



SACRAMENTO MUNICIPAL UTILITY DISTRICT P. O. Box 15830, Sacramento CA 95852-1830, (916) 452-3211
AN ELECTRIC SYSTEM SERVING THE HEART OF CALIFORNIA

NL 89-729

December 15, 1989

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Docket No. 50-312
Rancho Seco Nuclear Generating Station
License No. DPR-54
OPERATING PLANT STATUS REPORT

Attention: George Knighton

Enclosed is the November 1989 Monthly Operating Plant Status Report for the Rancho Seco Nuclear Generating Station. The District submits this report pursuant to Technical Specification 6.9.3.

Sincerely,

Steve L. Crunk
Nuclear Licensing Manager

Encl (5)

cc w/encl: J. B. Martin, NRC, Walnut Creek
A. D'Angelo, NRC, Rancho Seco
INPO
R. Twilley, Jr.

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NOVEMBER 1989

SUMMARY OF PLANT OPERATIONS

Rancho Seco entered refueling shutdown on October 16 at 0815 hours when vessel head closure bolt detensioning began. Refueling operation was entered on November 6 at 1030 hours when the reactor vessel head was lifted off the top of the reactor. The plenum was removed the following day. Fuel offloading began on November 28 and continued through the end of the month.

SUMMARY OF CHANGES IN ACCORDANCE WITH 10 CFR 50.59

The plant staff accepted documentation packages in November 1989 for the facility changes described below which required detailed safety analyses. These changes were reviewed in accordance with the Technical Specifications by the Plant Review Committee (PRC) and the Management Safety Review Committee (MSRC). There were no documentation packages completed for procedure changes, tests, or experiments during November 1989.

1. DCP R88-0061AB replaced the water hydraulic power unit with a pneumatic system to actuate the Main Fuel Handling Bridge (MFHB) fuel and control rod grapples.

None of the fuel handling accidents evaluated in the USAR are associated with the MFHB. Previously evaluated equipment malfunctions associated with the MFHB are not affected by converting the means of fuel grapple actuation from hydraulic to pneumatic power. The fuel grapple position interlock permitting vertical movement is entirely independent of the type of grapple actuation and the mechanical grapple mechanism which locks the grapple on the assembly after actuation is not changed by this DCP. The new pneumatic system cannot increase the severity of the release of activity due to any of the equipment malfunctions previously evaluated in the USAR.

Converting the fuel mast to pneumatic actuation does not create any new equipment failure modes or any new types of accidents not previously evaluated in the USAR. All new equipment is equal to or better than the original equipment. The fuel grapple self-locking mechanism is independent of the type of actuator power. Loss of pneumatic power will not cause a fuel assembly to drop. No safety feature of the MFHB has been compromised to accommodate the hydraulic to pneumatic conversion.

This modification does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the USAR, nor is the possibility for an accident or malfunction of a different type than any evaluated previously in the USAR created. This change does not involve an Unreviewed Safety Question.

SUMMARY OF CHANGES IN ACCORDANCE WITH 10 CFR 50.59 (Continued)

2. Mechanical work was done under DCP R88-0061AE to upgrade the cable drive system installed on fuel transfer system "A" under ECN A-5261B, to modify the "B" system to duplicate the upgraded "A" system, and for both the "A" and "B" systems, to upgrade the upender hydraulic system and to relocate the underwater proximity switches above water.

None of the fuel handling accidents evaluated in the USAR involve the fuel transfer system and the probability of any one of them occurring is not increased by the fuel transfer system upgrades included in this DCP. No malfunction of any fuel transfer equipment has been previously evaluated in the USAR. The fuel transfer system failure modes remain unchanged by the equipment upgrades covered by this DCP. The main effect of the fuel transfer system equipment upgrades is to enhance system safety and reliability.

These changes do not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the USAR, nor is the possibility for an accident or malfunction of a different type than any evaluated previously in the USAR created. These modifications do not involve an Unreviewed Safety Question.

MAJOR SAFETY-RELATED MAINTENANCE, TESTS AND MODIFICATIONS NOT REQUIRING DETAILED SAFETY ANALYSES

1. Routine maintenance was performed on the "A" Bruce-GM diesel generator. Dehumidifiers were installed on the turbine-generator system to prevent corrosion. Divers performed leak detection work in the spent fuel pool. Work was done to resolve a minor problem with one of the carriages used to transfer fuel assemblies from the containment building to the spent fuel building.
2. DCP R88-0052AB provided an alternate means of keeping control air pressurized when the starting air manual isolation valves are closed. This is a maintenance upgrade.
3. Major DCP R88-0061 covers the modifications required to upgrade the Fuel Handling System (FHS).

Sub DCP R88-0061AA provided the mechanical design changes to improve the operability of the MFHB trolley and masts.

MFHB modular control system electrical work was done under Sub DCP R88-0061AC.

Mechanical installation of the TV positioning system for the MFHB was done under Sub DCP R88-0061AD.

**MAJOR SAFETY-RELATED MAINTENANCE, TESTS AND MODIFICATIONS NOT REQUIRING
DETAILED SAFETY ANALYSES (Continued)**

Sub DCP R88-0061AF, Revision 0, provided the necessary electrical power and controls for Fuel Transfer Systems "A" and "B" modifications to support Sub DCP R88-0061AE.

Sub DCP R88-0061AG upgraded the underwater lighting of the fuel transfer canal in the Reactor Building and the Spent Fuel Storage Pool of the Fuel Storage Building to bring the lighting up to present design standards.

4. Special Test Procedure STP.1232, Main Fuel Handling Bridge Operational Test, was performed to verify operating functions of the MFHB and to verify that the controls, instrumentation and TV positioning system for the MFHB operate satisfactorily. Eighteen test deficiencies were identified. Twelve were procedure related and resolved by procedure changes. Three were due to misalignment of newly installed limit switches and actuating cams for bridge and trolley control. Adjustment and relocation of the effected equipment was completed and subsequent retest closed the test deficiencies. One test deficiency was due to sticking in the Control Rod Assembly Mast. The guide rollers were adjusted and smooth operation closed the test deficiency. The fuel assembly hoist speed was too fast and retested satisfactory after adjustment resolving another test deficiency. The last test deficiency was due to a need for bridge roller adjustment. When attempting to grapple the dummy fuel assembly in the "B" upender, the grapple did not fully engage. After adjusting the bridge rollers, grappling at the same location was successful which closed the last test deficiency. All test deficiencies are closed and all acceptance criteria met.
5. Special Test Procedure STP.1238, Fuel Handling Transfer System Functional Test, was performed to verify operability of the transfer carriages, drive system and upender mechanisms, controls for both the "A" and "B" fuel transfer systems, and the interlocks and permissives between the upenders, the carriages and the MFHB. Eleven test deficiencies were identified and resolved. All acceptance criteria were met by both carriage drive systems.
6. The purpose of Special Test Procedure STP.1306, Test For Fuel Handling System Underwater Lighting, was to verify that the new underwater lighting installed per DCP R88-0061AG operates from the correct circuit breakers while submerged. The operability of all 50 underwater lamps was verified. The test proceeded without any test deficiencies. All acceptance criteria were satisfied.

REFUELING INFORMATION REQUEST

1. Name of Facility Rancho Seco
2. Scheduled date for next refueling shutdown: *
3. Scheduled date for restart following refueling: *
4. Technical Specification change or other license amendment required: *
5. Scheduled date(s) for submitting proposed licensing action: *
6. Important licensing considerations associated with refueling: *
7. Number of fuel assemblies:
 - a) In the core: 177**
 - b) In the Spent Fuel Pool: 316**
8. Present licensed spent fuel capacity: 1080
9. Projected date of the last refueling that can be discharged to the Spent Fuel Pool: December 3, 2001

* Plant shut down June 7 following negative outcome of public vote regarding continued operation of Rancho Seco by SMUD.

** Fuel offloading began November 28. This number does not reflect fuel offloading.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-312
 UNIT Rancho Seco
 DATE 11/30/89
 COMPLETED BY Marla Mueller
 TELEPHONE (916) 452-3211

MONTH November 1989

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>0</u>	17	<u>0</u>
2	<u>0</u>	18	<u>0</u>
3	<u>0</u>	19	<u>0</u>
4	<u>0</u>	20	<u>0</u>
5	<u>0</u>	21	<u>0</u>
6	<u>0</u>	22	<u>0</u>
7	<u>0</u>	23	<u>0</u>
8	<u>0</u>	24	<u>0</u>
9	<u>0</u>	25	<u>0</u>
10	<u>0</u>	26	<u>0</u>
11	<u>0</u>	27	<u>0</u>
12	<u>0</u>	28	<u>0</u>
13	<u>0</u>	29	<u>0</u>
14	<u>0</u>	30	<u>0</u>
15	<u>0</u>	31	<u>0</u>
16	<u>0</u>		

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

OPERATING DATA REPORT

DOCKET NO. 50-312
 DATE 11/30/89
 COMPLETED BY Marla Mueller
 TELEPHONE (916) 452-3211

OPERATING STATUS

1. Unit Name: Rancho Seco Notes:
 2. Reporting Period: November 1989
 3. Licensed Thermal Power (MWt): 2,772
 4. Nameplate Rating (Gross MWe): 963
 5. Design Electrical Rating (Net MWe): 918
 6. Maximum Dependable Capacity (Gross MWe): 917
 7. Maximum Dependable Capacity (Net MWe): 873
 8. If changes occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons: N/A
 9. Power Level to Which Restricted, If Any (Net MWe): N/A
 10. Reasons For Restrictions, If Any: N/A

	This Month	Yr-to-Date	Cumulative
11. Hours in Reporting Period	<u>720*</u>	<u>8,016*</u>	<u>128,184</u>
12. Number of Hours Reactor Was Critical	<u>0</u>	<u>2,355.7</u>	<u>62,221.5</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>2,436.4</u>	<u>12,736.6</u>
14. Hours Generator On-Line	<u>0</u>	<u>2,217.6</u>	<u>57,811.1</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>2,437.3</u>	<u>3,647.5</u>
16. Gross Thermal Energy Generated (MWH)	<u>0</u>	<u>4,623,125</u>	<u>141,951,953</u>
17. Gross Electrical Energy Generated (MWH)	<u>0</u>	<u>1,575,699</u>	<u>46,223,924</u>
18. Net Electrical Energy Generated (MWH)	<u>-4,001</u>	<u>1,418,553</u>	<u>42,462,436</u>
19. Unit Service Factor	<u>0%</u>	<u>27.7%</u>	<u>45.1%</u>
20. Unit Availability Factor	<u>0%</u>	<u>58.1%</u>	<u>47.9%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>0%</u>	<u>20.3%</u>	<u>37.9%</u>
22. Unit Capacity Factor (Using DER Net)	<u>0%</u>	<u>19.3%</u>	<u>36.1%</u>
23. Unit Forced Outage Rate	<u>0%</u>	<u>40.7%</u>	<u>42.7%*</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):	<u>**</u>		
25. If Shut Down At End Of Report Period, Estimated Date of Startup:	<u>**</u>		
26. Units In Test Status (Prior to Commercial Operation):	Forecast	Achieved	
INITIAL CRITICALITY	<u>N/A</u>	<u>N/A</u>	
INITIAL ELECTRICITY	<u>N/A</u>	<u>N/A</u>	
COMMERCIAL OPERATION	<u>N/A</u>	<u>N/A</u>	

* Corrections for October: 745 (Month); 7,296 (Year)

**Plant shut down June 7 following negative outcome of public vote regarding continued operation of Rancho Seco by SMUD.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH November 1989

DOCKET NO. 50-312

UNIT NAME Rancho Seco

DATE 11-30-89

COMPLETED BY M. Mueller

TELEPHONE (916) 452-3211

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
20	06-07-89	S	720	F	1	N/A	N/A	N/A	Plant shut down June 7 following negative outcome of public vote regarding continued operation of Rancho Seco by SMUD.

- ¹
F Forced
S Scheduled

- ²
Reason:
A- Equipment Failure (Explain)
B- Maintenance or Test
C- Refueling
D- Regulatory Restriction
E- Operator Training & License Examination
F- Administrative
G- Operational Error (Explain)
H- Other (Explain)

- ³
Method:
1- Manual
2- Manual Scram
3- Automatic Scram
4- Other (Explain)

- ⁴
Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

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Exhibit 1 - Same Source