

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
RANCHO SECO NUCLEAR GENERATING STATION UNIT NO. 1

DOCKET NUMBER (2)

0 5 0 0 0 3 1 2

PAGE (3)

1 OF 0 3

TITLE (4)

REACTOR COOLANT SYSTEM NONISOLABLE LEAK

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)											
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)										
0	6	2	3	8	5	8	5	0	1	0	0	0	0	0	0	0	0	0	0	0
NONE										0	5	0	0	0	0	0	0	0	0	0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8: (Check one or more of the following) (11)

OPERATING MODE (9)	20.402(b)	20.406(a)(1)(i)	20.406(a)(1)(ii)	20.406(a)(1)(iii)	20.406(a)(1)(iv)	20.406(a)(1)(v)	20.406(c)	50.36(c)(1)	50.36(c)(2)	50.73(a)(2)(i)	50.73(a)(2)(ii)	50.73(a)(2)(iii)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vi)	50.73(a)(2)(vii)	50.73(a)(2)(viii)(A)	50.73(a)(2)(viii)(B)	50.73(a)(2)(ix)	73.71(b)	73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
N																						
POWER LEVEL (10)	0	0	0																			

LICENSEE CONTACT FOR THIS LER (12)

NAME
Ron W. Colombo, Regulatory Compliance Supervisor

TELEPHONE NUMBER

AREA CODE

9 1 6 4 5 2 1 - 3 2 1 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
B	A	B	P	S	P	X	9	9	9	Y	

SUPPLEMENTAL REPORT EXPECTED (14)

☒ YES (If yes, complete EXPECTED SUBMISSION DATE)
☐ NO

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR
0 8 3 1 0 8 5

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

With the reactor in hot shutdown, a normal cooldown of the reactor coolant system (RCS) was commenced because of unidentified RCS leakage. Numerous reactor building (RB) drain accumulator tank dump alarms were received and increasing makeup flow and decreasing makeup tank level were observed. Pressurizer level remained relatively constant. The estimated RCS leak rate was 17 gpm at 2145 psig.

The RCS was examined using the RB video cameras and steam was observed in the vicinity of the "B" Once Through Steam Generator (OTSG). As the exact location of the leak could not be identified, a RB entry was conducted. The source of the leak was identified as a crack in the 1-inch high-point vent line from the B-OTSG. This crack was nonisolable and approximately 16,000 gallons of coolant leaked into the RB before the RCS was depressurized.

To thoroughly investigate this incident, a multidepartmental task force was formed. Based on preliminary analyses, the probable cause of the pipe failure was fatigue cracking due to inadequately supported pipe. To examine the possible generic implications of this occurrence, engineering walkdowns of selected sections of Class 1 piping and supports are being conducted. A supplemental LER will be submitted when the task force investigation and walkdowns are completed.

There were no effects on public or plant safety as a result of this event.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
RANCHO SECO NUCLEAR GENERATING STATION NO. 1	050003112	85	0110	010	02	OF	03

TEXT (If more space is required, use additional NRC Form 366A's) (17)

At 0351 on June 23, 1985 a normal plant cooldown was commenced because of unidentified leakage from the reactor coolant system (RCS). Prior to starting the cooldown, with the RCS in hot shutdown at 2145 psig and 532°F, reactor building drain accumulator tank (RBDAT) dump alarms were received at the following times: 0149, 0214, 0227, 0240, 0251, 0301, 0309, 0316, 0323, 0330, and 0337. Based upon the 120 gallon dump volume of the RBDAT, RCS leak rates were calculated between alarms. RCS makeup flow was abnormally high during the period RBDAT dump alarms were received. The output of the makeup pump was sufficient to effectively control pressurizer level. At 0405 RCS leakage was confirmed greater than the Technical Specification limit of 10 gpm and an Unusual Event was declared in accordance with the Rancho Seco Emergency Plan. The estimated RCS leak rate was 17 gpm at 2145 psig.

Control Room operators initially examined the RCS using the reactor building (RB) video camera above the pressurizer and observed steam in the vicinity of the "B" Once Through Steam Generator (OTSG). During visual examination of other sections of the RCS, the panoramic capability on this camera became inoperable. As the camera above the pressurizer could not be rotated, the camera over the fuel transfer canal was subsequently used to observe the leak. The exact source of the steam could not be determined using either camera and plans were made for a RB entry.

At 0734 a team of three individuals entered the RB and identified the source of the leak as a crack in the 1-inch high-point vent line from the B-OTSG. The crack was nonisolable and approximately 16,000 gallons of coolant leaked into the RB before the RCS could be depressurized. At 1838 the reactor cooldown to cold shutdown was completed and the activation of the Emergency Plan was secured.

Prior to this occurrence the reactor had undergone a refueling outage and, therefore, the activity of the reactor coolant was relatively low. Because of the low activity, there was no observable increase in RB surface or airborne contamination attributable to the RCS leak.

As reactor coolant pumps (RCPs) C and D were located under the leaking pipe, the pumps were sprayed with steam and water from the RCS leak. The motor winding insulation of both RCPs was wetted, however, only the insulation of RCP C showed any decrease in resistance. Immediately prior to this occurrence, both of these RCPs were running. Pump C was secured at 0351 when the cooldown began and RCP D remained in operation for the duration of the leak.

Based on preliminary analyses, the probable cause of the pipe failure was fatigue cracking due to a deficiency in the as-built piping/support configuration. Corrective action for this incident will include at least the following:

- 1) Repair high-point vent line and install supports as designed,
- 2) Assignment of a multidisciplinary task force to thoroughly evaluate this occurrence and determine the root cause of the cracked high-point vent line,
- 3) Engineering walkdown and evaluation of 100% of the seismic Class 1 pipe support

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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		0	1	0	0	3	OF

TEXT (If more space is required, use additional NRC Form 368A's) (17)

modifications made since the completion of the walkdowns required by I&E Bulletin (IEB) 79-14,

4) Additional walkdowns of the safety-related, seismic, Class 1 piping and supports defined in the Rancho Seco USAR but not covered in the original IEB 79-14 walkdowns,

5) Dryout of the motor winding insulation of RCPs C and D, and

6) Repair of the RB video camera above the pressurizer to allow unrestricted rotation.

A supplemental LER will be submitted when the task force investigation and walkdowns are completed. The supplemental LER will also include an assessment of the potential safety consequences if this incident had occurred at 100% power after prolonged continuous operation.

There were no effects on public or plant safety as a result of this event.



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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

RJR 85-340

July 23, 1985

J B MARTIN, REGIONAL ADMINISTRATOR
REGION V OFFICE OF INSPECTION AND ENFORCEMENT
ATTN DOCUMENT CONTROL DESK
U S NUCLEAR REGULATORY COMMISSION
WASHINGTON DC 20555

DOCKET NO. 50-312
LICENSE NO. DPR-54
LICENSEE EVENT REPORT NUMBER 85-10

In accordance with the requirements of 10 CFR 50.73(a)(2)(ii), the Sacramento Municipal Utility District hereby submits Licensee Event Report Number 85-10.

If there are any questions concerning this report, please contact Mr. Ron Colombo at the Rancho Seco Nuclear Generating Station Unit No. 1.

R J RODRIGUEZ
ASSISTANT GENERAL MANAGER,
NUCLEAR

Attachment

cc: Region V (2)
INPO

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