NRC Form 366
(9-83)

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

LICENSEE EVENT REPORT (LER)

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

TITLE (4)

JANUARY 1, 1984, RADIOLOGICAL EVACUATION EVENT

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 1	0 1	8 4	8 4	0 0 1	0 0	0 1	3 1	8 4	UNIT 2	0 5 0 0 0 3 6 1
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)					
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	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)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
		20.405(a)(1)(iii)	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)	X 50.73(a)(2)(x)			

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
J. G. HAYNES, STATION MANAGER	AREA CODE 7 1 4 4 9 2 7 7 0 0 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	

SUPPLEMENTAL REPORT EXPECTED (14)

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

EXPECTED SUBMISSION DATE (15): MONTH | DAY | YEAR

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

On 1/1/84, at approximately 1100, with Unit 3 in Mode 1 at 100% power, precautionary Penetration and Radwaste Buildings' evacuation was initiated when Units 2 and 3 area radiation monitors and plant vent stack monitors alarmed. Tech Spec required fire watches in areas containing safety related equipment were suspended for approximately two hours as a result of the precautionary evacuation. This event was reported pursuant to 10 CFR 50.72(b)(2)(vi) and is reported herein pursuant to 10 CFR 50.73(a)(2)(x).

Area radiation monitors and plant vent stack monitors were alarmed when, during routine draining of the Waste Gas Header line, approximately 110 cubic feet of gas were released from the header. Approximately 84 curies of noble gas (Xe-133) were released. This did not exceed regulatory or technical specification limits, or the threshold for reporting pursuant to 10 CFR 50.72(b)(2)(iv).

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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San Onofre Nuclear Generating Station Unit 3	0 5 0 0 0 3 6 2	8 4	— 0 0 1	— 0 0	0 2 OF 0 3

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

On January 1, 1984, at approximately 1015, with Unit 3 in Mode 1 at 100% power and plant conditions stable, an Operator was dispatched to perform a routine draining operation at three Waste Gas Header drain valve points in the Penetration Building and Radwaste Building. Periodic draining of the Waste Gas Header (WGH) is necessary to remove excess moisture condensation and carryover liquid from the various inputs to the WGH.

The Radiation Exposure Permit (REP) which covers this activity requires Health Physics to be notified prior to initiation of draining and for an HP Technician to be present. The Operator did not conduct the activity in accordance with these REP conditions because he did not recognize the potential for release of radioactivity represented by the draining.

The Operator performed the first draining at a drain point at the 9 foot elevation in the Penetration Building and removed approximately 1/2 gallon of water from the WGH. The liquid was drained into a floor drain. However, he allowed the draining to continue into the gas-liquid phase for three to five minutes in an attempt to ensure all liquid was drained from this portion of the WGH. Approximately 110 cubic feet of gas were released from the WGH into the Penetration Building. The plant HVAC system is designed to remove this type of airborne release and to provide a pressure differential such that air will flow from the adjacent buildings, such as the Penetration Building, to the Radwaste Building.

At the conclusion of the first draining, the Operator went to the second drain point at the 27 foot elevation in the Radwaste Building. He completed the second draining and, having obtained an insignificant liquid volume, promptly terminated the draining upon gas-liquid flow. At this time, he was called by the Control Room and directed to stop activities as several area radiation monitors and the plant vent stack monitors were in alarm.

The plant vent stack monitor simultaneously alarms in the Control Room and the State of California, Office of Emergency Services. The alarm was activated from 1045 until 1345. Health Physics, upon receipt of the alarms, at approximately 1100 initiated a precautionary evacuation of the Penetration and Radwaste Buildings. Also at approximately 1100, discussion of the release took place between SCE and the State, which resulted in a 10 CFR 50.72(b)(2)(vi) notification to the NRC at 1532.

As a result of the evacuation, during the period of 1115 to 1250, two continuous fire watches in these areas were suspended. Since the fire watches were required by Technical Specification 3.3.3.7 for inoperable fire detectors associated with safety related equipment, their evacuation is reported pursuant to 10 CFR 50.73(a)(2)(x). Subsequent review has determined the evacuation was not necessary to prevent personnel exposures from exceeding administrative limits.

The post evacuation surveys of personnel from the area identified several individuals who had minor surface contamination of Rb-88, as a result of the noble gas in the building. The individuals were placed in a holdup area, and within 30 minutes the activity decayed sufficiently to permit their release without further decontamination.

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

No individuals other than the Operator received any apparent exposure from the material. The Operator received an exposure of 34 millirad which is significantly below regulatory limits. Whole body counting of the Operator was negative.

The airborne material is calculated to have been approximately 84 Curies of Xe-133. The plant HVAC system removed the gas, which was released via the plant vent stack system. The release was sufficient to exceed the plant vent stack alarm setpoint but did not exceed Technical Specification limits (10% of dose limit, 33% of dose rate limit) nor other regulatory limits. This conclusion is based upon calculations using the Offsite Dose Calculation Manual (ODCM), which is the methodology required by the Technical Specifications for evaluating this type of release. The greatest quantity of material was released during the first hour. Based on this amount the ODCM calculation indicates the concentration in unrestricted areas, when averaged over an hour, was 5.7 E-7 microcuries per cubic centimeter (1.9 times the applicable concentration of the limit specified in Appendix B, Table II of 10 CFR 20 in unrestricted areas, when averaged over one hour). The ODCM uses an average meteorology rather than actual meteorological conditions at the time of release. Calculations using the actual meteorological conditions during the release indicates a concentration of 7.82 E-6 microcuries per cubic centimeter (26 times the applicable concentration of the limit specified in Appendix B, Table II of 10 CFR 20 in unrestricted areas, when averaged over one hour). The unrestricted area concentration calculated using actual meteorologocal conditions is provided for information only, and any future reports pursuant to 10 CFR 50.72(b)(2)(iv) and 10 CFR 50.73(a)(2)(viii)(A) will be based on calculations using ODCM average meteorology.

The investigation of this incident indicates that there are no reasonable or credible circumstances which could have increased the severity of the incident. No plant systems or components failed as a result of this event.

The cause of this event was that the Operator violated the requirements of the REP. The Operator did not recognize the potential for a release of material and did not believe HP coverage was mandatory. If the HP Technician had been present, the HP instruments would have identified the radiological implications of the three to five minutes of venting. Corrective actions include: the Operator received disciplinary action for violating the REP; and an HP Technician will be stationed in the Radwaste Building when determined by the Health Physics or Operations Manager to be necessary or desirable to facilitate interaction between HP and Operations.

A Secondary contributor to this event was the fact that draining of condensate from the WGH was not proceduralized since it was considered to be within the skill level of an Operator. Revisions to existing procedures will be made to incorporate this activity.

The sources of the water in the WGH are under investigation. A test program is being conducted to identify which systems have carryover into the WGH. Based on the results, Design Change Packages (DCP's) may be prepared to accomplish automatic draining of the WGH.

A review of the plant vent stack alarm operation has resulted in an increase in the ODCM-based alarm setpoint to a more appropriate value, and a noise suppression circuit has been added to eliminate spurious spikes.

Southern California Edison Company

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January 31, 1984

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

Subject: Docket No. 50-362
30-Day Report
Licensee Event Report No. 84-001
San Onofre Nuclear Generating Station, Unit 3

Pursuant to 10 CFR 50.73.a.2(x), this submittal provides the required 30-day written Licensee Event Report (LER) for an occurrence involving the precautionary evacuation of personnel due to an inadvertent release of radioactive material. The material released did not exceed regulatory or Technical Specification limits. The health and safety of plant personnel or the public were not affected by this event.

If you require any additional information, please so advise.

Sincerely,

J. G. Haynes

Enclosure: LER No. 84-001

cc: A. E. Chaffee (USNRC Resident Inspector, Units 1, 2 and 3)
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)

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

U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement

Institute of Nuclear Power Operations (INPO)

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