

## LICENSEE EVENT REPORT (LER)

|  |  |  |  |  |  |  |  |  |  |                                      |  |  |  |                      |  |
|--|--|--|--|--|--|--|--|--|--|--------------------------------------|--|--|--|----------------------|--|
| FACILITY NAME (1)<br>SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 3 |  |  |  |  |  |  |  |  |  | DOCKET NUMBER (2)<br>0 5 0 0 0 3 6 2 |  |  |  | PAGE (3)<br>1 OF 0 6 |  |
|--|--|--|--|--|--|--|--|--|--|--------------------------------------|--|--|--|----------------------|--|

TITLE (4)

UNIDENTIFIED REACTOR COOLANT SYSTEM LEAKAGE

| EVENT DATE (5)            |     |      | LER NUMBER (6)   |             |             | REPORT DATE (7)                                    |     |      | OTHER FACILITIES INVOLVED (8)                       |  |                   |  |
|---------------------------|-----|------|--|-------------|-------------|--|-----|------|---|--|-------------------|--|
| MONTH                     | DAY | YEAR | YEAR   | SEQ. NUMBER | REV. NUMBER | MONTH  | DAY | YEAR | FACILITY NAMES                                      |  | DOCKET NUMBER (S) |  |
| 0 1                       | 2 7 | 8 5  | 8 5  | 0 0 1       | 0 0         | 0 2  | 2 6 | 8 5  |   |  | 0 5 0 0 0         |  |
| OPERATING MODE (9)<br>1   |     |      | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11) |             |             |  |     |      |   |  |                   |  |
| POWER LEVEL (10)<br>1 0 0 |     |      | 20.402(b)  |             |             | 20.405(c)  |     |      | <input checked="" type="checkbox"/> 50.73(a)(2)(iv) |  |                   | 73.71(b)   |
|                           |     |      | 20.405(a)(1)(i)  |             |             | 50.36(c)(1)  |     |      | 50.73(a)(2)(v)                                      |  |                   | 73.71(c)   |
|                           |     |      | 20.405(a)(1)(ii)   |             |             | 50.36(c)(2)  |     |      | 50.73(a)(2)(vii)                                    |  |                   | <input checked="" type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 366A) |
|                           |     |      | 20.405(a)(1)(iii)  |             |             | <input checked="" type="checkbox"/> 50.73(a)(2)(i) |     |      | 50.73(a)(2)(viii)(A)                                |  |                   |  |
|                           |     |      | 20.405(a)(1)(iv)   |             |             | 50.73(a)(2)(ii)                                    |     |      | 50.73(a)(2)(viii)(B)                                |  |                   |  |
|                           |     |      | 20.405(a)(1)(v)  |             |             | 50.73(a)(2)(iii)                                   |     |      | 50.73(a)(2)(x)                                      |  |                   |  |

LICENSEE CONTACT FOR THIS LER (12)

|                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NAME<br>J. G. HAYNES, STATION MANAGER |  |  |  |  |  |  |  |  |  | TELEPHONE NUMBER<br>AREA CODE<br>7 1 4 4 9 2 - 1 7 7 0 0 |  |  |  |
|---------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|

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

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NRC | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NRC |
|-------|--------|-----------|--------------|-------------------|-------|--------|-----------|--------------|-------------------|
| B     | A/B    | X/C/V     | H/O/3/5      | Y                 |       |        |           |              |                   |
|       |        |           |              |                   |       |        |           |              |                   |
|       |        |           |              |                   |       |        |           |              |                   |

SUPPLEMENTAL REPORT EXPECTED (14)

|   |  |                               |       |     |      |
|---|--|-------------------------------|-------|-----|------|
| YES (If yes, complete EXPECTED SUBMISSION DATE) | <input checked="" type="checkbox"/> NO | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
|   |  |                               |       |     |      |

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

On 1/27/85, at 1320, with Unit 3 in Mode 1 at 100% power, a Reactor Coolant System (RCS) water inventory balance indicated a 2.97 gpm leakage rate, of which 1.73 gpm was determined to be unidentified leakage, exceeding the 1.0 gpm limit of LCO 3.4.5.2. At 1330, the RCS was isolated. At 1350, it was determined the leak rate had not been reduced, and at 1412 a reactor shutdown was commenced and an Unusual Event was declared.

At 2248, and again at 0140 on 1/28/85, Containment Purge Isolation System (CPIS) Train 'A' actuated from containment airborne iodine resulting from the leak. The mini-purge in progress at 2248 was isolated. No purge was in progress at 0140.

Subsequent investigation determined the unidentified leakage was due to failure of the stem packing on Pressurizer Spray Valve 3PV-0100B. The pressurizer spray valve stem packing is currently under repair. To prevent recurrence, the pressurizer spray valve packing and pressurizer spray valve system will be modified during the first refueling outage.

This submittal also provides the report pursuant to Limiting Condition for Operation 3.4.7, Action Statement 'd', for RCS specific activity exceeding 1.0 microcuries/gram Dose Equivalent I-131, which was caused by iodine spiking following the shutdown.

There are no reasonable or credible circumstances which could have increased the severity of this event.

IE22  
11

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

| FACILITY NAME (1)                                | DOCKET NUMBER (2) | LER NUMBER (6) |             |             | PAGE (3) |    |     |
|--|-------------------|----------------|-------------|-------------|----------|----|-----|
|  |                   | YEAR           | SEQ. NUMBER | REV. NUMBER |          |    |     |
| SAN ONOFRE NUCLEAR GENERATING STATION,<br>UNIT 3 | 0 5 0 0 0 3 6 2   | 8 5            | - 0 0 1     | - 0 0       | 0 2      | OF | 0 6 |

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

On January 27, 1985, at 0810, with Unit 3 in Mode 1 at 100% power, operations personnel observed the temperature of the Reactor Coolant Drain Tank (RCDT) (EIIS Component Code TK) to be increasing. At 0900, a four hour Reactor Coolant System (RCS) (EIIS System Code AB) water inventory balance was commenced in accordance with Operations Procedure S023-3-3.37, "Reactor Coolant System Water Inventory Balance." In an attempt to determine the source of the leak, a reactor coolant pump gasket leakage surveillance was performed in accordance with Engineering Procedure S023-V-8.6, "Reactor Coolant Pump Gasket Leakage Monitoring." The gasket leakage surveillance results were satisfactory. At 1320, the 4 hour RCS water inventory balance was completed. The total leakage rate was calculated to be 2.97 gpm, of which 1.73 gpm was unidentified.

At 1330, charging and letdown were secured and a second water inventory balance was commenced with the RCS isolated. At 1350, it was determined that the RCS leakage had not decreased by isolating the RCS, therefore, the water inventory balance calculation was terminated. At 1407, discussions with plant management concluded that the leak was unidentified and could not be isolated. Preparations for plant shutdown were commenced which included returning charging and letdown to service. At 1412, a reactor shutdown was commenced, and in accordance with Emergency Plan Implementing Procedures, an Unusual Event was declared. The Unusual Event was terminated at 1255 on January 28 in accordance with Emergency Plan Implementing Procedures.

Subsequent investigation revealed the cause of the unidentified leakage was failure of the stem packing on Pressurizer Spray Valve 3PV-0100B (EIIS Component Code XCV). Complete valve disassembly, inspection and replacement of the valve stem packing on 3PV-0100A and 3PV-0100B will be accomplished prior to the unit returning to service. Previous investigations determined that the valve stem packing arrangement on the pressurizer spray valves required modification. To prevent recurrence, the pressurizer spray valves and pressurizer spray system will be modified during the first refueling outage for both units. This modification is complete on Unit 2 except for final startup tests.

At 1720 on January 27, with Unit 3 in Mode 2, RCS sample analysis indicated that RCS specific activity exceeded 1.0 microcurie/gram Dose Equivalent (DE) I-131. RCS specific activity was reduced to less than 1.0 microcurie/gram DE I-131 by purification flow at 1705 on January 29, 1985. This event was an indication of iodine spiking. Similar occurrences were previously reported in LERs 83-111, 84-005, 84-013, 84-015, 84-023, 84-037, 84-038, and 84-039.

At 2148, on January 27, while in Mode 3 the Containment Purge Isolation System (CPIS) Train 'A' (EIIS System Code VA) actuated on a high iodine signal from Containment Airborne Radiation Monitor 2RT-7804 (EIIS Component Code RIT). A containment mini-purge in progress was terminated, and all CPIS Train 'A' components actuated as required. Redundant Monitor 2RT-7807 was inoperable for maintenance.

On January 28, at 0140, with purge secured, a second CPIS Train 'A' actuation occurred, again due to high iodine on 2RT-7804. Concurrent with this second high iodine actuation, 2RT-7804 initiated a CPIS noble gas signal. This signal was verified as spurious by operators checking the reading on the noble gas monitor indicator. After each occurrence, the charcoal filters (EIIS Component Code FLT) in 2RT-7804 were replaced and CPIS was restored to operability.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

|   |  |                |                |                |          |    |     |
|---|--|----------------|----------------|----------------|----------|----|-----|
| FACILITY NAME (1)<br><br>SAN ONOFRE NUCLEAR GENERATING STATION,<br>UNIT 3 | DOCKET NUMBER (2)<br><br>0 5 0 0 0 3 6 2 | LER NUMBER (6) |                |                | PAGE (3) |    |     |
|   |  | YEAR           | SEQ.<br>NUMBER | REV.<br>NUMBER |          |    |     |
|   |  | 8 5            | - 0 0 1        | - 0 0          | 0 3      | OF | 0 6 |

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

There are no reasonable or credible circumstances which could have increased the severity of this event. Neither the health and safety of plant personnel nor the public was affected by this event.

Pursuant to Limiting Condition for Operation (LCO) 3.4.7, Action Statement 'd', this submittal also provides the required 30-day written report for the occurrence of RCS high specific activity, which was caused by iodine spiking following the shutdown. Additional information, required by LCO 3.4.7, Action Statement 'd', is provided in the tables below. Although the unit has a degasification path which operates continuously and takes pressurizer steam, condenses it and directs it to Liquid Radwaste, degassing history is not applicable, because this system reduces the noble gas content of the RCS but has no effect on Iodine.

CLEANUP FLOW HISTORY

| <u>PERIOD</u>                  | <u>AVERAGE CLEANUP<br/>FLOW (gpm)</u> |
|--------------------------------|---------------------------------------|
| 1/25/85, 0100 to 1/27/85, 1500 | 81.0                                  |
| 1/27/85, 1500 to 1/27/85, 1800 | 30.3                                  |
| 1/27/85, 1800 to 1/27/85, 2100 | 92.5                                  |
| 1/27/85, 2100 to 1/27/85, 2400 | 44.3                                  |
| 1/27/85, 2400 to 1/28/85, 0816 | 42.5 *                                |
| 1/28/85, 0816 to 1/29/85, 1705 | 85.0 *                                |

\* Hourly cleanup flow data not available. Figure used is taken from average flow with either one or two charging pumps in operation.

REACTOR POWER HISTORY

| <u>PERIOD</u>                  | <u>REACTOR POWER</u> |
|--------------------------------|----------------------|
| 1/25/85, 0100 to 1/27/85, 1400 | 97% Rated Power      |
| 1/27/85, 1400 to 1/27/85, 1700 | 97% to 44%           |
| 1/27/85, 1700 to 1/27/85, 1800 | 44% to 0%            |
| 1/27/85, 1800 to 1/29/85, 1705 | 0%                   |

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

SAN ONOFRE NUCLEAR GENERATING STATION,  
UNIT 3

0 5 0 0 0 3 6 2 8 5 - 0 0 1 - 0 0 0 4 OF 0 6

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

REACTOR COOLANT SYSTEM SPECIFIC ACTIVITY ANALYSIS

| <u>DATE</u> | <u>TIME</u> | <u>DE I-131<br/>MICROCURIES/GRAM</u> |
|-------------|-------------|--------------------------------------|
| 1/27/85     | 1720        | 1.32                                 |
| 1/27/85     | 2120        | 6.83                                 |
| 1/28/85     | 0120        | 8.97                                 |
| 1/28/85     | 0515        | 7.94                                 |
| 1/28/85     | 0750        | 5.90                                 |
| 1/28/85     | 1150        | 5.00                                 |
| 1/28/85     | 1550        | 3.92                                 |
| 1/28/85     | 1950        | 2.76                                 |
| 1/28/85     | 2150        | 2.92                                 |
| 1/29/85     | 0150        | 2.25                                 |
| 1/29/85     | 0550        | 1.79                                 |
| 1/29/85     | 0950        | 1.38                                 |
| 1/29/85     | 1350        | 1.01                                 |
| 1/29/85     | 1705        | 0.83                                 |



## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION  
APPROVED OMB NO. 3150-0104  
EXPIRES 8/31/85

FACILITY NAME (1)

SAN ONOFRE NUCLEAR GENERATING  
STATION, UNIT 3

DOCKET NUMBER (2)

050003162815-0107-0109606

LER NUMBER (6)

YEAR

SEQUENTIAL  
NUMBERREVISION  
NUMBER

PAGE (3)

TEXT (If more space is required, use additional NRC Form 366A (1) (17))

32.000 7.032 9.276 11.254 9.933 10.873 10.386 11.174 10.521 11.144 10.335 10.841 9.944 10.228 9.218 8.945 32.000  
11.136 11.423 12.561 12.135 13.334 12.541 13.532 12.708 13.590 12.572 13.264 12.079 12.548 11.283 11.004 11.000  
34.000 34.000 34.000 35.000 35.000 36.000 36.000 36.000 36.000 36.000 36.000 36.000 36.000 36.000 36.000 36.000

151-05 152-04 153-02 154-04 155-02 156-03 157-01 158-03 159-01 160-03 161-02 162-04 163-02 164-04 165-05  
7.248 4.427 3.278 11.324 10.051 10.861 11.356 11.031 10.311 10.740 9.975 10.225 9.238 8.351 7.211  
8.915 11.014 11.403 12.690 12.259 13.316 12.574 13.392 12.526 13.200 12.130 12.434 11.255 10.923 8.803  
34.000 34.000 35.000 35.000 35.000 36.000 36.000 35.000 34.000 36.000 36.000 36.000 36.000 34.000 34.000

166-05 167-06 168-04 169-02 170-04 171-02 172-04 173-02 174-04 175-02 176-04 177-02 178-04 179-06 180-05  
5.209 4.832 9.139 9.296 10.348 10.024 10.796 10.107 10.748 9.940 10.270 9.234 9.067 8.750 5.175  
6.401 10.920 11.309 11.348 12.732 12.237 13.268 12.411 13.211 12.136 12.606 11.255 11.133 10.708 5.298  
34.000 35.000 35.000 35.000 35.000 36.000 34.000 34.000 36.000 36.000 35.000 38.000 36.000 34.000 34.000

181-05 182-02 183-04 184-02 185-04 186-02 187-04 188-02 189-04 190-02 191-04 192-02 193-05  
5.970 7.516 9.032 9.295 10.260 9.901 10.514 9.857 10.139 9.234 9.014 7.435 5.785  
7.514 9.205 11.151 11.387 12.659 12.121 12.968 12.068 12.481 11.305 11.139 9.058 6.998  
34.000 35.000 38.000 36.000 34.000 34.000 36.000 36.000 38.000 38.000 38.000 36.000 34.000

194-05 195-06 196-04 197-02 198-04 199-02 200-04 201-02 202-04 203-06 204-05  
5.852 8.846 8.984 9.208 10.080 9.602 10.058 9.170 8.939 8.800 5.808  
7.139 10.881 11.087 11.283 12.463 11.795 12.444 11.245 11.030 10.810 7.063  
35.000 35.000 36.000 34.000 36.000 36.000 36.000 36.000 36.000 36.000 36.000

205-05 206-05 207-07 208-07 209-04 210-07 211-07 212-05 213-05  
5.327 7.221 8.629 10.257 9.143 10.270 8.652 7.201 5.285  
5.534 8.821 10.616 12.659 11.331 12.680 10.591 8.802 6.464  
34.000 34.000 34.000 34.000 34.000 34.000 34.000 34.000 34.000

214-05 215-05 216-05 217-05  
5.574 7.268 7.269 5.580  
6.805 8.846 8.854 6.826  
34.000 34.000 34.000 34.000

MAXIMUM INTEGRATED ASSEMBLY EXPOSURE IS 0.1124450+05 MWD/T IN ASSEMBLY 110  
MAXIMUM PEAK AXIAL EXPOSURE IS 0.1370410+05 MWD/T, OCCURRING AT 36.00 O/D OF THE CORE HEIGHT IN ASSEMBLY 108  
CORE AVERAGE EXPOSURE IS 3.9235581+04 MWD/T  
Equal to 243.42 EFPD

## ----- BATCH AVERAGE EXPOSURES -----

| BATCH NUMBER | BATCH NAME | AVERAGE EXPOSURE (GWD/T) |
|--------------|------------|--------------------------|
| 1            | A1         | 10.395                   |
| 2            | A2         | 9.468                    |
| 3            | B1         | 11.007                   |
| 4            | B2         | 9.879                    |
| 5            | C          | 6.282                    |
| 6            | C+         | 8.811                    |
| 7            | C+         | 9.611                    |

*Southern California Edison Company*



SAN ONOFRE NUCLEAR GENERATING STATION

P.O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

J. G. HAYNES  
STATION MANAGER

TELEPHONE  
(714) 492-7700

February 26, 1985

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

Dear Sir:

Subject: Docket No. 50-362  
30-Day Report  
Licensee Event Report No. 85-001  
San Onofre Nuclear Generating Station, Unit 3

Pursuant to 10 CFR 50.36(c)(2), 10 CFR 50.73(a)(2)(i)(B), 10 CFR 50.73(a)(2)(iv), and Limiting Condition for Operation 3.4.7, Action Statement 'd' of Appendix A, Technical Specifications to Facility Operating License NPF-15 for San Onofre Unit 3, this submittal provides the required 30-day written Licensee Event Report (LER) for an occurrence involving unidentified reactor coolant system leakage. Neither the health and safety of plant personnel nor the public were affected by this event.

If you require any additional information, please so advise.

Sincerely,

Enclosure: LER No. 85-001

cc: F. R. Huey (USNRC Senior Resident Inspector, Units 1, 2 and 3)  
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)

J. B. Martin (Regional Administrator, USNRC Region V)

Institute of Nuclear Power Operations (INPO)

IE22  
1/1