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Dwight E. Nunn
Vice President

August 4, 2003

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: **San Onofre Nuclear Generating Station Units 2 and 3**
Docket Nos. 50-361 and 50-362
Proposed Change Number (PCN) 534
Request to Revise Technical Specification 3.9.3,
"Containment Penetrations"

Gentlemen:

Pursuant to 10 CFR 50.90, Southern California Edison (SCE) hereby requests the following amendment: In Technical Specification 3.9.3, "Containment Penetrations," a Note will be added to the Limiting Condition for Operations (LCO) that permits the Containment equipment hatch to be open during core alterations and movement of irradiated fuel in containment provided: a) the Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes, b) the plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and c) a designated crew is available to close the Containment Structure Equipment Hatch Shield Doors. SCE has evaluated this request under the standards set forth in 10 CFR 50.92(c) and determined that a finding of "no significant hazards consideration" is justified.

SCE requests the approval of the proposed amendment by January 28, 2004 to support the San Onofre Unit 2 Cycle 13 refueling outage. Once approved, the amendment shall be implemented within 60 days.

SCE is making the following formal commitments that would result from NRC approval to allow implementation of the proposed amendments.

a. flashing will be added to the top and sides of the Containment Structure Equipment Hatch Shield Doors to retard or restrict a release of post-accident fission products,
b. a designated crew will be trained and available to shut the Containment Structure Equipment Hatch Shield Doors within 30 minutes of control room notification of a fuel handling accident, and
c. periodic inspection will be included in the shield door procedure to verify appropriate flashing integrity.

A001

P.O. Box 128
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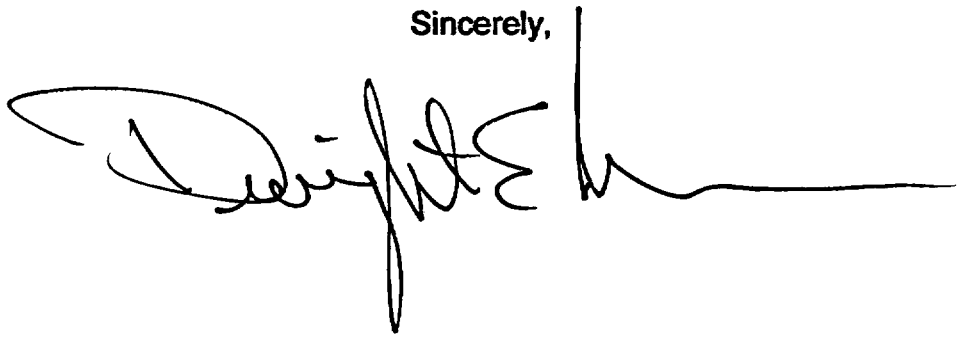
949-368-1480
Fax 949-368-1490

If you have any questions or require additional information, please contact Mr. Jack Rainsberry at (949) 368-7420.

Sincerely,



Enclosures
1. Notarized Affidavits
2. Licensee's Evaluation of the Proposed Change

Attachments:
A. Existing Technical Specification page, Unit 2
B. Existing Technical Specification page, Unit 3
C. Markup of Technical Specification page, Unit 2
D. Markup of Technical Specification page, Unit 3
E. Retyped Technical Specification page, Unit 2
F. Retyped Technical Specification page, Unit 3

cc: T. P. Gwynn, Acting Regional Administrator, NRC Region IV
B.M. Pham, NRC Project Manager, San Onofre Units 2, and 3
C. C. Osterholtz, NRC Senior Resident Inspector, San Onofre Units 2 and 3
S. Y. Hsu, Department of Health Services, Radiologic Health Branch

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. 2 of the San Onofre Nuclear Generating Station	)))))	Docket No. 50-361 Amendment Application No. 220

SOUTHERN CALIFORNIA EDISON COMPANY, et al. pursuant to 10CFR50.90, hereby submit Amendment Application No. 220. This amendment application consists of Proposed Change Number (PCN) 534 to Facility Operating License NPF-10. PCN-534 is a request to revise the Technical Specification 3.9.3, "Containment Penetrations," to permit the Containment equipment hatch to remain open during Core Alterations and movement of irradiated fuel assemblies for San Onofre Nuclear Generating Station Unit 2.

State of California
County of San Diego

FRANCES M. THURBER
Commission # 1295266
Notary Public - California
San Diego County
My Comm. Expires Mar 23, 2005

Subscribed and sworn to (or affirmed) before me this 4th day of August, 2003.

By: _____
Dwight E. Nunn
Vice President

_____
Notary Public

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. 205

SOUTHERN CALIFORNIA EDISON COMPANY, et al. pursuant to 10CFR50.90, hereby submit Amendment Application No. 205. This amendment application consists of Proposed Change Number (PCN) 534 to Facility Operating License NPF-15. PCN-534 is a request to revise the Technical Specification 3.9.3, "Containment Penetrations," to permit the Containment equipment hatch to remain open during Core Alterations and movement of irradiated fuel assemblies for San Onofre Nuclear Generating Station Unit 3.

State of California
County of San Diego

Subscribed and sworn to (or affirmed) before me this 4th day of August, 2003.

By: _____
Dwight E. Nunn
Vice President

_____
Notary Public

ENCLOSURE 2

LICENSEE'S EVALUATION
Proposed Change Number 534

SUBJECT: Technical Specification 3.9.3, "Containment Penetrations," Addition of Note to permit Containment equipment hatch to remain open during core alterations and movement of irradiated fuel.

1.0 INTRODUCTION

This letter is a request to amend Operating Licenses NPF-10 and NPF-15 for San Onofre Nuclear Generating Station Units 2 and 3 (SONGS 2 & 3), respectively.

The proposed change is to revise Technical Specification (TS) 3.9.3, "Containment Penetrations," to permit the Containment equipment hatch to remain open during CORE ALTERATIONS and movement of irradiated fuel assemblies.

2.0 PROPOSED CHANGE

Southern California Edison (SCE) is requesting a change to the SONGS 2 & 3 TS 3.9.3, "Containment Penetrations." This change specifically includes Limiting Condition for Operation (LCO) 3.9.3. The associated Bases changes to accompany this Technical Specification change are also attached for information. This change will permit the containment equipment hatch to remain open during CORE ALTERATIONS and movement of irradiated fuel assemblies. This change is consistent with allowances granted in approved Technical Specification Task Force (TSTF) modifications to the Combustion Engineering Owners' Group Standard Technical Specifications, NUREG-1432, in TSTF's 51, 68 and 312.

TS 3.9.3 currently requires that the Containment equipment hatch be closed during CORE ALTERATIONS or movement of irradiated fuel within Containment. The proposed change to TS 3.9.3 would allow the containment equipment hatch to be open during core alterations and movement of irradiated fuel within containment provided:

1) The Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes,
2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and
3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors.

The TS 3.9.3 Bases would similarly be modified to address these restrictions.

The containment shield doors are located outside of the containment, in front of the containment equipment hatch. With the proposed TS 3.9.3 changes, the crew tasked with closing the containment shield doors as a means of providing for containment closure will be performing this activity from outside containment.

3.0 BACKGROUND

TS 3.9.3 requires the equipment hatch be closed during Core Alterations and movement of irradiated fuel. The basis for this requirement is to limit the effects of a fuel handling accident (FHA) inside containment. A re-analysis of the FHA was performed with the assumption that the containment remains open to the outside environment for a two-hour period subsequent to the FHA.

The containment serves to control fission product radioactivity that may be released to the environment from the reactor core following an accident, such that offsite radiation exposures are maintained well within the requirements of 10 CFR Part 100, and such that control room operator radiation exposures are maintained within the requirements of 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 19. Additionally, the containment provides radiation shielding from the fission products that may be present in the containment atmosphere following accident conditions.

With the primary coolant system above 200°F and pressurized, the containment itself may become pressurized during an accident. Therefore, the containment and its penetrations must be OPERABLE by being capable of withstanding the pressure and thus prevent excessive fission product release to the environment.

During refueling operations, the potential for containment pressurization as a result of an accident is not likely; therefore, requirements to isolate the containment from the outside atmosphere can be less stringent. The required condition is referred to as "containment closure" rather than "containment OPERABILITY." Containment closure means that all potential escape paths are closed or capable of being closed. The closure restrictions are sufficient to restrict fission product radioactivity release from containment due to a FHA inside containment during refueling.

The containment equipment hatch, which is also part of the containment pressure boundary, provides a means to onload and offload large pieces of equipment and supplies into and out of the containment building. The containment equipment hatch is normally shut when "containment OPERABILITY" is required. During periods of unit shutdown when neither "containment OPERABILITY" nor "containment closure" is required, the hatch may remain open for extended periods. This allowance facilitates frequent containment entry and exit during plant outages.

During CORE ALTERATIONS and movement of irradiated fuel, the current TS 3.9.3 requires that the hatch be closed at all times. This is a scheduling impediment to normal refueling activities.

4.0 EVALUATION

This proposed change to TS 3.9.3 would allow the containment equipment hatch to be open during refueling operations and movement of irradiated fuel provided that certain restrictions are met. These restrictions are:

1) the Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes,
2) the plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and
3) a designated crew is available to close the Containment Structure Equipment Hatch Shield Doors.

The revised TS Bases will include administrative controls to close the containment shield doors within 30 minutes. The 30-minute closure time is considered to start when the control room communicates the need to shut the Containment Structure Equipment Hatch Shield Doors. Such administrative controls require a designated crew to be available, with the necessary equipment available, to restore containment closure should a fuel handling accident occur. The radiological analyses supporting this proposed TS 3.9.3 change do not credit this manual isolation.

The applicable staff positions regarding opening the equipment hatch during Mode 6 (Refueling Operations) are stated in Section 3.9.3 (BASES) of the Standard Technical Specifications (NUREG-1432, "Standard Technical Specifications for Combustion Engineering Plants" or "STS"). Text excerpted from the STS states:

> The requirements on containment penetration closure ensure that a release of fission product radioactivity within containment will be restricted from escaping to the environment. The closure restrictions are sufficient to restrict fission product radioactivity release from containment due to a fuel handling accident during refueling.

The SONGS 2&3 containment shield doors are being modified to include flashing that will retard or restrict a release of post-accident fission product radioactivity within containment from escaping to the outside environment when the containment shield doors are in their closed position. The flashing will be installed on the top and sides of the shield doors. Periodic inspection will be included in the shield doors procedure to verify appropriate flashing integrity.

With the proposed TS 3.9.3 changes, the crew tasked with closing the containment shield doors as a means of providing containment closure will be working outside containment. Since containment is unlikely to become pressurized during an in-containment fuel handling accident during refueling, there is no motive force for airborne radioacitivity to be propelled through the opening. As a result, the resultant dose to the crew is anticipated to be minimal.

During CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, the most severe radiological consequences result from a fuel handling accident. The fuel handling accident is a postulated event that involves damage to irradiated fuel. Fuel handling accidents include dropping a single irradiated fuel assembly and handling tool or a heavy object onto other irradiated fuel assemblies. The minimum decay time of 72 hours prior to CORE ALTERATIONS ensures that the release of fission product radioactivity, subsequent to a fuel handling accident, results in offsite doses that are well within the guideline values specified in 10 CFR 100. The acceptance limits for offsite radiation exposure are contained in Standard Review Plan (SRP) Section 15.7.4, which defines "well within" 10 CFR Part 100 to be 25% or less of the 10 CFR 100 values. The minimum decay time of 72 hours prior to CORE ALTERATIONS also ensures that the release of fission product radioactivity, subsequent to a fuel handling accident, results in control room operator doses within the requirements of 10 CFR Part 50, Appendix A, GDC 19.

As previously noted, the basis for the position against opening of the containment equipment hatch during core alterations and movement of irradiated fuel is to limit fission product leakage in the event of a Fuel Handling Accident. In performing analyses of the radiological consequences of a Fuel Handling Accident, the containment isolation criteria of SRP Section 15.7.4 are used. If fuel handling is prohibited when the containment is open, radiological consequences need not be calculated. If the containment is open during fuel handling operations, automatic isolation by radiation detection instrumentation must be provided for penetrations and calculations must demonstrate acceptable consequences. Since automatic isolation of the equipment hatch is not practicable, Standard Technical Specifications specify that containment integrity be maintained during fuel handling in containment. However, analysis has shown that the Standard Technical Specification requirement need not be applied to SONGS 2 & 3.

An analysis has been performed of a fuel handling accident with the containment open to the outside environment. The analysis uses the assumptions and methodology of Regulatory Guide 1.25, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Fuel Handling Accident in the Fuel Handling and Storage Facility for Boiling and Pressurized Water Reactors." The analysis assumes an instantaneous puff release of noble gases and radioiodine from the gap of the broken fuel rods as gas bubbles pass up through the 23 feet of water covering the damaged fuel. All airborne radioactivity reaching the containment atmosphere is assumed to be exhausted within 2 hours to the outside environment; this assumption is part of the existing analysis of record. All radioactive material in the fuel rod gap is assumed to have decayed for a period of 72 hours. Table 1 lists the primary assumptions and design input data employed in the analysis. The following assumptions reflect the conservatism of the analysis:

1) The fuel rod gap region is assumed to contain 12 percent of the fission product iodine inventory. This value exceeds the 8 percent recommended by Regulatory Guide 1.183 and Regulatory Guide 1.195.

2) The refueling cavity water overall effective decontamination factor for iodine is assumed to be 100. This value is smaller than the 200 recommended by Regulatory Guide 1.183 and Regulatory Guide 1.195.
3) The control room unfiltered inleakage rate is assumed to be 1000 cfm. This value greatly exceeds the 10 cfm modeled in the original FHA analysis, and is conservatively high for a pressurized control room design. Validation of this assumption will be addressed in the SONGS 2&3 response to the Generic Letter 2003-01 on control room habitability.

The resulting values for offsite and control room operator doses are listed in Table 2. The analysis demonstrates that the 0-2 hour site boundary thyroid dose would be no more than 56.4 Rem and the 0-2 hour whole body site boundary dose would be no more than 0.3 Rem. These consequences are within the SRP Section 15.7.4 limits of 75 Rem thyroid and 6 Rem Whole Body (WB).

General Design Criterion 19 of 10 CFR Part 50 Appendix A specifies that adequate radiation protection is to be provided to permit access and occupancy of the control room under accident conditions without personnel exposures in excess of 5 Rem WB or its equivalent to any part of the body for the duration of the accident. The SRP Section 6.4 limits are 5 Rem WB and 30 Rem thyroid for the control room operator. The analysis demonstrates that the control room operator whole body dose would be no more than 0.3 Rem and the thyroid dose would be no more than 25.4 Rem. While these calculated doses are higher than the existing analysis of record, the increase is attributable to the conservative estimate of unfiltered in-leakage to the control room rather than to the proposed activity of leaving the equipment hatch open during refueling operations.

Based on the evaluation, SCE concludes that the radiological consequences of not having a closed containment following a fuel handling accident are acceptable. The proposed administrative controls will optimize the ability of plant personnel to effectively close the containment by closing the containment shield doors, if needed, and provide assurance that offsite and control room radiological consequences will be minimized to the extent practical.

Furthermore, note that by leaving the equipment hatch open during CORE ALTERATIONS and movement of irradiated fuel, that this operating configuration would greatly facilitate evacuation of in-containment workers, who would otherwise have to be processed through the airlock doors. For these personnel, then, there is presumed to be a reduction in exposure, particularly when compared to minimal, if any, doses received by the shield operators.

TABLE 1
PARAMETERS USED FOR CALCULATING FHA INSIDE-CONTAINMENT RADIOLOGICAL CONSEQUENCES

Parameters	Modeled Value
Core Power Level, MWt	3,458
Maximum Decay Time After Shutdown, hours	72
Radial Peaking Factor:	
For dropped fuel bundle	1.71
For impacted fuel bundles	1.37
Number of Damaged Fuel Rods:	
In dropped fuel bundle	16
In impacted fuel bundles	210
Fission Product Gases in Fuel Rod Gap Region, %	
Krypton-85	30
Other Noble Gases	10
Iodine	12
Fraction of Gap Activity Released to the Refueling Cavity Water, %	100
Minimum Water Depth Above Reactor Vessel Flange (and Damaged Fuel Rods), feet	23
Refueling Cavity Water Decontamination Factors:	
Nobles Gases	1
Iodine	100
Airborne Iodine Forms, %	
Elemental	75
Organic	25
Exclusion Area Boundary Parameters	
Atmospheric Relative Concentration, sec/m^3	2.72e-4
Thyroid Inhalation Dose Conversion Factors	ICRP-30
EAB Breathing Rate, m^3/sec	3.47e-4
EAB Occupancy Factor (0 to 2 hours)	1.0
Control Room Parameters	
Atmospheric Relative Concentration, sec/m^3	3.1e-3
Thyroid Inhalation Dose Conversion Factors	ICRP-30
Control Room Breathing Rate, m^3/sec	3.47e-4
Control Room Occupancy Factor	1.0
Control Room Volume, cubic feet	266,920
Control Room Normal HVAC System Operation:	
Normal Operation Unfiltered Inflow Rate (0 to 3 minutes), cfm	5,820
Unfiltered Inleakage Rate (0 to 3 minutes), cfm	1,000
Control Room Isolation (switchover to CREACUS), minutes	3
Control Room CREACUS Operation:	
Filtered Inflow Rate (3 minutes to 8 hours), cfm	4,400
Filtered Recirculation Rate (3 minutes to 8 hours), cfm	59,870
Unfiltered Inleakage Rate (3 minutes to 8 hours), cfm	1,000
Inflow and Recirculation Filter Efficiencies, %	
Elemental Iodine	95
Organic Iodide	95
Particulates	99

Table 2 CALCULATED RADIOLOGICAL CONSEQUENCES		
Exclusion Area Boundary	**Dose**	**SRP 15.7.4 Limits**
Whole Body	0.3 Rem	6 Rem
Thyroid	56.4 Rem	75 Rem
Control Room Operator	**Dose**	**GDC-19 Limits**
Whole Body	0.3 Rem	5 Rem
Thyroid	25.4 Rem	Equivalent to 5 Rem Whole Body (30 Rem per SRP Section 6.4)

5.0 REGULATORY SAFETY ANALYSIS

The proposed change to TS 3.9.3 would allow the containment equipment hatch to be open during core alterations and movement of irradiated fuel in containment provided a) the containment structure equipment hatch shield doors are capable of being closed within 30 minutes, b) the plant is in MODE 6 with at least 23 feet of water above the reactor vessel flange, and c) a designated crew is available to close the containment shield doors. The capability to close the containment structure equipment hatch shield doors includes the requirement that any cables or hoses across the containment shield door tracks have quick-disconnects to ensure that the doors are capable of being closed in a timely manner.

The regulatory basis for TS 3.9.3, "Containment Penetrations," is to ensure that the primary containment is capable of containing fission product radioactivity that may be released following a fuel handling accident inside containment. This ensures that offsite radiation exposures are maintained well within the requirements of 10 CFR Part 100.

The purpose of the LIMITING CONDITION FOR OPERATION (LCO) is to minimize the release of radioactive material in the event of an in-containment fuel handling accident. Complying with the LCO assures that the assumptions reflected in the analysis for this accident as documented in the SONGS 2 & 3 UFSAR Section 15.10.7.3.9, "Design Basis Fuel Handling Accident Inside Containment," are met, and the resulting doses are lower than calculated.

The proposed change contains restrictions that allow the containment equipment hatch to be open provided that the containment shield doors will be available to perform the safety function of the containment equipment hatch. The restriction to be in MODE 6 with at least 23 feet of water above the reactor vessel flange provides sufficient time to respond to a loss of shutdown cooling, ensures a minimum water level exists to provide sufficient shielding during fuel movement, and reduces the radioactivity released in the event of a fuel handling accident. The capability to close the containment shield doors includes the requirement that any cables or hoses crossing over the containment shield door tracks

have quick disconnects to ensure the capability of the doors being closed in a timely manner. Requiring that a designated crew be available to close the containment shield doors will minimize the release of radioactive material.

Administrative requirements will be established for the responsibilities and appropriate actions of the designated individuals in the event of a fuel handling accident inside containment. These requirements will include the responsibility to be able to communicate with the control room, and the responsibility to ensure that the containment shield doors are capable of being closed in the event of a fuel handling accident. These administrative controls will ensure containment closure would be established in the event of a fuel handling accident inside containment.

The revised calculations and analysis indicate that the basis for the Technical Specification requirements will be met with the equipment hatch open during core alterations with the ability to close the containment shield doors following a FHA.

EVALUATION

Containment Integrity

Technical Specification 3.6.1, "Containment Integrity," requires that containment integrity be maintained while in MODES 1 to 4. During MODES 1 to 4, the reactor coolant system contains significant energy that provides the motive force for the expulsion of radionuclides subsequent to a design basis accident (DBA). TS 3.6.1 allows the opening of containment penetrations under administrative control. The relaxation described in this evaluation is being sought for MODE 6 where a fuel handling accident inside containment is the event of concern.

Containment Closure

Technical Specification 3.9.3, "Containment Penetrations," requires that the equipment hatch, as well as other containment penetrations (except as permitted under Administrative Controls), be closed during core alterations or movement of irradiated fuel within the containment. This requirement is more conservative than the assumptions used in the revised SONGS 2 & 3 Updated Final Safety Analysis Report (UFSAR), Section 15.10.7.3.9, "Design Basis Fuel Handling Accident Inside Containment". The revised accident analysis continues to assume that, in the event of a fuel handling accident in containment, all of the iodine and noble gases that become airborne within the containment are assumed to escape within two hours, and reach the site boundary and control room with no credit taken for the containment building barrier or for decay or deposition. The revised fuel handling accident analysis also assumes a minimum water level of 23 feet above the reactor vessel flange (i.e., above the damaged fuel) and a minimum post-reactor shutdown decay time of 72 hours prior to fuel movement.

During a refueling outage, other work inside containment does not stop during fuel movement or core alterations. The licensed operator supervising the movement of the reactor fuel is in constant communication with the control room and is procedurally required to inform the control room that the containment evacuation alarm be sounded in the event of a fuel handling accident. The personnel inside the reactor containment building will evacuate. This requires that personnel operate the personnel airlock doors to exit the containment.

The containment shield doors will have a designated closure crew available to close the doors. The closure crew will be trained to accomplish timely containment shield doors closure. The doors can be closed within 30 minutes of control room notification, even without electrical power available.

Control Room Ventilation

SONGS 2 & 3 are designed with a control room emergency air cleanup system (CREACUS), which is actuated by a safety injection actuation signal (SIAS) from either unit or a control room isolation signal (CRIS) high radiation signal or by manual actuation. The CREACUS trains filter a portion of the recirculated air. A reduced outside air flow, filtered by the cleanup part of the system, maintains a positive pressure in the control room which minimizes the ingress of unfiltered (i.e., potentially contaminated) outside air.

5.1 NO SIGNIFICANT HAZARDS CONSIDERATION

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10CFR50.92. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with a proposed amendment would not: (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) Involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

(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.

Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change to Technical Specification 3.9.3 would allow the containment equipment hatch to be open during fuel movement or core alterations.

Currently, the equipment hatch is closed with four bolts during fuel movement or core alterations to prevent the escape of radioactive material in the event of an in-containment fuel handling accident. The containment equipment hatch is not an initiator of an accident. Whether the containment equipment hatch is open or closed during fuel movement and core alterations has no affect on the probability of any accident previously evaluated.

Allowing the containment equipment hatch to be open during fuel movement or core alterations does not significantly increase the consequences from a fuel handling accident. The calculated offsite doses are well within the limits of 10 CFR Part 100 and the calculated control room operator dose are within the limits of 10 CFR 50 Appendix A General Design Criterion (GDC) 19. In addition, the calculated doses are larger than the expected doses because the calculation does not incorporate containment closure after the containment is evacuated, which is much less than the two hours assumed in the analysis. The proposed change should significantly reduce the dose to workers in containment in the event of a fuel handling accident by reducing the time required to evacuate the containment.

The changes being proposed do not adversely affect assumptions contained in other plant safety analyses or the physical design of the plant, nor do they affect other Technical Specifications that preserve safety analysis assumptions. Therefore, operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously analyzed.

(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 to Technical Specification 3.9.3, "Containment Penetrations," affects a previously evaluated fuel handling accident inside containment. The new Fuel Handling Accident analysis continues to assume that all of the iodine and noble gases that become airborne escape the containment within two hours, and reach the exclusion area boundary and control room with no credit taken for containment air exhaust filtration, or for decay or deposition during atmospheric dispersion. The change will include the addition of flashing that will restrict a release of post-accident fission products when the Containment Structure Equipment Hatch Shield Doors are in their closed position. In this manner, the closed Shield Doors will provide Containment closure. Accordingly, since the proposed change does not functionally alter the design of plant systems and the revised analysis is consistent with the Fuel Handling Accident analysis, the proposed change does 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.

The margin of safety as defined by 10 CFR Part 100 has not been significantly reduced. The calculated dose is well within the limits given in 10 CFR Part 100 as defined by Standard Review Plan 15.7.4. The analysis does not credit closing the Containment Structure Equipment Hatch Shield Doors. Accordingly, the proposed change does not alter the bases for assurance that safety-related activities are performed correctly or the basis for any Technical Specification that is related to the establishment of or maintenance of a safety margin. Therefore, operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

Summary

Based on the above discussion, Southern California Edison has determined that the proposed amendment request does not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety, therefore, the proposed change does not involve a significant hazards consideration as defined in 10 CFR 50.92.

Therefore, the operation of the facility in accordance with this proposed change will not involve a significant reduction in a margin of safety.

5.2 Applicable Regulatory Requirements/Criteria

NUREG-0800, "Standard Review Plan", Section 15.7.4, "Radiological Consequences of Fuel Handling Accidents," describes the acceptance criteria for this event as, "the calculated doses at the exclusion boundary are well within the exposure guidelines of 10 CFR Part 100. 'Well within' shall mean 25% or less of 10 CFR Part 100, i.e., 75 Rem to the thyroid and 6 Rem for the whole-body doses." The results of the calculations performed show that the offsite dose consequences of a fuel assembly dropped inside containment are well within the 10 CFR Part 100 limits. Therefore, the proposed change does not result in a significant hazard.

U. S. NRC Regulatory Guide 1.25, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Fuel Handling Accident in the Fuel Handling and Storage Facility for Boiling and Pressurized Water Reactors," is NRC guidance that describes a method acceptable to the NRC staff for licensee evaluation of the potential radiological consequences of a fuel handling accident. The parameters of concern and the acceptance criteria applied are based on the requirements of 10 CFR Part 100 with respect to the calculated radiological consequences of a FHA and GDC 61 with respect to appropriate containment, confinement, and filtering systems.

NUREG/CR-5009, "Assessment of the Use of Extended Burn-up Fuel in Light Water Power Reactors," relates to the expected release fraction for radioactive iodine. According to this report, the calculated release fraction for extended burn-up fuel may be up to 20% higher than that assumed in Regulatory Guide 1.25 for Iodine-131.

The methodology, assumptions, and results of the revised FHA with the proposed Technical Specification changes comply with the applicable regulatory requirements, criteria, and guidance.

10 CFR Part 50, Appendix A, General Design Criteria:

GDC 16, "Containment Design," requires that reactor containment and associated systems shall be provided to establish an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment and to assure that the containment design conditions important to safety are not exceeded for as long as the postulated accident conditions require.

GDC 19, "Control Room," requires that a control room shall be provided from which actions can be taken to operate the nuclear power unit safely under normal conditions and to maintain it in a safe condition under accident conditions, including loss-of-coolant accidents. Adequate radiation protection shall be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 5 Rem whole body, or its equivalent to any part of the body, for the duration of the accident.

GDC 56, "Primary Containment Isolation," describes the isolation provisions that must be provided for lines that connect directly to the containment atmosphere and which penetrate primary reactor containment unless it can be demonstrated that the isolation provisions for a specific class of lines are acceptable on some other defined basis.

GDC 61, "Fuel Storage and Handling and Radioactivity Control," requires that the fuel storage and handling, radioactive waste, and other systems which may contain radioactivity shall be designed to assure adequate safety under normal and postulated accident conditions.

The assumptions and results of the revised FHA analysis, coupled with the proposed Technical Specification changes, demonstrate compliance with the above GDCs.

Based on the considerations discussed above, it is concluded 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

EVALUATION CONCLUSIONS

Based on review of the licensing bases documentation and the results of the reanalysis of the fuel handling accident inside the reactor containment building, it is concluded that the proposed license amendment is acceptable and that code requirements are maintained.

6.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. The design basis analysis assumption that the post-accident release of the containment atmosphere to the environment occurs for a 2-hour duration is unaffected by the proposal change and bounds the equipment hatch remaining open as a potential release path for up to 30 minutes. It is also noted that the Control Room operator exposures have increased over those currently reported in the UFSAR. The increase is not attributable to the proposal to leave the equipment hatch open, but rather to an increase in the assumed Control Room unfiltered inleakage rate. A significant increase in individual or cumulative occupational radiation exposure is not expected because (1) the designated crew tasked with closing the shield doors will be working outside of containment, and as such is not anticipated to receive measurable dose since there is no driving force to push containment air out of containment given that containment is not pressurized as a result of an FHA; (2) leaving the equipment hatch open also provides an additional egress path, which reduces the dose to those employees who must evacuate the containment and can now do so in a more expeditious manner; and (3) leaving the equipment hatch open reduces the workload and exposure required of those employees staffing the personnel air lock as an emergency egress path. Given these considerations, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 REFERENCES

7.1 San Onofre Nuclear Generating Station (SONGS) 2 & 3, Updated Final Safety Analysis Report, Amendment 16

7.2 NUREG-0800, US NRC Standard Review Plan Sections 6.4 and 15.7.3

7.3 Regulatory Guide 1.25, "Assumptions Used for Evaluating the Potential Radiological Consequences of Fuel Handling Accident in the Fuel Handling and Storage Facility for Boiling and Pressurized Water Reactors," 1972

7.4 Technical Specification Task Force (TSTF) 51

7.5 TSTF 68

7.6 TSTF 312

Attachment A

(Existing Pages)

SONGS Unit 2

3.9 REFUELING OPERATIONS

3.9.3 Containment Penetrations

LCO 3.9.3 The containment penetrations shall be in the following status:

a. The equipment hatch closed and held in place by four bolts;

b. One door in each air lock closed;

----------NOTE----------
Both doors of the containment personnel airlock may be open provided:

a. one personnel airlock door is OPERABLE, and

b1. the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b2. defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).
---

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. closed by a manual or automatic isolation valve, blind flange, or equivalent, or

2. capable of being closed by an OPERABLE Containment Purge System.

APPLICABILITY: During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend CORE ALTERATIONS. AND A.2 Suspend movement of irradiated fuel assemblies within containment.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.3.1	Verify each required containment penetration is in the required status.	7 days
SR 3.9.3.2	Verify each required containment purge and exhaust valve actuates to the isolation position on an actual or simulated actuation signal.	24 months

BASES (continued)

LCO

This LCO limits the consequences of a fuel handling accident in containment by limiting the potential escape paths for fission product radioactivity released within containment. The LCO requires any penetration providing direct access from the containment atmosphere to the outside atmosphere to be closed except for the OPERABLE containment purge and exhaust penetrations and the containment personnel airlock.

For the containment personnel airlock, this LCO ensures that the airlock can be closed after containment evacuation in the event of a fuel handling accident. The requirement that the plant be in Mode 6 with 23 feet of water above the fuel in the reactor vessel or defueled configuration with fuel in the containment (i.e., fuel in the refueling machine or upender) ensures that there is sufficient time to close the personnel airlock following a loss of shutdown cooling before boiling occurs.

This LCO is modified by Note wich allows to keep both doors of the containment personnel airlock open provided:

a. one personnel airlock door is OPERABLE, and

b.1 the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b.2 defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).

The OPERABILITY requirements ensure that the airlock door is capable of performing its function, and that a designated individual located outside of the affected area is available to close the door. For the OPERABLE containment purge and exhaust penetrations, this LCO ensures that these penetrations are isolable by the Containment Purge Isolation System. The OPERABILITY requirements for this LCO ensure that the automatic purge and exhaust valve closure times specified in the UFSAR can be achieved and therefore meet the assumptions used in the safety analysis to ensure releases through the valves are terminated, such that the radiological doses are within the acceptance limit.

APPLICABILITY

The containment penetration requirements are applicable during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment because this is when there is a potential for a fuel handling accident. In MODES 1, 2, 3,

(continued)

Attachment B

(Existing Pages)

SONGS Unit 3

3.9 REFUELING OPERATIONS

3.9.3 Containment Penetrations

LCO 3.9.3 The containment penetrations shall be in the following status:

a. The equipment hatch closed and held in place by four bolts;

b. One door in each air lock closed;

----------NOTE----------
Both doors of the containment personnel airlock may be open provided:

a. one personnel airlock door is OPERABLE, and

b1. the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b2. defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).
---

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. closed by a manual or automatic isolation valve, blind flange, or equivalent, or

2. capable of being closed by an OPERABLE Containment Purge System.

APPLICABILITY: During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend CORE ALTERATIONS. AND A.2 Suspend movement of irradiated fuel assemblies within containment.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.3.1	Verify each required containment penetration is in the required status.	7 days
SR 3.9.3.2	Verify each required containment purge and exhaust valve actuates to the isolation position on an actual or simulated actuation signal.	24 months

BASES (continued)

LCO

This LCO limits the consequences of a fuel handling accident in containment by limiting the potential escape paths for fission product radioactivity released within containment. The LCO requires any penetration providing direct access from the containment atmosphere to the outside atmosphere to be closed except for the OPERABLE containment purge and exhaust penetrations and the containment personnel airlock.

For the containment personnel airlock, this LCO ensures that the airlock can be closed after containment evacuation in the event of a fuel handling accident. The requirement that the plant be in Mode 6 with 23 feet of water above the fuel in the reactor vessel or defueled configuration with fuel in the containment (i.e., fuel in the refueling machine or upender) ensures that there is sufficient time to close the personnel airlock following a loss of shutdown cooling before boiling occurs.

This LCO is modified by Note wich allows to keep both doors of the containment personnel airlock open provided:

a. one personnel airlock door is OPERABLE, and

b.1 the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b.2 defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).

The OPERABILITY requirements ensure that the airlock door is capable of performing its function, and that a designated individual located outside of the affected area is available to close the door. For the OPERABLE containment purge and exhaust penetrations, this LCO ensures that these penetrations are isolable by the Containment Purge Isolation System. The OPERABILITY requirements for this LCO ensure that the automatic purge and exhaust valve closure times specified in the UFSAR can be achieved and therefore meet the assumptions used in the safety analysis to ensure releases through the valves are terminated, such that the radiological doses are within the acceptance limit.

APPLICABILITY

The containment penetration requirements are applicable during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment because this is when there is a potential for a fuel handling accident. In MODES 1, 2, 3,

(continued)

Attachment C

(Proposed Pages)

(Redline and Strikeout)

SONGS Unit 2

3.9 REFUELING OPERATIONS

3.9.3 Containment Penetrations

LCO 3.9.3 The containment penetrations shall be in the following status:

a. The equipment hatch closed and held in place by four bolts;

---NOTE---
The equipment hatch may be open if:
1) The Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes,
2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and
3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors.
---

b. One door in each air lock closed;

---NOTE---
Both doors of the containment personnel airlock may be open provided:

a. one personnel airlock door is OPERABLE, and

b1. the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b2. defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).
---

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. closed by a manual or automatic isolation valve, blind flange, or equivalent, or

2. capable of being closed by an OPERABLE Containment Purge System.

APPLICABILITY: During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend CORE ALTERATIONS. AND	Immediately
	A.2 Suspend movement of irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.3.1	Verify each required containment penetration is in the required status.	7 days
SR 3.9.3.2	Verify each required containment purge and exhaust valve actuates to the isolation position on an actual or simulated actuation signal.	24 months

BASES (continued)

LCO

This LCO limits the consequences of a fuel handling accident in containment by limiting the potential escape paths for fission product radioactivity released within containment. The LCO requires any penetration providing direct access from the containment atmosphere to the outside atmosphere to be closed except for the OPERABLE containment purge and exhaust penetrations and the containment personnel airlock.

For the containment personnel airlock, this LCO ensures that the airlock can be closed after containment evacuation in the event of a fuel handling accident. The requirement that the plant be in Mode 6 with 23 feet of water above the fuel in the reactor vessel or defueled configuration with fuel in the containment (i.e., fuel in the refueling machine or upender) ensures that there is sufficient time to close the personnel airlock following a loss of shutdown cooling before boiling occurs.

LCO part a. is modified by a NOTE:

----------NOTE----------
The equipment hatch may be open if:
1) The Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes,
2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and
3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors.

These restrictions include the administrative controls to allow the opening of the containment equipment hatch during CORE ALTERATIONS or movement of irradiated fuel in the containment provided that 1) The Containment Structure Equipment Hatch Shield Doors capable of being closed within 30 minutes, 2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and 3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors. The Containment Structure Equipment Hatch Shield Doors include flashing on the top and sides of the shield doors which act to retard or restrict a release of post-accident fission products. The capability to close the containment shield doors includes requirements that the doors are capable of being closed and that any cables or hoses across the opening have quick disconnects to ensure the doors are capable of being closed within 30 minutes. The 30 minute closure time for the containment shield doors is considered to start when the control room communicates the need to shut the Containment

(continued)

BASES (continued)

LCO (continued)

Structure Equipment Hatch Shield Doors. This 30-minute requirement is significantly less than the fuel handling accident analysis assumption that the containment remains open to the outside environment for a two-hour period subsequent to the accident.

The administrative controls will also include the responsibility to be able to communicate with the control room, and the responsibility to ensure that the containment shield doors are capable of being closed in the event of a fuel handling accident. These administrative controls will ensure containment closure would be established in the event of a fuel handling accident inside containment.

~~This~~ LCO part b. is modified by NOTE~~ote~~ which allows ~~to keep~~ both doors of the containment ~~personnel~~ airlock to be open provided:

a. one personnel airlock door is OPERABLE, and

b.1 the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b.2 defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).

The OPERABILITY requirements ensure that the airlock door is capable of performing its function, and that a designated individual located outside of the affected area is available to close the door. For the OPERABLE containment purge and exhaust penetrations, this LCO ensures that these penetrations are isolable by the Containment Purge Isolation System. The OPERABILITY requirements for this LCO ensure that the automatic purge and exhaust valve closure times specified in the UFSAR can be achieved and therefore meet the assumptions used in the safety analysis to ensure releases through the valves are terminated, such that the radiological doses are within the acceptance limit.

APPLICABILITY

The containment penetration requirements are applicable during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment because this is when there is a potential for a fuel handling accident. In MODES 1, 2, 3,

(continued)

Attachment D

(Proposed Pages)

(Redline and Strikeout)

SONGS Unit 3

3.9 REFUELING OPERATIONS

3.9.3 Containment Penetrations

LCO 3.9.3 The containment penetrations shall be in the following status:

a. The equipment hatch closed and held in place by four bolts;

---NOTE---
The equipment hatch may be open if:
1) The Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes,
2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and
3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors.
---

b. One door in each air lock closed;

---NOTE---
Both doors of the containment personnel airlock may be open provided:

a. one personnel airlock door is OPERABLE, and

b1. the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b2. defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).
---

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. closed by a manual or automatic isolation valve, blind flange, or equivalent, or

2. capable of being closed by an OPERABLE Containment Purge System.

APPLICABILITY: During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

BASES (continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend CORE ALTERATIONS. AND	Immediately
	A.2 Suspend movement of irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.3.1	Verify each required containment penetration is in the required status.	7 days
SR 3.9.3.2	Verify each required containment purge and exhaust valve actuates to the isolation position on an actual or simulated actuation signal.	24 months

BASES (continued)

LCO

This LCO limits the consequences of a fuel handling accident in containment by limiting the potential escape paths for fission product radioactivity released within containment. The LCO requires any penetration providing direct access from the containment atmosphere to the outside atmosphere to be closed except for the OPERABLE containment purge and exhaust penetrations and the containment personnel airlock.

For the containment personnel airlock, this LCO ensures that the airlock can be closed after containment evacuation in the event of a fuel handling accident. The requirement that the plant be in Mode 6 with 23 feet of water above the fuel in the reactor vessel or defueled configuration with fuel in the containment (i.e., fuel in the refueling machine or upender) ensures that there is sufficient time to close the personnel airlock following a loss of shutdown cooling before boiling occurs.

LCO part a. is modified by a NOTE:

----------NOTE----------
The equipment hatch may be open if:
1) The Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes,
2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and
3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors.

These restrictions include the administrative controls to allow the opening of the containment equipment hatch during CORE ALTERATIONS or movement of irradiated fuel in the containment provided that 1) The Containment Structure Equipment Hatch Shield Doors capable of being closed within 30 minutes, 2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and 3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors. The Containment Structure Equipment Hatch Shield Doors include flashing on the top and sides of the shield doors which act to retard or restrict a release of post-accident fission products. The capability to close the containment shield doors includes requirements that the doors are capable of being closed and that any cables or hoses across the opening have quick disconnects to ensure the doors are capable of being closed within 30 minutes. The 30 minute closure time for the containment shield doors is considered to start when the control room communicates the need to shut the Containment

(continued)

BASES (continued)

LCO (continued)

Structure Equipment Hatch Shield Doors. This 30-minute requirement is significantly less than the fuel handling accident analysis assumption that the containment remains open to the outside environment for a two-hour period subsequent to the accident.

The administrative controls will also include the responsibility to be able to communicate with the control room, and the responsibility to ensure that the containment shield doors are capable of being closed in the event of a fuel handling accident. These administrative controls will ensure containment closure would be established in the event of a fuel handling accident inside containment.

~~This~~ LCO part b. is modified by NOTE~~ote~~ which allows ~~to keep~~ both doors of the containment ~~personnel~~ airlock to be open provided:

a. one personnel airlock door is OPERABLE, and

b.1 the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b.2 defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).

The OPERABILITY requirements ensure that the airlock door is capable of performing its function, and that a designated individual located outside of the affected area is available to close the door. For the OPERABLE containment purge and exhaust penetrations, this LCO ensures that these penetrations are isolable by the Containment Purge Isolation System. The OPERABILITY requirements for this LCO ensure that the automatic purge and exhaust valve closure times specified in the UFSAR can be achieved and therefore meet the assumptions used in the safety analysis to ensure releases through the valves are terminated, such that the radiological doses are within the acceptance limit.

APPLICABILITY

The containment penetration requirements are applicable during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment because this is when there is a potential for a fuel handling accident. In MODES 1, 2, 3,

(continued)

Attachment E

(Proposed Pages)

SONGS Unit 2

3.9 REFUELING OPERATIONS

3.9.3 Containment Penetrations

LCO 3.9.3 The containment penetrations shall be in the following status:

a. The equipment hatch closed and held in place by four bolts;

----------NOTE----------
The equipment hatch may be open if:
1) The Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes,
2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and
3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors.
---

b. One door in each air lock closed;

----------NOTE----------
Both doors of the containment personnel airlock may be open provided:

a. one personnel airlock door is OPERABLE, and

b1. the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b2. defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).
---

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. closed by a manual or automatic isolation valve, blind flange, or equivalent, or

2. capable of being closed by an OPERABLE Containment Purge System.

APPLICABILITY: During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend CORE ALTERATIONS. AND	Immediately
	A.2 Suspend movement of irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.3.1	Verify each required containment penetration is in the required status.	7 days
SR 3.9.3.2	Verify each required containment purge and exhaust valve actuates to the isolation position on an actual or simulated actuation signal.	24 months

BASES (continued)

LCO

This LCO limits the consequences of a fuel handling accident in containment by limiting the potential escape paths for fission product radioactivity released within containment. The LCO requires any penetration providing direct access from the containment atmosphere to the outside atmosphere to be closed except for the OPERABLE containment purge and exhaust penetrations and the containment personnel airlock.

For the containment personnel airlock, this LCO ensures that the airlock can be closed after containment evacuation in the event of a fuel handling accident. The requirement that the plant be in Mode 6 with 23 feet of water above the fuel in the reactor vessel or defueled configuration with fuel in the containment (i.e., fuel in the refueling machine or upender) ensures that there is sufficient time to close the personnel airlock following a loss of shutdown cooling before boiling occurs.

LCO part a. is modified by a NOTE:

----------NOTE----------
The equipment hatch may be open if:
1) The Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes,
2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and
3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors.

These restrictions include the administrative controls to allow the opening of the containment equipment hatch during CORE ALTERATIONS or movement of irradiated fuel in the containment provided that 1) The Containment Structure Equipment Hatch Shield Doors capable of being closed within 30 minutes, 2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and 3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors. The Containment Structure Equipment Hatch Shield Doors include flashing on the top and sides of the shield doors which act to retard or restrict a release of post-accident fission products. The capability to close the containment shield doors includes requirements that the doors are capable of being closed and that any cables or hoses across the opening have quick disconnects to ensure the doors are capable of being closed within 30 minutes. The 30 minute closure time for the containment shield doors is considered to start when the control room communicates the need to shut the Containment

(continued)

BASES (continued)

LCO (continued)

Structure Equipment Hatch Shield Doors. This 30-minute requirement is significantly less than the fuel handling accident analysis assumption that the containment remains open to the outside environment for a two-hour period subsequent to the accident.

The administrative controls will also include the responsibility to be able to communicate with the control room, and the responsibility to ensure that the containment shield doors are capable of being closed in the event of a fuel handling accident. These administrative controls will ensure containment closure would be established in the event of a fuel handling accident inside containment.

LCO part b. is modified by NOTE which allows both doors of the containment airlock to be open provided:

a. one personnel airlock door is OPERABLE, and

b.1 the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b.2 defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).

The OPERABILITY requirements ensure that the airlock door is capable of performing its function, and that a designated individual located outside of the affected area is available to close the door. For the OPERABLE containment purge and exhaust penetrations, this LCO ensures that these penetrations are isolable by the Containment Purge Isolation System. The OPERABILITY requirements for this LCO ensure that the automatic purge and exhaust valve closure times specified in the UFSAR can be achieved and therefore meet the assumptions used in the safety analysis to ensure releases through the valves are terminated, such that the radiological doses are within the acceptance limit.

APPLICABILITY

The containment penetration requirements are applicable during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment because this is when there is a potential for a fuel handling accident. In MODES 1, 2, 3,

(continued)

Attachment F

(Proposed Pages)

SONGS Unit 3

3.9 REFUELING OPERATIONS

3.9.3 Containment Penetrations

LCO 3.9.3 The containment penetrations shall be in the following status:

a. The equipment hatch closed and held in place by four bolts;

----------NOTE----------
The equipment hatch may be open if:
1) The Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes,
2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and
3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors.
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b. One door in each air lock closed;

----------NOTE----------
Both doors of the containment personnel airlock may be open provided:

a. one personnel airlock door is OPERABLE, and

b1. the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b2. defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).
---

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. closed by a manual or automatic isolation valve, blind flange, or equivalent, or

2. capable of being closed by an OPERABLE Containment Purge System.

APPLICABILITY: During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

BASES (continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend CORE ALTERATIONS. AND A.2 Suspend movement of irradiated fuel assemblies within containment.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.3.1	Verify each required containment penetration is in the required status.	7 days
SR 3.9.3.2	Verify each required containment purge and exhaust valve actuates to the isolation position on an actual or simulated actuation signal.	24 months

BASES (continued)

LCO

This LCO limits the consequences of a fuel handling accident in containment by limiting the potential escape paths for fission product radioactivity released within containment. The LCO requires any penetration providing direct access from the containment atmosphere to the outside atmosphere to be closed except for the OPERABLE containment purge and exhaust penetrations and the containment personnel airlock.

For the containment personnel airlock, this LCO ensures that the airlock can be closed after containment evacuation in the event of a fuel handling accident. The requirement that the plant be in Mode 6 with 23 feet of water above the fuel in the reactor vessel or defueled configuration with fuel in the containment (i.e., fuel in the refueling machine or upender) ensures that there is sufficient time to close the personnel airlock following a loss of shutdown cooling before boiling occurs.

LCO part a. is modified by a NOTE:

----------NOTE----------
The equipment hatch may be open if:
1) The Containment Structure Equipment Hatch Shield Doors are capable of being closed within 30 minutes,
2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and
3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors.

These restrictions include the administrative controls to allow the opening of the containment equipment hatch during CORE ALTERATIONS or movement of irradiated fuel in the containment provided that 1) The Containment Structure Equipment Hatch Shield Doors capable of being closed within 30 minutes, 2) The plant is in Mode 6 with at least 23 feet of water above the reactor vessel flange, and 3) A designated crew is available to close the Containment Structure Equipment Hatch Shield Doors. The Containment Structure Equipment Hatch Shield Doors include flashing on the top and sides of the shield doors which act to retard or restrict a release of post-accident fission products. The capability to close the containment shield doors includes requirements that the doors are capable of being closed and that any cables or hoses across the opening have quick disconnects to ensure the doors are capable of being closed within 30 minutes. The 30 minute closure time for the containment shield doors is considered to start when the control room communicates the need to shut the Containment

(continued)

BASES (continued)

LCO (continued)

Structure Equipment Hatch Shield Doors. This 30-minute requirement is significantly less than the fuel handling accident analysis assumption that the containment remains open to the outside environment for a two-hour period subsequent to the accident.

The administrative controls will also include the responsibility to be able to communicate with the control room, and the responsibility to ensure that the containment shield doors are capable of being closed in the event of a fuel handling accident. These administrative controls will ensure containment closure would be established in the event of a fuel handling accident inside containment.

LCO part b. is modified by NOTE which allows both doors of the containment airlock to be open provided:

a. one personnel airlock door is OPERABLE, and

b.1 the plant is in MODE 6 with 23 feet of water above the fuel in the reactor vessel, or

b.2 defueled configuration with fuel in containment (i.e., fuel in refueling machine or upender).

The OPERABILITY requirements ensure that the airlock door is capable of performing its function, and that a designated individual located outside of the affected area is available to close the door. For the OPERABLE containment purge and exhaust penetrations, this LCO ensures that these penetrations are isolable by the Containment Purge Isolation System. The OPERABILITY requirements for this LCO ensure that the automatic purge and exhaust valve closure times specified in the UFSAR can be achieved and therefore meet the assumptions used in the safety analysis to ensure releases through the valves are terminated, such that the radiological doses are within the acceptance limit.

APPLICABILITY

The containment penetration requirements are applicable during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment because this is when there is a potential for a fuel handling accident. In MODES 1, 2, 3,

(continued)