November 29, 2000

Mr. Harold B. Ray
Executive Vice President
Southern California Edison Company
San Onofre Nuclear Generating Station
P.O. Box 128
San Clemente, CA 92674-0128

SUBJECT: SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 - ISSUANCE OF AMENDMENTS RE: DEGRADED VOLTAGE AND LOSS OF VOLTAGE SETPOINTS, (TAC NOS. MA9641 and MA9642)

Dear Mr. Ray:

The Commission has issued the enclosed Amendment No. 174 to Facility Operating License No. NPF-10 and Amendment No. 165 to Facility Operating License No. NPF-15 for San Onofre Nuclear Generating Station, Units 2 and 3, respectively. The amendments are in response to your application dated July 20, 2000 (PCN-488, Supplement 1), and revise Technical Specifications (TSs) surveillance requirements (SRs) related to the acceptance criteria for TS 3.3.7, "Diesel Generator (DG) - Undervoltage Start," SR 3.3.7.3, which verifies operability of the loss of voltage and degraded voltage actuation circuits. The amendments also replace the analytical limits currently specified as acceptance criteria, with allowable values, and delete SR 3.3.7.4 on the basis that it is redundant with SR 3.3.7.3.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,
/RA by Jack Cushing for/
L. Raghavan, Senior Project Manager, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-361 and 50-362

Enclosures:
1. Amendment No. 174 to NPF-10
2. Amendment No. 165 to NPF-15
3. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-361

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 174
License No. NPF-10

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Southern California Edison Company, et al. (SCE or the licensee), dated July 20, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-10 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 174 , are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: November 29, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 174

FACILITY OPERATING LICENSE NO. NPF-10

DOCKET NO. 50-361

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3.3-34	3.3-34

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.7.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.7.2	Perform CHANNEL FUNCTIONAL TEST.	24 months
SR 3.3.7.3	Perform CHANNEL CALIBRATION with setpoint Allowable Values as follows: a. Degraded Voltage Function: i. Dropout ≥ 4196 V ii. Pickup ≤ 4281 V SDVS (Sustained Degraded Grid Voltage Signal): Time delay: i. 127D ≤ 2.17 seconds. ii. 162D ≥ 78 seconds and ≤ 128 seconds. DGVSS (Degraded Grid Voltage with SIAS Signal): Time delay: i. 127D ≥ 1.83 seconds and ≤ 2.17 seconds. ii. 162S ≥ 4.16 seconds and ≤ 4.44 seconds. iii. 162T ≥ 0.88 seconds and ≤ 1.62 seconds. b. Loss of Voltage Function ≥ 3554 V and ≤ 3796 V Time delay: ≥ 0.75 seconds and ≤ 1.0 seconds at 0 V.	24 months

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-362

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 165
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Southern California Edison Company, et al. (SCE or the licensee), dated July 20, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-15 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 165 , are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: November 29, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 165

FACILITY OPERATING LICENSE NO. NPF-15

DOCKET NO. 50-362

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3.3-34	3.3-34

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.7.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.7.2	Perform CHANNEL FUNCTIONAL TEST.	24 months
SR 3.3.7.3	Perform CHANNEL CALIBRATION with setpoint Allowable Values as follows: a. Degraded Voltage Function: i. Dropout ≥ 4196 V ii. Pickup ≤ 4281 V SDVS (Sustained Degraded Grid Voltage Signal): Time delay: i. 127D ≤ 2.17 seconds. ii. 162D ≥ 78 seconds and ≤ 128 seconds. DGVSS (Degraded Grid Voltage with SIAS Signal): Time delay: i. 127D ≥ 1.83 seconds and ≤ 2.17 seconds. ii. 162S ≥ 4.16 seconds and ≤ 4.44 seconds. iii. 162T ≥ 0.88 seconds and ≤ 1.62 seconds. b. Loss of Voltage Function ≥ 3554 V and ≤ 3796 V Time delay: ≥0.75 seconds and ≤ 1.0 seconds at 0 V.	24 months

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 174 TO FACILITY OPERATING LICENSE NO. NPF-10

AND AMENDMENT NO. 165 TO FACILITY OPERATING LICENSE NO. NPF-15

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3

DOCKET NOS. 50-361 AND 50-362

1.0 INTRODUCTION

By letter dated July 20, 2000 (PCN 488, Supplement 1), Southern California Edison (SCE or the licensee) proposed changes to the San Onofre Nuclear Generating Station (SONGS), Units 2 and 3, Technical Specifications (TSs) related to the acceptance criteria for TS 3.3.7, "Diesel Generator (DG) - Undervoltage Start," Surveillance Requirement (SR) 3.3.7.3, which verifies operability of the loss of voltage (LOV) and the degraded voltage actuation circuits. The proposed change would replace the analytical limits currently specified as acceptance criteria with allowable values. Also, SCE proposes to delete SR 3.3.7.4 on the basis that it is redundant with SR 3.3.7.3.

2.0 BACKGROUND

2.1 General

Engineered safety features (ESF) systems are installed in nuclear power plants to mitigate the consequences of the loss of the reactor coolant system boundary. The ESF systems are designed to remain operational without loss of their protective function capability during and following design-basis accident (DBA) conditions. One of the ESF system features is the safety injection actuation signal (SIAS).

To provide a reliable source of power for these ESF systems, nuclear power plants are provided with redundant offsite (preferred), and onsite (standby) power sources, such as the emergency diesel generators (EDGs). The power sources for the ESF systems are classified as Class 1E safety-related power sources. The EDGs provide an alternate source of power to the ESF systems if the preferred power source is lost (i.e., a loss of voltage, or LOV, condition) or is insufficiently stable (i.e., degraded grid voltage (DGV) condition). Each Class 1E bus is equipped with undervoltage (UV) relays to permit automatic transfer to the alternate preferred

power source, and for diesel generator starting. The UV relay logic includes intentional definite time delay settings to ensure that adequate voltage is available on the Class 1E bus during post-accident ESF load sequencing, and that the permanently connected Class 1E loads are not damaged as a result of a degraded voltage condition.

The UV relay trip setpoints are based on design limits determined by various DBA conditions, which are described in the updated final safety analysis report (UFSAR). The "allowable values" can be derived from the analytical trip setpoints by adjusting the analytical limits to take into account calibration tolerances, instrumentation uncertainties, and drift. The trip setpoints, at the allowable values, ensure that ESF systems will function as designed and within the time limits consistent with the accident analysis, and the consequences of accident conditions will be minimized.

2.2 SONGS Design

At SONGS, two 4.16 kV Class 1E buses per unit provide offsite power sources for the ESF systems. UV relay protection for the SONGS 2 and 3 Class 4.16 kV buses is described in UFSAR Section 8.3.1.1.3.13.B. As described in the UFSAR, each of these 4.16 kV Class 1E buses per unit is equipped with UV relays and timing relays to permit automatic transfer to the alternate preferred power source and for starting of EDGs. The UV relaying scheme is designed to perform the following:

2.2.1 LOV Protection

For LOV protection, four Westinghouse CV-2 induction disc relays with inverse time delay characteristics (hereinafter referred to as the 127F1, F2, F3, and F4 relays or 127F relays) are provided on each 4.16 kV Class 1E bus. The four UV relays are combined in a two-out-of-four logic to generate an LOV signal with a time delay of approximately 1 second for a complete LOV. An LOV signal with an SIAS will transfer the 4.16 kV Class 1E bus to the EDG, and an LOV signal without an SIAS will transfer the 4.16 kV Class 1E bus to the available alternate preferred power source, or to the EDG if the alternate power source is not available.

2.2.2 Degraded Grid Voltage Protection

For DGV protection, four definite time delay solid-state UV relays (hereinafter referred to as the 127D1, D2, D3, and D4 relays or 127D relays) along with four timing relays (hereinafter referred to as the 162D1, D2, D3, and D4 relays or 162D relays) are provided on each bus to permit automatic transfer to the alternate available preferred power source, or to the EDGs as appropriate. The four 127D relays are also combined in a two out-of-four-logic scheme such that upon detection of degraded voltage, a sustained degraded grid voltage signal (SDVS) is generated. An SDVS with an SIAS will transfer the 4.16 kV Class 1E bus to the EDG, and an SDVS without an SIAS will transfer the 4.16 kV Class 1E bus to the available alternate preferred power source, or to the EDG if the alternate power source is not available. The voltage and time delay settings for these relays are such that the permanently connected Class 1E loads will be maintained within equipment operating voltage ranges.

2.2.2.1 Degraded Grid Voltage With an SIAS Signal

For sustained degraded grid voltage conditions with an SIAS signal present, one output contact from each 127D1, D2, D3, and D4 UV relay is used along with a set of timing relays to transfer directly to the EDG rather than to the alternate preferred power source. The voltage and time delay settings are such that signals will be generated with an intentional definite delay upon initiation of an SIAS along with degraded bus voltage as sensed by the 127D1, D2, D3, and D4 relays during the first load sequencing cycle only. This scheme is designed to actuate in the event of an SIAS with degraded voltage condition. These signals are combined in a two-out-of-four logic, and the resulting signal is referred to as DGV with an SIAS signal (DGVSS). The time delay for this signal is chosen to ride through the voltage transient and to ensure that adequate voltage is available on the 4.16 kV Class 1E bus during post-accident ESF load sequencing.

SONGS TSs include requirements for periodic surveillance of the UV relays to provide assurance that they will function during potential LOV and DGV conditions. These surveillances measure the "dropout voltage" at which the relay actuates upon sensing degraded bus voltage, and also the "pickup voltage" at which the relay resets to enable sequencing of ESF loads onto the bus. The SRs ensure operability of the relays to protect the ESF loads against degraded voltage, and to ensure that appropriate ESF equipment is loaded to the power source in proper sequence such that the bus is not overloaded.

3.0 EVALUATION

The licensee proposed to revise the acceptance criteria in SR 3.3.7.3 and delete SR 3.3.7.4. Currently, SR 3.3.7.3 contains analytical limits, that is, limits derived directly from engineering analyses without any margin. The licensee is proposing to replace the analytical limits with more restrictive allowable values, that is, a range of acceptable values to compare to the values measured during surveillance testing called "as found" values. The licensee defines the allowable values as follows:

Allowable Value (minimum) = Design limit + | Positive tolerance | + Engineering margin

Allowable Value (maximum) = Design limit - | Negative tolerance | - Engineering margin

The staff's evaluation of the proposed changes to the SR are discussed below.

3.1 Degraded Voltage Function (TS SR 3.3.7.3.a)

Currently, SR 3.3.7.3a. verifies voltage and time delay limits for DGV and DGVSS functions. The current SR does not distinguish between dropout and pickup values of degraded voltage; rather, it specifies a voltage range between 4181 and 4275 V, inclusive. It is important to measure both the dropout voltage at which the relay actuates upon sensing degraded bus voltage, and the pickup voltage at which the relay resets to enable sequencing loads onto the bus. The licensee in its setpoint calculation E4C-098, has determined that the allowable value for the measured relay dropout voltage should be greater than or equal to 4196 V, and the pickup voltage less than or equal to 4281 V. During surveillance testing, the licensee's "as-found" dropout voltages have been between 4210.5 and 4239.9 V. These values are greater than the proposed minimum allowable value of 4196 V. Similarly, during surveillance testing,

the licensee's "as-found" pickup voltages have been measured between 4233.25 and 4248.3 V. These values are less than the proposed maximum allowable value of 4281 V. The as-found dropout and pickup voltage values are bounded by the allowable voltage values. Therefore, the proposed minimum dropout voltage limit of 4196 V and the proposed maximum pickup voltage limit of 4281 V are consistent with the allowable value for relay actuation. Because the safety function of the relay for dropout and pickup can be assured at any voltage greater than 4196 V and less than 4281 V, respectively, the proposed voltage limits are acceptable. The proposed SR 3.3.7.3.a, with a minimum allowable value for relay dropout and a maximum allowable value for relay pickup, is acceptable since it ensures operability of the relay to both protect the ESF loads against degraded voltage and enable ESF load sequencing.

3.1.1 SDVS (Sustained Degraded Grid Voltage)

Currently, SR 3.3.7.3.a.i and SR 3.3.7.3.ii verify time delay limits for the 127D and 162D relays for the DGV condition. The licensee has proposed to revise the time delay settings for the 127D and 162D relays for the SDVS function.

a. Time Delays for 127D relays

SR 3.3.7.3.a.i currently specifies for SDVS (without an SIAS Signal) a time delay of greater than or equal to 1.8 seconds and less than or equal to 2.2 seconds. For the SDVS function, it is not necessary to impose a lower bound on the UV relay time delay because the SDVS will transfer the 4.16 kV Class 1E bus to the available alternate preferred power source, or to the EDG if the alternate power source is not available. The important limit is the upper time delay limit, which will ensure that the Class 1E bus is transferred in a timely manner when it experiences a degraded voltage condition. The licensee has determined that for the UV relays tested by SR 3.3.7.3.a.i, the maximum allowable value for the time delay relay should be less than or equal to 2.17 seconds. On the basis of past surveillances, the measured operating time of the UV relays has been between 1.99 and 2.03 seconds, which is less than the proposed maximum allowable value of 2.17 seconds. The proposed upper time delay limit of $\leq$ 2.17 seconds is conservative compared to the current TS limit of $\leq$ 2.2 seconds. Therefore, in the proposed SR 3.3.7.3.a.i for SDVS, a time delay for the 127D relays of $\leq$ 2.17 seconds is acceptable.

b. Time Delay for 162D Relays

In SCE Calculation E4C-098, the licensee has also determined (Section 2.1.3 of the SCE Calculation E4C-098) that for the Agastat relays tested by SR 3.3.7.3.a.ii (162D relays for SDVS), the proposed allowable relay time delay value should be $\geq$ 78 seconds and $\leq$ 128 seconds. The current SR specifies between 88 and 132 seconds, inclusive. The measured operating time of the 162D relays has been between 108 and 116.6 seconds, which is less than the proposed maximum allowable value of 128 seconds and greater than the minimum allowable value of 78 seconds. Any value $\geq$ 78 seconds and $\leq$ 128 seconds will ensure that the relay is capable of performing its intended safety function. Therefore, in the proposed SR 3.3.7.3.a.ii for the SDVS (sustained DGV signal), the time delay for the 162D relays of between 78 and 128 seconds is acceptable.

3.2 DGVSS (Degraded Grid Voltage With an SIAS Signal)

There are three time delay calibrations required to verify the performance of the relays for the DGVSS function. Currently, SR 3.3.7.3.a.i, SR 3.3.7.3.a.ii, and SR 3.3.7.3.a.iii verify time delay limits for the 127D, 162S, and 162T relays for the DGVSS condition. The licensee has proposed to revise the time delay settings for the 127D, 162S, and 162T relays for the DGVSS function.

For the DGVSS function, each relay must operate above a specified minimum time delay allowable value and less than the maximum allowable value in order to ensure performance of the DGVSS safety function.

a. Time Delay for 127D Relays:

For the DGVSS function of the 127D relays, the relay must operate above a specified minimum time delay value in order to ensure proper relay operation. Therefore, the minimum allowable value of 1.83 seconds (2.00 seconds - 0.17 second) of Section 2. 1.1 of SCE Calculation E4C-098 is proposed for inclusion in SR 3.3.7.3.a.i. The specific proposal to revise SR 3.3.7.3.a.i, Degraded Voltage Function With an SIAS Signal, is as follows:

Time delay: 127D $\geq$ 1.83 seconds and $\leq$ 2.17 seconds

The current SR specifies a time delay between 1.8 and 2.2 seconds, inclusive, which is the analytical limit. The proposed new allowable value based on SCE Calculation E4C-098 (Section 2.1.1) is between 1.83 and 2.17 seconds, which is within the existing analytical limit. The measured operating time of the relays has been between 1.99 and 2.03 seconds, which is within the proposed time delay limits. Because the proposed SR 3.3.7.3.a.i for DGVSS is conservative to the current TS, the time delay for the 127D relays of between 1.83 and 2.17 seconds is acceptable.

b. Time Delay for 162S Relays

In SCE Calculation E4C-098 (Section 2.1.3), the licensee has determined that for the 162S relays in the DGVSS circuitry, the measured time delay should be 4.3 seconds ± 0.14 second (4.16 seconds and 4.44 seconds), inclusive (4.3 seconds ± 3.33%). The specific proposal to revise SR 3.3.7.3.a.ii, Degraded Voltage Function With an SIAS Signal, is as follows:

Time delay: 162S $\geq$ 4.16 seconds and $\leq$ 4.44 seconds

The current SR specifies between 4.11 and 4.49 seconds, inclusive (4.3 seconds ± 4.4%). The proposed allowable values are within this range. Measured operating time of the 162S relays has been between 4.29 and 4.31 seconds, which is within the proposed range of allowable values (4.16 to 4.44 seconds, inclusive). Because the proposed SR 3.3.7.3.a.ii for DGVSS is conservative compared to the current TS, the time delay for the 162S relays of between 4.16 and 4.44 seconds is acceptable.

c. Time Delay for 162T Relays

Through SCE Calculation E4C-098 (Section 2.1.3), the licensee has further determined that for the Agastat relays tested by SR 3.3.7.3.a.iii (162T relays for DGVSS), the measured relay time delay should be 1.25 seconds ± 0.37 second (1.25 ± 29.87%), inclusive (0.88 second through 1.62 seconds). The specific proposal to revise SR 3.3.7.3.a.iii, Degraded Voltage Function With an SIAS Signal, is as follows:

Time delay: 162T ≥ 0.88 second and ≤ 1.62 seconds

The current SR specifies setpoints between 0.85 and 1.65 seconds, inclusive (1.25 seconds ± 32%). The proposed allowable values are within this range. Measured operating time of the 162T relays has been between 1.23 and 1.38 seconds, which is within the proposed range of allowable values (0.88 to 1.62 seconds, inclusive). Because the proposed SR 3.3.7.3.a.iii for DGVSS is conservative compared to the current TS, the time delay for the 162T relays of between 0.88 and 1.62 seconds is acceptable.

3.3 Loss of Voltage (LOV) Protection

For LOV, current SR 3.3.7.3 b. specifies voltage limits between 3554 and 3796 V. The licensee states that any voltage greater than or equal to 3554 V will ensure that the LOV relay would actuate to perform its safety function. LOVs with an SIAS will transfer the 4.16 kV Class 1E bus to the standby power source. LOVs without an SIAS will transfer the 4.16 kV Class 1E bus to the alternate preferred source if it is available. If the alternate power source is not available, it will transfer the Class 1E bus to the EDG. The licensee proposes no changes in the dropout and pickup values of the LOV relays (CV-2).

However, in SCE Calculation E4C-098, the licensee has determined (Section 2.1.2) that for the LOV CV-2 relays tested by SR 3.3.7.3.b (Loss of Voltage Function), the measured time delay should be less than 1 second at zero volts. The current SR specifies a time delay of between 0.95 and 1.05 seconds, inclusive.

Only the upper time limit performs a safety function, and the time dial of the CV-2 relays is selected such that the time delay of the entire LOVS channel, including the measured auxiliary relays, is ≤ 1 .0 second, which will ensure that the relay is capable of performing its intended safety function. The lower limit of time delay of the CV-2 relays has no safety function but is selected to ensure proper relay operation and avoid unnecessary bus transfers. Specifically, the proposal to revise SR 3.3.7.3.b, Loss of Voltage Function, is as follows:

Time delay: ≥ 0.75 second and ≤ 1.0 second at 0 V

Measured operating times for the CV-2 relays for the recent Unit 2 refueling outage ranged between 0.91 and 1.01 seconds, inclusive (Section 4.3 of SCE Calculation E4C-098). The one data point at 1.01 seconds would not meet the proposed allowable value. However, this datum resulted from the need to set the as-left value at or above 0.95 second, the minimum value under the existing TSs. SCE will, under the proposed revision, be able to set the as-left value lower than 0.95 second (Section 2.1.2 of SCE Calculation E4C-098). Consequently, SCE does not expect setpoint drift to cause the proposed allowable value of less than or equal to 1.0 second to be exceeded once the as-left values are relaxed. In view of the above, the

proposed SR 3.3.7.3.b, Loss of Voltage Function, the time delay for the CV-2 relays of between ≥ 0.75 second and ≤ 1.0 second at 0 V is acceptable.

3.4 SR 3.3.7.4

Finally, TS SR 3.3.7.4 currently requires verification that the response time of the DG-LOV channel is within 1.05 seconds. This SR is redundant with the loss of voltage function time delay measurement of SR 3.3.7.3. SR 3.3.7.4 is not in NUREG-1432, Standard Technical Specifications, Combustion Engineering Plants. Accordingly, SCE is proposing to delete SR 3.3.7.4 in its entirety. The staff has determined that SR 3.3.7.4 is redundant to SR 3.3.7.3 and deleting SR 3.3.7.4 in its entirety from the TSs is, therefore, acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (65 FR 51362). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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