections and the inspectors findings as noted in this report were discussed.