

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

March 26, 2001

SUBJECT: SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 -  
ISSUANCE OF AMENDMENTS ON POST ACCIDENT SAMPLING PROGRAM  
(TAC NOS. MB0992 AND MB0993)

Dear Mr. Ray:

The Commission has issued the enclosed Amendment No. 178 to Facility Operating License No. NPF-10 and Amendment No. 169 to Facility Operating License No. NPF-15 for San Onofre Nuclear Generating Station, Units 2 and 3, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated January 11, 2001.

The amendments delete Technical Specifications (TS) Section 5.5.2.2, "Post Accident Sampling Program," for San Onofre Nuclear Generating Station, Units 2 and 3, and thereby eliminate the requirements to have and maintain the post-accident sampling systems (PASS). The amendments also revise TS 5.5.2.8, "Primary Coolant Sources Outside Containment Program," to reflect the elimination of PASS. Additionally, the amendments delete PASS-related License Conditions 2.c(19)i for Unit 2 and 2.C.(17)d for Unit 3.

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,  
/RA/

L. Raghavan, Senior Project Manager, Section 2  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-361 and 50-362

Enclosures: 1. Amendment No. 178 to NPF-10  
2. Amendment No. 169 to NPF-15  
3. Safety Evaluation

cc w/encls: See next page

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

March 26, 2001

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Docket Nos. 50-361 and 50-362

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2. Amendment No. <sup>169</sup> to NPF-15  
3. Safety Evaluation

cc w/encs: See next page

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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 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 178  
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 January 11, 2001, 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, Facility Operating License No. NPF-10 is hereby amended by deleting License Condition 2.c.(19)i as indicated in the attachment to this license amendment. In addition, 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. 178 , 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 its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Stephen Dembek, Chief, Section 2  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility Operating License  
and Technical Specifications

Date of Issuance: March 26, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 178

FACILITY OPERATING LICENSE NO. NPF-10

DOCKET NO. 50-361

Replace the following page of Facility Operating License NPF-10 with the attached revised page. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change

REMOVE

10

INSERT

10

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

5.0-9  
5.0-12  
5.0-13

INSERT

5.0-9  
5.0-12  
5.0-13

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\*Overleaf pages provided to maintain document completeness. No changes on these pages.

5.5 Procedures, Programs, and Manuals

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5.5.2.1.1 Licensee-initiated changes to the ODCM: (continued)

- c. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5.2.2 Deleted

5.5.2.3 Radioactive Effluent Controls Program

This program conforming to 10 CFR 50.36a provides for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by operating procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;
- b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to 10 CFR 20, Appendix B, Table II, Column 2;
- c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 and with the methodology and parameters in the ODCM;

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(continued)

h. Reactor Coolant System Vents (II.B .1). SSER #1 . SSER #4)

By May 1, 1982, SCE shall provide procedures or procedure guidelines for reactor coolant gas vent system operation and testing.

i. Deleted

j. Safety Valve Test Requirements (II.D.1. SSER #1)

SCE shall conform to the results of the EPRI test program. By April 1, 1982, SCE shall provide confirmation of the adequacy of the San Onofre 2 RCS safety valves based on a preliminary review of generic test program results. By July 1, 1982, SCE shall provide evidence supported by test of safety valve functionality for expected operating and accident (non-ATWS) conditions. The testing shall demonstrate that the valves will open and reclose under the expected flow conditions. By July 1, 1982, SCE shall provide an evaluation of the adequacy of the associated piping and supports at San Onofre 2.

k. Direct Indication of Safety Valve Position (II.D.3. SSER #1)

Prior to exceeding five (5) percent power, the safety valve position indication system shall be environmentally and seismically qualified consistent with the component or system to which it is attached, and documentation of this shall be provided.

l. AFW Pump 48-hour Endurance Test (II.E.1.1. SSER #1)

Prior to exceeding five (5) percent power, SCE shall conduct a 48-hour endurance test of all auxiliary feedwater pumps.



## 5.5 Procedures, Programs, and Manuals

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### 5.5.2.7 Explosive Gas and Storage Tank Radioactivity Monitoring Program (continued)

The program shall include:

- a. The limits for the concentrations of hydrogen and oxygen in the Gaseous Radwaste System and a surveillance program to ensure the limits are maintained. Such limits shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion); and
- b. A surveillance program to ensure that the quantity of radioactivity contained in each waste gas decay tank and fed into the gaseous radwaste vent system is less than the amount that would result in a whole body exposure of greater than or equal to 0.5 rem to any individual in the unrestricted area, in the event of an uncontrolled release of the tanks contents; and
- c. A surveillance program to ensure that the quantity of radioactivity contained in all outdoor liquid radwaste tanks that are not surrounded by liners, dikes, or walls, capable of holding the tanks' contents and that do not have tank overflows and surrounding area drains connected to the Liquid Waste Management System is less than the amount that would result in concentrations less than the limits of 10 CFR Part 20, Appendix B, Table II, Column 2, at the nearest potable water supply and the nearest surface water supply in an unrestricted area, in the event of an uncontrolled release of the tanks' contents.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Explosive Gas and Storage Tank Radioactivity Monitoring Program surveillance frequencies.

### 5.5.2.8 Primary Coolant Sources Outside Containment Program

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include high pressure safety injection recirculation, the shutdown cooling system, the reactor coolant sampling system (post-accident sampling piping only until such time as a modification eliminates the post-accident piping as a potential leakage path), the containment spray system, the radioactive waste gas system (post-accident sampling return piping only until such time as a modification eliminates the post-accident piping as a potential leakage path), and the liquid radwaste

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(continued)

5.5 Procedures, Programs, and Manuals (continued)

5.5.2.8 Primary Coolant Sources Outside Containment Program (continued)

system (post-accident sampling return piping only until such time as a modification eliminates the post-accident piping as a potential leakage path). The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements; and
- b. Integrated leak test requirements for each system at refueling cycle intervals or less.

5.5.2.9 Pre-Stressed Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containment, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. Program itself is relocated to the LCS.

5.5.2.10 Inservice Inspection and Testing Program

This program provides controls for inservice inspection of ASME Code Class 1, 2, and 3 components and Code Class CC and MC components including applicable supports. The program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program itself is located in the LCS.

5.5.2.11 Steam Generator (SG) Tube Surveillance Program

This program provides controls for monitoring SG tube degradation. Each SG shall be demonstrated OPERABLE by meeting the requirements of Specification 5.5.2.11 and by meeting an augmented inservice inspection program based on a modification of Regulatory Guide 1.83, Revision 1, which includes at least the following:

- a. SG Sample Selection and Inspection

Each SG shall be determined OPERABLE during shutdown by selecting and inspecting at least the minimum number of SG specified in Table 5.5.2.11-1 and 5.5.2.11-2.

- b. SG Tube Sample Selection and Inspection

The SG tube and sleeve minimum sample size, inspection result classification, and the corresponding action required shall be as specified in Table 5.5.2.11-1 and 5.5.2.11-2. The inservice inspection of SG tubes and sleeves shall be performed at the frequencies specified in Specification 5.5.2.11.e and the inspected tubes shall be verified acceptable per the acceptance criteria of Specification 5.5.2.11.f. The tubes selected for each inservice inspection shall include at least 3% of the total

(continued)



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 3

AMENDMENT TO FACILITY OPERATING LICENSE

169

Amendment No.  
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 January 11, 2001, 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, Facility Operating License No. NPF-15 is hereby amended by deleting License Condition 2.c.(17)d as indicated in the attachment to this license amendment. In addition, 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. 169 , 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 its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Stephen Dembek, Chief, Section 2  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility Operating License  
and Technical Specifications

Date of Issuance: March 26, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 169

FACILITY OPERATING LICENSE NO. NPF-15

DOCKET NO. 50-362

Replace the following page of Facility Operating License NPF-15 with the attached revised page. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change

REMOVE

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Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

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\*Overleaf pages provided to maintain document completeness. No changes on these pages.

(17) NUREG-0737 Conditions (Section 22)

Each of the following conditions shall be completed to the satisfaction of the NRC. Each item references the related subpart of Section 22 of the SER and/or its supplements.

a. Procedures for Transients and Accidents (I.C.1. SSER #1, SSER #2, SSER #5)

Emergency procedures based on guidelines approved by the NRC shall be implemented prior to startup following the first refueling outage that occurs six months or more after NRC approval of the guidelines.

b. Procedures for Verifying Correct Performance of Operating Activities (I.C.6. SSER #1)

Prior to fuel loading, SCE shall implement a system for verifying the correct performance of operating activities, and shall keep the System in effect thereafter.

c. Control Room Design Review (I.D.1. SSER #1)

The control room modifications identified as required in Section 22, Item I.D.1 of Supplement No. 1 to the SER shall be installed and made operational on the schedules identified for each modification in Supplement No. 1 to the SER.

## d. Deleted

e. Direct Indication of Safety Valve Position (II.D.3. SSER #1)

The safety valve position indication system shall be environmentally and seismically qualified consistent with the component or system to which it is attached, and documentation of this shall be maintained.

f. AFW Pump 48-hour Endurance Test (II.E.1.1. SSER #11)

Prior to exceeding five (5) percent power, SCE shall conduct a 48-hour endurance test of all auxiliary feedwater pumps. The results of the test shall be submitted to the NRC staff.

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**5.5 Procedures, Programs, and Manuals**

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**5.5.2.1.1 Licensee-initiated changes to the ODCM: (continued)**

- c. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

**5.5.2.2 Deleted****5.5.2.3 Radioactive Effluent Controls Program**

This program conforming to 10 CFR 50.36a provides for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by operating procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;
- b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to 10 CFR 20, Appendix B, Table II, Column 2;
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(continued)

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## 5.5 Procedures, Programs, and Manuals

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- a. The limits for the concentrations of hydrogen and oxygen in the Gaseous Radwaste System and a surveillance program to ensure the limits are maintained. Such limits shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion); and
- b. A surveillance program to ensure that the quantity of radioactivity contained in each waste gas decay tank and fed into the gaseous radwaste vent system is less than the amount that would result in a whole body exposure of greater than or equal to 0.5 rem to any individual in the unrestricted area, in the event of an uncontrolled release of the tanks contents; and
- c. A surveillance program to ensure that the quantity of radioactivity contained in all outdoor liquid radwaste tanks that are not surrounded by liners, dikes, or walls, capable of holding the tanks' contents and that do not have tank overflows and surrounding area drains connected to the Liquid Waste Management System is less than the amount that would result in concentrations less than the limits of 10 CFR Part 20, Appendix B, Table II, Column 2, at the nearest potable water supply and the nearest surface water supply in an unrestricted area, in the event of an uncontrolled release of the tanks' contents.

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(continued)



5.5 Procedures, Programs, and Manuals (continued)

5.5.2.8 Primary Coolant Sources Outside Containment Program (continued)

system (post-accident sampling return piping only until such time as a modification eliminates the post-accident piping as a potential leakage path). The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements; and
- b. Integrated leak test requirements for each system at refueling cycle intervals or less.

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This program provides controls for monitoring any tendon degradation in pre-stressed concrete containment, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. Program itself is relocated to the LCS.

5.5.2.10 Inservice Inspection and Testing Program

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- b. SG Tube Sample Selection and Inspection

The SG tube and sleeve minimum sample size, inspection result classification, and the corresponding action required shall be as specified in Table 5.5.2.11-1 and 5.5.2.11-2. The inservice inspection of SG tubes and sleeves shall be performed at the frequencies specified in Specification 5.5.2.11.e and the inspected tubes shall be verified acceptable per the acceptance criteria of Specification 5.5.2.11.f. The tubes selected for each inservice inspection shall include at least 3% of the total

(continued)



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 178 TO FACILITY OPERATING LICENSE NO. NPF-10  
AND AMENDMENT NO. 169 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 January 11, 2001, Southern California Edison Company, et al. (SCE or the licensee) requested changes to the Facility Operating Licenses and Technical Specifications (TS) for San Onofre Nuclear Generating Station, Units 2 and 3. The proposed changes would delete requirements associated with the Post Accident Sampling Systems (PASS).

In the aftermath of the accident at Three Mile Island (TMI), Unit 2, the Nuclear Regulatory Commission (NRC) imposed requirements on licensees for commercial nuclear power plants to install and maintain the capability to obtain and analyze post-accident samples of the reactor coolant and containment atmosphere. The desired capabilities of PASS were described in NUREG-0737, "Clarification of TMI Action Plan Requirements." The NRC issued orders to licensees with plants operating at the time of the TMI accident to confirm the installation of PASS capabilities (generally as they had been described in NUREG-0737). A requirement for PASS and related administrative controls was added to the TS of the operating plants and was included in the initial TS for plants licensed during the 1980s and 1990s. Additional expectations regarding PASS capabilities were included in Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants To Assess Plant and Environs Conditions During and Following an Accident."

Significant improvements have been achieved since the TMI accident in the areas of understanding risks associated with nuclear plant operations and developing better strategies for managing the response to potentially severe accidents at nuclear plants. Recent insights about plant risks and alternate severe accident assessment tools have led the NRC staff to conclude that some TMI Action Plan items can be revised without reducing the ability of licensees to respond to severe accidents. The NRC's efforts to oversee the risks associated

with nuclear technology more effectively and to eliminate undue regulatory costs to licensees have prompted the NRC to consider eliminating the requirements for PASS in TS and other parts of the licensing bases of operating reactors.

The staff has completed its review of the topical reports submitted by the Combustion Engineering Owners Group (CEOG) and the Westinghouse Owners Group (WOG) that proposed the elimination of PASS. The justifications for the proposed elimination of PASS requirements center on evaluations of the various radiological and chemical sampling and their potential usefulness in responding to a severe reactor accident or making decisions regarding actions to protect the public from possible releases of radioactive materials. As explained in more detail in the staff's safety evaluations for the two topical reports, the staff has reviewed the available sources of information for use by decision-makers in developing protective action recommendations and assessing core damage. Based on this review, the staff found that the information provided by PASS is either unnecessary or is effectively provided by other indications of process parameters or measurement of radiation levels. The staff agrees, therefore, with the owners groups that licensees can remove the TS requirements for PASS, revise (as necessary) other elements of the licensing bases, and pursue possible design changes to alter or remove existing PASS equipment.

## 2.0 BACKGROUND

In a letter dated May 5, 1999 (as supplemented by letter dated April 14, 2000), the CEOG submitted the topical report CE NPSD-1157, Revision 1, "Technical Justification for the Elimination of the Post-Accident Sampling System From the Plant Design and Licensing Bases for CEOG Utilities." A similar proposal was submitted on October 26, 1998 (as supplemented by letters dated April 28, 1999, April 10 and May 22, 2000), by the WOG in its topical report WCAP-14986, "Post Accident Sampling System Requirements: A Technical Basis." The reports provided evaluations of the information obtained from PASS samples to determine the contribution of the information to plant safety and accident recovery. The reports considered the progression and consequences of core damage accidents and assessed the accident progression with respect to plant abnormal and emergency operating procedures, severe accident management guidance, and emergency plans. The reports provided the owners groups' technical justifications for the elimination for the various PASS sampling requirements. The specific samples and the staff's findings are described in the following evaluation.

The NRC staff prepared a generic safety evaluation (SE) relating to the elimination of requirements on post accident sampling which included soliciting public comment (65 FR 49271) in accordance with the consolidated line item improvement process (CLIIP). The use of the CLIIP in this matter is intended to help the NRC to efficiently process amendments that propose to remove the PASS requirements from TS. Licensees of nuclear power reactors to which the generic SE apply were informed (65 FR 65018) that they could request amendments confirming the applicability of the SE to their reactors and providing the requested plant-specific verifications and commitments.

## 3.0 EVALUATION

The technical evaluations for the elimination of PASS sampling requirements are provided in the safety evaluations dated May 16, 2000, for the CEOG topical report CE NPSD-1157 and June 14, 2000, for the WOG topical report WCAP-14986. The NRC staff's safety evaluations

approving the topical reports are located in the NRC's Agencywide Documents Access and Management System (ADAMS) (Accession Numbers ML003715250 for CE NPSD-1157 and ML003723268 for WCAP-14986).

The ways in which the requirements and recommendations for PASS were incorporated into the licensing bases of commercial nuclear power plants varied as a function of when plants were licensed. Plants that were operating at the time of the TMI accident are likely to have been the subject of confirmatory orders that imposed the PASS functions described in NUREG-0737 as obligations. The issuance of plant specific amendments to adopt this change, which would remove PASS and related administrative controls from TS, supersede the PASS specific requirements imposed by post-TMI confirmatory orders.

As described in its safety evaluations for the topical reports, the staff finds that the following PASS sampling requirements may be eliminated for plants of Combustion Engineering and Westinghouse designs:

1. reactor coolant dissolved gases
2. reactor coolant hydrogen
3. reactor coolant oxygen
4. reactor coolant pH
5. reactor coolant chlorides
6. reactor coolant boron
7. reactor coolant conductivity
8. reactor coolant radionuclides
9. containment atmosphere hydrogen concentration
10. containment oxygen
11. containment atmosphere radionuclides
12. containment sump pH
13. containment sump chlorides
14. containment sump boron
15. containment sump radionuclides

The staff agrees that sampling of radionuclides is not required to support emergency response decision making during the initial phases of an accident because the information provided by PASS is either unnecessary or is effectively provided by other indications of process parameters or measurement of radiation levels. Therefore, it is not necessary to have dedicated equipment to obtain this sample in a prompt manner.

The staff does, however, believe that there could be significant benefits to having information about the radionuclides existing post-accident in order to address public concerns and plan for long-term recovery operations. As stated in the safety evaluations for the topical reports, the staff has found that licensees could satisfy this function by developing contingency plans to describe existing sampling capabilities and what actions (e.g., assembling temporary shielding) may be necessary to obtain and analyze highly radioactive samples from the reactor coolant system (RCS), containment sump, and containment atmosphere. (See item 4.1 under Licensee Verifications and Commitments.) These contingency plans must be available to be used by a licensee during an accident; however, these contingency plans do not have to be carried out in emergency plan drills or exercises. The contingency plans for obtaining samples from the RCS, containment sump, and containment atmosphere may also enable a licensee to derive

information on parameters such as hydrogen concentrations in containment and boron concentration and pH of water in the containment sump. The staff considers the sampling of the containment sump to be potentially useful in confirming calculations of pH and boron concentrations and confirming that potentially unaccounted for acid sources have been sufficiently neutralized. The use of the contingency plans for obtaining samples would depend on the plant conditions and the need for information by the decision makers responsible for responding to the accident.

In addition, the staff considers radionuclide sampling information to be useful in classifying certain types of events (such as a reactivity excursion or mechanical damage) that could cause fuel damage without having an indication of overheating on core exit thermocouples. However, the staff agrees with the topical reports' contentions that other indicators of failed fuel, such as letdown radiation monitors (or normal sampling system), can be correlated to the degree of failed fuel. (See item 4.2 under Licensee Verifications and Commitments.)

In lieu of the information that would have been obtained from PASS, the staff believes that licensees should maintain or develop the capability to monitor radioactive iodines that have been released to offsite environs. Although this capability may not be needed to support the immediate protective action recommendations during an accident, the information would be useful for decision makers trying to limit the public's ingestion of radioactive materials. (See item 4.3 under Licensee Verifications and Commitments.)

The staff believes that the changes related to the elimination of PASS that are described in the topical reports, related safety evaluations and this proposed change to TS are unlikely to result in a decrease in the effectiveness of a licensee's emergency plan. Each licensee, however, must evaluate possible changes to its emergency plan in accordance with 10 CFR 50.54(q) to determine if the change decreases the effectiveness of its site-specific plan. Evaluations and reporting of changes to emergency plans should be performed in accordance with applicable regulations and procedures.

The staff notes that redundant, safety-grade, containment hydrogen concentration monitors are required by 10 CFR 50.44(b)(1), are addressed in NUREG-0737 Item II.F.1 and Regulatory Guide 1.97, and are relied upon to meet the data reporting requirements of 10 CFR Part 50, Appendix E, Section VI.2.a.(i)(4). The staff concludes that during the early phases of an accident, the safety-grade hydrogen monitors provide an adequate capability for monitoring containment hydrogen concentration. The staff sees value in maintaining the capability to obtain grab samples for complementing the information from the hydrogen monitors in the long term (i.e., by confirming the indications from the monitors and providing hydrogen measurements for concentrations outside the range of the monitors). As previously mentioned, the licensee's contingency plan (see item 4.1) for obtaining highly radioactive samples will include sampling of the containment atmosphere and may, if deemed necessary and practical by the appropriate decision makers, be used to supplement the safety-related hydrogen monitors.

The elimination of PASS requirements requires the elimination of License Condition 2.C(19)i in the Unit 2 operating license and License Condition 2.C(17)d in the Unit 3 operating license. The changes are included in the licensee's application to revise the TS. The staff has reviewed the changes and agrees that the revisions are necessary due to the removal of the TS section on PASS. The changes do not revise technical requirements beyond that reviewed by the NRC

staff in connection with the supporting topical reports or the preparation of the TS improvement incorporated into the CLIIP.

The TS include an administrative requirement for a program to minimize to levels as low as practicable the leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident. The program includes preventive maintenance, periodic inspections, and leak tests for the identified systems. PASS is specifically listed in TS 5.5.2.8 as falling under the scope of this requirement. The applicability of this specification depends on whether or not PASS is maintained as a system that is a potential leakage path. The licensee has stated that a plant change might be implemented such that PASS would not be a potential leakage path outside containment for highly radioactive fluids (e.g., the PASS piping that penetrates the containment might be cut and capped). The modification will not, however, be made during the implementation period for this amendment. The licensee has proposed to add the following phrase to the reference to PASS in TS 5.5.2.2:

“(until such time as a modification eliminates the PASS penetration as a potential leakage path).”

The above phrase makes clear that TS 5.5.2.8 remains applicable to the PASS as long as it is a possible leakage path and reflects that the actual modification of the piping system may be scheduled beyond the implementation period for this amendment. Requirements in NRC regulations (e.g., 10 CFR Part 50, Appendix J) and other TS provide adequate regulatory controls over the licensee's modification to eliminate PASS as a potential leakage path. Following the modification to eliminate PASS as a potential leakage path, the licensee may elect (in order to maintain clarity and simplicity of the requirement) to revise TS 5.5.2.8 to remove the reference to PASS, including the phrase added by this amendment.

#### 4.0 VERIFICATIONS AND COMMITMENTS

As requested by the staff in the notice of availability for this TS improvement, the licensee has addressed the following plant-specific verifications and commitments.

- 4.1 Each licensee should verify that it has, and make a regulatory commitment to maintain (or make a regulatory commitment to develop and maintain), contingency plans for obtaining and analyzing highly radioactive samples of reactor coolant, containment sump, and containment atmosphere.

The licensee has made a regulatory commitment to develop contingency plans for obtaining and analyzing highly radioactive samples from the RCS, containment sump, and containment atmosphere. The contingency plans will be initiated in emergency plan implementing procedures and will be implemented with the implementation of this license amendment (i.e., within 60 days of issuance).

- 4.2 Each licensee should verify that it has, and make a regulatory commitment to maintain (or make a regulatory commitment to develop and maintain), a capability for classifying fuel damage events at the Alert level threshold (typically this is 300  $\mu\text{Ci/ml}$  dose equivalent iodine). This capability may utilize the normal

sampling system and/or correlations of sampling or letdown line dose rates to coolant concentrations.

The licensee has verified that it has the capability for classifying fuel damage events at the Alert level threshold. The capability is described in the licensee's emergency plan implementing procedures and has been implemented.

- 4.3 Each licensee should verify that it has, and make a regulatory commitment to maintain (or make a regulatory commitment to develop and maintain), the capability to monitor radioactive iodines that have been released to offsite environs.

The licensee has verified that it has the capability to monitor radioactive iodines that have been released to offsite environs. The capability is described in the licensee's site procedures and has been implemented.

The NRC staff finds that reasonable controls for the implementation and for subsequent evaluation of proposed changes pertaining to the above regulatory commitments are provided by the licensee's administrative processes, including its commitment management program. Should the licensee choose to incorporate a regulatory commitment into the emergency plan, final safety analysis report, or other document with established regulatory controls, the associated regulations would define the appropriate change-control and reporting requirements. The staff has determined that the commitments do not warrant the creation of regulatory requirements. The NRC staff has concluded that NEI 99-04, Revision 0, "Guidelines for Managing NRC Commitment Changes," provides reasonable guidance for the control of regulatory commitments made to the NRC staff. (See Regulatory Issue Summary 2000-17, Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff, dated September 21, 2000.) The commitments should be controlled in accordance with the industry guidance or comparable criteria employed by a specific licensee. The staff may choose to verify the implementation and maintenance of these commitments in a future inspection or audit.

## 5.0 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.

## 6.0 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 change 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 (66 FR 11063). 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.

7.0 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.

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