BEFORE THE UNITED STATES 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. 2 of the San Onofre Nuclear Generating Station	)))))	DOCKET NO. 50-361 Amendment Application No. 128

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

This amendment application consists of Proposed Change Number (PCN) NPF-10-325 to Facility Operating License No. NPF-10. PCN NPF-325 is a request to revise San Onofre Unit 2 Technical Specification (TS) 3.2.1, "LINEAR HEAT RATE," and TS 3.2.4, "DNBR MARGIN" and the corresponding Bases. This amendment request increases the ACTION time for the Core Operating Limit Supervisory System (COLSS) to be out of service from 1 hour to 4 hours. During the 4 hour ACTION period new Surveillance Requirements will verify every 15 minutes that no adverse trend in departure from nucleate boiling ratio margin or linear heat rate will occur. In addition, new power reduction requirements are proposed when the Limiting Conditions for Operability cannot be met from "HOT STANDBY" to "less than or equal to 20% Rated Thermal Power."

Subscribed on this 21st day of December, 1992.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Harold B. Ray
Harold B. Ray
Senior Vice President

State of California

County of Orange

On 12/31/92 before me, Mariane Sanchez,

personally appeared Harold B. Ray, personally known to me to

the person whose name is subscribed to the within instrument and

dged to me that he executed the same in his authorized capacity, and

n signature on the instrument the person, or the entity upon behalf

person acted, executed the instrument.

and official seal.

OFFICIAL SEAL
MARIANE SANCHEZ
Notary Public-California
ORANGE COUNTY
My Commission Expires
October 14, 1994

Mariane Sanchez

James A. Beoletto
Attorney for Southern
California Edison Company

James A. Beoletto

Subscribed on this 31st day of December, 1992.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Harold B. Ray
Harold B. Ray
Senior Vice President

State of California

County of Orange

On 12/31/92 before me, Mariane Sanchez

personally appeared Harold B. Ray, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

OFFICIAL SEAL
MARIANE SANCHEZ
Notary Public-California
ORANGE COUNTY
My Commission Expires
October 14, 1994

Signature Mariane Sanchez

James A. Beoletto
Attorney for Southern
California Edison Company

By: James A. Beoletto
James A. Beoletto

BEFORE THE UNITED STATES 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. 112

SOUTHERN CALIFORNIA EDISON COMPANY ET AL., pursuant to 10 CFR 50.90, hereby submit Amendment Application No. 112.

This amendment consists of Proposed Change Number (PCN) NPF-15-325 to Facility Operating License No. NPF-15. PCN NPF-325 is a request to revise San Onofre Unit 3 Technical Specification (TS) 3.2.1, "LINEAR HEAT RATE," and TS 3.2.4, "DNBR MARGIN" and the corresponding Bases. This amendment request increases the ACTION time for the Core Operating Limit Supervisory System (COLSS) to be out of service from 1 hour to 4 hours. During the 4 hour ACTION period new Surveillance Requirements will verify every 15 minutes that no adverse trend in departure from nucleate boiling ratio margin or linear heat rate will occur. In addition, new power reduction requirements are proposed when the Limiting Conditions for Operability cannot be met from "HOT STANDBY" to "less than or equal to 20% Rated Thermal Power."

Subscribed on this 31st day of December, 1992.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Harold B. Ray
Harold B. Ray
Senior Vice President

State of California

County of Orange

On 12/31/92 before me, Mariane Sanchez, personally appeared Harold B. Ray, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

OFFICIAL SEAL
MARIANE SANCHEZ
Notary Public-California
ORANGE COUNTY
My Commission Expires
October 14, 1994

Signature Mariane Sanchez

James A. Beoletto
Attorney for Southern
California Edison Company

By: James A. Beoletto
James A. Beoletto

DESCRIPTION AND SAFETY ANALYSIS OF PROPOSED CHANGE NPF-10/15-325

This is a request to revise the reactor core power distribution limits Technical Specification (TS) 3/4.2.1, "LINEAR HEAT RATE," and TS 3/4.2.4, "DNBR MARGIN" for the San Onofre Nuclear Generating Station, Units 2 and 3. The proposed change will provide different ACTIONS for operating with and without the Core Operating Limit Supervisory System (COLSS) and increase the COLSS out of service ACTION time from 1 hour to 4 hours. In addition, a new surveillance will require increased monitoring of the Linear Heat Rate (LHR) and Departure from Nucleate Boiling Ratio (DNBR) margin using the Core Protection Calculators (CPCs) during the 4 hour ACTION time.

EXISTING TECHNICAL SPECIFICATION(S) AND BASES

Attachment A - Unit 2 TS and Bases
Attachment B - Unit 3 TS and Bases

PROPOSED TECHNICAL SPECIFICATION(S) AND BASES

Attachment C - Unit 2 TS and Bases
Attachment D - Unit 3 TS and Bases

DESCRIPTION

This amendment request consists of the following proposed changes to TS 3.2.1, "LINEAR HEAT RATE," TS 3.2.4, "DNBR MARGIN" and the associated Bases:

1) Replace the existing ACTIONs with two new ACTIONs which distinguish between COLSS in service and COLSS Out Of Service (OOS);
2) The new ACTIONs when COLSS is OOS will initiate within 15 minutes new surveillances to monitor DNBR margin and/or LHR every 15 minutes and increase the ACTION time from 1 hour to 4 hours when COLSS is OOS and either the LHR or DNBR margin is not being maintained within limits as indicated using any OPERABLE CPC channel;
3) Renumber the existing Surveillance Requirement (SR) 4.2.1.3 to 4.2.1.4 and add the following new SR 4.2.1.3: "4.2.1.3 With COLSS not in service and the linear heat rate not being maintained as indicated by any OPERABLE Local Power Density Channel exceeding the linear heat rate limit, verify every 15 minutes that there is no adverse trend in the linear heat rate."
4) Renumber the existing SR 4.2.4.3 to 4.2.4.4 and add the following new SR 4.2.4.3: "4.2.4.3 With COLSS not in service and the DNBR margin not being maintained as indicated by operation outside the region of acceptable operation of Figure 3.2-1 or 3.2-2 using any operable CPC channel, verify every 15 minutes that there is no adverse trend in DNBR margin.

5) Change the power reduction requirements when the DNBR margin and LHR Limiting Conditions for Operation (LCOs) cannot be met within the allowed ACTION time from "HOT STANDBY" to "less than or equal to 20% of RATED THERMAL POWER."
6) Add a discussion to the Bases of TS 3.2.1 and TS 3.2.4 to document the principal elements of this proposed change.
7) Change TS 3.2.4.d from "neither CEACs is" to "neither CEAC is."

This proposed change does not affect the LCOs for DNBR margin and LHR, or the applicability of these limits.

During normal operations core power distribution is continuously monitored by the COLSS to verify that the LHR and DNBR margin are within TS limits. When COLSS is not available the TSs allow DNBR margin and LHR to be monitored using the Core Protection Calculators (CPCs). The core power distribution is more accurately determined with the incore detector system used by the COLSS than the excore detectors used by the CPCs. In addition, the COLSS reserves a DNBR overpower margin to ensure that the specified acceptable fuel design limits are not exceeded in the event of an anticipated operational occurrence. To accommodate both CPC uncertainty and the reserved overpower margin, the TS LCOs are more restrictive and require larger margins of safety when operating without the COLSS.

TS 3.2.1 and TS 3.2.4 require the core power as determined by the COLSS to be below the COLSS calculated DNBR and LHR Power Operating Limits (POLs) while operating in MODE 1 above 20% rated thermal power. However, when operating at full power with the core power below the COLSS POLs, the CPCs will indicate a DNBR margin outside the COLSS out of service TS LCO.

Consequently, if COLSS becomes unavailable, the CPCs may indicate DNBR margin outside TS LCOs without any change in reactor operation and the DNBR margin still being within the TS LCOs if COLSS were available. In addition, with COLSS OOS the existing TS 3.2.4 ACTION requires corrective action (power reduction) to be initiated within 15 minutes to restore the DNBR margin within 1 hour. The required power reduction would take place when COLSS, the most accurate indication of core power distribution, is unavailable and with no real indication of need. This proposed change increases the ACTION time when COLSS is not in service to provide a reasonable opportunity for appropriate corrective actions including a power reduction.

During normal operations the COLSS is in service and the existing ACTION time limits are appropriate. However, the ACTION time limits are overly restrictive when COLSS is not available. Therefore, the proposed change increases the ACTION time from 1 hour to 4 hours to restore DNBR and LHR limits as indicated using any operable CPC channel. To ensure that no adverse trend in thermal margin occurs during the 4 hour ACTION, new TS surveillances (SR 4.2.1.3 and/or SR 4.2.4.3) will be performed every 15 minutes to monitor DNBR and/or LHR using the CPCs. In addition, if the DNBR margin and LHR limits cannot be met within the allowed 4 hour action time, this proposed change requires power to be reduced to less than or equal to 20% of the Rated Thermal Power (RTP) within the next 6 hours.

The specific changes to the Unit 2 and Unit 3 TSs are as follows:

TS 3/4.2.1 LINEAR HEAT RATE

The existing ACTIONs are to be replaced with the following two ACTIONs identified as "a" and "b":

a. With COLSS in service and the linear heat rate not being maintained as indicated by COLSS calculated core power exceeding the COLSS calculated core power operating limit based on linear heat rate (kw/ft):

   1. Restore the linear heat rate to within its limits within 1 hour, or

   2. Reduce THERMAL POWER to less than or equal to 20% of RATED THERMAL POWER within the next 6 hours.

b. With COLSS not in service and the linear heat rate not being maintained as indicated by any OPERABLE Local Power Density channel exceeding the linear heat rate limit:

   1. Within 15 minutes initiate surveillance requirement 4.2.1.3 and restore the linear heat rate to within limits within 4 hours, or

   2. Reduce THERMAL POWER to less than or equal to 20% of RATED THERMAL POWER within the next 6 hours.

The existing surveillance 4.2.1.3 is renumbered to 4.2.1.4 and replaced with the following new surveillance:

4.2.1.3 With COLSS not in service and the linear heat rate not being maintained as indicated by any OPERABLE Local Power Density Channel exceeding the linear heat rate limit, verify every 15 minutes that there is no adverse trend in the linear heat rate.

BASES TS 3/4.2.1

1) In the second paragraph, line 5, delete the second "its" to change "... the linear heat rate does not exceed its its limits." to "... the linear heat rate does not exceed its limits."

2) Add the following sentences as the fourth paragraph: "The core power distribution and a corresponding power operating limit based on Linear Heat Rate (LHR) are more accurately determined by the COLSS using the incore detector system. The CPCs determine LHR less accurately with the excore detectors. When COLSS is not available the TS LCOs are more restrictive due to the uncertainty of the CPCs. However, when COLSS becomes inoperable the added margin associated with CPC uncertainty is not immediately required and a 4 hour ACTION is provided for appropriate corrective action."

3) Add the following sentences as the last paragraph: "While operating with the COLSS out of service, the CPC calculated LHR is monitored every 15 minutes to identify any adverse trend in thermal margin. The increased monitoring of LHR during the 4 hour action period ensures that adequate safety margin is maintained for anticipated operational occurrences and

no postulated accident results in consequences more severe than those described in Chapter 15 of the UFSAR."

TS 3/4.2.4 DNBR MARGIN

An editorial change to TS 3.2.4.d will replace "neither CEACs is" with "neither CEAC is."

The existing Actions are to be replaced with the following two Actions identified as "a" and "b":

a. With COLSS in service and the DNBR limit not being maintained as indicated by COLSS calculated core power exceeding the COLSS calculated core power operating limit based on DNBR:

   1. Restore the DNBR to within its limits within 1 hour, or

   2. Reduce THERMAL POWER to less than or equal to 20% of RATED THERMAL POWER within the next 6 hours.

b. With COLSS not in service and the DNBR limit not being maintained as indicated by operation outside the region of acceptable operation of Figure 3.2-1 or 3.2-2 using any operable CPC channel:

   1. Within 15 minutes initiate surveillance requirement 4.2.4.3 and restore the DNBR to within its limits within 4 hours, or

   2. Reduce THERMAL POWER to less than or equal to 20% of RATED THERMAL POWER within the next 6 hours.

The existing surveillance 4.2.4.3 is renumbered to 4.2.4.4 and replaced with the following new surveillance:

4.2.4.3 With COLSS not in service and the DNBR margin not being maintained as indicated by operation outside the region of acceptable operation of Figure 3.2-1 or 3.2-2 using any operable CPC channel, verify every 15 minutes that there is no adverse trend in DNBR margin.

BASES TS 3/4.2.4

1) Add the following sentences as the fourth paragraph: "The core power distribution and a corresponding power operating limit based on DNBR are more accurately determined by the COLSS using the incore detector system. The CPCs determine DNBR less accurately with the excore detectors. In addition, the COLSS reserves a DNBR overpower margin to ensure that the specified acceptable fuel design limits are not exceeded in the event of an anticipated operational occurrence. Therefore, the COLSS out of service TS LCOs are more restrictive due to the uncertainty of the CPCs and the overpower margin reserved for anticipated operational occurrences. However, when COLSS becomes inoperable the added margin associated with the CPCs is not immediately required and a 4 hour ACTION is provided for appropriate corrective action."

2) Add the following sentences as the last paragraph: "While operating with the COLSS out of service, the CPC calculated DNBR is monitored every 15 minutes to identify any adverse trend in thermal margin. The increased monitoring of DNBR during the 4 hour action period ensures that adequate safety margin is maintained for anticipated operational occurrences and no postulated accident results in consequences more severe than those described in Chapter 15 of the UFSAR."

BASIS FOR AND ACCEPTABILITY OF THE REQUEST

This proposed change provides 4 hours to establish both the DNBR margin and LHR are within the existing TS LCOs when COLSS becomes inoperable. The proposed 4 hour action time is based on the following four considerations: 1) The loss of COLSS operability alone does not indicate an actual loss of safety margin, 2) The additional margin associated with the CPCs is not immediately required, 3) Compensatory actions will be provided in new surveillance requirements that increase monitoring of DNBR and LHR to assure no loss of required thermal margin, and 4) The benefits of a properly planned power reduction at a controllable rate.

This proposed change does not modify any Reactor Protection System setpoint and the safety limits will not be exceeded in the event of anticipated operational occurrences. The TS LCOs for DNBR and LHR will not be affected by this change and the core power distribution during all phases of normal operation and anticipated operational occurrences will remain bounded by the initial conditions assumed in chapter 15 of the San Onofre Units 2 and 3 Updated Final Safety Analysis Report (UFSAR).

The COLSS assists in maintaining core power at or below the operating license power limit. In addition, the COLSS provides indication and alarms for monitoring TS required LCOs including: Thermal Margin, Azimuthal Tilt, Axial Shape Index, Reactor Coolant System (RCS) flow rate, and Linear Heat Rate. When COLSS is not in service TS 3.2.1 and TS 3.2.4 allow DNBR margin and LHR to be monitored using the CPCs.

The COLSS and CPCs provide two different methods of independently determining the DNBR and LHR. The COLSS uses incore detectors to accurately determine core power distribution. The core power distribution is used for calculating COLSS Power Operating Limits (POLs) based on DNBR and LHR. The CPCs calculate DNBR and LHR using an axial power distribution from excore detectors and other inputs. The CPC method for calculating DNBR and LHR is less accurate than the COLSS method and requires additional safety margin. Due to the CPC uncertainties and the overpower margin reserved for anticipated operational occurrences, the TS LCOs are accordingly more restrictive when the CPCs are used to monitor DNBR and LHR. Therefore, during normal operations at full power, with the COLSS calculated core power below the COLSS POLs, the CPCs will usually indicate a DNBR margin outside the COLSS out of service TS LCO.

Since the CPCs will usually indicate DNBR margin outside the COLSS out of service TS LCOs, if COLSS becomes unavailable during normal full power operations the TS LCO will not be met. The existing ACTION statement requires corrective action to be initiated within 15 minutes to restore the DNBR margin within 1 hour. This will typically require a rapid power reduction of approximately 15% if COLSS cannot be restored within the 15 minute ACTION.

The magnitude of the required power reduction is dependent on core design and core life. Therefore, the current TSs may require a reduction of power on the basis of COLSS unavailability alone.

These rapid power reduction rates are difficult to control and could result in unnecessary challenges to the Reactor Protection System (RPS). The loss of COLSS does not indicate that DNBR and LHR safety limits have been exceeded, and the TSs allow operation without the COLSS. However, the existing TSs could require a change in power at a time when the most accurate method of monitoring the core power distribution is not available.

Operating Instruction (OI) S023-3-3.6, "COLSS Out of Service Surveillance" will be revised to support the new SRs during the proposed increased ACTION time. The revised OI will require more frequent monitoring of DNBR and LHR when the COLSS is not available and the DNBR or LHR LCOs are not met. The LHR and DNBR will be monitored using any operable CPC channel, with an initial determination made within the first 15 minutes after COLSS becomes inoperable and every 15 minutes thereafter. If an adverse trend (beyond normal parameter variation during steady state operation) in either DNBR margin or LHR is observed, the revised OI will require operator action to restore the DNBR margin and LHR to within acceptable values. Changes may be made to the OI in the future utilizing 10 CFR 50.59, to further specify the conditions which would represent an adverse trend.

If the CPC DNBR or LHR limits are not restored within the allowed 4 hours, this proposed change will require a power reduction to "less than or equal to 20% of RATED THERMAL POWER" within 6 hours. The current DNBR and LHR Actions require power to be reduced to at least "HOT STANDBY" conditions if DNBR and LHR limits cannot be restored. This proposed change is an administrative change to maintain consistency with the existing applicability statement which requires limits on DNBR margin and LHR only when the thermal power exceeds 20%.

SYSTEM OVERVIEW

The COLSS is a computer program run by the Plant Monitoring System (PMS) computer and the COLSS Backup Computer System (CBCS). The PMS and CBCS do not provide any safety function nor are they required for plant operation. The COLSS program performs several calculations to determine axial shape index, azimuthal power tilt, LHR Power Operating Limit (POL), DNBR POL, and licensed core power operating limit. The COLSS calculated POLs for DNBR and LHR equate to the core power at which the corresponding TS LCO is exceeded. Core power distribution is continuously determined using the incore detector assemblies spaced throughout the core. These calculations are used to accurately monitor TS LCOs for LHR, DNBR margin, Axial Shape Index (ASI) and Azimuthal power tilt. The CBCS runs an identical COLSS program in parallel with the PMS for use when the PMS is not available. The COLSS provides highly accurate data, however it lacks the necessary speed and redundancy required for the plant protection systems.

The Core Protection Calculators (CPCs) are designed to initiate an automatic reactor trip to ensure that the specified acceptable fuel design limits are not exceeded during anticipated operational occurrences. There is one excore detector assembly and one CPC for each independent channel of the RPS. The

excore detectors provide the CPCs with the axial core power distribution data required for calculating DNBR and LHR. However, due to limitations of the excore detectors the CPCs cannot calculate azimuthal tilt, which is required for determining core power distribution. Therefore, a conservative azimuthal tilt allowance is manually entered into the CPCs as an addressable constant.

During normal plant operation the TS DNBR and LHR LCOs are monitored using the COLSS which determines a core power and compares it with the COLSS calculated DNBR and LHR POLs. The COLSS calculated POLs include a DNBR overpower allowance to ensure that the specified acceptable fuel design limits are not exceeded in the event of an anticipated operational occurrence. When COLSS is not available the DNBR and LHR are monitored using the CPCs and directly compared with the TS LCOs. The CPCs are less accurate than the COLSS in determining DNBR and LHR, because each CPC channel uses one, tri-level, excore detector assembly, as compared to COLSS which uses a maximum of 56, five-level, incore detector assemblies (ref. TS 3/4.3.3.2). Consequently, the COLSS out of service TS LCOs are more restrictive when the CPCs are used to monitor DNBR margin and LHR.

DISCUSSION

When COLSS becomes unavailable the DNBR TS limits cannot usually be satisfied without a reduction in core power. This is because the DNBR as determined using CPCs usually exceeds the COLSS OOS TS limits at full power. Therefore, if COLSS becomes inoperable for greater than 15 minutes then full power operation cannot be maintained in accordance with TS ACTIONS. The amount of power reduction depends on the cycle specific core design and the existing core conditions at the time COLSS becomes inoperable.

The existing DNBR and LHR TS ACTION time limits originated from estimated time requirements for returning COLSS to service and optimistic anticipated power reduction requirements. These time limits were established prior to initial plant operation without the benefit of practical experience. Currently, reinitializing the PMS computer or transferring from the PMS to the CBCS requires approximately 15 minutes. Therefore, a potential situation exists in which a power reduction would be required when the non-safety related COLSS is lost, because inadequate time is provided by TSs for appropriate corrective action.

In general, a 15% power reduction is required when COLSS is lost to restore CPC DNBR margin to within TS limits. According to TSs this power reduction must be completed within 1 hour following a loss of the COLSS. However, during the last third of the operating cycle, when boron concentration is low, large power reduction rates are difficult to control and could result in a reactor trip. In addition, this power maneuver will be required when the most accurate means of monitoring reactor conditions is not available. Consequently, the existing TS may contribute to reduce plant reliability by unnecessarily increasing the potential of RPS actuation.

Revised OIs will require the new DNBR margin and LHR SRs be performed when the COLSS is not in service and TS 3.2.1 or TS 3.2.4 LCOs are not met. The DNBR margin and LHR will be monitored using any operable CPC channel every 15 minutes. An initial determination will be made within the first 15 minutes after COLSS becomes inoperable as a basis for comparison. If an adverse trend

in DNBR margin or LHR is observed, the revised OI will require operator action to restore DNBR margin and LHR to be conservative with respect to the initial values. Changes may be made to the OI in the future, utilizing 10 CFR 50.59, to further specify the conditions which would represent an adverse trend. If LHR or DNBR cannot be restored within the COLSS OOS 4 hour action time, a power reduction to less than or equal to 20% rated thermal power will be required within 6 hours.

Increasing the amount of time available for restoring LHR and DNBR when COLSS is not available will potentially reduce the number and rate of power reductions, thereby decreasing the probability of actuating the RPS. This proposed change accordingly increases TS 3.2.1 and TS 3.2.4 ACTION times for restoring LHR and DNBR margin when COLSS is out of service to provide a reasonable opportunity for appropriate corrective actions. The existing safety margins and the proposed increased LHR and DNBR monitoring will assure that this proposed change will not significantly increase the probability of exceeding the initial conditions assumed in the safety analysis.

SAFETY ANALYSIS

The proposed change described above shall be deemed to involve a significant hazards consideration if there is a positive finding in any 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.

   This proposed change distinguishes between the action requirements applicable when COLSS is either in service or out of service. If COLSS is in service the actions and time requirements remain unchanged. When COLSS is not available the action time is increased from 1 hour to 4 hours. The purpose of these TS changes is to provide a reasonable opportunity for appropriate corrective actions when the COLSS becomes inoperable.

   The TS LCOs for DNBR margin and LHR are more restrictive when operating without the COLSS due to CPC uncertainties and the overpower margin reserved to ensure that specified acceptable fuel design limits are not exceeded in the event of anticipated operational occurrences. Consequently, when COLSS becomes inoperable the existing DNBR margin limits based on CPC information can only be satisfied by either a power reduction or by restoring the COLSS to service. By itself, a loss of COLSS or returning the COLSS to service does not affect plant operation and does not affect the actual DNBR or the LHR. In addition, a loss of the COLSS does not immediately mean that the actual core power should be changed. Therefore, during normal operation within the COLSS POLs, if there are no indications that the actual DNBR margin or LHR has degraded, the required overpower margin discussed in chapter 15 of the UFSAR will continue to be maintained.

When either TS 3.2.1 or TS 3.2.4 is not satisfied compensatory actions will provide additional assurance that the actual DNBR margin and LHR do not exceed the safety limits stated in the UFSAR. The new SR will ensure that DNBR margin and LHR are monitored every 15 minutes and appropriate action is taken if an adverse trend is noted when COLSS is out of service and the LHR and DNBR TS LCOs are not met.

The primary consideration in extending the COLSS out of service time limit is the remote possibility of a slow, undetectable transient that degrades the DNBR margin or LHR within the 4 hour action time and is then followed by an anticipated operational occurrence or accident. The plant parameters monitored by COLSS which could affect DNBR margin and LHR include RCS flow rate as determined from reactor coolant pump shaft speed, axial power distribution, cold leg temperature, reactor core power, RCS pressure, and azimuthal tilt. Of these parameters, the CPC's directly incorporate measured values for reactor core power, RCS flow rate as determined from reactor coolant pump shaft speed, RCS pressure, and cold leg temperature into the calculations of DNBR and LHR. Therefore, any degradation of conditions with respect to these parameters is expected to be evident in the equivalent CPC margins.

San Onofre is stable with respect to azimuthal power tilt within any 4 hour time period. The only credible events affecting azimuthal tilt are an inadvertent drop or misalignment of a Control Element Assembly (CEA). The probability of an undetected dropped or misaligned CEA is remote within any four hour time period and beyond the basis of LCO monitoring. In addition, a CEA calculator indicating light and alarm will alert operators that corrective action is required if this situation were to occur. Thus, during the proposed 4 hour action statement any degradation of azimuthal tilt is unlikely and would be quickly and positively identified.

Axial xenon oscillations are a normal consequence of the San Onofre Unit 2 and 3 core designs, particularly near the end of a fuel cycle. The resultant axial core power fluctuations are strictly controlled to insure efficient fuel burnup. As a result, axial power shape is strictly maintained by existing procedures well within the limits assumed in the safety analysis. Typically, axial shape control will maintain the ASI within 0.05 ASI units of the Equilibrium Shape Index (ESI).

Typically, one full xenon oscillation will take approximately 26 hours. Since operating procedures will be revised to require CPC calculated LHR and DNBR to be monitored every 15 minutes, any significant change in ASI will be identified. Therefore, due to the attention given the axial power distribution when COLSS is in service and the increased LHR and DNBR monitoring when COLSS is not in service, it is unlikely that a change in ASI during the 4 hour ACTION period of steady plant operation would either be undetected or lead to a condition outside the range of initial conditions assumed in the safety analysis.

This proposed change does not modify either the LHR or DNBR Limiting Conditions for Operation (LCOs). The core power distribution during all phases of normal operation and anticipated operational occurrences will remain bounded by the initial conditions assumed in chapter 15 of the

safety analysis. The COLSS calculated POLs and the CPC based LHR and DNBR operating limits will remain unchanged. Therefore, this proposed change will not significantly increase the probability or consequences of an accident previously evaluated.

This proposed change increases the core power limit if LHR and DNBR limits are not restored within the applicable action time, from "HOT STANDBY" to "less than or equal to 20% of Rated Thermal Power (RTP). This administrative change provides consistency with the existing TS applicability statements. The increased power level allows in-core and ex-core neutron detectors to provide meaningful data for COLSS trouble shooting and operability determination without decreasing any safety margin.

Therefore, this change will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

   Response: No.

   This proposed change is limited to administrative limits, does not involve any physical change to plant systems, and the COLSS and CPC software is not altered. This change will not affect any safety-related equipment used in the mitigation of anticipated operational occurrences or design basis accidents. The only significant change resulting from this amendment will be to the OIs used when COLSS is out of service. These OI changes will be reviewed and implemented in accordance with 10 CFR 50.59 and TS Administrative Controls. The DNBR and LHR LCOs are not affected by these changes. Therefore, this change 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 amendment involve a significant reduction in a margin of safety?

   Response: No.

   TS LCOs 3.2.1 and 3.2.4 ensure that operation of the reactor is within the range of conditions assumed in the Safety Analysis. When COLSS is unavailable, the new SR will monitor DNBR margin and LHR using the CPCs to ensure that the DNBR margin and LHR have not degraded and no anticipated operational occurrence or postulated accident will result in core conditions exceeding Specified Acceptable Fuel Design Limits or the maximum peak cladding temperature of 2200°F specified by 10 CFR 50.46. Therefore, the analysis as described in Chapter 15 of the UFSAR remains bounding. For these reasons, this change will not result in a significant reduction in a margin of safety.

SAFETY AND SIGNIFICANT HAZARDS DETERMINATION

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