

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA EDISON	)	
COMPANY, <u>ET AL.</u> for a Class 103 License to	)	DOCKET NO. 50-361
Acquire, Possess, and Use a Utilization	)	
Facility as Part of Unit No. 2 of the San	)	Amendment Application
Onofre Nuclear Generating Station	)	No. 42

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90,  
hereby submit Amendment Application No. 42.

This amendment application consists of Proposed Change NPF-10-247  
to Facility Operating License No. NPF-10. Proposed Change NPF-10-247 is a  
request to revise Technical Specification 3/4.6.4.2, "Electric Hydrogen  
Recombiners." The proposed change would increase 18 month surveillance test  
intervals to "refueling interval," to support nominal 24 month fuel cycle  
operation.

Pursuant to 10 CFR 170.12, the required amendment application fee of  
\$150 is enclosed.

Subscribed on this 25<sup>th</sup> day of April, 1988.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Kimith P. Baker

Subscribed and sworn to before me this  
25<sup>th</sup> day of April, 1988.

C. Sally Sebo  
Notary Public in and for the County of  
Los Angeles, State of California

My Commission Expires: Apr 20, 1990



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

By: James A. Beoletto

STATE OF CALIFORNIA } SS.  
COUNTY OF San Diego

On April 7, 1988, before me, the undersigned, a Notary Public in and for  
said State, personally appeared JD Cotton and

\_\_\_\_\_, personally known to me (or proved to me on the  
basis of satisfactory evidence) to be the persons who executed the within instrument as \_\_\_\_\_

in Vice President and \_\_\_\_\_ Secretary, on behalf of \_\_\_\_\_

San Diego Gas & Electric

the corporation therein named, and acknowledged to me that  
such corporation executed the within instrument pursuant to  
its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

Signature

Stephanie E Hitt



(This area for official notarial seal)

SAN DIEGO GAS & ELECTRIC COMPANY

By:

LR Cotton

David R. Pigott  
Samuel B. Casey  
Orrick, Herrington & Sutcliffe  
Attorneys for San Diego  
Gas & Electric Company

By:

David R Pigott

Subscribed and sworn to before me this

7 day of April.

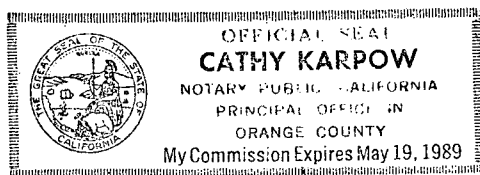
Stephanie E. Hill  
Notary Public in and for the City  
and County of San Diego, California

THE CITY OF ANAHEIM

By: *London Watts*

Alan R. Watts  
Rourke & Woodruff  
Attorneys for the City of Anaheim

By: *Alan R. Watts*



Subscribed and sworn to before me this 1<sup>st</sup> day of April, 1988.

*Cathy Karpow*  
Notary Public in and for the County  
of Orange, State of California

THE CITY OF RIVERSIDE

By:



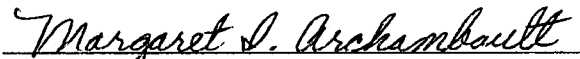
Bill D. Carnahan  
Public Utilities Director

Alan R. Watts  
Rourke & Woodruff  
Attorneys for the City of Riverside

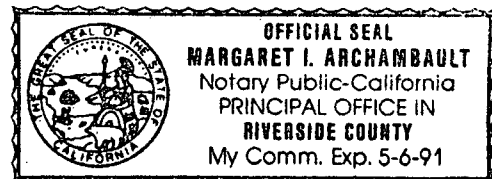
By:



Subscribed and sworn to before me this  
4th day of April, 1988.



Notary Public in and for the County of  
Riverside, State of California



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA EDISON	)	
COMPANY, <u>ET AL.</u> for a Class 103 License to	)	DOCKET NO. 50-362
Acquire, Possess, and Use a Utilization	)	
Facility as Part of Unit No. 3 of the San	)	Amendment Application
Onofre Nuclear Generating Station	)	No. 28

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90,  
hereby submit Amendment Application No. 28.

This amendment application consists of Proposed Change NPF-15-247  
to Facility Operating License No. NPF-15. Proposed Change NPF-15-247 is a  
request to revise Technical Specification 3/4.6.4.2, "Electric Hydrogen  
Recombiners." The proposed change would increase 18 month surveillance test  
intervals to "refueling interval," to support nominal 24 month fuel cycle  
operation.

Pursuant to 10 CFR 170.12, the required amendment application fee of  
\$150 is enclosed.

Subscribed on this 25<sup>th</sup> day of April, 1988.

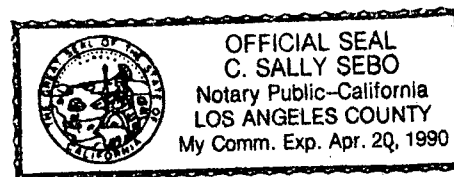
Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Kenneth P. Bush

Subscribed and sworn to before me this  
25<sup>th</sup> day of April, 1988.

C. Sally Sebo  
Notary Public in and for the County of  
Los Angeles, State of California



My Commission Expires: Apr. 20, 1990

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

By: James A. Beoletto



STATE OF CALIFORNIA  
COUNTY OF San Diego } SS.

On April 7, 1988, before me, the undersigned, a Notary Public in and for  
said State, personally appeared H.D. Cotton and

\_\_\_\_\_, personally known to me (or proved to me on the  
basis of satisfactory evidence) to be the persons who executed the within instrument as \_\_\_\_\_

Mr. Vice President and \_\_\_\_\_ Secretary, on behalf of \_\_\_\_\_

San Diego Gas & Electric

the corporation therein named, and acknowledged to me that  
such corporation executed the within instrument pursuant to  
its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

Signature \_\_\_\_\_



(This area for official notarial seal)

SAN DIEGO GAS & ELECTRIC COMPANY

By: SD Cotton

David R. Pigott  
Samuel B. Casey  
Orrick, Herrington & Sutcliffe  
Attorneys for San Diego  
Gas & Electric Company

By: David R Pigott

Subscribed and sworn to before me this  
7 day of April.

Stephanie E. Hill  
Notary Public in and for the City  
and County of San Diego, California

THE CITY OF ANAHEIM

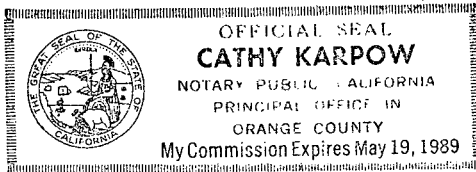
By:

Jordan W. Hoops

Alan R. Watts  
Rourke & Woodruff  
Attorneys for the City of Anaheim

By:

Alan R. Watts




Subscribed and sworn to before me this  
15<sup>th</sup> day of April, 1988.

Cathy Karpow  
Notary Public in and for the County  
of Orange, State of California

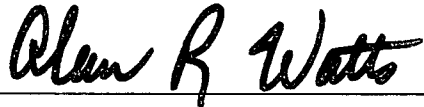
THE CITY OF RIVERSIDE

By: \_\_\_\_\_

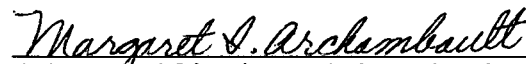
  
Bill D. Carnahan  
Public Utilities Director

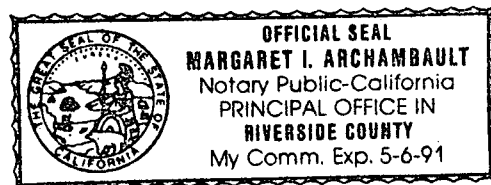
Alan R. Watts  
Rourke & Woodruff  
Attorneys for the City of Riverside

By: \_\_\_\_\_



Subscribed and sworn to before me this  
4th day of April, 1988.

  
Notary Public in and for the County of  
Riverside, State of California



## DESCRIPTION OF PROPOSED CHANGE NPF-10/15-247 AND SAFETY ANALYSIS

This is a request to revise Technical Specification 3/4.6.4.2, "Electric Hydrogen Recombiners."

### Existing Specifications

Unit 2: See Attachment "A"

Unit 3: See Attachment "C"

### Proposed Specifications

Unit 2: See Attachment "B"

Unit 3: See Attachment "D"

### Description

The proposed change would revise Technical Specification (TS) 3/4.6.4.2, "Electric Hydrogen Recombiners," to increase the interval for surveillance tests which are currently performed every 18 months, to each refueling. TS 3/4.6.4.2 requires that two hydrogen recombiners be operable during startup or power operation (Modes 2 and 1, respectively), defines period surveillance tests to verify operability, and compensatory actions to be taken when the minimum operability requirements are not met.

The hydrogen recombiners are part of the post accident combustible gas control system. During a postulated loss of coolant accident, hydrogen gas would evolve from the reaction of water with fuel cladding, radiolytic decomposition of water, and corrosion of metals inside containment. The function of the combustible gas control system is to maintain the post accident concentration of hydrogen gas in the containment atmosphere below the explosive gas limit, thereby prevent a hydrogen gas explosion from challenging containment integrity.

In order to verify operability of the hydrogen recombiners, TS 3/4.6.4.2, requires that a functional test be performed at least once per six months. In addition, TS 4.6.4.2.b requires each hydrogen recombiner system to be demonstrated operable at least once per 18 months by performance of the following surveillance requirements:

- 1) TS 4.6.4.2.b.1 requires a channel calibration of all hydrogen recombiner instrumentation and control circuits. This test verifies electrical resistance and calibrates thermocouples to plus or minus one percent.

- 2) Technical Specification 4.6.4.2.b.2 and 3 require that : 1) that there is no evidence of abnormal conditions within the recombiners by performing a visual examination; and 2) that the integrity of the heater electrical circuits is satisfactory by performing a continuity and resistance to ground test.

SONGS 2 has recently entered its first nominal 24 month fuel cycle. SONGS 3 will enter its first nominal 24 month cycle with cycle 4 startup in mid-1988. The hydrogen recombiners are located in the containment so access to the containment is required to conduct the required testing. In order to maintain radiation exposures as low as reasonably achievable, the unit would need to be in a shutdown mode to conduct this testing. The current 18 month surveillance interval could necessitate a plant shutdown solely for the purpose of performing 18 month surveillance requirements. To avoid the need for an otherwise unnecessary shutdown, the proposed change would increase the surveillance test interval from 18 months to "once each refueling."

Since the proposed changes would increase the surveillance interval from 18 months to "refueling interval" for a nominal 24 month cycle, the actual time interval between surveillances will be a function of the plant capacity factor for that particular fuel cycle. The equilibrium fuel cycle length will be approximately 513 effective full power days (EFPD). Assuming a production factor of 90% and a 75 day refueling outage, the actual cycle length, and surveillance interval, would be approximately 21 months. Currently, Specification 4.0.2 allows a 25% extension of surveillance intervals which would accommodate uninterrupted operation for the equilibrium cycle length, except that the Specification 4.0.2 limitation on the application of a 25% extension, such that three consecutive intervals do not exceed 3.25 times the nominal interval; eventually would impact operation. Thus, the proposed change does not represent a radical increase over what is already permitted by technical specifications.

A review of the history of the required 18 month surveillance tests, from the beginning of commercial operation to present, revealed only minor equipment deficiencies. On Unit 2 terminal blocks were broken during a surveillance. The terminal block breakage problem is currently being evaluated, however extending the surveillance interval would tend to decrease the impact since it appears to be test-related. One potentiometer was found to be out of adjustment during a channel calibration on Unit 3. Visual examinations have all been satisfactory. Heater electrical circuit tests have revealed only one problem. Unit 3 had one non-failure related problem where the heater leads were reversed. It is likely that this condition was caused during installation or maintenance.

A functional test of each hydrogen recombiner is performed once every six months in accordance with TS 4.6.4.2.a. This functional test provides a high level of assurance that the recombiners are capable of performing their design function by actually measuring the heater sheath temperature and power output of the unit. The additional testing currently required at 18 month intervals does not add significantly to the level of assurance of operability provided by the functional test. Indeed, as noted above, it may contribute to failure.

### Safety Analysis

The proposed changes discussed above shall be deemed to involve a significant hazards consideration if there is a positive finding in any one of the following areas:

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The function of the hydrogen recombiners is to maintain the post accident concentration of hydrogen gas in the containment atmosphere below the explosive gas limit, thereby prevent a hydrogen gas explosion from challenging containment integrity. The proposed change increases the interval for surveillance tests currently performed at 18 month intervals. There has been a low incidence of problems detected by the 18 month surveillances tests. Additionally the functionality of the hydrogen recombiners is demonstrated at six month intervals by the required functional test, which is unaffected by the proposed change. Because of the low incidence of problems, and the functional testing at six month intervals, the proposed change will not significantly affect the hydrogen recombiners' availability to function post accident. Therefore, the proposed change will not significantly increase the probability of previously analyzed accidents.

2. Will operation of the facility in accordance with this proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed change affects only the frequency of hydrogen recombiner surveillance testing. The proposed change does not alter the configuration of the facility or its operation. Therefore, the proposed change does not create the possibility of a new or different kind of accident.

3. Will operation of the facility in accordance with the proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed change affects only the frequency of certain hydrogen recombiner surveillance tests which may result in a small reduction of confidence in hydrogen recombiner operability and the associated margin

of safety. However, the 18 month surveillances have historically detected few problems and the six month functional tests are unaffected by the proposed change. Therefore, the proposed change will not result in a significant reduction in a margin of safety.

Safety and Significant Hazards Determination

Based on the above Safety Analysis it is concluded that: (1) the proposed change does not constitute a significant hazards consideration as defined by 10 CFR 50.92; and (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change; and (3) 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.

9504F



ATTACHMENT "A"  
UNIT 2 EXISTING SPECIFICATIONS