



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 155 TO FACILITY OPERATING LICENSE NO. DPR-13

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 1

DOCKET NO. 50-206

I. INTRODUCTION

By letter of May 12, 1993, and supplemented by letters dated June 30, and November 23, 1993, Southern California Edison Company (SCE or the licensee) submitted a request for a new license condition and a change to the San Onofre Nuclear Generating Station, Unit No. 1 (SONGS 1), Technical Specifications appended to Facility Operating License No. DPR-13. The requested changes would add a new license condition 2.C.(9) concerning the Fire Protection Program, and replace Appendix A, Technical Specifications, of DPR-13 in its entirety with the enclosed set of Permanently Defueled Technical Specifications (PDTs).

II. BACKGROUND

SONGS 1 received a Provisional Operating License on March 27, 1967 and began commercial operation on January 1, 1968. A Full-Term Operating License (OL) was not issued until September 26, 1991. The OL was to expire on March 2, 2004, 40 years after the issuance of the SONGS 1 Construction Permit. The delay in issuing the OL was due primarily to an NRC staff reevaluation of the plant design to reconfirm its safety in light of operating experience and updated design standards that had developed since the plant was built in the 1960s.

The NRC staff review concluded that numerous modifications were required to SONGS 1 to upgrade the plant to safety standards that were in effect at newer nuclear power stations. SCE made many of the identified upgrades and committed to complete most of the modifications before restarting the reactor from Refueling Outage 12. Refueling Outage 12 was scheduled at the end of 1992. The NRC formalized the licensee commitment to complete the SONGS 1 modifications by issuing a Confirmatory Order on January 2, 1990. Based on the formalized commitment to upgrade the plant to contemporary safety standards, the NRC issued the OL in 1991.

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While reviewing the SCE rate case, the Division of Ratepayer Advocates (DRA), a division of the California Public Utilities Commission (CPUC), concluded that the required upgrades for SONGS 1 were not cost effective. As a result, significant differences of opinion concerning the cost effectiveness of continued SONGS 1 operation occurred between the DRA and SCE. These differences of opinion resulted in a settlement agreement that included shutting down SONGS 1 and not operating it in the future. That stipulation resulted in the need for SCE to request an amendment to the license to remove the authority of SCE to operate SONGS 1.

This amendment was issued on October 23, 1992. SONGS 1 was permanently shut down on November 30, 1992, and defueling of the reactor was completed by the licensee on March 6, 1993. Upon certification of completion of defueling of the reactor to the NRC by the licensee, the Possession Only License (POL) became effective on March 9, 1993. The reactor remains defueled with the fuel stored in the spent fuel pool. SONGS 1 is permanently defueled and cannot be operated or have fuel placed in the reactor under the terms of its license.

### III. DISCUSSION AND EVALUATION

SCE in its letter dated May 12, 1993, requested an amendment to Facility Operating License No. DPR-13. SCE proposed the following changes: (1) addition of a new license condition 2.C.(9) concerning the Fire Protection Program, and (2) replacing Appendix A, Technical Specifications, of DPR-13 in its entirety with the enclosed PDTs. The SCE letter of May 12, 1993, was supplemented on June 30, and November 23, 1993, with additional clarifying information.

#### A. Fire Protection Program

SCE proposes to delete from the SONGS 1 Technical Specification fire brigade staffing requirements as well as limiting conditions for operation and surveillance requirements for fire detection systems, fire suppression systems, and fire barriers. SCE is proposing these changes in accordance with the guidance provided in Generic Letters 86-10 and 88-12.

Generic Letter 86-10 recommends the removal of fire protection requirements from the technical specifications. Although a comprehensive fire protection program is essential to plant safety, the basis for this recommendation is that many details of this program that are currently addressed in technical specifications can be modified without affecting nuclear safety. Such modifications can be made provided that there are suitable administrative controls over these changes. These details, that are presently included in technical specifications and would be removed by this amendment, do not constitute performance requirements necessary to ensure safe operation of the facility and, therefore, do not warrant being included in the technical specifications. At the same time, suitable administrative controls ensure that there will be careful review and analysis by competent individuals of any changes in the Fire Protection Program including those technical and

administrative requirements removed from the technical specifications to ensure that nuclear safety is not adversely affected. These controls include: (1) technical specification administrative controls that are applicable to the Fire Protection Program Procedure; (2) a license condition on implementation of, and subsequent changes to the Fire Protection Program; and (3) 10 CFR 50.59 criteria for evaluating changes to the Fire Protection Program. In addition, the Nuclear Safety Group (NSG) is responsible to ensure that the following occur: (1) annually, an audit and an independent fire protection and loss prevention inspection utilizing either qualified offsite licensee personnel or an outside fire protection firm; (2) at least once per 24 months, an audit of the Fire Protection Program and implementing procedures; and (3) at intervals no greater than 36 months, an audit and inspection of the fire protection and loss prevention program by a qualified outside fire protection consultant. Further, the licensee incorporated the UFHA into Section 9.5.1 of the SONGS 1 Updated Final Safety Analysis Report (UFSAR) by reference in December 1988.

The specific details relating to fire protection requirements removed from the technical specifications by this amendment include those specifications for fire detection systems, fire suppression systems, fire barriers, and fire brigade staffing requirements. The administrative controls include the requirements that: (1) the Vice President and Site Manager, Nuclear Generation Site, is responsible to assure that each procedure and program required by Specification D6.8, which will include the Fire Protection Program implementation, and other procedures which affect nuclear safety, and changes thereto, are prepared by qualified individuals; and (2) the NSG is responsible to review the safety evaluations for changes to procedures required by Specification D6.8.

The technical specification changes proposed by the licensee are in accordance with the guidance provided by Generic Letter 88-12, as addressed in the items below.

- (1) Specification D6.8, Procedures and Programs, includes Fire Protection Program implementation to those programs for which written procedures shall be established, implemented, and maintained.
- (2) Specifications 3.14.1 through 3.14.4, Fire Suppression Water Systems, their associated Surveillance Requirements, and Bases were removed.
- (3) Specification 3.14.5, Fire Hose Stations, its associated Surveillance Requirements, and Bases were removed.
- (4) Specification 3.14.6, Fire Detection Instrumentation, its associated Surveillance Requirements, and Bases were removed.
- (5) Specification 3.14.7, Fire Barriers, its associated Surveillance Requirements, and Bases were removed.
- (6) Specification 6.2.2.e, on fire brigade staffing requirements was removed.

The standard fire protection license condition, which was described in Generic Letter 86-10, is not applicable to SONGS 1 because SONGS 1 is permanently shut down. Consequently, in its submittal, the licensee modified the license condition requirement. Based on discussions between the NRC staff and the licensee, the staff and licensee further modified the license condition to read as follows:

The licensee shall implement and maintain in effect all provisions of the SONGS 1 Fire Protection Program approved in Safety Evaluation Reports dated July 19, 1979, February 4, 1981, June 27, 1986, and April 8, 1987, as described in the Updated Fire Hazards Analysis (UFHA), originally submitted February 11, 1985, and periodically revised thereafter, subject to the following provisions:

"The licensee may make changes to the SONGS 1 Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to maintain the fuel in the spent fuel pool in a safe condition in the event of a fire, or increase the likelihood of a significant offsite release of radioactive material due to a fire."

The intent of the Generic Letter 86-10 license condition is to ensure that the licensee does not alter specific features of the approved program which would adversely affect the ability to achieve and maintain safe shutdown and, therefore, the ability to reduce the potential offsite radiological consequences of fire. Because SONGS 1 is in a permanently shutdown and defueled condition it is not necessary for the SONGS 1 license condition to address achieving and maintaining safe shutdown. The staff has determined that the modified license condition proposed by the licensee adequately ensures a reduced potential of an offsite release of radioactive material as a consequence of fire, by protecting the spent fuel which is stored in the spent fuel pool. Therefore, the proposed license condition meets the intent of Generic Letter 86-10.

Based on the above evaluation with the modifications noted and the permanently shutdown condition of SONGS 1, the staff has concluded that the licensee has met the intent of Generic Letters 86-10 and 88-12. Therefore, the staff finds the proposed changes acceptable.

#### B. Permanently Defueled Technical Specifications (PDTs)

The existing SONGS 1 Technical Specifications were developed and implemented to ensure the plant was safely operated under a wide range of conditions and all credible accidents. SCE proposes replacing the current set of existing SONGS 1 Technical Specifications with a set of PDTs. The PDTs proposed by SCE would ensure the safe long term storage of irradiated fuel in the spent fuel pool. Thus, the proposed PDTs to reflect the permanently defueled condition of SONGS 1 include fewer systems and consider a reduced number of postulated accidents against which a permanently defueled plant must be protected. Of the accidents previously analyzed in Chapter 15 of the SONGS 1 Updated Final Safety Analysis Report (UFSAR) only two accidents are relevant to the permanently defueled condition of SONGS 1. These two accidents are the loss

of offsite power and a fuel handling accident. Further, no new accidents were introduced based on the permanent defueling of the SONGS 1 reactor.

The following are the sections of the existing SONGS 1 Technical Specifications that will be affected by the proposed changes:

### 1. Introduction

This section of the SONGS 1 Technical Specifications contains the specific definitions of terms and words used throughout the rest of the SONGS 1 Technical Specifications. The licensee proposes to omit certain definitions related to power operation and a table also related to power operation from the proposed PDTS Section D1, Definition. In addition, the licensee proposes to add several new definitions related to the permanently shutdown status of SONGS 1 to the proposed PDTS Section D1, Definition. The licensee basis for these proposed changes is the permanently shutdown status of SONGS 1 and that the current set of definitions do not properly reflect this condition.

The licensee proposes to omit the following definitions from the proposed PDTS Section D1, Definition: Actuation Logic Test, Channel Calibration, Channel Check, Channel Test, Containment Integrity, Core Alteration, Correlation Check, Correlation Verification, DG Fast Start, DG Slow Start, Dose Equivalent I-131, E-Average Disintegration Energy, Fire Suppression Water System, Gaseous Radwaste Treatment System, Operational Mode-Mode, Purge-Purging, Rated Thermal Power, Residual Heat Removal (RHR) Train, Shutdown Margin, Solidification, Source Check, Staggered Test Basis, Thermal Power, Trip Actuating Device Operational Test, Ventilation Exhaust Treatment System, and Venting. In addition the licensee proposes to delete Table 1.2, Operation Mode.

The licensee also proposes to add the following definitions to the proposed PDTS Section D1, Definition: Fuel Handling Operations, Functional, Permanently Defueled Mode, and Spent Fuel Pool Cooling (SFPC) Train.

The staff has determined, based on its review, that the proposed changes to be included in Section D1, Definitions of the PDTS are appropriate for a permanently defueled facility. Therefore, the staff finds these proposed changes acceptable.

### 2. Safety Standards

This section of the SONGS 1 Technical Specifications contains safety limits, limiting safety system settings, and limiting control settings. The current Section 2, Safety Standards, contains limits to maintain the integrity of the reactor coolant system and to prevent the release of excessive amounts of fission products to the coolant. The licensee proposes to replace the current Section 2, Safety Standards, which contain safety limits for an operating facility and replace it with a new Section D2, Safety Standards, which will be based on the permanently shutdown condition of SONGS 1. The licensee justification for this change is that the current limits on reactor power, system pressure, coolant temperature, and coolant flow are unnecessary since the SONGS 1 reactor will not be operated. The licensee proposed a new safety limit to protect the spent fuel cladding. This is accomplished by maintaining the spent fuel pool water level above plant elevation 16 feet.

The staff agrees with the licensee basis for deleting the current safety limits which are based on power operation. Further, the staff has determined, based on its review, that the licensee proposed safety limit to protect the spent fuel cladding in the proposed Section D2, Safety Limits, of the PDTs is appropriate for a permanently defueled facility. Therefore, the staff finds these proposed changes acceptable.

### 3. Limiting Conditions for Operation

Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility.

#### 3.0 Limiting Conditions for Operation (General)

This section of the SONGS 1 Technical Specifications contains the general limiting conditions for operation for plant operation. The purpose of the general limiting conditions for operation is that the plant be placed in a safe condition when circumstances arise which are not identified within individual limiting conditions for operation.

The licensee proposed the following changes to this section. Revise Specification 3.0.1 to reflect single mode operation of the plant - permanently defueled. This revised specification would be included in the PDTs as Specification D3.0.1. Specification 3.0.2 would be included in the PDTs as Specification D3.0.2. Specifications 3.0.3 and 3.0.4 would be omitted from the PDTs, since these specifications are related to changing operational mode and the facility will remain in a single mode - permanently defueled.

The staff has determined, based on its review, that the proposed changes to be included in Section D3.0, Limiting Conditions for Operation (General), of the PDTs are appropriate for a permanently defueled facility. Therefore, the staff finds these proposed changes acceptable.

#### 3.1 Reactor Coolant System

This section of the SONGS 1 Technical Specifications contains the following technical specifications related to the operation of the reactor coolant system: Specification 3.1.1, Maximum Reactor Coolant Activity; Specification 3.1.2, Operational Components; Specification 3.1.3, Combined Heatup, Cooldown and Pressure Limitations; Specifications 3.1.4, Leakage and Leakage Detection Systems; Specification 3.1.5, Pressurizer Relief Valves; Specification 3.1.6, Pressurizer; and Specification 3.1.7, Reactor Coolant System Vents.

The licensee proposes the following changes to this section. Omit the current specifications that are related to the operations of the reactor coolant system because the reactor is permanently defueled. These reactor coolant system operation technical specifications would be replaced with spent fuel pool operation technical specifications. The title of this revised section would be D3.1, Spent Fuel Pool. The licensee proposed to include the following specifications in this section: Specification D3.1.1, Spent Fuel Pool Temperature; Specification D3.1.2, Spent Fuel Pool Water Level; and Specification D3.1.3, Spent Fuel Pool Water Chemistry.

The staff has determined the following based on its review of the proposed changes to this section of the SONGS 1 Technical Specifications. The current reactor coolant system specifications are not necessary for the safe maintenance of SONGS 1, because SONGS 1 is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Also, the adoption of new spent fuel pool specifications which ensure the safe operation of the spent fuel pool is appropriate for a permanently defueled facility. The licensee has determined that the proposed specifications, based on the maximum normal heat load, will enable the spent fuel pool cooling system to provide adequate cooling for the irradiated fuel assemblies in the spent fuel pool and to limit radiological dose rates above the spent fuel pool while in the permanently defueled mode. Therefore, the staff finds these proposed changes acceptable.

### 3.2 Chemical and Volume Control System

The objective of this section of the SONGS 1 Technical Specifications is to identify those conditions of the chemical and volume control system necessary to ensure safe reactor operation.

The licensee proposes the following changes to this section. Omit the current chemical and volume control system technical specification which is no longer necessary for safe reactor operation because the reactor is permanently defueled. The chemical and volume control system operation technical specifications would be replaced with an auxiliary feedwater storage tank technical specification. The purpose of the proposed auxiliary feedwater storage tank technical specification is to ensure an adequate availability of water in the auxiliary feedwater storage tank to supplement the spent fuel pool water inventory, if necessary. The title of this revised section would be D3.2, Auxiliary Feedwater Storage Tank.

The staff has determined the following based on its review of the proposed changes to this section of the SONGS 1 Technical Specifications. The current chemical and volume control system technical specifications is not necessary for the safe maintenance of SONGS 1, because SONGS 1 is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Also, the adoption of new spent auxiliary feedwater storage tank technical specifications to ensure adequate supplemental water supply for the spent fuel pool is appropriate for a permanently defueled facility. The auxiliary feedwater storage tank serves as a seismically qualified source of makeup water and requires no power source as it would perform its function via gravity feed. The proposed specifications will maintain the auxiliary feedwater storage tank level such that if cooling of the spent fuel pool were interrupted, more than a five-day supply of usable water would be available to replace water lost due to evaporation. Five days is sufficient time to either restore cooling or to connect another water source to the spent fuel pool to ensure the spent fuel pool minimum water level of Specification D.3.1.2 is maintained. Therefore, the staff finds these proposed changes acceptable.

### 3.3 Safety Injection, Recirculation, and Containment Spray Systems

This section of the SONGS 1 Technical Specifications contains the following technical specifications related to the operation of the safety injection, recirculation, and containment spray systems: Specification 3.3.1, Operating Status; Specification 3.3.2, Shutdown Status; Specification 3.3.3, Minimum Boron Concentration in the Refueling Water Storage Tank (RWST) and Safety Injection (SI) Lines and Minimum RWST Water Volume; Specifications 3.3.4, Minimum Solution Volume Hydrazine Concentration in the Hydrazine Tank; and Specification 3.3.5, Primary Coolant System Pressure Isolation Valves.

The licensee proposes to omit the current specifications that are related to either those conditions and/or components that are necessary to ensure availability of the safety injection, recirculation, and containment spray systems. The licensee justification for not including these technical specifications in the PDTs is that these systems are permanently out of service. These safety injection, recirculation, and containment spray systems technical specifications would be replaced with a fuel storage building load handling limit technical specification.

The title of this revised section would be D3.3, Fuel Storage Building Load Handling Limit. The objective of this technical specification would be to prevent incidents during fuel handling operations that could affect public health and safety.

The staff has determined the following based on its review of the proposed changes to this section of the SONGS 1 Technical Specifications. The current safety injection, recirculation, and containment spray systems technical specifications are not necessary for the safe maintenance of SONGS 1, because the only function of the related systems is to mitigate accidents involving reactor operation and the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Also, the adoption of new fuel storage building load handling limit technical specification ensures safe fuel handling. The licensee analysis determined the restriction on the movement of loads in excess of 1,500 pounds over fuel assemblies in the spent fuel pool ensures that in the event of a load drop, the activity release will be limited to that contained in a single fuel assembly and that any possible distortion of fuel in the storage racks will not result in an inadvertent criticality. Therefore, the staff finds these proposed changes acceptable.

### 3.4 Turbine Cycle

This section of the SONGS 1 Technical Specifications contains the following technical specifications to ensure the capability of the turbine cycle to remove decay heat from the reactor core: Specification 3.4.1, Operating Status; Specification 3.4.2, Maximum Secondary Coolant Activity; Specification 3.4.3, Auxiliary Feedwater System; and Specification 3.4.4, Auxiliary Feedwater Storage Tank.



The licensee proposes to omit the current turbine cycle technical specifications from the PDTS. The licensee justification for not including these technical specifications in the PDTS is that there is no longer a need to remove decay heat from the reactor since the reactor is permanently defueled.

The staff has determined the following based on its review of the proposed changes to this section of the SONGS 1 Technical Specifications. The current turbine cycle technical specifications are not necessary for the safe maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds these proposed changes acceptable.

### 3.5 Instrumentation and Control

This section of the SONGS 1 Technical Specifications contains the following technical specifications to delineate the conditions of the plant instrumentation and safety circuits necessary to ensure reactor safety: Specification 3.5.1, Reactor Trip System; Specification 3.5.2, Control Rod Insertion Limits; Specification 3.5.3, Control and Shutdown Rod Misalignment; Specification 3.5.4, Rod Position Indicating System; Specification 3.5.5 Containment Isolation Instrumentation; Specification 3.5.6, Accident Monitoring Instrumentation; Specification 3.5.7, Auxiliary Feedwater Instrumentation; and Specification 3.5.10, Radiation Monitoring Instrumentation. Specifications 3.5.8 and 3.5.9 were previously deleted from the SONGS 1 Technical Specifications by license Amendment No. 145, dated May 15, 1992.

The licensee proposes to omit the current instrumentation and control technical specifications from the PDTS. The licensee justification for not including these technical specifications in the PDTS is that they are no longer necessary to ensure safe reactor operation since the reactor is permanently defueled. The licensee has committed to administratively maintain radiation monitors in the control room, in the spent fuel pool area, and the plant vent stack as commercial grade equipment. Further, the licensee also committed in its letter of November 23, 1993, to have two operating radiation monitors, fixed, portable, or combination thereof, in the spent fuel pool area whenever spent fuel is being moved.

The staff has determined the following based on its review of the proposed changes to this section of the SONGS 1 Technical Specifications and commitments. The current instrumentation and control technical specifications are not necessary for the safe maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds these proposed changes acceptable.

### 3.6 Containment Systems

This section of the SONGS 1 Technical Specifications contains the following technical specifications to ensure containment integrity: Specification 3.6.1, Containment Sphere; Specification 3.6.2, Containment Isolation Valves; and Specification 3.6.3, Hydrogen Monitoring and Hydrogen Recombiners.

The licensee proposes to omit the current containment systems technical specifications from the PDTS. The licensee justification for not including these technical specifications in the PDTS is that they are no longer necessary to ensure containment integrity since containment integrity is not required due to the reactor being permanently defueled.

The staff has determined the following based on its review of the proposed changes to this section of the SONGS 1 Technical Specifications. The current containment systems technical specifications are not necessary for the safe maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds these proposed changes acceptable.

### 3.7 Auxiliary Electrical Supply

This section of the SONGS 1 Technical Specifications contains the following technical specifications which define conditions of electrical power availability necessary to provide for safe reactor operation, to provide for the continued availability of engineered safeguards, and to provide the ability to maintain the facility in a shutdown and/or refueling condition: Specification 3.7.1, Electrical Supply: Operating; and Specification 3.7.2, Electrical Supply: Shutdown.

The licensee proposes to omit the current auxiliary electrical supply technical specifications from the PDTS. The licensee justification for not including these technical specifications in the PDTS is that they are no longer necessary since the reactor is permanently defueled, and that all remaining electrical demands will be non-safety-related demands that can be supplied by commercial grade equipment.

The staff has determined the following based on its review of the proposed changes to this section of the SONGS 1 Technical Specifications. The current auxiliary electrical supply technical specifications are not necessary for the safe maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds these proposed changes acceptable.

### 3.8 Fuel Loading and Refueling

The objective of this SONGS 1 Technical Specification is to prevent incidents during fuel handling operations that could affect public health and safety.

The licensee proposes to omit the portions of the current fuel handling and refueling technical specifications from the PDTS that are not applicable to the permanently shutdown condition of SONGS 1. The licensee proposes to omit those specifications that deal with decay heat removal from the reactor, core subcritical neutron flux monitoring, and containment radiation levels. The licensee justification for omitting these specifications is that they are unnecessary since all fuel has been permanently removed from the reactor. Further, the licensee proposes to omit the specification requiring boration of spent fuel pool water. The licensee justification for omitting this specification is an analysis which indicates that boration of the spent fuel pool water is not necessary to maintain the shutdown margin of the spent fuel stored in the spent fuel pool under both normal and accident conditions. The worst case accident postulated for spent fuel pool is a drop of a heavy load into the spent fuel pool, damaging the fuel and possibly altering the fuel storage geometry. The licensee has proposed a new technical specification to address this concern, Specification D3.3, Fuel Storage Building Load Handling Limit. The objective of this technical specification would be to prevent a load drop during fuel handling operations that could either result in a radioactive release or an inadvertent criticality.

The staff has determined the following based on its review of the proposed changes to this section of the SONGS 1 Technical Specifications. The current fuel handling and refueling technical specifications are not necessary for the safe maintenance of SONGS 1 because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Further, the addition of the proposed new Technical Specification D3.3, Fuel Storage Building Load Handling Limit is appropriate for a permanently defueled facility as explained above in Section 3.3. Therefore, the staff finds these proposed changes acceptable.

### 3.9 Moderator Temperature Coefficient (MTC)

The objective of this SONGS 1 Technical Specifications is to establish negative MTC limits for the reactor core during reactor operation.

The licensee proposes to omit the current MTC technical specification from the PDTS. The licensee justification for not including this technical specification in the PDTS is that it is no longer necessary to ensure safe reactor operation since the reactor is permanently defueled.

The staff has determined the following based on its review of the licensee proposal to omit this specification from the PDTS. The current MTC technical specification is not necessary for the safe maintenance of SONGS 1 because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds this proposed change acceptable.

### 3.10 Incore Instrumentation

The objective of this SONGS 1 Technical Specification is to specify the type and frequency of incore measurements used to verify linear density values for power operation of the reactor.

The licensee proposes to omit the current incore instrumentation technical specification from the PDTS. The licensee justification for not including this technical specification in the PDTS is that it is no longer necessary to ensure safe reactor operation since the reactor is permanently defueled.

The staff has determined the following based on its review of the licensee proposal to omit this specification from the PDTS. The current incore instrumentation technical specification is not necessary for either the safe operation or maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds this proposed change acceptable.

### 3.11 Continuous Power Distribution Monitoring

The objective of this SONGS 1 Technical Specification is to provide corrective actions in the event that the axial offset monitoring system limits are approached during reactor power operation.

The licensee proposes to omit the current continuous power distribution monitoring technical specification from the PDTS. The licensee justification for not including this technical specification in the PDTS is that this specification is no longer necessary to ensure safe reactor operation since the reactor is permanently defueled.

The staff has determined the following based on its review of the licensee proposal to omit this specification from the PDTS. The current continuous power distribution monitoring technical specification is not necessary for either the safe operation or maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds this proposed change acceptable.

### 3.12 Control Room Emergency Air Treatment System

The objective of this SONGS 1 Technical Specification is to identify those conditions of the control room emergency air treatment system which will ensure reliable and efficient operation, should the system be needed.

The licensee proposes to omit the current control room emergency air treatment system technical specification from the PDTS. The licensee justification for not including this technical specification in the PDTS is that the control room emergency air treatment system no longer serves a safety-related function as a result of the reactor being permanently defueled. However, the control room emergency air treatment system will be maintained functional as commercial grade equipment.

The staff has determined the following based on its review of the licensee proposal to omit this specification from the PDTS. The current control room emergency air treatment system technical specification is not necessary for either the safe operation or maintenance of SONGS 1, because the SONGS 1

reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds this proposed change acceptable.

### 3.13 Shock Suppression (Snubbers) Operability

The objective of this SONGS 1 Technical Specification is to define operability requirements of snubbers required to protect safety-related piping from unrestricted motion when subjected to dynamic loading, as might occur during a seismic event or severe transient.

The licensee proposes to omit the current snubber technical specification from the PDTS. The licensee justification for not including this technical specification in the PDTS is that as a result of SONGS 1 being permanently shut down.

The staff has determined the following based on its review of the licensee proposal to omit this specification from the PDTS. The current snubber technical specification is not necessary for either the safe operation or maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds this proposed change acceptable.

### 3.14 Fire Protection

This section of the SONGS 1 Technical Specifications contains the following technical specifications to delineate the plant fire protection program: Specification 3.14.1, Fire Suppression Water System; Specification 3.14.2, Spray and/or Sprinkler Systems; Specification 3.14.3, Foam Suppression System; Specification 3.14.4, Halon System; Specification 3.14.5, Fire Hose Stations; Specification 3.14.6, Fire Detection Instrumentation; Specification 3.14.7, Fire Barriers; Specification 3.14.8, Dedicated and Alternative Shutdown Systems; and Specifications 3.14.9, Eight Hour Emergency Lighting Units.

The licensee proposes to omit the current fire protection technical specifications from the PDTS. Specifications 3.14.1 through 3.14.7 have previously been addressed in Section 3.1 of this safety evaluation. The licensee justification for not including technical specifications 3.14.8 and 3.14.9 in the PDTS is that these specifications are no longer necessary to ensure the ability to shut down the reactor in case of a fire since the reactor is permanently shut down and defueled.

The staff has determined the following based on its review of the licensee proposal to omit this section of the SONGS 1 Technical Specifications from the PDTS. The current fire protection technical specifications are not necessary for the safe maintenance of SONGS 1, because Specifications 3.14.1 through 3.14.7 are being deleted from the PDTS in accordance with NRC Generic Letters 86-10 and 88-12 (discussed above in Section 3.1 of this safety evaluation), and Specifications 3.14.8 and 3.14.9 are deleted because the SONGS 1 reactor

is permanently shut down and defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds this proposed change acceptable.

3.15 [Deleted]

This section of the SONGS 1 Technical Specifications was previously deleted from the SONGS 1 Technical Specifications by license Amendment No. 145, dated May 15, 1992.

3.16 Radioactive Gaseous Effluents

This section of the SONGS 1 Technical Specifications contain the following technical specifications to define the gas storage tanks storage limits: Specification 3.16.5, Gas Storage Tank; and Specification 3.16.6, Explosive Gas Mixtures. Technical Specifications 3.16.1, 3.16.2, 3.16.3, and 3.16.4 were previously deleted from the SONGS 1 Technical Specifications by license Amendment No. 145, dated May 15, 1992.

The licensee proposes to omit the current gas storage tank and explosive gas mixtures specifications from the PDS. The licensee justification for not including these specifications in the PDS is that they are no longer necessary because all gas storage tanks and the waste gas holdup system are removed from service and vented at all times.

The staff has determined the following based on its review of the licensee proposal to omit this section of the SONGS 1 Technical Specifications from the PDS. The current gas storage tank and explosive gas mixtures specifications are not necessary for either the safe operation or maintenance of SONGS 1, because all gas storage tanks and the waste gas holdup system are removed from service and vented at all times. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds this proposed change acceptable.

3.17 [Deleted]

This section of the SONGS 1 Technical Specifications was previously deleted from the SONGS 1 Technical Specifications by license Amendment No. 145, dated May 15, 1992.

3.18 [Deleted]

This section of the SONGS 1 Technical Specifications was previously deleted from the SONGS 1 Technical Specifications by license Amendment No. 145, dated May 15, 1992.

### 3.19 [Deleted]

This section of the SONGS 1 Technical Specifications was previously deleted from the SONGS 1 Technical Specifications by license Amendment No. 145, dated May 15, 1992.

### 3.20 Overpressure Protection Systems

The objective of this SONGS 1 Technical Specification is to preclude potentially exceeding the criteria specified in 10 CFR 50, Appendix G, in the event of a pressure transient while the reactor coolant system is water solid.

The licensee proposes to omit the current overpressure protection systems specification from the PDTS. The licensee justification for not including this specification in the PDTS is that this specification is no longer necessary to ensure safe reactor operation since the reactor is permanently defueled. The reactor coolant system will no longer be in service and pressurizer safety valve removed.

The staff has determined the following based on its review of the licensee proposal to omit this specification from the PDTS. The current overpressure protection systems specification is not necessary for either the safe operation or maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds this proposed change acceptable.

## 4. Surveillance Requirements

Surveillance requirements are requirements related to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that limiting conditions for operation will be met.

### 4.0 Surveillance Requirements (General)

This section of the SONGS 1 Technical Specifications defines the conditions under which the surveillance requirements of Section 4 of the SONGS 1 Technical Specifications are applicable.

The licensee proposes the following changes to this section. Revise Specifications 4.0.1 and 4.0.4 to reflect a single mode of operation, the permanently defueled mode. Also, the licensee proposes to revise the specification numbers from 4.0.1, 4.0.2, 4.0.3, and 4.0.4 to D4.0.1, D4.0.2, D4.0.3, and D4.0.4 respectively.

The staff has determined, based on its review, that the proposed changes to be included in Section D4.0, Surveillance Requirements (General) of the PDTS are appropriate for a permanently defueled facility. Therefore, the staff finds these proposed changes acceptable.

#### 4.1 Untitled

This section of the SONGS 1 Technical Specifications contain the following technical specifications which specify the minimum frequency and type of surveillance to be applied to plant equipment and conditions: Specification 4.1.1, Operational Safety Items; Specification 4.1.4, Containment Isolation Instrumentation; Specification 4.1.5, Accident Monitoring Instrumentation; Specification 4.1.6, Pressurizer Relief Valves; Specification 4.1.7, Pressurizer; Specification 4.1.8, Auxiliary Feedwater Instrumentation; Specification 4.1.9, Auxiliary Feedwater System Surveillance; 4.1.10, Auxiliary Feedwater Storage Tank Surveillance; Specification 4.1.11, Radiation Monitoring Instrumentation; Specification 4.1.12, Reactor Coolant System Vents; and Specification 4.1.13, Leakage and leakage Detection Systems. Technical Specifications 4.1.2 and 4.1.3 were previously deleted from the SONGS 1 Technical Specifications by license Amendment No. 145, dated May 15, 1992.

The licensee proposes to omit from the PDTs the current surveillance requirements applied to plant equipment and conditions specified in this section of the SONGS 1 Technical Specifications. The licensee justification for not including these specifications in the PDTs is that they are no longer necessary to ensure safe reactor operation since the reactor is permanently defueled.

The staff has determined the following based on its review of the proposed changes to this section of the SONGS 1 Technical Specifications. The current surveillance requirements applied to plant equipment and conditions in this section of the SONGS 1 Technical Specifications are not necessary for either the safe operation or maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds these proposed changes acceptable.

#### 4.2 Safety Injection and Containment Spray System

This section of the SONGS 1 Technical Specifications contains the following technical specifications to verify that the Safety Injection System and the Containment Spray System will respond promptly and properly if required: Specification 4.2.1, Safety Injection and Containment Spray System Periodic Testing; and Specification 4.2.2, Primary Coolant System Pressure Isolation Valves Testing.

The licensee proposes to omit the current surveillance requirements applied to the Safety Injection System and the Containment Spray System from the PDTs. The licensee justification for not including these specifications in the PDTs is that the Safety Injection System and the Containment Spray System are permanently removed from service and these specifications are no longer necessary to ensure safe reactor operation since the reactor is permanently defueled.



The staff has determined the following based on its review of the licensee proposed changes to this section of the SONGS 1 Technical Specifications. The current surveillance requirements applied to the Safety Injection System and the Containment Spray System are not necessary for either the safe operation or maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds these proposed changes acceptable.

#### 4.3 Containment Systems

This section of the SONGS 1 Technical Specifications contains the following specifications to verify that the containment sphere is maintained within specified values: Specification 4.3.1, Containment Testing; Specification 4.3.2, Containment Isolation Valves; and Specification 4.3.3, Hydrogen Monitors and Hydrogen Recombiners.

The licensee proposes to omit the current surveillance requirements applied to the containment sphere from the PDTS. The licensee justification for not including these technical specifications in the PDTS is that containment integrity is no longer necessary since the reactor is permanently defueled. Thus, these specifications are no longer necessary to ensure safety.

The staff has determined the following based on its review of the proposed changes to this section of the SONGS 1 Technical Specifications. The current surveillance requirements applied to the containment sphere are not necessary for either the safe operation or maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds these proposed changes acceptable.

#### 4.4 Emergency Power System Periodic Testing

The purpose of this section of the SONGS 1 Technical Specifications is to verify that the Emergency Power System will respond promptly and properly when required.

The licensee proposes to omit the current surveillance requirements applied to the Emergency Power System from the PDTS. The licensee justification for not including this specification in the PDTS is that the Emergency Power System will not be performing a safety-related function during the Permanently Defueled Mode. Therefore, the emergency power system does not need to have operability requirements.

The staff has determined the following based on its review of the licensee proposal to omit this section of the SONGS 1 Technical Specifications from the PDTS. The current surveillance requirements applied to the Emergency Power System are not necessary for either the safe operation or maintenance of SONGS 1, because the SONGS 1 reactor is permanently defueled. The removal of

specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds this proposed change acceptable.

#### 4.5 [Deleted]

This section of the SONGS 1 Technical Specifications was previously deleted from the SONGS 1 Technical Specifications by license Amendment No. 145, dated May 15, 1992.

#### 4.6 Radioactive Gaseous Effluents

Specifications 4.6.1, 4.6.2, 4.6.3, and 4.6.4 of the SONGS 1 Technical Specifications were previously deleted from the SONGS 1 Technical Specifications by license Amendment No. 145, dated May 15, 1992. The purpose of the remaining Specifications 4.6.5, Gas Storage Tank, and 4.6.6, Explosive Gas Mixture, is to limit both the amount of radioactive material and explosive gases stored in the gas storage tanks.

The licensee proposes to omit surveillance requirements of these two gas storage tanks from the PDTS. The licensee justification for not including these specifications in the PDTS is that the gas storage tanks will be removed from service and vented at all times during the Permanently Defueled Mode.

The staff has determined the following based on its review of the licensee proposal to omit these specifications of the SONGS 1 Technical Specifications from the PDTS. The current surveillance requirements applied to the gas storage tanks are not necessary for either the safe operation or maintenance of SONGS 1, because the gas storage tanks will be removed from service and vented as a result of the SONGS 1 reactor being permanently defueled. The removal of specifications no longer necessary for safe operation or maintenance of SONGS 1 is appropriate to reduce complexity of the SONGS 1 Technical Specifications. Therefore, the staff finds these proposed changes acceptable.

#### 4.7 Inservice Inspection Requirements

The purpose of this section of the SONGS 1 Technical Specifications is to examine and/or test applicable components to ensure system integrity and/or operability.

The licensee proposes to omit from the PDTS the current surveillance requirements applied to the inservice inspection requirements. The licensee justification for not including this specification in the PDTS is that the NRC by letter dated November 20, 1992, has already granted relief from the required third 10-year interval inspection.