

# Southern California Edison Company

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F. R. NANDY MANAGER OF NUCLEAR LICENSING February 23, 1990

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U. S. Nuclear Regulatory Commission Document Control Desk Washington, D.C. 20555

Subject: Docket Nos. 50-206, 50-361 and 50-362 Annual RCS Specific Activity Report San Onofre Nuclear Generating Station, Units 1, 2 and 3

The purpose of this submittal is to provide the Annual Reactor Coolant System (RCS) Specific Activity Report for 1989 required by Technical Specifications (TS) 6.9.1.5 to Provisional Operating License No. DPR-13 for San Onofre Unit 1 and Facility Operating Licenses NPF-10 and NPF-15 for San Onofre Units 2 and 3, respectively. This report provides information concerning the periods of time when RCS specific activity exceeded the limits of TS 3.1.1 for Unit 1 and TS 3.4.7 for Units 2 and 3. Unit 2 specific activity exceeded TS limits on two occasions in 1989. There were no instances in 1989 in which Unit 1 or Unit 3 RCS specific activity exceeded TS limits.

If you require any additional information, please let me know.

Very truly yours,

FRMand

Enclosures

cc: J. B. Martin (Regional Administrator, NRC Region V)
C. W. Caldwell (NRC Senior Resident Inspector, Units 1, 2 and 3) Institute of Nuclear Power Operations (INPO)



### 1989 RCS SPECIFIC ACTIVITY REPORT

### SOUTHERN CALIFORNIA EDISON COMPANY SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 1, 2 AND 3 DOCKET NOS. 50-206, 50-361 AND 50-362

On January 12, 1989, at 1725, with Unit 2 in Mode 3, following a reactor shutdown required by plant Technical Specifications, analysis of a Reactor Coolant System (RCS) sample indicated that RCS specific activity exceeded 1.0 microcurie/gram Dose Equivalent (DE) I-131 due to iodine spiking. A combination of purification system operation and iodine isotope decay resulted in reducing RCS specific activity to less than 1.0 microcurie/gram DE I-131 by 0400 on January 13, 1989. The time duration that the specific activity of the primary coolant exceeded the radio-iodine limit for this event was approximately 10 hours and 35 minutes.

On May 13, 1989, at 1032, with Unit 2 in Mode 3, following a reactor shutdown to investigate increased primary to secondary steam generator leakage, a RCS sample indicated RCS specific activity exceeded 1.0 microcurie/gram DE I-131 due to iodine spiking. A combination of purification system operation and iodine isotope decay resulted in reducing RCS specific activity to less than 1.0 microcurie/gram DE I-131 by 1415 the same day. The time duration that the specific activity of the primary coolant exceeded the radio-iodine limit for this event was approximately 3 hours and 43 minutes.

Additional information required by Technical Specification 6.9.1.5 is presented below. Figures 1 and 2 provide a graphic presentation of I-131 concentration and I-133 (the other radio-iodine isotope selected for this purpose) concentration in microcuries/gram as a function of time for the duration of the specific activity above the steady state level for the January 12, 1989 and the May 13, 1989 events.

#### **REACTOR POWER HISTORY**

#### <u>Period</u>

01/10/89, 1725 to 01/11/89, 1800 01/11/89, 1800 to 01/11/89, 2330 01/11/89, 2330 to 01/12/89, 0915 01/12/89, 0915 to 01/12/89, 1430 01/12/89, 1430 to 01/12/89, 1725

05/11/89, 1032 to 05/13/89, 0120 05/13/89, 0120 to 05/13/89, 0636 05/13/89, 0636 to 05/13/89, 1032 **Reactor Power** 

100% 100% decreasing to 80% 80% 80% decreasing to 0% 0%

100% 100% decreasing to 0% 0%

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# REACTOR COOLANT SYSTEM SPECIFIC ACTIVITY

# Date/Time of Sample

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4.

### DE I-131 (uCi/gram)

01/11/89, 0045 01/12/89, 1725 01/12/89, 2114 01/13/89, 0026	0.090 1.080 1.510 1.240
01/13/89, 0400	0.926
05/13/89, 0723	0.536
05/13/89, 1032	1.500
05/13/89, 1415	0.980

#### CLEANUP FLOW HISTORY

Period	Average Cleanup Flow (gpm)
01/10/89, 1650 to 01/12/89, 0950	44.05
01/12/89, 0950 to 01/12/89, 1750	84.45 *
05/11/89, 0950 to 05/13/89, 0050	44.19
05/13/89, 0050 to 05/13/89, 1050	91.41 *

\* Cleanup flow is the average flow with two charging pumps in operation.



ISOTOPE CONCENTRATION (uCi/gm)

FIGURE 1



