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. 116

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby submit Amendment Application No. 116.

This amendment application consists of Proposed Technical Specification Change No. NPF-10-407 to Facility Operating License NPF-10. Proposed Technical Specification Change No. NPF-10-407 is a request to revise Technical Specification 3/4.7.5, "Control Room Emergency Air Cleanup System." The proposed change will delete Surveillance Requirements 4.7.5.c.1, and 4.7.5.e.5, and revise Surveillance Requirement 4.7.5.b, the ACTION statement, and Bases.

The implementation of these changes will delete unnecessary Surveillance Requirements, clarify Action statements in a case when both Units are in different operational MODES, and revise the Bases to reflect all above mentioned changes.

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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. 100.

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby submit Amendment Application No. 100.

This amendment application consists of Proposed Technical Specification Change No. NPF-10-407 to Facility Operating License NPF-15. Proposed Technical Specification Change No. NPF-15-407 is a request to revise Technical Specification 3/4.7.5, "Control Room Emergency Air Cleanup System." The proposed change will delete Surveillance Requirements 4.7.5.c.1, 4.7.5.e.5, and revise Surveillance Requirement 4.7.5.b, the ACTION statement, and Bases.

The implementation of these changes will delete unnecessary Surveillance Requirements, clarify Action statements in a case when both Units are in different operational MODES, and revise the Bases to reflect all above mentioned changes.

Subscribed on this 14th day of OCTOBER, 1992.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

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

State of California
County of Orange
On 10/14/92 before me, BARBARA A. McCARTHY/NOTARY PUBLIC, personally appeared HAROLD B. RAY, personally known to me ~~(or proved to me on the basis of satisfactory evidence)~~ to be the person~~(s)~~ whose name~~(s)~~ is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity~~(ies)~~, and that by his/~~her/their~~ signature~~(s)~~ on the instrument the person~~(s)~~, or the entity upon behalf of which the person~~(s)~~ acted, executed the instrument.

WITNESS my hand and official seal.

Signature Barbara A. McCarthy

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

James A. Beoletto
Attorney for Southern
California Edison Company

By: James A. Beoletto
James A. Beoletto

DESCRIPTION AND SAFETY ANALYSIS
OF PROPOSED CHANGE NPF-10/15-407

This is a request to revise Technical Specification (TS) 3/4.7.5, "Control Room Emergency Air Cleanup System," and its associated Bases B 3/4.7.5.

Existing Specifications:

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

Proposed Specifications:

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

SUMMARY OF CHANGES

The proposed change will revise Technical Specification (TS) 3/4.7.5 "Control Room Emergency Air Cleanup System" and its associated Bases B3/4.7.5. This change will delete unnecessary Surveillance Requirements, clarify operator's action in a case when both Units are in different operational MODES, and rewrite the Bases to reflect all of the above mentioned changes.

The proposed changes include the deletion of SURVEILLANCE REQUIREMENTS for duct heaters, and the addition of the NOTE "Each Unit shall enter applicable ACTIONS separately" before the ACTION statement. The SURVEILLANCE REQUIREMENT 4.7.5.c.1 concerning the leakage through the system's diverting valves will be deleted from the SURVEILLANCE REQUIREMENTS. The purpose of these changes is to accurately reflect San Onofre Units 2 and 3 current operating practice.

Background

Technical Specification 3/4.7.5 ensures the Control Room Emergency Air Cleanup System (CREACUS) is capable of providing an enclosed environment from which the plant can be operated following an uncontrolled release of radioactivity or toxic gas to the atmosphere. The system consists of one normal air conditioning unit, two emergency supply filtration trains, two normal exhaust fans, and one smoke removal fan. The outside air intake louvers for the control room are located at elevation 30 feet. The normal air conditioning unit is provided with a moderate efficiency filter. Each of the two redundant emergency filtration trains is equipped with an emergency ventilation unit and an emergency air conditioning unit (See Sketch A.)

The emergency ventilation unit consists of a prefilter, HEPA filter, heating coil, charcoal filter, and fan. The emergency air conditioning unit consists of a prefilter, HEPA filter upstream, charcoal filter, HEPA filter downstream, cooling coil, and fan.

Upon receipt of a control room isolation signal (CRIS), actuated by either a safety injection actuation signal (SIAS) or a normal supply air duct high radiation signal, the control room HVAC system is automatically shifted to the emergency mode of operation. Transfer to the emergency mode may also be initiated manually from the control room. Transfer to the emergency mode consists of automatically closing the outside air isolation dampers from the normal supply air handling unit and all exhaust isolation dampers. This also stops the control building supply and exhaust fans, and activates both trains A and B outside air isolation dampers to the emergency ventilation units. Transfer to the emergency mode also includes starting the emergency air conditioning units, opening the outside air isolation damper to the emergency filtration trains, and starting the fans.

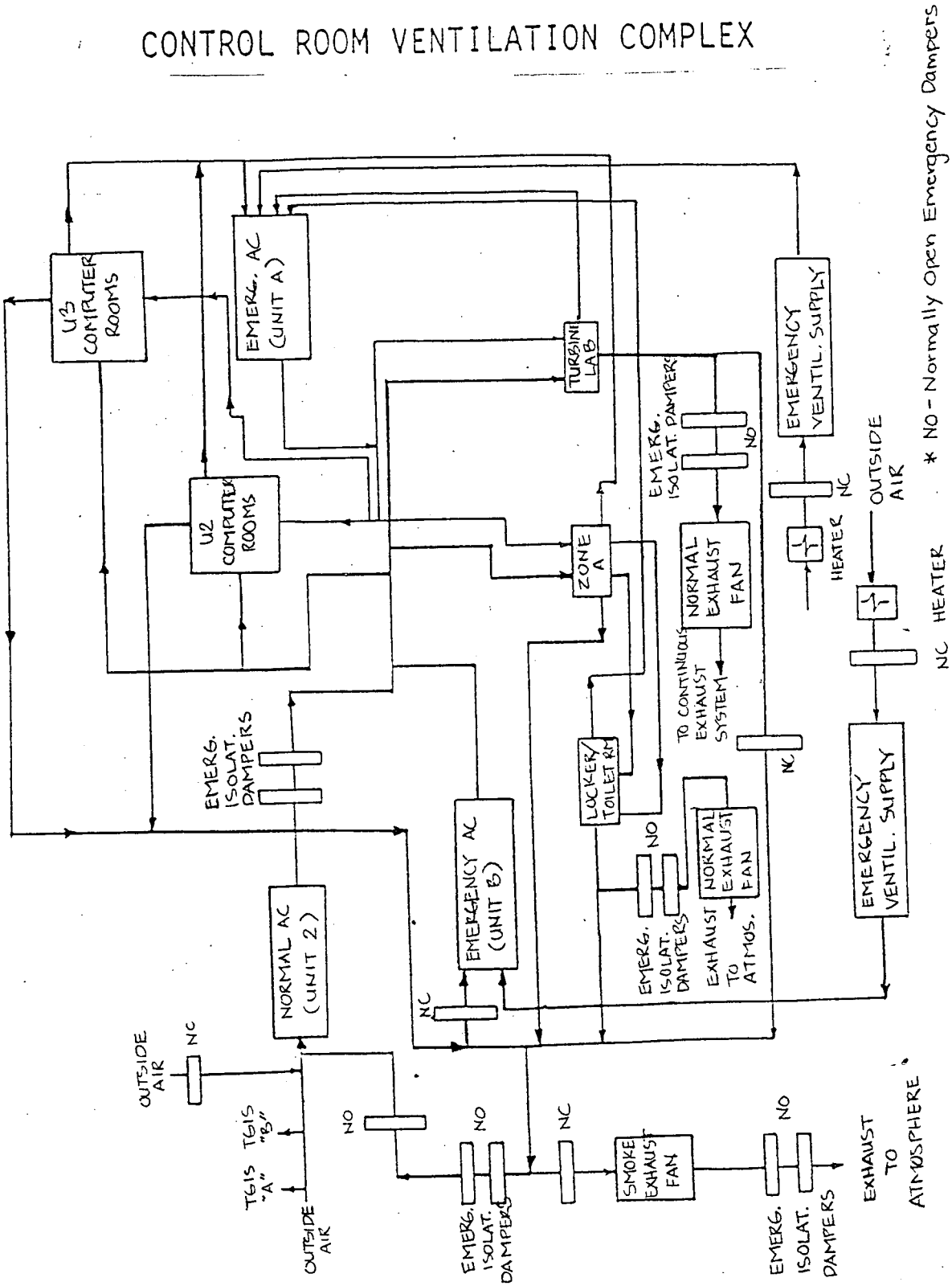
Thus, when actuated by a CRIS or SIAS signal, each emergency ventilation supply train fan draws outside air through HEPA filters and charcoal filters and discharges into the respective emergency recirculation air conditioning unit. Outside air, which is required to provide pressurization of the control room, is directed through both the emergency ventilation supply unit and the emergency recirculation air conditioning unit in each train. Dose calculations, as indicated in the Unit 2 and 3 UFSAR (Section 6.4.4.3.e and 6.5.1.3.a), only take credit for the HEPA filters and charcoal adsorbers of the emergency recirculation air conditioning unit. The emergency ventilation supply unit is only credited with pressurizing the control room to 1/8 inch water gauge positive pressure (minimum) to prevent unfiltered inleakage.

A toxic gas isolation signal (TGIS) automatically switches the control room HVAC system to the isolation mode. This mode is the same as the emergency mode except outside air is prevented from entering the control room and mixing with recirculated air. That is, the emergency ventilation supply fans are not started.

Should the control room fill with smoke, the control room normal HVAC system is shifted automatically to the smoke removal mode to clear the atmosphere. Operation of the smoke removal mode is not safety related and, therefore, the capability to shift to the control room isolation mode is unaffected by the smoke removal mode. The 100% capacity smoke removal fan is started, the smoke isolation damper mounted in the smoke exhaust duct is opened, and the recirculation damper is closed.

Sketch A

CONTROL ROOM VENTILATION COMPLEX



NOTE: This sketch is provided to illustrate the background information concerning Control Room Emergency Air Cleanup System.

DESCRIPTION OF CHANGES

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

1. The NOTE " **Each Unit shall enter applicable ACTIONS separately**" was inserted before the ACTION statement.

   Discussion

   The Technical Specifications do not address the operational situation when the Units are in different operational MODES. Because of different REQUIRED ACTIONS some confusion could take place. For example, if Unit 2 is in MODE 1 and Unit 3 is in MODE 5, the Required Actions for each Unit are not only different but conflicting (See Sketch B.). Without this NOTE it may not be clear what ACTION should be taken.

   Conclusions:

   The proposed NOTE "Each Unit shall enter applicable ACTIONS separately" clarifies an operational situation when both Units are in different operational MODES.

2. The Action statement "Units 2 and 3 in MODE 5 or 6" was changed to **"Units 2 or 3 in MODE 5 or 6."**

   Discussion

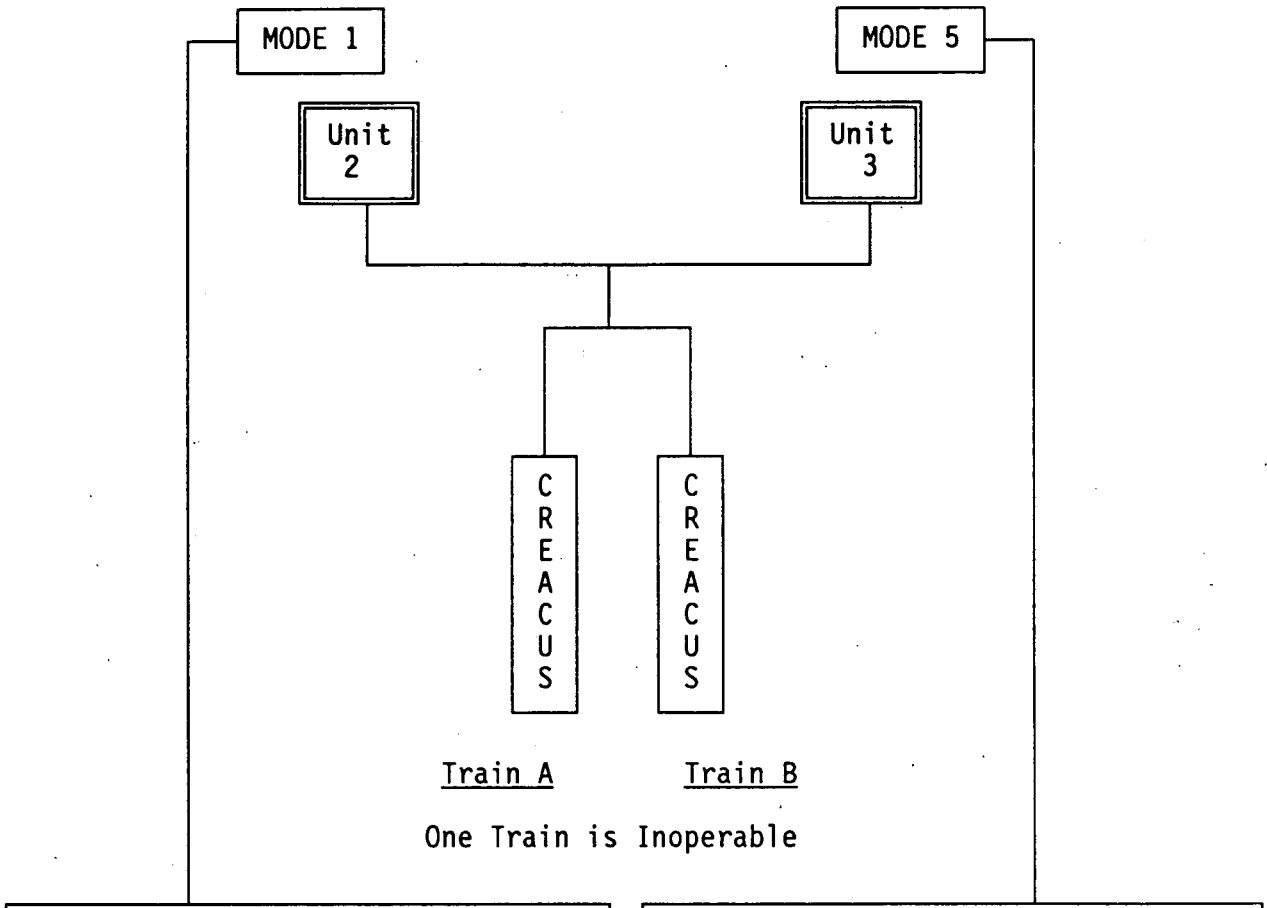
   The wording of the current Action statement is in conflict with the proposed new Note (from **1** above) which requires each Unit to enter applicable ACTIONS separately. The statement "Units 2 and 3..." prevents each Unit from entering the applicable ACTION separately.

   Conclusion

   The proposed change to the Action statement concerning CREACUS inoperability in MODES 5 or 6 is editorial in nature, is made for consistency with the new proposed Note, and clarifies the existing Required Action.

3. SURVEILLANCE REQUIREMENT 4.7.5.b has been revised. The new SURVEILLANCE REQUIREMENT reads **"Each Control Room Emergency Air Cleanup System shall be demonstrated OPERABLE at least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes."**

SKETCH B



NOTE: This sketch is provided to illustrate Proposed Change #1, "Each unit shall enter applicable ACTIONS separately."

Discussion

The emergency ventilation units consist of a prefilter, HEPA filter, heating coil, charcoal filter, and fan. Each emergency ventilation supply train fan draws outside air through HEPA filters and charcoal adsorbers and discharges into the respective emergency recirculation air conditioning handling unit. During a radioactive release, outside air which is required to provide pressurization of the control room is directed through both the emergency ventilation supply unit and the emergency recirculation air conditioning unit in each train.

Current SURVEILLANCE REQUIREMENT 4.7.5.b states: "Each control room emergency air cleanup system shall be demonstrated OPERABLE at least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters on."

Current Bases 3/4.7.5 states: "Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters."

The following Sections of the UFSAR provide information related to the need for the intake filters and the need to maintain proper relative humidity (RH) in the intake duct:

- UFSAR, Unit 2 and Unit 3, Chapter 6 "Habitability Systems", Section 6.4.4.3.e and Section 6.5.1.3.a
- UFSAR, Unit 2 and 3, Chapter 6 "Habitability Systems", Section 6.4.2.2.2
- UFSAR, Unit 2 and 3. Chapter 15, Appendix 15B, Table 15B-5 "Control Room Ventilation System Parameters."

Dose calculations, as indicated in the Unit 2 and 3 UFSAR (Section 6.4.4.3.e and 6.5.1.3.a), only take credit for the HEPA filters and charcoal adsorbers of the emergency recirculation air conditioning unit. The emergency ventilation supply unit charcoal adsorbers and HEPA filters are not credited for removing radioactivity. The unit's only required function is to pressurize the control room to 1/8 inch water gauge positive pressure (minimum) to prevent unfiltered inleakage.

FSAR, Chapter 6 "Habitability Systems", Section 6.4.2.2.2 specifies the need to maintain the Relative Humidity of the incoming air to 70% or less as follows: "In order to maximize carbon adsorber efficiency, an electric heating coil is provided in the outside air filter unit to lower the relative humidity of the incoming air to 70%, or less."

FSAR, Chapter 15, Appendix 15B, Table 15B-5 "Control Room Emergency Ventilation System Parameters" in comment "b" concerning intake cleanup

filter efficiency states "No credit is taken for this filter removing radioactivity when calculating control room infiltration doses. However, a filter efficiency of 100% is assumed when evaluating the filter as a direct whole body gamma source."

The current design outside air makeup rate is 2050 cfm. When this outside air is mixed with the recirculating air from the control room recirculation unit, the RH in the recirculation unit (where the credited charcoal and HEPA filters are installed) is well below 60% and meets the requirement of 70% RH. Even if a 100% moisture condition was to exit the makeup unit filter, the resultant relative humidity in the recirculation unit would be below 60%.

The basis for operating the system with the heaters on for at least 10 hours is to reduce the buildup of moisture on the filters. However, this is not necessary, since (1) these filters are not credited for removing radioactivity, and (2) these filters are not required for meeting the relative humidity requirements at the filters which are credited. An operating time of 15 minutes is sufficient time to initiate flow through the system, establish and maintain the proper system parameters, and ensure the system operability. Fifteen minutes is consistent with the CE Standard Technical Specifications, NUREG 0212, Rev. 3.

Conclusion

Based on (1) the emergency ventilation unit filters are not credited for removing radioactivity, and (2) the emergency ventilation unit heaters are not required to maintain RH below 70 % in the recirculation unit (where the credited filters are installed), there is no need to verify operability of the heaters by operating the system for 10 hours. Fifteen minutes is a sufficient time to initiate flow through the HEPA filters and charcoal adsorbers, establish and maintain the proper system parameters, and ensure the system operability.

The proposed SURVEILLANCE REQUIREMENT 4.7.5.b will read:

" Each Control Room Emergency Air Cleanup System shall be demonstrated OPERABLE at least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes."

4. The text of SURVEILLANCE REQUIREMENT 4.7.5.c.1 has been deleted. The word "Deleted" will be placed under this SURVEILLANCE REQUIREMENT instead of its text.

Discussion

The present version of SURVEILLANCE REQUIREMENT 4.7.5.c.1 reads: "Verifying that with the system operating at a flow rate of 35485 cfm $\pm$

10% for the air conditioning unit, and 2050 ± 150 cfm for the ventilation unit and recirculating through the respective HEPA filters and charcoal adsorbers, leakage through the system diverting valves is less than or equal to 1% air conditioning unit and 1% ventilation unit when the system is tested by admitting cold DOP at the respective intake."

A typical control room emergency air cleanup system is integrated with the normal control room ventilation and air conditioning system. During normal operation, the ventilation flow path bypasses the emergency air cleanup system by "diverting" the flow around the charcoal adsorbers and HEPA filters. During the emergency condition, the diverting valves close and the air is forced to pass through the emergency air cleanup units.

The existing surveillance requirement to measure leakage past the "diverting valve" is not applicable to San Onofre Units 2 and 3. There are no diverting valves in the emergency air cleanup system. This statement originated in the Combustion Engineering Standardized Technical Specifications. The Combustion Engineering Standardized Technical Specifications in the SURVEILLANCE REQUIREMENT 4.7.7.c.1 specifies in brackets "For systems with diverting valves". Since San Onofre Units 2 and 3 are not equipped with diverting valves, this SURVEILLANCE REQUIREMENT should not be included in the Technical Specification.

Conclusion

Based on the above information the text of SURVEILLANCE REQUIREMENT 4.7.5.c.1 was deleted from the proposed Technical Specification and the word "Deleted" was placed under this SURVEILLANCE REQUIREMENT instead of its text.

5. SURVEILLANCE REQUIREMENT 4.7.5.e.5 " **Verifying that the heaters dissipate 4.8 kw ± 5% when tested in accordance with ANSI N510-1975** " will be deleted.

Discussion

Current SURVEILLANCE REQUIREMENT 4.7.5.e.5 states: "Each control room emergency air cleanup system shall be demonstrated OPERABLE at least once per 18 months by verifying that the heaters dissipate 4.8 kw ± 5% when tested in accordance with ANSI N510-1975."

Current Bases 3/4.7.5 states: "Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters."

As discussed in item 3 even if a 100% moisture condition was to exit the makeup unit's filter, the resultant relative humidity in the recirculation unit (where the credited HEPA and charcoal filters are

installed) would be below 60% when mixed with the return air from the main control room. Also, no credit is taken for the intake HEPA and charcoal filters removing radioactivity when calculating the control room infiltration dose.

Conclusion

Based on the analysis of the resultant relative humidity there is no need to heat the emergency ventilation supply unit's incoming air. Also, no credit is taken for the intake HEPA and charcoal filters removing radioactivity when calculating the control room infiltration dose. Therefore, this SURVEILLANCE REQUIREMENT concerning emergency ventilation supply unit incoming air heaters should be deleted from this Technical Specification.

6. Bases 3/4.7.5 were rewritten in a more detailed manner.

The current Bases 3/4.7.5 "Control Room Emergency Air Cleanup System" discusses the basis for this system: 1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system, and 2) the control room will remain habitable for operating personnel during and following all credible accident conditions. The OPERABILITY of this system is based on limiting the radiation exposure to personnel occupying the control room to 5 rem. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix A, 10 CFR 50.

Also, the current Bases discusses the use of heaters to reduce the buildup of moisture on the charcoal adsorbers and HEPA filters.

The proposed Bases reflect all changes which are specified in this proposed Amendment. Also, description or operation requirements concerning heaters are removed from the proposed Bases.

Conclusion

The proposed Bases are rewritten completely to match changes provided in this Amendment.

Safety Analysis

The proposed change described above shall be deemed to involve a significant hazards consideration if there is a positive finding in any one of the following areas:

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of any accident previously evaluated?

   Response: No

The control room emergency air cleanup system provides a protected environment from which operators can control the plant following an uncontrolled release of radioactivity or toxic gas.

Proposed Change 1 will insert the NOTE before the ACTION statements. CREACUS consists of two redundant independent trains which are used for both units. This NOTE addresses the operational situation when each Unit is in a different operational MODE.

Assume, for example, Unit 2 is in MODE 1 and Unit 3 is in MODE 5. If one CREACUS train is inoperable MODE 1 REQUIRED ACTIONS specify the following: "Restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within next 6 hours and in COLD SHUTDOWN within the following 30 hours." MODE 5 REQUIRED ACTIONS in the same operational situation are different. These actions require: "Restore the inoperable system to OPERABLE status in seven days or initiate and maintain operation of the remaining OPERABLE CREACUS in recirculation mode."
Because of different REQUIRED ACTIONS, some confusion could take place regarding what Action the operator should perform first. This NOTE clarifies that each unit enters the specified REQUIRED ACTION separately.

Proposed Change 2 will change the wording of the existing Action statement concerning one CREACUS train inoperability in MODES 5 or 6. This change will substitute the word <u>and</u> with the word <u>or</u>. Without this change a conflict between the new proposed Note and the proposed ACTION statement would exist. The existing wording of this statement would prevent each Unit from entering applicable Actions separately as required by the new proposed Note.

Proposed Change 3 changes SURVEILLANCE REQUIREMENT 4.7.5.b. The new version of this SURVEILLANCE REQUIREMENT is "Each Control Room Emergency Air Cleanup System shall be demonstrated OPERABLE at least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes." Surveillance requirements concerning emergency ventilation air supply heaters are not required, so the operating time is reduced to 15 minutes. The basis for operating the system with the heaters on for at least 10 hours is to reduce the buildup of moisture on the filters. However, this is not necessary, since (1) these filters are not credited for removing radioactivity, and (2) these filters are not required for meeting the relative humidity requirements at the filters which are credited. An operating time of 15 minutes is sufficient time to initiate flow through the system, establish and maintain the proper system parameters and ensure the system operability. Fifteen minutes is consistent with the CE Standard Technical Specifications, NUREG 0212, Rev. 3.

Proposed Change 4 deletes the text of SURVEILLANCE REQUIREMENT 4.7.5.c.1 and places the word "Deleted" under this SURVEILLANCE REQUIREMENT instead of its text. Diverting valves do not exist in the SONGS Unit 2 and 3 control room emergency air cleanup system.

Proposed Change 5 deletes SURVEILLANCE REQUIREMENT 4.7.5.e.5 from this TS. Intake air duct heaters are not required to be used because calculations show relative humidity of the control room recirculation air flow after mixing with emergency ventilation supply air flow is below the required 70%. Also, credit is not taken for intake HEPA and charcoal filters removing radioactivity when calculating the control room infiltration doses. Therefore, this SURVEILLANCE REQUIREMENT which requires verification of each heater to dissipate 4.8 kw was deleted.

Proposed change 6 will rewrite Bases B3/4.7.5 to be more detailed. A brief description of the control room emergency air cleanup system and functions of its major components will be included. Also, all required changes will be made to incorporate the above described changes.

Therefore, the proposed change will not involve a significant increase in the probability or consequences of any accident previously evaluated.

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

   Response: No

   The six changes proposed herein do not reduce the reliability or performance of the Control Room Emergency Air Cleanup System. The revised Surveillance Requirements ensure the CREACUS will continue to perform its intended design functions. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Will operation of the facility in accordance with this proposed change involve a significant reduction in a margin of safety?

   Response: No

   Operation of the facility in accordance with these changes will not be adversely affected as a result of the six changes proposed herein. These proposed changes include some changes in the APPLICABILITY and ACTION sections, deletion of unnecessary requirements from SURVEILLANCE REQUIREMENTS, and rewriting Bases in a more detailed, informative manner. As credit is not taken for intake air filters removing radioactivity the deletion of the intake air heaters from the SURVEILLANCE REQUIREMENTS will not

change safety margins. None of these changes requires revision or recalculation of any CREACUS parameter or characteristics.

Operation of the CREACUS is unaffected by these changes. Generally, this modification of the current TECHNICAL SPECIFICATION and SURVEILLANCE REQUIREMENTS is made to clarify some existing requirements and delete unnecessary ones. Therefore, operation of the facility in accordance with this proposed change will not involve a significant reduction in a margin of safety.

Safety and Significant Hazards Determination

Based on the above Safety Analysis, it is concluded that: (1) the proposed change does not constitute a significant hazards consideration as defined by 10 CFR 50.92: and (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change; and (3) this action will not result in a condition which significantly alters the impact of the station on the environment as described in the NRC Final Environmental Statement.