

JANUARY 1986

SUMMARY OF PLANT OPERATIONS

The plant has been in cold shutdown for the entire month of January.

PERSONNEL CHANGES REQUIRING REPORT

Fred W. Kellie has been promoted to the position of Rancho Seco's Radiation Protection Superintendent. Mr. Kellie was designated as the Chem-Rad Superintendent in June 1985, and had served in that capacity prior to his promotion.

Mr. Kellie joined the District in June 1971 upon graduation from Chico State College with a B.A. Degree in Physical Science (emphasis on Chemistry). Prior to attending college, Mr. Kellie served in the U. S. Navy Nuclear Program as an Engineering Laboratory Technician (ELT) where he ran chemistry and radiological surveys. His advancement with the District consists of the following position:

June, 1971 Senior Chem Rad Assistant
May, 1977 Nuclear Chemist
March, 1981 Assistant Chem-Rad Supervisor
August, 1982 Assistant Superintendent Chem-Rad
June 1985 Chem-Rad Superintendent

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

The documentation for the following facility changes was completed in January. All of the changes have been subjected to the review and approval of the Plant Review Committee (PRC) and the Management Safety Review Committee (MSRC) .

1. The electric motor and actuation for reactor coolant system drain header isolation valve SFV-60003 were replaced. SFV-60003 is located outside of the containment. The change was made to meet the post-LOCA requirements of IE Bulletin 79-01-B.
2. A change was made to provide dual auxiliary feedwater flow (AFW) rate indicators for each steam generator. Thus, a single failure will not eliminate the indication for a AFW piping train. The indications will be provided to the Control Room. The change was made to meet the operation's monitoring requirements of Regulatory Guide 1.97 and the safety grade flow indication requirements of NUREG-0737, IIE, 1.2.2c.
3. The overcurrent relay time dial settings on the 4160V station service transformer breaker S4B05 were changed from 6 to 8 and the 480V switchgear bus supply breaker settings on the 480V switchgear bus supply breaker S3B05 changed from 3 to 7. A coordination study of the protective relaying for associated circuits by common power supply had shown that the control rod drive power supply breaker S3B13 failed to coordinate with the upstream supply breakers S3B05 of the 480V bus S3B and the station service transformer supply breaker S4B05 of the 4160V switchgear S4B. The dial setting changes ensure that the nuclear service electrical distribution bus S3B is not affected by its associated power circuits in the event of a fire in the areas of their routing.

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4. A change was made to initiate integrated control system (ICS) control of auxiliary feedwater flow (AFW) on a low A&B main feedwater (MFW) discharge pressure signal rather than the A&B MFW pumps tripped signal. This change prevents the AFW control valves from closing when the MFW pump trip is re-set and satisfies a District commitment made in the October 23, 1985 meeting with the NRC.
5. SP 207.04B, Weekly RCS Leakage Test, was revised to incorporate a new temperature correction factor table to improve the accuracy in calculating the Tave change during the test. The test Tave boundary was expanded to allow performance of the test between 525 and 585°F. Corrections for the Tave changes are based on curves generated over 5.9°F temperature ranges within this boundary.
6. SP 207.01, Inservice Inspection, was revised to include clarification and expanded descriptions for the District's inservice inspection procedures. These changes were designed to ensure that the procedures are up-to-date and take advantage of new techniques and equipment.
7. New seismic flow response spectra were developed for the auxiliary and spent fuel buildings. The new response spectra will be used for future equipment qualification, design of new piping, and supports for cable trays, ducts, and conduit.
8. A change was made to upgrade thirteen (13) existing doors in the auxiliary building with 3-hour fire rated doors. In addition, two (2) security gates will be installed where doors would adversely affect air flow. These changes were made to meet the requirements of 10 CFR 50, Appendix R.
9. A change was made to modify the reactor building atmosphere monitor (R-15044) to also provide monitoring of the reactor building purge stacks with a wide range gas radiation monitor. This capability is achieved by installing isokinetic probes with flow transmitters on both purge stacks and running a sample line from the stacks to R15044. This change satisfies the NRC's requirements (see Stolz to Rodriguez letter, December 4, 1984) for approval of the utilization of the reactor building equalization system and is in accordance with NUREG 0737 II.F.1. The enhanced monitoring will provide the plant operator with information on plant releases of noble gases, iodines, and particulates for normal plant operation, as well as post-accident operation.
10. Fire detectors were installed in fire areas 14, 7, 8 and the auxiliary feedwater pump area in the tank farm. This modification addresses the District commitment in Section 4.2 of the Safety Evaluation Report (SER) dated February 28, 1978, to provide fire detectors in areas of the plant containing safe shutdown related circuits. The detection systems will only provide an early warning function at the IDADS (Interim Data Acquisition and Display System). No automatic fire suppression will be initiated.
11. Inboard terminations of the cables on Kulka terminal blocks inside the penetration assemblies were lifted and replaced with qualified Raychem splice kits. The change was performed as a result of NRC IE Information Notice 84-47, which identified the subject terminal blocks as not qualified for LOCA/MSLB environment for instrumentation and control cables.

12. Engineering Change Notice (ECN) A-2980, which specified the physical and seismic requirements of the Nuclear Services Electrical Building, was completed. ECN A-2980 was initiated in December, 1980 to provide space for additional electrical equipment to support the Technical Service Center (TSC) and other NUREG 0578 and 0660 requirements.
13. A manual 1 inch valve (RCS-629) was added to line 21581-1" - CA to bypass HV-21515. HV-21515 is a one-way Kerotest y-globe valve used for obtaining gaseous pressurizer samples and the addition of nitrogen into the pressurizer. However, because of the unidirectional flow design of HV-21515 the nitrogen flow rate into the pressurizer is severely limited (see LER 82-20). Addition of RCS-629 allows faster and safer nitrogen admission into the pressurizer.
14. Isolation was provided for eight (8) instrument signals going from shutdown panel H2SD in the 4160 West Switchgear Room to panel H3SSI in the Technical Support Center (TSC). This change was made to ensure an alternate safe shutdown capability of the plant in the case of a fire in the Control Room or TSC. The eight Class 2 instrument signals were:
 - (1) LT-20501A - Steam Generator "A" Level
 - (2) LT 20502A - Steam Generator "B" Level
 - (3) LT-21503D - Pressurizer Level
 - (4) LT-23502C - Make-Up Tank Level
 - (5) PT-20563C - Steam Generator "A" Pressure
 - (6) PD-20543D - Steam Generator "B" Pressure
 - (7) TE-21024C - RCS temperature, cold leg C
 - (8) TE-21025C - RCS temperature, cold leg A
15. The overcurrent trip setting of breakers 3A18 and 3B18 were changed from 375 amperes to 400 amperes. The change was made to increase the margin between the highest expected Nuclear Service Cooling Water (NSCW) pump motor current and the lowest expected trip point of the motor feeder breaker. The change reduces the probability of nuisance trips occurring and is substantially within the current tripping band specified by the NSCW pump manufacturer. The change increases the maximum locked rotor tripping time to 27 seconds (from 26 seconds) which is significantly below the time when pump motor damage is likely to occur.
16. A ground wire was added from terminal point AJ-18 in the S4B11 panel to the 451 ground neutral relay current transformer secondary circuit in order to match field wiring and vendor print to elementary drawing. Current transformer devices over 750 volts in the plant are grounded for safety.
17. A fire protection system was installed in the TSC and the fire systems in the auxiliary building were upgraded to reflect the changes in usage of the existing fire zones. These changes were made to meet the following objectives of Amendment No. 19 to the Facility Operating License:
 - a. Reduce the likelihood of occurrence of widespread fires.
 - b. Promptly detect and extinguish fires.

- c. Maintain the capability of safe shutdown of the plant in the event of a fire.
 - d. Prevent the release of a significant amount of radioactive material in the event of a fire.
18. Embedded security barrier bars were provided in the ventilation ports for rooms 121, 124, 214 and 217 of the auxiliary building. This change resolved the NRC identified problem of ventilation ports not meeting security requirements and does not affect the acceptability for the overall static pressure of the associated fans. The rooms are in the 4160V switchgear area on grade level and the 480V electrical equipment area on the mezzanine level.
19. Sixteen (16) incore thermocouples (2 per channel per quadrant) and their associated connectors were upgraded to Class 1. Cables were installed from the connectors through junction boxes and penetrations to signal isolation cabinets, and from these cabinets to the SPDS and IDADS multiplexors for incore thermocouple temperature indication. This change was made to meet the requirements of NUREG 0737/II.F.2, Regulatory Guide 1.97, and NRC letter to SMUD dated 12/10/82 regarding the inadequate core cooling instrumentation system.
20. The solenoids on the main feedwater and startup feedwater valves were replaced with solenoids that are qualified to withstand the environmental requirements in the tank farm area. The new solenoids meet the requirements of IEEE Standards 323-1974, 344-1975 and 382-1980.
21. Four of the six impeller stages for auxiliary feedwater pump (P-318) were replaced with a slightly larger impeller of the same design. P-318 had a history of low flows and marginal performance. The change was required by the pumps failure to meet the requirements of surveillance procedure SP 210.01A. All associated parameter changes were within the design ratings of the affected components.
22. To meet the requirements of NUREG 0578, paragraph 2.1.7(a) and NUREG 0737, paragraph II E.1.2, the following changes were made:
- a. A circuit was provided to automatically load AFW pump P-319 on bus 4A with and without the diesel connected to the bus.
 - b. An ESFAS signal for automatic initiation of P-319 was added to Channel A.
 - c. Channel A ESFAS initiating signal for P-318 turbine steam inlet valve FV-30801 was deleted.
 - d. The "A" diesel generator room supply and exhaust fans were moved from load block 3 to load block 5.

These changes also satisfy the District's commitment (SMUD to NRC letter 4/15/82) to automatically load one of the AFW pumps on a diesel generator upon initiation of ESFAS.

23. A design change was made to provide a suitable, seismically qualified bracket to hold the Self Powered Neutron Detector (SPND) Disposal System Tall Transfer Cask during power operation. The design change was made to ensure that the cask will not come loose during a seismic event and impact the RCS or containment, or have an adverse effect on nuclear safety.
24. An insulated enclosure was provided for PT-20543A and B to ensure that their operating temperatures are maintained within the vendor specified temperature environment. These instruments are used to assure proper ICS control of turbine bypass valves and atmospheric dump valves. The change will protect the steam line pressure transmitters in the event of a temperature transient resulting from a steam line break.

MAJOR ITEMS OF SAFETY RELATED MAINTENANCE

1. The hydrogen analyzer pressure regulator (PCV-53817) was replaced and verified to operate properly. The replacement was required by the Environmental Qualification Maintenance and Replacement Schedule.
2. The drain valve from the spray header (RCS-502) was found to have a body to bonnet leak. The valve was disassembled, the internal seating/sealing surfaces found to be acceptable, and the valve was reassembled with a new bonnet gasket. The valve stroked successfully after the repair.

REFUELING INFORMATION REQUEST

1. Name of Facility Rancho Seco Unit 1
2. Scheduled date for next refueling shutdown: Jan 1, 1987
3. Scheduled date for restart following refueling: May 1, 1987
4. Technical Specification change or other license amendment required:
 - a) Change to Rod Index vs Power Level Curve (TS 3.5.2)
 - b) Change to Core Imbalance vs Power Level Curve (TS 3.5.2)
 - c) Tilt Limits (TS 3.5.2)
5. Scheduled date(s) for submitting proposed licensing action: Aug 1, 1986
6. Important licensing considerations associated with refueling: N/A
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

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-312

UNIT Rancho Seco Unit 1

DATE 01-31-86

COMPLETED BY R. Colombo

TELEPHONE (916) 452-3211

MONTH January 1986

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	<u>0</u>
2	<u>0</u>
3	<u>0</u>
4	<u>0</u>
5	<u>0</u>
6	<u>0</u>
7	<u>0</u>
8	<u>0</u>
9	<u>0</u>
10	<u>0</u>
11	<u>0</u>
12	<u>0</u>
13	<u>0</u>
14	<u>0</u>
15	<u>0</u>
16	<u>0</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	<u>0</u>
18	<u>0</u>
19	<u>0</u>
20	<u>0</u>
21	<u>0</u>
22	<u>0</u>
23	<u>0</u>
24	<u>0</u>
25	<u>0</u>
26	<u>0</u>
27	<u>0</u>
28	<u>0</u>
29	<u>0</u>
30	<u>0</u>
31	<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 01/31/86
 COMPLETED BY R. Colombo
 TELEPHONE (916) 452-3211

OPERATING STATUS

NOTE:

1. Unit Name: Rancho Seco Unit 1
2. Reporting Period: January 1986
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	744	744	94,609
12. Number of Hours Reactor Was Critical	0	0	54,322
13. Reactor Reserve Shutdown Hours	0	0	10,300.2
14. Hours Generator On-Line	0	0	50,363.8
15. Unit Reserve Shutdown Hours	0	0	1,210.2
16. Gross Thermal Energy Generated (MWH)	0	0	127,861,688
17. Gross Electrical Energy Generated (MWH)	0	0	41,523,187*
18. Net Electrical Energy Generated (MWH)	0	0	38,527,432
19. Unit Service Factor	0.0%	0.0%	53.2%
20. Unit Availability Factor	0.0%	0.0%	54.5%
21. Unit Capacity Factor (Using MDC Net)	0.0%	0.0%	46.6%
22. Unit Capacity Factor (Using DER Net)	0.0%	0.0%	44.4%
23. Unit Forced Outage Rate	100.0%	100.0%	30.7%
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):	N/A		

25. If Shut Down At End Of Report Period, Estimated Date of Startup: March 8, 1986

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>

* Corrected from the September 1985 Operations Report.

REPORT MONTH JANUARY

DOCKET NO. 50-312
UNIT NAME Rancho Seco Unit No. 1
DATE January 31, 1986
COMPLETED BY R. W. Colombo
TELEPHONE (916) 542-3211

Seq.	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
1	85-12-26	F	744	A	3	85-25	CB	INSTRU	<p>Reactor trip on high pressure. Total loss of all ICS power. Corrective actions still under investigation.</p> <p>Note: Reactor trip of 10/2/85 was reported as a manual shutdown (1) should have been an automatic scram (3).</p>

5 Exhibit I - Same Source



SMUD

SACRAMENTO MUNICIPAL UTILITY DISTRICT 6201 S Street, P.O. Box 15830, Sacramento CA 95852-1830, (916) 452-3211
AN ELECTRIC SYSTEM SERVING THE HEART OF CALIFORNIA

RWC 86-74

February 7, 1986

DIRECTOR
OFFICE OF INSPECTION AND ENFORCEMENT
U S NUCLEAR REGULATORY COMMISSION
WASHINGTON D C 20555

OPERATING PLANT STATUS REPORT
DOCKET NO. 50-312

Enclosed is the January 1986 Monthly Plant Status Report for Rancho Seco Unit One.

RW Colombo

R. W. COLOMBO
REGULATORY COMPLIANCE SUPERINTENDENT

Encl (5)

cc: I & E Washington (9)
Region V
MIPC (2)
INPO

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