

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-312/89-17

Docket Nos. 50-312

License Nos. DPR-54

Licensee: Rancho Seco Nuclear Generating Station
Sacramento Municipal Utility District
14440 Twin Cities Road
Herald, California 95638-9799

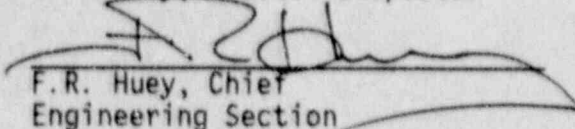
Facility Name: Rancho Seco Unit 1

Inspection at: Herald, California (Rancho Seco Site)

Inspection conducted: September 27-29, 1989

Inspector: C. Ramsey, Reactor Inspector

Approved by:


F.R. Huey, Chief
Engineering Section

11/6/89
Date Signed

Summary:

Inspection on September 27-29, 1989 (Report No. 50-312/89-17)

Areas Inspected: Special unannounced inspection by a regional based inspector for the purpose of assessing fire protection program implementation during the current Rancho Seco shutdown mode, and to determine the status of licensee corrective actions on previous NRC and Licensee identified open items. This was a limited assessment of specific areas of program elements and associated measures established for their implementation. During this inspection, Inspection Procedures 30703, 62704 and 92701 were used.

Results: In the areas inspected, no violations or deviations were identified. However, the inspection disclosed concerns that require increased management attention and resolution as discussed below.

General Conclusions and Specific Findings:

1. The inspector noted that fire protection will continue to be an area warranting continued management attention and emphasis. In fact, the vulnerability of radioactive materials at Rancho Seco from a fire protection standpoint is likely to increase in the event of plant decommissioning. In this regard, licensee management did not appear to be providing sufficient attention to fire protection activities as evidenced by the following observations during the NRC visit:

- a. Missed commitments for corrective actions.
 - b. Loss of experienced staff in the the fire protection area.
 - c. Increased number of deficiencies identified by licensee staff relative to Fire Brigade staffing and qualification.
 - d. Insufficient independent overview of fire protection by QA.
2. The inspectors observed that the above noted deficiencies appear to warrant a prompt and clear statement of continued commitment to fire protection by licensee management. In this regard, the licensee was requested to perform a thorough review of all open fire protection commitments and provide the NRC with a revised plan of action, addressing the above noted concerns.

Summary of Open Items: Two open items were closed and three open items were updated.

DETAILS

1. Persons Contacted

Sacramento Municipal Utility District (SMUD)

- *W. Peabody, Manager, Technical Services
- *T. Kahn, Configuration Manager
- *W. Bennett, Technical Services
- *J. Reese, Radiation Protection
- *J. Meyer, Quality Assurance
- *T. Tucker, Fire Protection
- *P. Lyndon, Fire Protection
- *J. Delezenski, Fire Protection
- *K. Zimmerman, Fire Protection
- *D. Swank, Nuclear Licensing

NRC

- *R. Huey, Chief, Engineering Section
- *P. Qualls, Resident Inspector

*Denotes those attending the exit meeting held on September 29, 1989.

2. Status of Fire Protection Program Implementation

The inspector performed a review of the following program elements to ascertain the status of the programs implementation during the current shutdown mode:

A. Technical Specifications applicable to the current mode of operation:

- (1) 1.11 Fire Suppression System Definition.
- (2) 3.14.1 Suppression/Detection Instrumentation.
- (3) 3.14.2 Water Systems.
- (4) 3.14.3 Spray/Sprinkler Systems.
- (5) 3.14.4 CO2 Systems.
- (6) 3.14.5 Fire Hose Stations.
- (7) 3.14.6 Fire Barriers/Penetration Seals

B. Technical Specification Surveillances

<u>Number</u>	<u>Title</u>
SP 5,6	Fire Pump & Power Supplies.

SP 306	Weekly Surveillance of Fire Systems.
SP 705,706	Annual Surveillance of Fire Pumps.
SP 721	Refueling Interval FP System Surveillance.
SP 721	Refueling Interval Spray Sprinkler/Hose Station Surveillance.
SP 712	Bus Duct Fire Stops.
SP 724	Surveillance of Fire Barrier Wraps.
SP 736	Monthly Surveillance of Alarm Circuits

In general, implementation of Technical Specification requirements appeared to be satisfactory. However, implementation of corrective actions for previously identified program deficiencies had been curtailed.

Staffing levels had been reduced to a minimum on the basis of the current shutdown mode and reduced plant activities. This minimum staffing level did not appear to be sufficient to consistently implement the fire protection program requirements that are required during the current shutdown mode and during future plant modes as decommissioning activities increase. Inspector interviews with various members of the licensee's technical staff indicated that employee morale was low and the staff appeared to be uncertain with regard to future employment or management expectations. The Operations Fire Protection Supervisor informed the inspector that the reason for his resignation, which was announced on the day of the inspection exit meeting, was his uncertainty about licensee management expectation and commitment to maintaining the fire protection program. Although the licensee has taken steps to retain certain key personnel, additional management attention appears warranted to ensure continued retention of proper levels of experienced fire protection and quality oversight personnel.

C. Technical Specification Fire Brigade Staffing Levels

Technical Specification 6.2.2 requires the fire brigade be manned by five fire brigade members at all times. The inspector's interview with operations personnel and review of Control Room logs for operations shift manning, indicated that a minimum of seven personnel on operations shift crews are being maintained during the current shutdown mode. A minimum of four of the seven shift crew members are required to be fire brigade qualified and assigned to the fire brigade, in addition to one Radiation Protection Technician in accordance with Operations Procedure No. OAP 0001.

According to Control Room logs, some shift manning compliments have been composed of an abundance of fire brigade qualified operations personnel, while other shift crews have been composed of insufficient personnel to meet Technical Specification fire brigade

manning requirements. In this regard the inspector noted that four Potential Deviation from Quality (PDQ) reports (Nos. 89-691, 89-300, 88-1889 and 88-1125) were issued during the period May 31, 1988 through September 27, 1989, documenting fire brigade staffing deficiencies that were associated with Shift Supervisors' failure to assign qualified operations personnel to the fire brigade.

The inspector observed that licensee control over the assignment of qualified personnel to the fire brigade does not appear to be adequate. In particular, licensee procedures for operator shift relief did not require assignment of fire brigade duties to specific qualified personnel and records of these assignments on each shift are not kept in an auditable manner. Although it can be established from Control Room logs that a number of fire brigade qualified personnel were on duty during a shift, it cannot clearly be established which personnel were assigned fire brigade duties. Based on the inspector's review of this issue, the four PDQ's regarding deficiencies in fire brigade staffing levels appear to be attributed to the following:

- (1) Minimum staffing levels on operation shift crews.
- (2) Poor coordination of training qualifications for operations personnel between operations and the training department.
- (3) Inadequate control over assignment and tracking of fire brigade responsibilities on each shift.

The licensee indicated that corrective actions implemented for this concern will be included in the licensee's previously committed November 30, 1989, submittal to Region V, reassessing current licensee commitments.

D. Previous NRC Commitments

(1) Fire Hose Stations Inside Containment Interim Measures

The inspector verified that interim measures previously committed to the NRC for nonconforming fire hose stations inside containment were satisfactorily in place. In addition, because of this interim measure, the licensee indicated that consideration would be given to decreasing the fire potential inside containment (e.g. wood scaffolding, lubricating oil, etc) in anticipation of future reactor decommissioning activities.

(2) Fire Brigade Training

In meetings with Region V, as documented in Inspection Report No. 312/88-38 (followup to Open Item 312/87-39-02) and licensee internal memorandum No. NL 89-417, dated May 2, 1989, the licensee committed to submit by June 1989 a schedule for providing internal structural firefighting training to the fire brigade. However, the inspector noted that the licensee has suspended plans (Design Change Package (DCP) No. R-89-0071) for

constructing a certified burn facility to provide this training.

Furthermore, additional fire brigade concerns appear to exist in fire brigade member training qualifications as is evidenced by a licensee identified training deficiency disclosed during the inspection on September 27, 1989 (PDO No. 89-690), regarding 7 students in a fire brigade training class wearing respiratory equipment without completing the required respiratory equipment training.

The licensee indicated that a revised schedule for implementing this NRC commitment and corrective actions for other fire brigade training deficiencies will be included in a November 30, 1989, submittal to Region V.

(3) Rebuilding of Fire Pumps

Region V Inspection Report Nos. 312/87-49 and 312/88-38 document the NRC's understanding of the licensee plans to rebuild both fire pumps to satisfy pump manufacturer design criteria during the cycle 8 refueling outage.

However, the licensee stated in Revision 1 to LER No. 87-29, that "The fire protection water system electric driven fire pump (P-440) and diesel driven fire pump (P-996) have both demonstrated their ability to perform their intended functions during surveillance tests. The discrepancies noted are, therefore, judged by the District not to be significant".

Based on interviews with the licensee's staff and the review of baseline testing conducted on both the electric and diesel fire pumps on January 14 and April 18, 1988; and Surveillance test results from tests performed on July 17 and July 24, 1989, the inspector determined that it is apparent that both pumps continue to operate in a degraded condition.

Although Design Change Package (DCP) Nos. R880065AA and R880065AB were issued by the licensee for the pump rebuilding work to be done, and the necessary parts were ordered and received, implementation of this work was suspended due to the plant's current shutdown mode.

According to interviews with members of the licensee staff, completion of the modifications to the fire pumps has been curtailed, but the need for performing the pump rebuilding modification will be reassessed by evaluations performed in accordance with RSAP-0215, governing the licensee's Long Range Scoping List (LRSL). This modification is identified as Item No. 4010 on the licensee's LRSL.

The licensee agreed to reevaluate the need for fire pump rebuilding and the evaluation will be included in a November 30, 1989, submittal to the NRC.

3. Quality Assurance Involvement in Fire Program Implementation

The inspector's interviews with the licensee's quality assurance staff disclosed that there has been significantly reduced independent overview of the licensee's implementation of fire protection program requirements by the quality assurance staff, when compared to attention provided prior to the decision to shutdown the plant. No quality assurance/control audits or surveillances have been performed in this area since June 1989, and none were scheduled, primarily due to reductions in the quality assurance staff.

The licensee indicated that corrective actions for this condition will be included in a November 30, 1989 submittal to Region V.

4. Licensee Actions on Previous Inspection Findings (92701)

On the basis of the plant's shutdown mode and associated special circumstances, the licensee was in the process of performing a re-analysis of scheduled plant modifications in accordance with the licensee's Long Range Scope List Procedure No. RSAP 0215. Based on the inspector's review of the licensee's list of systems required for this operating mode (Cold Shutdown/Refueling), the inspector determined that some of the previously scheduled fire protection plant modifications could be suspended or closed as follows until a decision is made to change the plant's mode of operation:

- A. (Suspended) Open Item 312/89-01-06, "Reliability of Electrical Distribution System/Breaker Coordination" (suspended per RSAP 0215 evaluation). This item identified an apparent lack of appropriate consideration being given to maintaining circuit breaker/fuse coordination schemes by the licensee.

On the basis of the licensee's current shutdown mode and plans for decommissioning, the noted concerns with the electrical distribution system will have no adverse impact on the plant.

- B. (Suspended) Open Item 312/87-49-01 - "Nonconforming Containment Hose Stations". This item identified the NRC's concern that firefighting standpipe hose stations inside containment did not appear to be of adequate design for firefighting purposes.

In response to this concern, the licensee implemented interim compensatory measures by providing an alternate means of water supply for firefighting inside containment.

The inspector verified that the interim measures for supplying firefighting water means from the Auxiliary Building were acceptable.

- C. (Closed) LER 87-29-LO - "Fire Protection Deficiencies" The licensee identified to the NRC in this LER that a number of fire protection program features were not in conformance with Technical Specifications and previous NRC commitments.

Subsequently, the licensee submitted revision 1 to LER-87-29 which modified the status of the conditions reported in the original LER. On the basis that each of the conditions discussed in the original

LER are discussed in revision 1 to the LER, the original LER is considered closed.

- D. (Suspended) LER 87-29-L1 - "Fire Protection Program Deficiencies" - On the basis of the licensee's re-analysis of planned plant modifications in accordance with the licensee's Long Range Scope List Procedure No. RSAP 0215, corrective action for fire protection program features discussed in this LER are being suspended, except as discussed in paragraph 3 of the report.
- E. (Closed) LER 88-09-L0 - "Fire Barrier Penetration Deficiencies". The licensee reported to the NRC in this LER that fire barrier penetration deficiencies existed due to personnel error during maintenance and surveillance testing activities.

The licensee's corrective action for these conditions included revision of appropriate procedures to more clearly delineate personnel responsibilities regarding fire barrier operability. Procedure No. RSAP-0227 "Control of Fire Protection Limiting Conditions for Operation and Impairments" and Surveillance Procedure Nos. SP.1009 and SP.1011 were reviewed by the inspector. The procedures appeared to contain instructions that require increased emphasis on personnel use of fire barrier penetration seal detail drawings, and the responsibilities of Shift Supervisor and the operations staff to maintain fire barrier integrity were more prescriptive. On this basis, this item is considered closed.

5. Exit Meeting (30703)

An exit meeting was held with the licensee's staff on September 29, 1989. The items of concern in this report were discussed at that time. The licensee acknowledged the scope and content of the inspection findings.