October 8, 1996

Mr. Harold B. Ray
Executive Vice President
Southern California Edison Company
P.O. Box 128
San Clemente, California 92674-0128

SUBJECT: ISSUANCE OF AMENDMENT FOR SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 2 (TAC NO. M93000) AND UNIT NO. 3 (TAC NO. M93001)

Dear Mr. Ray:

The Commission has issued the enclosed Amendment No. 132 to Facility Operating License No. NPF-10 and Amendment No. 121 to Facility Operating License No. NPF-15 for San Onofre Nuclear Generating Station, Unit Nos. 2 and 3. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated July 19, 1995, as supplemented by letters dated December 22, 1995, and March 26, 1996.

These amendments revise Technical Specification (TS) 3.3.8, "Containment Purge Isolation Signal (CPIS)," and TS 3.3.9, "Control Room Isolation Signal (CRIS)." The revisions are needed to (1) support the upgrading or replacement of existing radiation monitoring system with state-of-the-art equipment that will provide for greater operational flexibility and reliability, and (2) incorporate minor editorial changes to improve clarity of these TS sections.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Original Signed By

Mel B. Fields, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-361
and 50-362

Enclosures: 1. Amendment No. 132 to NPF-10
2. Amendment No. 121 to NPF-15
3. Safety Evaluation

cc w/encls: See next page

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cc w/encl:
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-361

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 132
License No. NPF-10

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Southern California Edison Company, et al. (SCE or the licensee) dated July 19, 1995, as supplemented by letters dated December 22, 1995, and March 26, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-10 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 132 , are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance to be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Mel B. Fields

Mel B. Fields, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: October 8, 1996

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 132 TO FACILITY OPERATING LICENSE NO. NPF-10

DOCKET NO. 50-361

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3.3-35	3.3-35
3.3-36	3.3-36
3.3-37	3.3-37
3.3-38	3.3-38
3.3-39	3.3-39
3.3-40	3.3-40
3.3-41	3.3-41

3.3 INSTRUMENTATION

3.3.8 Containment Purge Isolation Signal (CPIS)

LCO 3.3.8 One CPIS channel shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4,
During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

----------NOTE----------
Only required when the penetration is not isolated by appropriate closed and de-activated automatic valve(s), closed manual valve(s), or blind flange(s).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. CPIS Actuation Logic, or one or more required channels of containment airborne radiation monitors inoperable in MODES 1, 2, 3, and 4.	A.1	Enter applicable Conditions and Required Actions for affected valves of LCO 3.6.3, "Containment Isolation Valves," made inoperable by CPIS instrumentation.	Immediately
B. Required Action and associated Completion Time not met in MODES 1, 2, 3, or 4.	B.1	Be in MODE 3.	6 hours
	AND		
	B.2	Be in MODE 5.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more required channels of containment airborne radiation monitors inoperable in MODES 1, 2, 3, and 4.	C.1 Enter applicable conditions and required actions of LCO 3.4.15, "RCS Leak Detection."	Immediately
D. CPIS Manual Trip, Actuation Logic, or one or more required channels of containment airborne radiation monitors inoperable during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment.	----------NOTE---------- The provisions of LCO 3.0.3 are not applicable. ----------	
	D.1 Place and maintain containment purge supply and exhaust valves in closed position.	Immediately
	OR	
	D.2.1 Suspend CORE ALTERATIONS.	Immediately
	AND	
	D.2.2 Suspend movement of irradiated fuel assemblies in containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.8.1	Perform a CHANNEL CHECK on required containment airborne radiation monitor channel.	12 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.8.2	Perform a CHANNEL FUNCTIONAL TEST on each required containment airborne radiation monitor channel. Verify trip setpoint is in accordance with the following: Containment Airborne Radiation Monitor: set sufficiently high to prevent spurious alarms/trips yet sufficiently low to assure an alarm/trip should an inadvertent release occur.	92 days
SR 3.3.8.3	----------NOTE---------- Surveillance of Actuation Logic shall include the actuation of each initiation relay and verification of the proper operation of each initiation relay. ---------- Perform a CHANNEL FUNCTIONAL TEST on required CPIS Actuation Logic channel.	24 months
SR 3.3.8.4	Perform a CHANNEL CALIBRATION on required containment airborne radiation monitor channel.	24 months
SR 3.3.8.5	Verify that response time of required CPIS channel is within limits.	24 months
SR 3.3.8.6	Perform CHANNEL FUNCTIONAL TEST on required CPIS Manual Trip channel.	24 months

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3.3 INSTRUMENTATION

3.3.9 Control Room Isolation Signal (CRIS)

LCO 3.3.9 One CRIS channel shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6,
During movement of irradiated fuel assemblies.

ACTIONS

----------NOTES----------
1. The provisions of LCO 3.0.3 are not applicable.
2. The provisions of LCO 3.0.4 are not applicable.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. CRIS Manual Trip, Actuation Logic, or one required channel of control room airborne radiation monitors inoperable in MODES 1, 2, 3, or 4.	A.1	--------NOTE-------- Place Control Room Emergency Air Cleanup System (CREACUS) in isolation mode if automatic transfer to isolation mode inoperable. ---------- Place one CREACUS train in emergency mode.	1 hour

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. CRIS Manual Trip, Actuation Logic, or required control room airborne radiation monitors inoperable in MODE 5 or 6, or during movement of irradiated fuel assemblies.	B.1	--------NOTE--------- Place CREACUS in isolation mode if automatic transfer to isolation mode inoperable. ----------	
		Place one CREACUS train in emergency mode.	Immediately
	OR		
	B.2.1	Suspend movement of irradiated fuel assemblies.	Immediately
	AND		
	B.2.2	Suspend positive reactivity additions.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.9.1	Perform a CHANNEL CHECK on the required control room airborne radiation monitor channel.	12 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.9.2	Perform a CHANNEL FUNCTIONAL TEST on required CRIS airborne radiation monitor channel. Verify CRIS high radiation setpoint is ≤ 4E2 cpm above normal background.	92 days
SR 3.3.9.3	----------NOTE---------- Surveillance of Actuation Logic shall include the verification of the proper operation of each initiation relay. ---------- Perform a CHANNEL FUNCTIONAL TEST on required CRIS Actuation Logic channel.	18 months
SR 3.3.9.4	Perform a CHANNEL CALIBRATION on required CRIS airborne radiation monitor channel.	18 months
SR 3.3.9.5	Perform a CHANNEL FUNCTIONAL TEST on required CRIS Manual Trip channel.	18 months

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-362

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 121
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Southern California Edison Company, et al. (SCE or the licensee) dated July 19, 1995, as supplemented by letters dated December 22, 1995, and March 26, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-15 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 121 , are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance to be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Mel B. Fields

Mel B. Fields, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: October 8, 1996

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 121 TO FACILITY OPERATING LICENSE NO. NPF-15

DOCKET NO. 50-362

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3.3-35	3.3-35
3.3-36	3.3-36
3.3-37	3.3-37
3.3-38	3.3-38
3.3-39	3.3-39
3.3-40	3.3-40
3.3-41	3.3-41

3.3 INSTRUMENTATION

3.3.8 Containment Purge Isolation Signal (CPIS)

LCO 3.3.8 One CPIS channel shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4,
During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

----------NOTE----------
Only required when the penetration is not isolated by appropriate closed and de-activated automatic valve(s), closed manual valve(s), or blind flange(s).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. CPIS Actuation Logic, or one or more required channels of containment airborne radiation monitors inoperable in MODES 1, 2, 3, and 4.	A.1	Enter applicable Conditions and Required Actions for affected valves of LCO 3.6.3, "Containment Isolation Valves," made inoperable by CPIS instrumentation.	Immediately
B. Required Action and associated Completion Time not met in MODES 1, 2, 3, or 4.	B.1	Be in MODE 3.	6 hours
	AND		
	B.2	Be in MODE 5.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more required channels of containment airborne radiation monitors inoperable in MODES 1, 2, 3, and 4.	C.1 Enter applicable conditions and required actions of LCO 3.4.15, "RCS Leak Detection."	Immediately
D. CPIS Manual Trip, Actuation Logic, or one or more required channels of containment airborne radiation monitors inoperable during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment.	----------NOTE---------- The provisions of LCO 3.0.3 are not applicable. ----------	
	D.1 Place and maintain containment purge supply and exhaust valves in closed position.	Immediately
	OR	
	D.2.1 Suspend CORE ALTERATIONS.	Immediately
	AND	
	D.2.2 Suspend movement of irradiated fuel assemblies in containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.8.1	Perform a CHANNEL CHECK on required containment airborne radiation monitor channel.	12 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.8.2	Perform a CHANNEL FUNCTIONAL TEST on each required containment airborne radiation monitor channel. Verify trip setpoint is in accordance with the following: Containment Airborne Radiation Monitor: set sufficiently high to prevent spurious alarms/trips yet sufficiently low to assure an alarm/trip should an inadvertent release occur.	92 days
SR 3.3.8.3	----------NOTE---------- Surveillance of Actuation Logic shall include the actuation of each initiation relay and verification of the proper operation of each initiation relay. ---------- Perform a CHANNEL FUNCTIONAL TEST on required CPIS Actuation Logic channel.	24 months
SR 3.3.8.4	Perform a CHANNEL CALIBRATION on required containment airborne radiation monitor channel.	24 months
SR 3.3.8.5	Verify that response time of required CPIS channel is within limits.	24 months
SR 3.3.8.6	Perform CHANNEL FUNCTIONAL TEST on required CPIS Manual Trip channel.	24 months

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3.3 INSTRUMENTATION

3.3.9 Control Room Isolation Signal (CRIS)

LCO 3.3.9 One CRIS channel shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6,
During movement of irradiated fuel assemblies.

ACTIONS

----------NOTES----------
1. The provisions of LCO 3.0.3 are not applicable.
2. The provisions of LCO 3.0.4 are not applicable.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. CRIS Manual Trip, Actuation Logic, or one required channel of control room airborn radiation monitors inoperable in MODES 1, 2, 3, or 4.	A.1	--------NOTE-------- Place Control Room Emergency Air Cleanup System (CREACUS) in isolation mode if automatic transfer to isolation mode inoperable. ---------- Place one CREACUS train in emergency mode.	1 hour

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. CRIS Manual Trip, Actuation Logic, or required control room airborne radiation monitors inoperable in MODE 5 or 6, or during movement of irradiated fuel assemblies.	B.1	--------NOTE-------- Place CREACUS in isolation mode if automatic transfer to isolation mode inoperable. ---------- Place one CREACUS train in emergency mode.	Immediately
	OR		
	B.2.1	Suspend movement of irradiated fuel assemblies.	Immediately
	AND		
	B.2.2	Suspend positive reactivity additions.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.9.1	Perform a CHANNEL CHECK on the required control room airborne radiation monitor channel.	12 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.9.2	Perform a CHANNEL FUNCTIONAL TEST on required CRIS airborne radiation monitor channel. Verify CRIS high radiation setpoint is ≤ 4E2 cpm above normal background.	92 days
SR 3.3.9.3	----------NOTE---------- Surveillance of Actuation Logic shall include the verification of the proper operation of each initiation relay. ---------- Perform a CHANNEL FUNCTIONAL TEST on required CRIS Actuation Logic channel.	18 months
SR 3.3.9.4	Perform a CHANNEL CALIBRATION on required CRIS airborne radiation monitor channel.	18 months
SR 3.3.9.5	Perform a CHANNEL FUNCTIONAL TEST on required CRIS Manual Trip channel.	18 months

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 132 TO FACILITY OPERATING LICENSE NO. NPF-10

AND AMENDMENT NO. 121 TO FACILITY OPERATING LICENSE NO. NPF-15

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3

DOCKET NOS. 50-361 AND 50-362

1.0 INTRODUCTION

By application dated July 19, 1995, as supplemented by letters dated December 22, 1995, and March 26, 1996, Southern California Edison Company (SCE or the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License Nos. NPF-10 and NPF-15) for San Onofre Nuclear Generating Station, Unit Nos. 2 and 3. The proposed changes would allow the licensee to discontinue the use of the containment area radiation monitors as part of the licensee's plans to upgrade or replace existing radiation monitoring system equipment with state-of-the-art equipment to provide greater operational flexibility and reliability. The proposed changes also include minor editorial changes to improve clarity.

The December 22, 1995, and March 26, 1996, supplemental letters provided additional clarifying information and did not change the initial no significant hazards consideration determination, which was published in the Federal Register on September 27, 1995 (60 FR 49947).

2.0 BACKGROUND

The proposed changes to the existing TS sections will allow implementation of modifications to the containment radiation monitors. These modifications are part of the licensee's efforts to delete or upgrade/replace existing radiation monitoring equipment with modern state-of-the-art microprocessor-based equipment. Part of this effort is to discontinue the use of the containment area radiation monitors 2(3) RT-7856-1 and 2(3) RT 7857-2. The containment area radiation monitors are designed to sense a loss-of-coolant-accident (LOCA) or fuel handling accident inside containment during a containment purge and initiate the containment purge isolation system (CPIS) to close the

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containment purge valves. CPIS actuation signals are also provided by containment airborne radiation monitors 2(3) RT-7804-1 and 2(3) RT-7807-2. The containment airborne radiation monitors (1) alarm on high radiation level and initiate CPIS in the event of a fuel handling accident inside containment, (2) alarm on high radiation level and initiate CPIS in the event of a LOCA, (3) alarm on high radiation level and initiate CPIS prior to activity levels exceeding 10 CFR 20 Appendix B limits, and 4) detect a primary-to-containment atmosphere leak rate change of 1 gal/min in 1 hour consistent with the recommendations of Regulatory Guide (RG) 1.45, "Reactor Coolant System Pressure Boundary Leakage Detection Systems for Nuclear Power Plants."

3.0 EVALUATION

This evaluation addresses the acceptability of the proposed deletion of the containment area radiation monitors. This evaluation also address minor editorial changes to TS 3.3.8 and TS 3.3.9.

Both the containment area radiation monitors and the containment airborne radiation monitors currently have engineered safety feature actuation system (ESFAS) functions to initiate CPIS on high radiation in containment. There are two accidents capable of generating sufficiently high levels of radiation in containment to actuate CPIS; a LOCA, and a fuel handling accident inside containment. The containment area radiation monitors initiate CPIS upon detection of high gamma radiation signals while the containment airborne radiation monitors initiate CPIS upon detection of high gaseous activity. The licensee proposes to eliminate the containment area radiation monitors and their ESFAS function to initiate containment purge isolation on high gamma radiation in containment.

The LOCA function of the CPIS will be essentially unaffected by the elimination of the containment area radiation monitors. This is because in a LOCA event, containment isolation is expected to occur on either a safety injection actuation system signal or a containment isolation actuation system signal prior to initiation on a CPIS signal on high radiation in containment. In addition, the containment airborne radiation monitors will also generate an isolation signal for the containment purge in the event of a LOCA. Therefore, the proposed elimination of the containment area radiation monitors will not increase the consequences of a LOCA.

During a fuel handling accident in containment, the containment area radiation monitors are designed to detect high gamma radiation levels and actuate the CPIS, thereby isolating containment purge prior to any releases of radioactivity. If the containment area radiation monitors were to be eliminated, as proposed by the licensee, then the containment airborne radiation monitors would actuate the CPIS on high gaseous activity and the containment purge would still be isolated during a fuel handling accident inside containment. However, the licensee has calculated that, due to the longer response time of the containment airborne radiation monitors (when compared to the response time for the containment area radiation monitors), there would be some release of radioactivity to the environment prior to isolation of the purge by the CPIS. The licensee calculates that, following a

fuel handling accident in containment, it could take as long as a minute and a half (depending on the concentration of radioactive gas in containment) before the containment airborne radiation monitors would actuate the CPIS and isolate the containment purge.

In order to calculate the off-site doses resulting from such a release, the licensee conservatively assumed that all of the airborne radioactivity resulting from a fuel handling accident in containment was released to the environment (i.e., the containment purge was not isolated following a fuel handling accident). The licensee's analysis used the assumptions and methodology prescribed by RG 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." A 72-hour decay time (between reactor shutdown and fuel movement) was assumed in the analysis, which is consistent with the TS requirements for fuel movement after reactor shutdown. The licensee conservatively assumed that all 236 fuel pins in a fuel bundle were breached as a result of a fuel handling accident inside containment. The licensee's analysis showed that the 0-2 hour site boundary (exclusion area boundary [EAB]) thyroid dose would be approximately 72.7 rem and the 0-2 hour site boundary whole body (WB) dose would be approximately 0.3 rem. These calculated doses are below the Standard Review Plan (SRP) 15.7.4 limits of 75 rem thyroid and 6 rem WB (these SRP limits are based on 25 percent of the 10 CFR 100 limits).

General Design Criteria (GDC) 19 specifies that 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 WB, or its equivalent to any part of the body, for the duration of the accident. SRP 6.4 defines the dose-equivalent as 30 rem to the thyroid. The licensee's analysis demonstrated that no individual in the control room will receive more than 0.2 rem WB and 19.5 rem thyroid. These projected doses are well within the dose acceptance values specified in GDC 19 as delineated by SRP 6.4.

The staff performed an independent analysis to confirm the licensee's results. The staff evaluated the radiological consequences resulting from a postulated fuel handling accident using accident source terms given in RG 1.4, "Assumptions Used for the Potential Radiological Consequences of a Loss of Coolant Accident for Pressurized Water Reactors" and the review procedures specified in SRP 15.7.4.

The staff also utilized the assumptions contained in RG 1.25, except that the staff did not use the radial peaking factor of 1.65 provided in RG 1.25. When analyzing the fuel handling accident consequences for damage to an individual fuel pin, the maximum radial peaking factor of 1.65 should be used. However, when calculating the accident consequences for damage to an entire fuel assembly of 236 pins, the average radial peaking factor is generally lower than the peaking factor for an individual fuel pin. RG 1.25 allows alteration of assumptions due to site characteristics, plant design features, and major changes in fuel composition or management. In a letter dated March 26, 1996, the licensee provided its basis for using a radial peaking factor of 1.20 for

analyzing the consequences of a fuel handling accident involving all 236 fuel pins. The licensee researched the relative power densities (RPDs) for high burnup fuel assemblies (i.e., assemblies burned once or twice) for the last three fuel cycles for Unit 2. Throughout these three cycles, the RPDs of the high burnup fuel assemblies were found to be all below 1.15 and at the end of each cycle the highest RPD was 1.10. In addition, preliminary analysis for the next Unit 2 fuel cycle (Cycle 9) indicates that high burnup fuel assembly RPDs are below 1.15. Because Units 2 and 3 operate essentially identically, this data is considered applicable to Unit 3. Therefore, the licensee concluded that the use of a 1.20 radial peaking factor is conservative for high burnup fuels. Based on this information, the staff concludes that a radial peaking factor of 1.20 for the fuel handling accident involving all 236 fuel pins is appropriate, and used this value in its confirmatory analysis.

The staff assumed an instantaneous puff release of noble gases and radioiodine from the gap and plenum of the broken fuel rods. These gas bubbles will pass through at least 23 feet of water covering the fuel prior to reaching the containment atmosphere. All airborne radioactivity reaching the containment atmosphere is assumed to be exhausted into the environment within two hours. All radioactive material in the fuel rod gap is assumed to have decayed for a period of 72 hours before release.

The staff computed the offsite doses for the San Onofre exclusion area boundary using the above assumptions and the NRC computer code, ACTICODE. The dose outputs from ACTICODE were then modified to account for extended burnup and the differences in iodine dose conversion factors between International Commission on Radiological Protection (ICRP) Publication 2 and ICRP Publication 30. The control room operator doses were computed using methodology given in SRP 6.4. The NRC computed offsite WB dose of 0.38 rem is well within the SRP 15.7.4 limit of 6 rem. The computed offsite thyroid dose of 73.2 rem is also within the SRP limit of 75 rem. These doses are based on the conservative assumption that the containment purge is not isolated following a fuel handling accident inside containment and the entire radioactive release is exhausted to the environment. In actuality, the containment airborne radiation monitors would actuate the CPIS and isolate the containment purge within the first minute and a half, or sooner, following a fuel handling accident inside containment, thereby minimizing the amount of radioactivity released to the environment.

The NRC calculated control room WB dose of 5.63×10^{-2} rem is well within the GDC 19 guidelines of 5 rem during the course of the accident. The calculated control room thyroid dose of 5.97×10^{-1} rem is well within the guideline dose of 30 rem contained in SRP 6.4. The values of the offsite and control room operator doses calculated by the staff are listed in Table 1 and the assumptions used are listed in Table 2.

On the basis of the evaluation performed by the licensee and the staff's confirmatory analysis, the staff concludes that the radiological consequences of eliminating the containment area radiation monitors are acceptable.

The staff's review of the individual changes to the TS proposed by the licensee is as follows:

1. TS 3.3.8 deletes references to containment area radiation monitors and clarifies that this section applies to the containment airborne radiation monitors. This is consistent with the removal of the containment area radiation monitors from operation, and is acceptable to the staff.

2. Surveillance Requirement (SR) 3.3.8.2 replaces the setpoint allowable values for the containment airborne monitors with the statement, "set sufficiently high to prevent spurious alarms/trips yet sufficiently low to assure an alarm/trip should an individual release occur." Compliance with this statement will provide suitable confirmation that the monitors will be capable of performing their intended function, and is further justified by the fact that no credit was given to the airborne monitors in the radiological dose analysis. The staff finds this change acceptable.

3. The previous SR 3.3.8.3 has been combined with SR 3.3.8.2, since its only purpose was to provide a separate setpoint for the containment area radiation monitors from SR 3.3.8.2. Subsequent SRs are renumbered. This is an editorial change, and is acceptable to the staff.

4. TS 3.3.9 clarifies that the radiation monitors controlled by this TS are the control room airborne radiation monitors. This is an editorial change, and is acceptable to the staff.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (60 FR 49947). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Attachments: 1. Table 1
2. Table 2

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Table 1

CALCULATED RADIOLOGICAL CONSEQUENCES

Exclusion Area Boundary	Dose	SRP Limits
Whole Body	0.38 rem	6 rem
Thyroid	73.2 rem	75 rem

Control Room Operator	Dose	GDC-19 Guidelines
Whole Body	0.0563 rem	5 rem
Thyroid	0.597 rem	Equivalent to 5 rem WB*

*Guideline doses provided in Standard Review Plan Section 6.4 define the dose-equivalent as 30 rem to the thyroid.

Table 2

ASSUMPTIONS USED FOR CALCULATING RADIOLOGICAL CONSEQUENCES

Parameters

Power Level, Mwt	3560
Number of Fuel Rods Damaged	236
Total Number of Rods	51,212
Shutdown Time, hours	72
Power Peaking Factor	1.2
Fission Product Release Duration*	2 hrs
Fission-Product Release (percent)*	
Iodine	10
Noble Gases	30
Pool Decontamination Factors*	
Iodine	100
Noble Gases	1
Iodine Forms (percent)	
Elemental	75
Organic	25

Core Fission Product Inventories per TID-14844

Receptor Point Variables

Exclusion Area Boundary**

Atmospheric Dispersion Factor, X/Q (sec/m^3) 0-2 hours	4.0×10^{-4}

Control Room

Atmospheric Dispersion Factor, X/Q (sec/m^3)	1.0×10^{-3}

Control Room Volume, cubic feet	244,398
Maximum Infiltration Rate, ft^3/min	4,400
Filter Recirculation Rate, ft^3/min	59,474
Unfiltered Inleakage, ft^3/min	10
Filter Efficiency (percent)	95
Geometry Factor	18
Iodine Protection Factor	265

* Regulatory Guide 1.25
** San Onofre SER