BEFORE THE UNITED STATES NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA EDISON COMPANY and SAN DIEGO GAS & ELECTRIC COMPANY for a Class 104(b) License to Acquire, Possess, and Use a Utilization Facility as Part of Unit No. 1 of the San Onofre Nuclear Generating Station	)	DOCKET NO. 50-206 Amendment No. 85

SOUTHERN CALIFORNIA EDISON COMPANY and SAN DIEGO GAS & ELECTRIC COMPANY, pursuant to 10 CFR 50.90, hereby submit Amendment No. 85.

This amendment consists of Proposed Change No. 81 to the Technical Specifications incorporated in Provisional Operating License No. DPR-13 as Appendices A and B. Proposed Change No. 81 is a request to modify the existing Technical Specifications to exempt the continuous temperature recording portion of the ocean thermal monitoring program, from the reporting requirements of Section 5.6.3.b(3)(a) and to reduce the data retrieval rate from 98% to 80%, with failure to achieve this level of retrieval to be identified in the Annual Operating Report. This change would reduce the amount of temperature data loss reporting, while allowing the intent of the specification to continue to be fulfilled.

In the event of conflict, the information in this Amendment No. 85 supersedes the information previously submitted.

In our opinion, the proposed change does not result in a condition which significantly alters the impact of San Onofre Unit 1 on the environment, and there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change.

Pursuant to 10 CFR 170.22, Proposed Change No. 81, submitted as Amendment No. 85, is determined to be a Class III change. The basis for this determination is that the Change involves a single environmental issue.

Accordingly, the fee of $4,000.00 corresponding to this determination is remitted herewith as required by 10 CFR 170.22.

Subscribed on this 2nd day of October, 1979

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By J. H. Drake
J. H. Drake
Vice President

Subscribed and sworn to before me this 2nd day of October, 1979.

Agnes Crabtree
Notary Public in and for the County of Los Angeles, State of California

OFFICIAL SEAL
AGNES CRABTREE
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
My Commission Exp. Aug. 27, 1982

Agnes Crabtree
My Commission expires 27th day of August 1982.

Charles R. Kocher
James A. Beoletto
Attorneys for Southern California Edison Company

By James A. Beoletto
James A. Beoletto

Subscribed on this 27th day of September 1979.

Respectfully submitted,

SAN DIEGO GAS & ELECTRIC

By _____
J. E. Thomas
Vice President
Electric Division

David R. Pigott
Samuel B. Casey
Chickering & Gregory
Attorneys for San Diego
Gas & Electric Company

By _____
Samuel B. Casey

Subscribed and sworn to before me this

27th day of September 1979.

My Commission expires the 25th day

of July, 1981.

_____
Notary Public in and for the County of
San Diego, State of California
Angela B. Snyder

OFFICIAL SEAL
ANGELA B. SNYDER
NOTARY PUBLIC - CALIFORNIA
Principal Office, San Diego Co. Calif.
My Commission Exp. July 25, 1981

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of SOUTHERN CALIFORNIA EDISON COMPANY and SAN DIEGO GAS & ELECTRIC COMPANY (San Onofre Nuclear Generating Station Unit No. 1)	))))	Docket No. 50-206

CERTIFICATE OF SERVICE

I hereby certify that a copy of Amendment No. 85 was served on the following by deposit in the United States Mail, postage prepaid, on the 4th day of October, 1979.

Henry J. McGurren, Esq.
Staff Counsel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20545

David R. Pigott, Esq.
Samuel B. Casey, Esq.
Chickering & Gregory
Three Embarcadero Center
San Francisco, California 94111

I. R. Caraco
Bechtel Corporation
P. O. Box 60860, Terminal Annex
Los Angeles, California 90060

Michael L. Mellor, Esq.
Thelen, Marrin, Johnson & Bridges
Two Embarcadero Center
San Francisco, California 94111

Huey Johnson
Secretary for Resources
State of California
1416 Ninth Street
Sacramento, California 95814

Janice E. Kerr, General Counsel
California Public Utilities Commission
5066 State Building
San Francisco, California 94102

J. Rengel
Atomic Power Division
Westinghouse Electric Corporation
Box 355
Pittsburgh, Pennsylvania 15230

A. E. Gaede
P. O. Box 373
San Clemente, California 92672

Frederick E. John, Executive Director
California Public Utilities Commission
5050 State Building
San Francisco, California 94102

Docketing and Service Section
Office of the Secretary
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

James A. Beoletto
Assistant Counsel
Southern California Edison Company

DESCRIPTION OF PROPOSED CHANGE AND ENVIRONMENTAL ANALYSIS
PROPOSED CHANGE NO. 81 TO THE TECHNICAL SPECIFICATIONS
PROVISIONAL OPERATING LICENSE DPR-13

This is a request to revise Environmental Technical Specification 3.1.1.a(5), "Thermal Measurements," included in Appendix B of Provisional Operating License DPR-13, San Onofre Unit 1.

Reason for Proposed Change

Environmental Technical Specification 5.6.3.b.(3)(a), Thirty-Day Written Report (Non-Routine), for continuous monitoring data losses states, "Instances where primary data collection systems required by Environmental Technical Specifications in Sections 3 and 4 are inoperative, or the data collected are lost or invalid or cannot be obtained due to severe weather or similar conditions, for one week continuous or a total in excess of three weeks per year" are reportable. The reporting level found in Section 5.6.3.b.(3)(a) specifically equates to a 98% reliability factor for the continuous offshore water temperature monitoring system. Failure to achieve this 98% reliability factor has resulted in numerous reports to the NRC explaining past temperature data losses.

Since the installation of a continuous offshore water temperature monitoring system at San Onofre on May 21, 1975, there have been 13 reportable occurrences of lost data. Equipment malfunctions and losses have been the causes of the reportable occurrences and has frequently prevented the system from achieving the required 98% retrieval rate. Actual retrieval rates and number of reportable occurrences of lost data are as follows:

Year	Retrieval Rate	Reportable Occurrences
1975	97%	2
1976	98%	1
1977	97%	2
1978	92%	6
1979 (through April)	92%	2

Retrieval rates have not been significantly improved since the initial installation of the analog strip chart temperature recorders despite numerous system improvements. The following is a chronology detailing the actions taken to improve the reliability of the system.

1975

January to August

A digital telemetry system built as the permanent offshore temperature system for San Onofre.

May

Analog strip chart temperature recorders installed as as temporary system.

Summer 1975

Permits needed to install the telemetry system for the digital telemetry system obtained.

- Army Corp of Engineers
- California Coastal Zone Conservation Commission
- State Lands Commission
- FCC

Fall 1975

San Onofre Plant Design Change Approval for telemetry system antenna.

1976

February

Digital telemetry system installed.
Analog strip chart temperature recorders used as a backup system.

December

Digital telemetry system abandoned as design and maintenance problems prove to be unsolvable. Analog strip chart temperature recorders continue to be maintained.

1977

June

Thermograph recording system installed to replace the digital telemetry system. The analog strip chart temperature recorders continue to be used as a backup system.

Fall 1977

The original analog strip chart temperature recording system installed as a temporary system in 1975 finally deteriorates and is removed.

1978

April 1978 to March 1979

The thermograph recording system begins to fail at a rate of approximately one unit out of six per month. Maintenance efforts are reassessed.

June

Scripps Institution of Oceanography contracted to build a new temperature recording system.

September

Scripps system design tested.

December

Scripps system prototype tested.

1979

February

Vendor of thermograph system visited and in-depth discussions and trouble shooting sessions held in a continuing effort to improve the reliability of the existing system.

March

An assessment of the experiences that other companies have had using the same thermograph recording system was initiated.

April

Scripps system installed at San Onofre for in situ field testing.

Reliability analysis of the thermograph recording system resulted in the conclusion that such a system is satisfactory and is industry accepted. However, in a harsh open ocean environment such as San Onofre the maximum reliability limit for the thermograph recording system ranges from 80 to 98%

May

Backup thermograph recorders were installed at surface locations. Presently, there are two continuous offshore temperature monitoring systems (thermograph and Scripps) and an additional thermograph recorder (surface) at the two required monitoring locations.

The existing specification has created impractical demands on the continuous water temperature monitoring system by requiring a 98% data retrieval level from a system in an open ocean environment. It is proposed that Section 3.1.1.a(5) be revised to exempt it from the reporting level criteria found in Section 5.6.3.b.(3)(a) and reduce the data retrieval rate from 98% to 80%, with failures to achieve this level reported in the Annual Operating Report. This change would reduce the amount of temperature data loss reporting, while allowing the intent of the specification to continue to be fulfilled.

An 80% reliability factor is a reasonable level for continuous in situ water temperature monitoring equipment in a harsh nearshore open ocean environment such as San Onofre. Experience has shown that one act of vandalism or one incident of equipment loss due to a large storm could reduce the annual data retrieval rate to a level below the required 98%. The 80% data retrieval rate is an arbitrary yet practical figure which is based on past experience and the reliability analysis of the equipment. Data return at a rate of 80% would still allow a complete assessment of the characteristics of offshore water temperatures at San Onofre. The reduction of the reporting level for lost data from 98% to a more realistic 80% would not reduce the existing level of temperature surveillance data collected because the change would affect only the non-routine reporting of temperature data losses.

Existing Specification

The third paragraph under Specification of Environmental Technical Specification 3.1.1.a(5) currently reads:

"For at least two stations, one in Zone 0A and one in Zone 6, continuous temperature recording systems will measure near sea surface, midwater, and near bottom temperatures at least once every hour. Proper system operation will be verified once every month, as weather permits."

Proposed Specification

The third paragraph under Specification of Environmental Technical Specification 3.1.1.a(5) would be revised to read:

"For at least two stations, one in Zone 0A and one in Zone 6, continuous temperature recording systems will measure near sea surface, midwater, and near bottom temperatures at least once every hour. Proper system operation will be verified once every month, as weather permits. These continuous temperature recording systems* shall be exempted from the non-routine reporting requirements of Environmental Technical Specification 5.6.3.b.(3)(a). The annual offshore continuous temperature retrieval rate shall be at least 80%** for acceptable data analysis; losses resulting in less than an 80%** return shall be fully described and discussed in the Annual Operating Reports, including corrective action taken to achieve better future data retrieval rates."

Evaluation and Basis for Environmental Finding

The purpose of the continuous offshore water temperature monitoring system is to provide temperature surveillance data necessary to assist in determining whether the thermal discharge plume from the operation of San Onofre Unit 1 has any significant effect upon the marine environment. The continuous offshore water temperature monitoring system has been operative since May, 1975, and the analysis of the temperature data collected has consistently demonstrated that the operation of San Onofre Unit 1 has not adversely or significantly impacted the marine environment (see 1975, 1976, 1977, and 1978 San Onofre Annual Operating Reports, Oceanographic Volumes).

The proposed change to Environmental Technical Specification 3.1.1.a(5) will neither change the monitoring methods nor will it reduce the existing level of temperature surveillance data being collected. Since the objective of thermal monitoring is to deduce the impacts of San Onofre Unit 1 operation on

*except as required in ETS 3.1.1.a(6)
**data losses can amount to 20% continuous per sensor but may not exceed more than 20% total cumulative

the natural ocean temperatures, there is little reason to suspect that any impacts induced by Unit 1 could go undetected at an 80% data retrieval rate. Exempting the specification from the requirement for the non-routine reporting within thirty days of the verification of lost data will not affect the monitoring of the thermal additions to the receiving water. In the four-year history of the continuous offshore water temperature monitoring system, as part of Environmental Technical Specification 3.1.1.a(5), the data retrieved has provided enough information to adequately assess the effect of the thermal discharge plume from the operation of San Onofre Unit 1 on the marine environment. The assessments of the continuous offshore water temperature data collected, which can be found in the Annual Operating Reports-Oceanographic Data Volumes (1975, 1976, 1977, and 1978) has shown no significant environmental impact due to San Onofre Unit 1 operation.

Environmental Finding

This action will not result in a condition which significantly alters the impact of the station on the environment as described in the NRC Final Environmental Statement.

Cost-Benefit Analysis

The additional costs ($26,000 for the initial year and $18,000 per year thereafter, based on a completely redundant back-up system) needed to guarantee a 98% data retrieval rate would be an unproductive expenditure since an 80% data retrieval rate is adequate to allow a sufficient assessment of the characteristics of offshore water temperatures at San Onofre. The relaxation of the data retrieval rate and exemption from the non-routine thirty-day written report will not create any environmental impacts or result in any reduction in the existing level of environmental data currently being collected. The change in method of non-routine reporting of data losses will result in a savings of at least $18,000 per year with no resultant impact to the environment.

WHS:dcc
2WHS130.B