UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. for a Class 103 License to Acquire, Possess, and Use a Utilization Facility as Part of Unit No. 3 of the San Onofre Nuclear Generating Station	)	Docket No. 50-362 Amendment Application No. 128

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby submits Amendment Application No. 128

This amendment application consists of Proposed Technical Specification Change No. NPF-10-439 to Facility Operating License NPF-15. Proposed Technical Specification Change No. NPF-15-439 is a request to revise Technical Specification 3/4.7.5, "Control Room Emergency Air Cleanup System." The proposed change will provide an LCO 3.0.4 exception for MODES 5, 6, or a defueled configuration. The APPLICABILITY statement "or during movement of irradiated fuel assemblies" will be added also. The Action statement "Units 2and 3 in Mode 5 or 6" will be changed to "Units 2 and 3 in Mode 5 or 6, or defueled configuration when moving irradiated fuel assemblies." The words "or movement of irradiated fuel assemblies" will be added in Action b) after the words "suspend all operations involving CORE ALTERATIONS or positive reactivity changes."

Subscribed on this 26TH day of AUGUST, 1994.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Richard M. Rosenblum
Richard M. Rosenblum
Vice President

State of California
County of Orange
On 8/26/94 before me, BARBARA A. MC CARTHY/NOTARY PUBLIC, personally appeared RICHARD M. ROSENBLUM, personally known to me ~~(or proved to me on the basis of satisfactory evidence)~~ to be the person~~(s)~~ whose name~~(s)~~ is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity~~(ies)~~, and that by his/~~her/their~~ signature~~(s)~~ on the instrument the person~~(s)~~, or the entity upon behalf of which the person~~(s)~~ acted, executed the instrument.

WITNESS my hand and official seal.

Signature Barbara A. McCarthy

OFFICIAL SEAL
BARBARA A. MC CARTHY
Notary Public-California
ORANGE COUNTY
My Commission Expires
March 31, 1995

ENCLOSURE 1

DESCRIPTION AND SAFETY ANALYSIS
OF PROPOSED CHANGE NPF-10/15-439

This is a request to revise Technical Specification (TS) 3/4.7.5, "Control Room Emergency Air Cleanup System," for the San Onofre Nuclear Generating Station (SONGS), Units 2 and 3. The proposed revision to TS 3/4.7.5 will modify the Applicability by including the statement "or during movement of irradiated fuel assemblies." The proposed revision will also add an exception to the requirements of Limiting Condition for Operation (LCO) 3.0.4 for MODES 5, 6, or a defueled configuration. Subsequently, the Action statement when either Unit is in MODES 5 or 6 and Action b) will be modified also.

EXISTING TECHNICAL SPECIFICATIONS

Unit 2: See Attachment A
Unit 3: See Attachment B

PROPOSED TECHNICAL SPECIFICATIONS

Unit 2: See Attachment C
Unit 3: See Attachment D

DESCRIPTION

The proposed change will revise Technical Specification (TS) 3/4.7.5, "Control Room Emergency Air Cleanup System." The Control Room Emergency Air Cleanup System (CREACUS) provides a protected environment from which operators can control the plant following an uncontrolled release of radioactivity, or toxic gas.

The proposed change will modify the Applicability by including the statement "or during movement of irradiated fuel assemblies," and a new Action d) will be added which permits an exception to the requirements of LCO 3.0.4 when entering MODES 5, 6, or a defueled configuration. The Action statement when either Unit is in MODES 5 or 6 and Action b) will be modified also.

The proposed changes are required since the current TS provides critical path restrictions to refueling outages with no commensurate increase in reactor safety. For example, a delay may be caused by requiring withdrawing from an electrical bus outage in progress in order to make a defueled to Mode 6 mode change. This subsequently requires re-establishing the bus outage once the Mode change is made -- which only increases the total time the Unit is in a degraded configuration due to establishing and withdrawing from required bus outages.

In fact, as will be shown below, the current 3.0.4 restraint for Modes 5, 6, and defueled is inappropriate since it does not restrict the Mode where this system is relied upon for safety: during movement of irradiated fuel. Instead, unnecessary restriction is placed on Mode changes to Modes 5, 6, and defueled which do not improve safety but only cause a costly delay to the refueling outage. Accordingly, we request this proposed change in a timely manner to facilitate the SONGS 2 refueling outage now scheduled for February,

1995.

The CREACUS consists of one normal air conditioning unit, two emergency supply filtration trains, two normal exhaust fans, and one smoke removal fan. The outside air intake louvers for the control room are located at elevation 30 feet. The normal air conditioning unit is provided with a moderate efficiency filter. Each of the two redundant emergency filtration trains is equipped with an emergency ventilation unit and an emergency air conditioning unit.

Emergency ventilation units consist of a prefilter, HEPA filter, heating coil, charcoal filter, and fan. Emergency air conditioning units consist of a prefilter, HEPA filter upstream, charcoal filter, HEPA filter downstream, cooling coil, and fan.

The following are the proposed changes to Technical Specification 3/4.7.5 "Control Room Emergency Air Cleanup System:"

1. Add the following statement to the Applicability: "**or during movement of irradiated fuel assemblies.**"

2. A new Action d): "**The provisions of Specification 3.0.4 are not applicable when entering MODES 5, 6, or defueled configuration**" is added to the Action section.

3. Add the following words "**or defueled configuration when moving irradiated fuel assemblies**" after the words "Units 2 and 3 in MODE 5 or 6" in the Action statement.

4. Add the following words "**or movement of irradiated fuel assemblies**" after the words "suspend all operations involving CORE ALTERATIONS or positive reactivity changes" in the Action b) statement.

Discussion

1. Addition to Applicability Statement

The current Applicability of TS 3/4.7.5 covers all operational MODES but does not cover movement of irradiated fuel assemblies. By the current definition, MODE 6 or REFUELING is mainly characterized by the following parameters:

- 0% of rated thermal power (excluding decay heat)
- Reactivity, $K_{eff} \leq 0.95$
- Average coolant temperature $\leq 140°F$
- Fuel in the reactor vessel
- With the reactor vessel head closure bolts less than fully tensioned or with the head removed.

REFUELING itself is characterized as the operational MODE when fuel is in the reactor vessel with the vessel head closure bolts less than fully tensioned, or with the head removed. Movement of irradiated fuel inside or outside containment when no fuel is in the vessel is not covered by this definition. Chapter 15 of the SONGS Units 2 and 3 Updated Final Safety Analysis Report (UFSAR), Section 15.7.3.4, "Design Basis Fuel Handling Accidents," describes the consequences of the fuel handling accident inside containment and inside the Fuel Handling Building.

During fuel handling operations, the containment is kept in an isolatable condition, with all penetrations to the outside atmosphere either closed or capable of being closed on a containment purge isolation signal (CPIS) from redundant area and airborne radiation monitors. In addition to the area and airborne radiation monitors in the containment, portable monitors capable of sounding audible alarms are located in the fuel handling area during refueling. Should a fuel assembly be dropped and release activity above a prescribed level, the radiation monitors sound an audible alarm, and the containment is isolated from the outside atmosphere. The containment purge lines are automatically closed upon a CPIS, thus minimizing the escape of any radioactivity.

Should a fuel assembly be dropped in the fuel transfer canal or in the spent fuel pool (SFP) and release radioactivity above a prescribed level, the airborne radiation monitors sound an alarm, alerting personnel to the problem. Airborne radiation monitors in the exhaust ducts from the Fuel Handling Building isolate the normal Fuel Handling Building ventilation system and automatically initiate the recirculation and filtration systems.

The probability of a fuel handling accident is very low because of the safety features, administrative controls, and design characteristics of the facility. However, since the fuel handling accident is considered a limiting fault, it is postulated that a fuel assembly is dropped during refueling operations, breaching the cladding of the fuel pins and releasing the volatile fission products contained in the gap region of the fuel pin.

Radiation doses to control room personnel following a postulated fuel handling accident are based on the same shielding, ventilation, atmospheric dispersion, and dose model assumptions used for the LOCA. Buildup of activity in the control room is based on the two hour release of activity following the accident. In calculating the doses, outside air intake through the control room HVAC system (emergency mode of operation) is assumed for the two hour duration of the accident.

The additional requirement proposed in the Applicability, to have two Control Room Emergency Air Cleanup Systems OPERABLE during movement of irradiated fuel, covers the consequences of a fuel accident when there are no fuel assemblies in the core. This includes: (1) movement of fuel in the Fuel Handling Building; (2) movement of the last fuel assembly from the vessel (defueling) to the transfer canal inside containment;

and (3) movement of the first fuel assembly from the transfer canal to the vessel (fuel loading).

2. LCO 3.0.4 Exception

Specification 3.0.4 establishes that entry into an operational mode or other specified condition shall not be made unless the conditions of the LCO are met. Existing Technical Specification 3/4.7.5 prohibits entering MODE 6 from a defueled configuration unless both CREACUS trains are OPERABLE. With the addition of the statement "or during movement of irradiated fuel assemblies" to the Applicability, OPERABILITY of the CREACUS will be ensured prior to the start of movement of irradiated fuel assemblies. However, one train of CREACUS may be inoperable for up to seven days once fuel movement has been initiated. Therefore, the only difference between a defueled configuration and MODE 6, is the position of the first irradiated fuel assembly--whether it is in the reactor vessel or external to it. This threshold (i.e. placing the first assembly into the reactor vessel) has no safety significance because the only credible event during the transition from a defueled configuration to MODE 6 is the Design Basis Fuel Hardling Accident which is covered by the proposed Applicability. Therefore, this change in MODES can be excepted from LCO 3.0.4.

The MODE change from MODE 6 to a defueled configuration can also be excepted from the requirements of LCO 3.0.4. The proposed Applicability would cover movement of the last fuel assembly from the reactor vessel to the transfer canal inside containment. As discussed above, the only difference between MODE 6 and a defueled configuration is the position of the last fuel assembly, which has no safety significance. Therefore, this change in MODES can be excepted from LCO 3.0.4.

By the current definition, MODE 5 or COLD SHUTDOWN is defined by the following parameters:

- Reactivity, $K_{eff} < 0.99$
- 0% of Rated Thermal Power (excluding decay heat)
- $\leq$ 200°F average coolant temperature
- Fuel in the reactor vessel
- All reactor vessel head closure bolts fully tensioned.

The threshold of entering MODE 5 from MODE 6 consists of fully tightening the last reactor vessel head closure bolt only. This evolution has no safety significance from the point of view of isolating the control room from a radiation or toxic gas release. Therefore, this MODE change can be excepted from LCO 3.0.4.

The threshold of entering MODE 6 from MODE 5 consists of untightening at least one reactor vessel head closure bolt. If no irradiated fuel assemblies are being moved, this evolution has no safety significance from the point of view of isolating the control room from a radiation or toxic gas release. Therefore, this MODE change can be excepted from LCO 3.0.4.

The threshold of entering MODE 5 from MODE 4 consists of decreasing Reactor Coolant System (RCS) temperature from $350°F > T_{avg} > 200°F$ to $T_{avg} \leq 200°F$ by initiating shutdown cooling. If no irradiated fuel assemblies are being moved, this evolution has no safety significance from the point of view of isolating the control room from a radiation or toxic gas release. Therefore, this MODE change can be excepted from LCO 3.0.4. Based on the 3.0.4 definition and NUREG 1432 direction an Action Time clock can not be restarted when changing MODES when excepting the provisions of 3.0.4. This is also the practice for all other specifications which have a 3.0.4 exception.

There are Design Basis Accidents which require CREACUS initiation and control room isolation. The accidents of more significance are Loss of Coolant Accident (LOCA) and Fuel Handling Accident for either Unit. The consequences of the radioactivity release in a case of a LOCA are more severe than in a case of a Fuel Handling Accident. However, one train of CREACUS may be inoperable for up to seven days in accordance with the existing TS 3/4.7.5 in any operational MODE. The MODE changes have no significance relative to releases. Therefore, since CREACUS can be inoperable during each individual mode, it should not be required to have two OPERABLE CREACUS trains before MODE changes from defueled configuration to MODE 6, from MODE 6 to MODE 5, from MODE 5 to MODE 6, from MODE 6 to defueled configuration, and from MODE 4 to MODE 5.

3. Addition of the words "**or defueled configuration when moving irradiated fuel assemblies**" after the words "Units 2 and 3 in MODE 5 or 6" in the Action statement.

These words are added for consistency with a proposed Applicability statement "or during movement of irradiated fuel assemblies." Without these words it is not clear what Actions should be entered if the LCO requirement is not met in a defueled configuration when moving irradiated fuel assemblies. By adding these words Actions a) and b) became applicable in a defueled configuration when moving irradiated fuel assemblies.

4. Addition of the words "**or movement of irradiated fuel assemblies**" in the Action b) statement.

With both control room emergency air cleanup systems inoperable when Unit 2 or Unit 3 is in a defueled configuration when moving irradiated fuel assemblies, the proposed wording requires to suspend movement of irradiated fuel assemblies. Without addition of these words Action b)

did not specify what should be done when any Unit is in a defueled configuration when moving irradiated fuel assemblies. This change was made for consistency with the proposed Applicability statement and proposed Action statement.

Safety Analysis

The proposed change 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 any accident previously evaluated?

   Response: No

   The Control Room Emergency Air Cleanup System (CREACUS) provides a protected environment from which operators can control the plant following an uncontrolled release of radioactivity or toxic gas.

   Proposed Change 1 will replace the existing wording of the Applicability with the following words "**ALL MODES or during movement of irradiated fuel assemblies.**" The requirement concerning movement of irradiated fuel assemblies was added because the existing Applicability statement does not reflect the possibility of radiation exposure to the operators inside the control room during this event. A fuel handling accident can happen during defueled operations. In this case, movement of the last irradiated fuel assembly from the empty core inside containment is not covered by the existing Applicability.

   Also, a fuel handling accident can happen inside the Fuel Handling Building when irradiated fuel is moved from one location to another in the Spent Fuel Pool (SFP). The need for the CREACUS during fuel handling is based on safety analysis assumptions which are specified in Chapter 15 of the SONGS Unit 2 and 3 Updated Final Safety Analysis Report (UFSAR).

   Addition of the new Applicability requirement will not involve a significant increase in the possibility or consequences of any accident previously evaluated.

   Proposed Change 2 will add a new Action d) which reads: "**The provisions of Specification 3.0.4 are not applicable when entering MODES 5, 6, or defueled configuration.**" Existing Technical Specification 3/4.7.5 prohibits entering MODE 6 from a defueled configuration unless both CREACUS trains are OPERABLE. With the addition of the statement "or during movement of irradiated fuel assemblies" to the Applicability, OPERABILITY of the CREACUS will be ensured prior to movement of irradiated fuel assemblies.

Therefore, the only threshold between defueled configuration and MODE 6 is the position of the first irradiated fuel assembly--whether it is in the reactor vessel or external to it. This threshold has no safety significance because the only credible event during the transition from a defueled configuration to MODE 6 and from MODE 6 to defueled configuration is a Design Basis Fuel Handling Accident which is covered by the proposed Applicability. Therefore, this threshold can be excepted from Limiting Condition for Operation (LCO) 3.0.4.

The threshold of entering MODE 5 from MODE 6 consists of fully tightening the last reactor vessel head closure bolt. This evolution has no safety significance from the point of view of isolating the control room from external hazards. Therefore, this MODE change can be excepted from LCO 3.0.4. The threshold of entering MODE 6 from MODE 5 consists of untightening at least one reactor vessel head closure bolt. If no irradiated fuel assemblies are being moved, this evolution has no safety significance from the point of view of isolating the control room from external hazards. Therefore, this MODE change can be excepted from LCO 3.0.4 also.

The threshold of entering MODE 5 from MODE 4 consists of decreasing Reactor Coolant System (RCS) temperature from 350°F > T_{avg} > 200°F to T_{avg} ≤ 200°F by initiating shutdown cooling. If no irradiated fuel assemblies are being moved, this evolution has no safety significance from the point of view of isolating the control room from external hazards. Therefore, this MODE change can be excepted from LCO 3.0.4.

The MODE changes have no significance relative to releases. Therefore, since CREACUS can be inoperable during each individual mode, it should not be required to have two OPERABLE CREACUS trains before mode changes.

Therefore, addition of the new Action will not involve a significant increase in the probability or consequences of any accident previously evaluated.

Proposed Change 3 will add the words "**or defueled when moving irradiated fuel assemblies**" to the Action statement when either Unit is in MODE 5 or 6. These words are added for consistency with a proposed Applicability statement "or during movement of irradiated fuel assemblies." Without these words it is not clear what Actions should be entered if the LCO requirement is not met in a defueled configuration when moving irradiated fuel assemblies. By adding these words Actions a) and b) became applicable in a defueled configuration when moving irradiated fuel assemblies. This change applies the requirement of the proposed Applicability to the Action when either Unit is in MODES 5 or 6. Therefore, addition of these words to the Action statement will

not involve a significant increase in the probability or consequences of any accident previously evaluated.

Proposed Change 4 will add the words "**or movement of irradiated fuel assemblies**" in the Action b) statement. These words are added for consistency with the proposed Applicability statement and proposed Action statement when either Unit is in MODES 5 or 6, or a defueled configuration when moving irradiated fuel assemblies. Without addition of these words Action b) did not specify what should be done when any Unit is in a defueled configuration when moving irradiated fuel assemblies. Therefore, addition of these words to the Action statement will not involve a significant increase in the probability or consequences of any accident previously evaluated.

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 previously evaluated?

Response: No

The changes proposed herein do not reduce the reliability or performance of the Control Room Emergency Air Cleanup System (CREACUS). The proposed LCO 3.0.4 exception for CREACUS permits MODE 5, MODE 6, or defueled configuration entry with one train of CREACUS inoperable. This change does not affect CREACUS reliability and its capability to perform its intended design functions.

Additional requirements in the Applicability to have two Control Room Emergency Air Cleanup Systems OPERABLE during movement of irradiated fuel covers the consequences of a fuel accident in the Fuel Handling Building and in containment when the reactor vessel is defueled. Operation of the facility will remain unchanged as a result of the proposed changes.

Also, addition of the requirement to suspend movement of irradiated fuel assemblies when either Unit is in a defueled configuration when moving irradiated fuel is made for consistency with the proposed Applicability statement and Action statement. The proposed Action statement emphasize that Actions a) and b) are applicable not only when either Unit is in MODES 5 or 6, but also when in a defueled configuration when moving irradiated fuel assemblies. This change does not affect CREACUS reliability and its capability to perform its intended design functions. Therefore, the proposed changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Will operation of the facility in accordance with this proposed

change involve a significant reduction in a margin of safety?

Response: No

Operation of the facility in accordance with these changes will not be adversely affected as a result of the changes proposed herein. The proposed changes include a change to the Applicability, adding the new Action d), modifying the Action statement when either Unit is in MODES 5 or 6, and modifying the Action b). The proposed LCO 3.0.4 exception for CREACUS permits MODE 5, MODE 6, or defueled configuration entry with one train of CREACUS inoperable. Additional requirements in the Applicability statement to have two Control Room Emergency Air Cleanup Systems OPERABLE during movement of irradiated fuel, covers the consequences of the fuel accident in the Fuel Handling Building. Also, this requirement covers the movement of irradiated fuel when the reactor vessel is defueled. Modified Action statement for either Unit in MODES 5 or 6 is made for consistency with the proposed Applicability statement. Modified Action b) covers the possibility of both the CREACUS trains being inoperable in a defueled configuration when moving irradiated fuel assemblies.

The margin of safety as defined in Bases 3/4.7.5 is limiting the dose to control room personnel to 5.0 rem or less whole body, or its equivalent. As discussed above, operation of the CREACUS will be unchanged as a result of the proposed changes. Therefore, operation of the facility in accordance with this proposed change will not involve 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. Moreover, because this action does not involve a significant hazards consideration, it will also not result in a condition which significantly alters the impact of the station on the environment as described in the NRC Final Environmental Statement.