| | LICE | NSEE EVENT REPO | DRT (LER) | U.S. NUCLEA APPRO EXPIRI | R REGULATORY COMMIS DVED OMB NO. 3150-0104 ES: 8/31/85 | | | | | |
|--|---|---|--|--|--|--|--|--|--|--|
| SAN ONOFRE NUCLE | AR GENERATING STATI | ON, UNIT 2 | | 0 15 0 0 | D 0 3 6 1 1 0F 0 | | | | | |
| 25-VOLT DC BATT | ERY SURVEILLANCE | | | | | | | | | |
| EVENT DATE (5) | LER NUMBER (6) | REPORT DATE (7) | OTHER | FACILITIES | NVOLVED (8) | | | | | |
| DATH DAY YEAR YE | AR SEA. REV. NUMBER NUMBER | MONTH DAY YEAR | FACILITY NAMES | | DOCKET NUMBER(S) | | | | | |
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| OPERATING TH | S REPORT IS SUBMITTED PURS | UANT TO THE REQUIREME | NTS OF 10 CFR § : (C | heck one or mo | ore of the following) (11) | | | | | |
| MODE (9) 1. | 20.402(b) | 20.405(c) | 50.73(a)(2)(iv | () | 73.71(b) | | | | | |
| LEVEL 16.0 | 20.405(a)(1)(i) | 50.36(c)(1) | 50.73(a)(2)(v) |) | 73.71(c) | | | | | |
| (10) | 20.405(a)(1)(ii) | 50.36(c)(2) | 50.73(a)(2)(vi | ii) | DTHER (Specify in Ab below and in Text, NF | | | | | |
| _ | 20.405(a)(1)(iv) | 50.73(a)(2)(ii) | 50.73(a)(2)(v | (ii)(A) | Form 300A) | | | | | |
| * | 20.405(a)(1)(v) | 50.73(a)(2)(iii) | 50.73(a)(2)(x |) | | | | | | |
| | LICE | NSEE CONTACT FOR TH | IS LER (12) | | | | | | | |
| | | | | AREA CO | DE | | | | | |
| H. E. 1 | MORGAN, STATION MAN | AGER | | 7 1 14 | 3 6 8 - 6 2 4 | | | | | |
| | COMPLETE ONE LINE FOR | EACH COMPONENT FAILUR | E DESCRIBED IN THIS | REPORT (13) | | | | | | |
| USE SYSTEM COMPONENT | MANUPAC- TURER TO NPROS | CAUSE SY | STEM COMPONENT | MANUPAC- TURER | REPORTABLE TO NPRDS | | | | | |
| | | | 1 111 | | | | | | | |
| | | | | | | | | | | |
| | <u> * </u> | | | | | | | | | |
| VEC (If yes, complete I | | | • | EXPECTED SUBMISSIO DATE (15) | N N | | | | | |
| At 1145 on 6/13/8 associated with 1 four, 125-volt DC that the minimum during surveillar During routine we have specific gr providing the char to be within this ambiguous procedu cells was ceterming ravity readings fech. Spec. Table | 36; with Unit 2 at imiting. Condition C battery banks, di allowable value fo nee performed on 6/ eekly surveillance ravity. This is pe arging current is 1 s acceptance criter ure instructions an ined using the quar were found to be o e 4.8-2, the batter | 60% power, a rev for Operation (L d not satisfy al r individual cel 10/86. on Battery Bank rmitted during p ess than 2 amps ia for the weekl d unclear Tech. terly surveillar utside allowable y continued to b | Hiew of comple (10) 3.8.2.1 m 1 of the surve 1 specific gr B007, one pillor performance of The chargin y surveillance Specs., the considered the values; cont performance of the chargin surveillance specs., the considered the considered of the co | ted surve evealed t eillance avity was ot cell w the week g current e. Howev ondition Individ rary to f operable. | eillance data that one of the criteria in exceeded was found to hav ly surveillance was determined er, due to of all individu lual cell specif footnote (1) of | | | | | |

| NRC Form 366A (9/83) | LICENSEE EVENT REPORT (LER) TEXT CONTINUATION | | | | U.S. NUCLEAR REGULATORY COMMISSION APPROVED OMB NO. 3150-0104 EXPIRES: 8/31/85 | | | | | | | | |
|---|--|------|---|----------------|--|---|--------|---|---|----------|---|---|--|
| PACILITY NAME(1) | DOCKET NUMBER (2) | | | LER NUMBER (6) | | | | | | PAGE (3) | | | |
| | | YEAR | | NU | SEQ. | | NUMBER | 1 | | T | Γ | | |
| SAN ONOFRE NUCLEAR GENERATING S | O 5 0 0 3 6 1 | 8 6 | - | 0 | 1 4 | - | 0 0 | 0 | 2 | OF | 0 | 3 | |
| TEXT (If more space is required, use additional NRC I | Form 366A's) (17) | | | | | | | | | | | | |

At 1600, on June 10, 1986, maintenance electricians commenced routine weekly battery bank surveillance testing on designated pilot cells in accordance with Technical Specification Surveillance Requirement 4.8.2.1.a, using Maintenance Procedure S023-I-2.12. Pilot cell numbers 15 and 35 on 125-volt DC Battery B007 (EIIS System Code EJ) (EIIS Component Code BTRY) were selected and all data recorded was found to be within the acceptance criteria of the procedure for Technical Specification Table 4.8-2 "Category A" parameters, with the exception of the specific gravity on cell number 35. Whereas the specific gravity for this cell, corrected for temperature and level, was recorded as 1.129, the procedure and Technical Specification requires this parameter to be greater than or equal to 1.200. This Technical Specification Limit, however, is footnoted with the following statement:

"(b) Or battery charging current is less than 2 amps when on charge."

In addition, the following Technical Specification Table 4.8-2 footnote is applicable to all "Category A" parameters:

"(1) For any Category A parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that within 24 hours all the Category B measurements are taken and found to be within their allowable values, and provided all Category A and B parameter(s) are restored to within limits within the next 6 days." 20

The weekly surveillance procedure did not clearly direct personnel to measure and evaluate the charging current to determine if the alternate acceptance criteria permitted by footnote (b) was satisfied. Instead, procedural requirements directed maintenance personnel to perform the Quarterly Surveillance Procedure S023-I-2.13, under which the Category B parameters would be measured.

Although battery charging current was determined to be less than 2 amps, it was believed that footnote (1) allowed six days to complete corrective maintenance, and at 1815 on 6/10/86, Limiting Condition for Operation Action Requirement (LCOAR) C-86-308 was issued to administratively monitor and control the status of the action required by this surveillance table footnote.

The "Category B" allowable values for specific gravity in Technical Specification Table 4.8-2, include both allowable values for individual cells, as well as, for all connected cells as follows:

For individual cells,

"Not more than .020 below the average of all connected cells"

For all connected cells,

"Average of all connected cells must be greater than or equal to 1.195(b)..."

Here, again, footnote (b) is referred to, but only in the allowable value for all connected cells.

| LICENSEE | EVENT | REPORT | (LER |
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DOCKET NUMBER (2)

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

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PACILITY NAME (1)

NRC Form 366A

(9/83)

| PACILITY NAME(1) | DOCKET NUMBER (2) | | LER NUMBER (6) | | | | | PAGE (3) | | |
|--|-------------------|------|----------------|----------------|---|----------------|----|----------|---|--|
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| SAN ONOFRE NUCLEAR GENERATING STATION, | and the second | | | | | | | | | |
| UNIT 2 | 0 5 0 0 0 3 6 1 | 8 6 | - | 0 1 4 | - | 0 0 | 03 | OF | 0 | |

TEXT (If more space is required, use additional NRC Form 366A's) (17) When the quarterly surveillance was completed, the average of all connected cells was not only within "allowable values" but also within Category B "limits." Maintenance electricians considered the battery to be operable under the provisions of footnote (b) during the weekly surveillance of Category A parameters, and an equalizing charge was initiated to correct the specific gravity deviations on individual cells. However, 5 of the 58 cells were determined to have a specific gravity more than .020 below the 1.208 average of all connected cells.

When the data was independently verified by a Maintenance Planner on June 13, 1986, he noted that individual cells did not satisfy the allowable value for specific gravity of "not more than .020 below the average of all connected cells," and, insofar as footnote (b) did not apply to the acceptance criteria for individual cells, he notified Operations that the battery was to be considered inoperable in accordance with procedure step 6.8.1 and Technical Specification Table 4.8-2, footnote (1).

Immediate action was taken and an orderly shutdown was initiated at 1215 until the condition of the battery could be assessed. A new quarterly surveillance was performed and, since an equalizing charge had been completed, all parameters were found to be within Technical Specification limits. The shutdown was terminated at 56% power and power ascension commenced at 1321.

The root cause of this occurrence was an ambiguous procedural presentation of confusing Technical Specification acceptance criteria in the Maintenance Surveillance procedures utilized to determine battery operability. Technical Specification Table 4.8-2. Category A parameters, measured during weekly surveillance tests, permit low pilot cell specific gravity provided battery charging current is below 2 amps. The weekly surveillance procedure did not provide adequate instructions regarding this alternate acceptance criteria when the specific gravity on one or both pilot cells is found to be low. Electricians then took action beyond that required by the Technical Specifications to determine the status of all individual battery cells by performing the Quarterly Surveillance Procedure. The procedures resulted in the Quarterly Surveillance being performed prior to the scheduled interval and thus the battery evaluation was made more conservatively than required by the Technical Specifications. While measurements indicated individual cells were outside allowable values permitted by the Quarterly Surveillance, the battery continued to be considered operable based on battery charging current being within limits.

Corrective action is being taken to clearly specify acceptance criteria in both weekly and quarterly surveillance procedures, as well as, clarify the action to be taken should limits and/or allowable values be exceeded. A review of all previous battery surveillance test data is being conducted to verify that that the surveillance tests had been properly performed within the Technical Specification requirements.

There was no safety significance to this event as the battery bank remained capable of performing its intended safety function.

Southern California Edison Company

SAN ONOFRE NUCLEAR GENERATING STATION

P. O BOX 128

SAN CLEMENTE, CALIFORNIA 92672

H. E. MORGAN

TELEPHONE (714) 368-6241

June 30, 1986

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

Subject: Docket No. 50-361 Informational Report Licensee Event Report No. 86-014 - San Onofre Nuclear Generating Station, Unit 2

This submittal provides an informational Licensee Event Report (LER) for an occurrence involving the 125-volt D.C. Battery Surveillance. Neither the health and safety of plant personnel nor the health and safety of the public was affected by this event.

If you require any additional information, please so advise.

Sincerely, HEMOY

Enclosure: LER No. 86-014

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

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

Institute of Nuclear Power Operations (INPO)

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