B 3.7 PLANT SYSTEMS

B 3.7.5 Auxiliary Feedwater (AFW) System

BASES

BACKGROUND

The AFW System automatically supplies feedwater to the steam generators to remove decay heat from the Reactor Coolant System upon the loss of normal feedwater supply. The motor-driven AFW pumps take suction through a common suction line and the turbine-driven pump takes suction through a separate and independent suction line~~s~~ from the condensate storage tank (CST) (LCO 3.7.6) and pump to the steam generator secondary side via separate and independent connections to the main feedwater (MFW) piping outside containment. The steam generators function as a heat sink for core decay heat. The heat load is dissipated by releasing steam to the atmosphere from the steam generators via the main steam safety valves (MSSVs) (LCO 3.7.1) or atmospheric ~~dump~~ relief valves (LCO 3.7.4). If the main condenser is available, steam may be released via the steam ~~bypass~~ dump valves and recirculated to the CST.

The AFW System consists of two motor driven AFW pumps and one steam turbine driven pump configured into three trains. Each motor driven pump provides 100% of AFW flow capacity, and the turbine driven pump provides 200% of the required capacity to the steam generators, as assumed in the accident analysis. The pumps are equipped with ~~independent~~ miniflow recirculation lines to prevent pump operation against a closed system. The miniflow line for the motor driven pump automatically isolate on a flow signal. The miniflow line for the turbine driven pump does not isolate and remains open during pump operation. Each motor driven AFW pump is powered from an independent Class 1E power supply and feeds two steam generators, although each pump has the capability to be locally realigned ~~from the control room~~ to feed other steam generators. The steam turbine driven AFW pump receives steam from two main steam lines upstream of the main steam isolation valves. Each of the steam feed lines will supply 100% of the requirements of the turbine driven AFW pump. The AFW System is capable of supplying feedwater to the steam generators during normal unit startup, shutdown, and hot standby conditions. Each steam feed line is provided with a check valve that prevents loss of steam supply to the turbine driven pump should a piping failure affect the secondary side of the steam generator for that supply line.

Q-3.7.G-1

Q-3.7.G-1

BACKGROUND (continued)

The turbine driven AFW pump supplies a common header capable of feeding all steam generators with normally open, DC powered, air operated control valves ~~actuated to the appropriate steam generator by the Engineered Safety Feature Actuation System (ESFAS)~~. One pump at full flow is sufficient to remove decay heat and cool the unit to residual heat removal (RHR) entry conditions. Thus, the requirement for diversity in motive power sources for the AFW System is met.

The AFW System is designed to supply sufficient water to the steam generator(s) to remove decay heat with steam generator pressure at the lowest ~~setpoint~~ set pressure of the MSSVs plus accumulation. Subsequently, the AFW System supplies sufficient water to cool the unit to RHR entry conditions, with steam released through the ~~ADVs~~ ARVs.

The AFW System actuates automatically on steam generator water level — low-low by the ESFAS (LCO 3.3.2). The system also actuates on loss of offsite power~~,~~ and on an ATWS Mitigation System Actuation Circuitry (AMSAC) signal, however, AMSAC start of the AFW pumps is not required for AFW system operability. The motor driven pumps also start on safety injection~~,~~ and trip of all MFW pumps. During normal plant operations, the AFW system, under manual control, is used to maintain SG water level. CP-3.7-13 Q-3.7.G-1

The AFW System is discussed in the FSAR~~, Section 10.4.9~~ (Ref. 1).

APPLICABLE SAFETY ANALYSES

The AFW System mitigates the consequences of any event with loss of normal feedwater.

The design basis of the AFW System is to supply water to the steam generator to remove decay heat and other residual heat by delivering at least the minimum required flow rate to the steam generators at pressures corresponding to the lowest steam generator safety valve set pressure plus 3% accumulation.

In addition, the AFW System must supply enough makeup water to replace steam generator secondary inventory lost as the unit cools to MODE 4 conditions. Sufficient AFW flow must also be available to account for flow losses such as pump recirculation and MFW line breaks.

The limiting Design Basis Accidents (DBAs) and transients for the AFW System are as follows:

a. Feedwater Line Break (FLB ~~FWLB~~); and

b. Loss of MFW.

between 72 hours and 10 days dictates that both Completion Times apply simultaneously, and the more restrictive must be met.

C.1 and C.2

When Required Action A.1 or B.1 cannot be completed within the required Completion Time, or if two AFW trains are inoperable in MODE 1, 2, or 3, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4 within 18 hours. Q-3.7.G-1

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

~~In MODE 4 with two AFW trains inoperable, operation is allowed to continue because only one motor driven pump AFW train is required in accordance with the Note that modifies the LCO.~~ In MODE 4, either the reactor coolant pumps or the RHR loops can be used to provide forced circulation. This is addressed in LCO 3.4.6, "RCS Loops — MODE 4. Although not required, the unit may continue to cool down and initiate RHR. Q-3.7.5-1

D.1

If all three AFW trains are inoperable in MODE 1, 2, or 3, the unit is in a seriously degraded condition with no safety related means for conducting a cooldown, and only limited means for conducting a cooldown with nonsafety related equipment. In such a condition, the unit should not be perturbed by any action, including a power change, that might result in a trip. The seriousness of this condition requires that action be started immediately to restore one AFW train to OPERABLE status

Required Action D.1 is modified by a Note indicating that all required MODE changes or power reductions are suspended until one AFW train is restored to OPERABLE status. In this case, LCO 3.0.3 is not applicable because it could force the unit into a less safe condition.

~~E.1~~

~~In MODE 4, either the reactor coolant pumps or the RHR loops can be used to provide forced circulation. This is addressed in LCO 3.4.6, "RCS Loops — MODE 4." With one required AFW train inoperable, action must be taken to immediately restore the inoperable train to OPERABLE status. The immediate Completion Time is consistent with LCO 3.4.6.~~

BASES (continued)

This SR is modified by a Note indicating that the SR should be deferred until suitable test conditions are established. This deferral is required because there is insufficient steam pressure to perform the test.

SR 3.7.5.3

This SR verifies that AFW can be delivered to the appropriate steam generator in the event of any accident or transient that generates an ESFAS, by demonstrating that each automatic valve in the flow path actuates to its correct position on an actual or simulated actuation generated by an auxiliary feedwater actuation signal. The Steam Generator Blowdown, Steam Generator Blowdown Sample, and Feedwater Split Flow Bypass valves close on an auxiliary feedwater actuation to ensure auxiliary feedwater is delivered to the steam generator upper nozzles and is retained in the steam generator for decay heat removal. The AFW flow control valves trip to auto (open) on an auxiliary feedwater actuation to ensure full flow is delivered to each steam generator flow path. The steam admission valves open to supply the turbine driven auxiliary feedwater pump. This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. The 18 month Frequency is acceptable based on operating experience and the design reliability of the equipment. Q-3.7.5-8 CP-3.7-13

~~This SR is modified by a Note that states the SR is not required in MODE 4. In MODE 4, the required AFW train is already aligned and operating.~~

SR 3.7.5.4

This SR verifies that the AFW pumps will start in the event of any accident or transient that generates an ESFAS by demonstrating that each AFW pump starts automatically on an actual or simulated actuation generated by an auxiliary feedwater actuation signal in MODES 1, 2, and 3. In MODE 4, the required pump is already operating and the autostart function is not required. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Q-3.7.5-8 Q-3.7.G-1

BASES (continued)

This SR is modified by a Note that ~~two Notes. Note 1~~ indicates that the SR be deferred until suitable test conditions are established. This deferral is required because there is insufficient steam pressure to perform the test. ~~Note 2 states that the SR is not required in MODE 4. In MODE 4, the required pump is already operating and the autostart function is not required. In MODE 4, the heat removal requirements would be less providing more time for operator action to manually start the required AFW pump.~~ Q-3.7.G-1

~~In MODE 4, the heat removal requirements would be less providing more time for operator action to manually start the required AFW pump. This SR is modified by a Note indicating that the SR should be deferred until suitable test conditions are established. This~~ Q-3.7.G-1

B 3.7 PLANT SYSTEMS

B 3.7.6 Condensate Storage Tank (CST)

BASES

BACKGROUND

The CST provides a safety grade source of water to the steam generators for removing decay and sensible heat from the Reactor Coolant System (RCS). The CST provides a passive flow of water, by gravity, to the Auxiliary Feedwater (AFW) System (LCO 3.7.5). The steam produced is released to the atmosphere by the main steam safety valves or the atmospheric ~~dump~~ relief valves. The AFW pumps operate with ~~continuous~~ miniflow recirculation to the CST as required.

When the main steam isolation valves are open, the preferred means of heat removal is to discharge steam to the condenser by the nonsafety grade path of the steam ~~bypass~~ dump valves. The condensed steam is returned to the CST by the condensate transfer pump. This has the advantage of conserving condensate while minimizing releases to the environment.

Because the CST is a principal component in removing residual heat from the RCS, it is designed to withstand earthquakes and other natural phenomena, including missiles that might be generated by natural phenomena. The CST is designed to Seismic Category I to ensure availability of the feedwater supply. Feedwater is also available from alternate sources. The safety-related back-up supply is provided by manual switchover of AFW pump suctions to the Station Service Water System. ~~Isolation of the condensate makeup/reject line from the CST is also required for operability.~~ CP-3.7-13

A description of the CST is found in the FSAR, ~~Section 9.2.6~~ (Refs. 1, 3 & 5).

APPLICABLE SAFETY ANALYSES

The CST provides cooling water to remove decay heat and to cool down the unit following all events in the accident analysis as discussed in the FSAR, Chapter ~~6 and~~ 15 (Refs. ~~2 and~~ 3). Q-3.7.G-1
For
anticipated operational occurrences and accidents that do not affect the OPERABILITY of the steam generators, the bounding analysis assumption is ~~generally 30 minutes~~ 4 hours at MODE 3, steaming through the MSSVs, followed by a cooldown to residual heat removal (RHR) entry conditions at the design cooldown rate of 50°F/hour (Refs. 4 and 5). This assumption does not include reactor coolant pump heat.

LCO (Continued)

MODE 3 for 4 hours, followed by a cooldown to RHR entry conditions at ~~75~~ 50°F/hour for 5 hours. This basis is established in Reference 4 5 and exceeds the volume required by the accident analysis. Q-3.7.G-1

The OPERABILITY of the CST is determined by maintaining the tank level at or above the minimum required level.

APPLICABILITY

In MODES 1, 2, and 3, ~~and in MODE 4, when steam generator is being relied upon for heat removal,~~ the CST is required to be OPERABLE.

In MODE 4, 5 or 6, the CST is not required because the AFW System is not required.

ACTIONS

A.1 and A.2

If the CST level is not within limits, the OPERABILITY of the backup supply should be verified by administrative means within 4 hours and once every 12 hours thereafter. OPERABILITY of the backup feedwater supply must include verification that the flow paths from the backup water supply to the AFW pumps are OPERABLE, and that the ~~backup supply has the required volume of water available~~ SSWS is Operable. In addition, each motor operated valve between the SSWS and each Operable AFW pump must be OPERABLE. The CST must be restored to OPERABLE status within 7 days, because the backup supply is not condensate grade water. ~~may be performing this function in addition to its normal functions.~~ The 4 hour Completion Time is reasonable, based on operating experience, to verify the OPERABILITY of the backup water supply. Additionally, verifying the backup water supply every 12 hours is adequate to ensure the backup water supply continues to be available. The 7 day Completion Time is reasonable, based on an OPERABLE backup water supply being available, and the low probability of an event occurring during this time period requiring the CST. TR-3.7-002

B.1 and B.2

If the CST cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4, ~~without reliance on the steam generator for heat removal~~, within ~~18~~ 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. Q-3.7.6-5

B 3.7 PLANT SYSTEMS

B 3.7.7 Component Cooling Water (CCW) System

BASES

BACKGROUND

The CCW System provides a heat sink for the removal of process and operating heat from safety related components during a Design Basis Accident (DBA) or transient. During normal operation, the CCW System also provides this function for various nonessential components, as well as the spent fuel storage pool. The CCW System serves as a barrier to the release of radioactive byproducts between potentially radioactive systems and the Service Water System, and thus to the environment.

The ~~A typical~~ CCW System is arranged as two independent, full capacity cooling loops (safeguards loops), and has isolatable nonsafety related components. A common non-safeguards loop is provided for non-essential cooling loads as well as spent fuel pool cooling. Each safeguards loop ~~safety related~~ train includes a full capacity pump, ~~surge tank,~~ heat exchanger, piping, valves, and instrumentation. Each safety related train is powered from a separate bus. An open surge tank in the system provides ~~pump trip~~ protective functions to ensure that sufficient net positive suction head is available. In the event an accident, various system valves are repositioned by an ESF actuation signal (i.e., a Safety Injection Actuation Signal and/or a Containment Spray Actuation Signal) as described in the FSAR (Ref. 1). The pump in each train is automatically started on receipt of a safety injection signal, and the non-safeguards loop is ~~all nonessential components are~~ isolated on receipt of a Containment Spray Actuation Signal. CP-3.7-13

Additional information on the design and operation of the system, along with a list of the components served, is presented in the FSAR, Section 9.2.2 (Ref. 1). The principal safety related function of the CCW System is the removal of decay heat from the reactor via the Residual Heat Removal (RHR) System. This may be during a normal or post accident cooldown and shutdown. Q-3.7.G-1

APPLICABLE SAFETY ANALYSES

The design basis of the CCW System is for one CCW train to remove the post loss of coolant accident (LOCA) heat load from the containment sump during the recirculation phase, with a maximum CCW temperature of ~~120~~ 135°F (Ref. 2). The Emergency Core Cooling System (ECCS) LOCA and containment OPERABILITY LOCA each model the maximum and minimum performance of the CCW System, respectively. ~~The normal temperature of the CCW is 80 115°F, and, during unit cooldown to MODE 5 (T_{cold} < 200°F), a maximum~~

B 3.7 PLANT SYSTEMS

B 3.7.8 Station Service Water System (SSWS)

BASES

BACKGROUND

The SSWS provides a heat sink for the removal of process and operating heat from safety related components during a Design Basis Accident (DBA) or transient. During normal operation, and a normal shutdown, the SSWS also provides this function for various safety related ~~and nonsafety related components~~. The safety related functions are ~~is~~ covered by this LCO. Q-3.7.8-4

The SSWS consists of two separate, 100% capacity, safety related, cooling water trains. Each train consists of two 100% capacity pumps, ~~one component cooling water (CCW) heat exchanger,~~ piping, valving, and instrumentation~~, and two cyclone separators~~. The pumps and valves are remote and manually aligned~~, except~~ to be operable in the unlikely event of a loss of coolant accident (LOCA). The pumps aligned to ~~the critical~~ their respective loops are automatically started upon receipt of a safety injection signal~~, and all essential valves are aligned to their post accident positions~~. An automatic valve in the discharge of each pump is interlocked to open on a pump start. An automatic valve in the SSWS cooling water flow path for each emergency diesel generator automatically opens on a diesel generator start. All other valves are manual valves operated locally. The SSWS also ~~provides emergency makeup to the spent fuel pool and CCW System and~~ is the backup water supply to the Auxiliary Feedwater System. Q-3.7.8-4 Q-3.7.G-1

Cross-connections are provided between trains and between units such that any pump can supply any other pump's required flow.

Train isolation by two normally closed valves in series or one locked closed valve is provided to satisfy GDC-44. Unit isolation by one locked closed valve is provided to satisfy GDC-5. (Ref. 5)

In the event of a total Loss of Station Service Water (LOSSW) event in one unit at Comanche Peak, backup cooling capability is available via a cross-connect between the two units (References 1, 4 and ~~4~~ 6). An OPERABLE pump is manually realigned and flow balanced to provide cooling to essential heat loads to one or both units as required. The OPERABILITY of the unit cross-connect along with a Station Service Water pump in the shutdown unit ensures the availability of sufficient redundant cooling capacity for the operating unit. The Limiting Condition of Operation will ensure a significant risk reduction as indicated by the analyses of a Loss of Station Service Water System event. The surveillance requirements ensure the short and long-term OPERABILITY of the Station Service Water System and cross-connect between the two units. CP-3.7-13

BASES

BACKGROUND (Continued)

The Station Service Water System cross-connect between the two units consists of appropriate piping and cross-connect valves connecting the discharge of the Station Service Water pumps of the two units. By aligning the cross-connect flow paths, additional redundant cooling capacity from one unit is available to the Station Service Water System of the other unit.

Additional information about the design and operation of the SSWS, along with a list of the components served, is presented in the FSAR, Section 9.2.1 (Ref. 1). The principal safety related function of the SSWS is the removal of decay heat from the reactor via the CCW System. Q-3.7.G-1

APPLICABLE SAFETY ANALYSES

The design basis of the SSWS is for one SSWS train, in conjunction with the CCW System and a 100% capacity containment cooling system, to remove core decay heat following a design basis LOCA as discussed in the FSAR, Section 6.2 (Ref. 2). This prevents the containment sump fluid from increasing in temperature during the recirculation phase following a LOCA and provides for a gradual reduction in the temperature of this fluid as it is supplied to the Reactor Coolant System by the ECCS pumps. The SSWS is designed to perform its function with a single failure of any active component, assuming the loss of offsite power.

The SSWS, in conjunction with the CCW System, also cools the unit from residual heat removal (RHR), as discussed in the FSAR, Section 5.4.7 (Ref. 3) entry conditions to MODE 5 during normal and post accident operations. The time required for this evolution is a function of the time after shutdown and number of CCW and RHR System trains that are operating. One SSWS train is sufficient to remove decay heat during subsequent operations in MODES 5 and 6. This assumes a maximum SSWS temperature of ~~95~~ 102°F occurring simultaneously with maximum heat loads on the system. CP-3.7-13

The SSWS satisfies Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii). The requirement for cross connections and opposite unit pumps satisfy Criterion 4 of 10CFR50.36(c)(2)(ii). Q-3.7.8-4

LCO

Two SSWS trains are required to be OPERABLE to provide the required redundancy to ensure that the system functions to remove post accident heat loads, assuming that the worst case single active failure occurs coincident with the loss of offsite power.

B 3.7 PLANT SYSTEMS

B 3.7.10 Control Room Emergency Filtration/Pressurization System (CREFS)

BASES

BACKGROUND

The CREFS provides a protected environment from which operators can control the unit following an uncontrolled release of radioactivity~~, chemical, or toxic gas~~. Q-3.7.G-1

The CREFS consists of two independent, redundant trains that pressurize, recirculate and filter the control room air. Each train contains two filtration units: an emergency pressurization unit and an emergency filtration unit. Each ~~train~~ filtration unit consists of a prefilter ~~or demister~~, ~~a~~ high efficiency particulate air (HEPA) filters, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. Ductwork, valves or dampers, and instrumentation also form part of the system, as well as demisters to remove water droplets from the air stream. A second bank of HEPA filters follows the adsorber section to collect carbon fines and provide backup in case of failure of the main HEPA filter bank. In addition, the emergency pressurization units contain a demister and a heater to maintain the humidity of the incoming air below 70%.

The CREFS is an emergency system wholly contained within the Control Room Air Conditioning System, parts of which ~~may also~~ operate during normal unit operations ~~in the standby mode of operation~~. Upon receipt of the actuating signal(s), normal air supply fans to the control room ~~is~~ are isolated, and the stream of ventilation air is provided by the emergency pressurization units and then recirculated through the ~~system filter trains~~ emergency filtration units. The ~~prefilters or~~ demisters and heaters in the emergency pressurization units remove any large particles in the air, and any entrained water droplets present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. Continuous operation of each train's emergency pressurization unit for at least 10 hours per month, with the heaters on, reduces moisture buildup on the HEPA filters and adsorbers. Both the demister and heater are important to the effectiveness of the charcoal adsorbers.

Actuation of the CREFS by a Safety Injection, Loss of Offsite Power or Intake Vent High Radiation signal places the system in ~~either of two separate states (emergency radiation state or~~

APPLICABLE SAFETY ANALYSES

The CREFS components are arranged in redundant, safety related ventilation trains. The location of components and ducting within the control room envelope ensures an adequate supply of filtered air to all areas requiring access. The CREFS provides airborne radiological protection for the control room operators, as demonstrated by the control room accident dose analyses for the most limiting design basis loss of coolant accident, fission product release presented in the FSAR, Chapter 15 (Ref. 2).

Q-3.7.G-1

CP-3.7-014

The Control Room post accident mode of operation is the emergency recirculation mode. In the emergency recirculation mode, both the Emergency Filtration and Emergency Pressurization Units are functioning and they operate in series. In other words, all air which passes through the Emergency Pressurization Unit in each train will pass through the corresponding Emergency Filtration Unit before it is released into the Control Room. The safety analysis which confirmed the CREFS design took credit for no more than 99% filter efficiency of the Emergency Filtration Units only. If the Emergency Pressurization Units do not meet the surveillance requirement criteria for filtration the safety analyses and the associated acceptance criteria continue to be met by the Emergency Filtration Units. Thus, the operators will continue to be provided the protection identified in the licensing bases for CPSES.

The analysis of toxic gas releases demonstrates that the toxicity limits are not exceeded in the control room following a toxic chemical release, as presented in Reference 1. Isolation of the control room is not automatic for a toxic chemical release event.

The worst case single active failure of a component of the CREFS, assuming a loss of offsite power, does not impair the ability of the system to perform its design function.

The CREFS satisfies Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

Two independent and redundant CREFS trains are required to be OPERABLE to ensure that at least one is available assuming a single failure disables the other train. Total system failure could result in exceeding a dose of 5 rem to the control room operator in the event of a large radioactive release.

The CREFS is considered OPERABLE when the individual components necessary to limit operator exposure are OPERABLE in both trains.

B 3.7 PLANT SYSTEMS

B 3.7.11 Control Room ~~Emergency Air Temperature Control~~ Air Conditioning System (~~CREATCS~~ CRACS)

BASES

BACKGROUND

The control room for CPSES is common to both units and the CRACS is a shared system common to both units. Q 3.7.11-1

The ~~CREATCS~~ CRACS provides temperature control for the control room during normal and emergency operation ~~and following isolation of the control room~~.

The ~~CREATCS~~ CRACS consists of two ~~independent and~~ redundant trains that provide cooling and heating of recirculated control room air. Each CRACS train includes two heating and cooling units ~~consists of heating coils, cooling coils~~, instrumentation, and controls to provide for control room temperature control. Each cooling unit provides 50% of the maximum heat removal capability for its respective Train. The ~~CREATCS~~ CRACS is a subsystem providing air temperature control for the control room.

The ~~CREATCS~~ CRACS is an emergency system, parts of which may also operate during normal unit operations. A single train will provide the required temperature control to maintain the control room between 70°F and ~~85~~ 80°F. Each CPSES Unit has two CRACS trains for a total of four cooling units available to cool the common control room. The ~~CREATCS~~ CRACS operation in maintaining the control room temperature is discussed in the FSAR, Sections 6.4 (Ref. 1) and 9.4.1 (Ref.2). Q-3.7.G-1

If one 50% safety related cooling unit in each train is inoperable, the trains may still be operable if an evaluation of the conditions (e.g. weather, UHS temperature, etc.) show that one 50% unit is capable of performing the function for thirty days or that the inoperable unit(s) can be restored prior to conditions that would require two 50% units. If two units are required per train and one is inoperable, the train is inoperable; however, if one 50% safety related cooling unit in each train is operable with required cooling water and power, 100% of the heat removal capability is still available. Q 3.7.11-1

APPLICABLE SAFETY ANALYSES

The design basis of the ~~CREATCS~~ CRACS is to maintain the control room temperature for 30 days of continuous occupancy.

The ~~CREATCS~~ CRACS components are arranged in redundant, safety related trains. During normal and emergency operation, the ~~CREATCS~~ CRACS maintains the temperature between 70°F and ~~85~~ 80°F.

B 3.7 PLANT SYSTEMS

B 3.7.15 Fuel Storage ~~Pool~~ Area Water Level

BASES

BACKGROUND

The minimum water level in ~~the~~ a fuel storage ~~pool~~ area meets the assumptions of iodine decontamination factors following a fuel handling accident. The specified water level shields and minimizes the general area dose when the storage racks are filled to their maximum capacity. The water also provides shielding during the movement of spent fuel.

The minimum water depth for design for fuel handling ensures that a nominal 23 feet of water is maintained above the top of a damaged fuel assembly laying atop the fuel storage racks and that 10 feet of water shielding is maintained above fuel assemblies being moved.

The fuel storage areas in the Fuel Building include the two spent fuel pools (Spent Fuel Pool No. 1 and Spent Fuel Pool No. 2). In addition, the fuel storage areas include a portion of the Refueling Cavity in each Containment Building. Permanent spent fuel storage racks are located in each spent fuel pool and in the upender area of the Refueling Cavity in each containment. Maintaining 23 feet of water over these storage racks also ensures a nominal depth of 23 feet above the top of structures in the transfer canal and wet cask pit during fuel movement. A general description of the fuel storage pool design is given in the FSAR, Section 9.1.2 (Ref. 1). The in-containment fuel storage area is described in FSAR Section 9.1.2 (Ref. 1). A description of the Spent Fuel Pool Cooling and Cleanup System is given in the FSAR, Section 9.1.3 (Ref. 2). The assumptions of the fuel handling accident are given in the FSAR, Section 15.7.4 (Ref. 3).

Q-3.7.15-3

Q-3.7.G-1

APPLICABLE SAFETY ANALYSES

The minimum water level in ~~the~~ a fuel storage ~~pool~~ area meets the pool decontamination factor of 100 assumptions of the fuel handling accident described in Regulatory Guide 1.25 (Ref. 4). The resultant 2 hour thyroid dose per person at the exclusion area boundary is ~~a small fraction of~~ well within the 10 CFR 100 (Ref. 5) limits [Reference 6 and 7].

According to Reference 4, there ~~is~~ should be a nominal 23 ft of water between the top of the damaged fuel bundle and the fuel pool surface during a fuel handling accident. With 23 ft of water, the

B 3.7 PLANT SYSTEMS

B 3.7.17 Spent Fuel Assembly Storage

BASES

BACKGROUND

In the ~~Maximum~~ High Density Rack ~~(MDR)~~ (HDR) [(Refs. 1 and 2)] design, the two shared spent fuel storage ~~pool is~~ pools are administratively divided into ~~two~~ three separate and distinct regions which, for the purpose of criticality considerations, are considered as separate pools. ~~[Region 1]~~ Low Density Racks (LDR), with ~~[336]~~ 556 storage positions, ~~is~~ are designed to accommodate new fuel with a maximum enrichment of ~~[4.65]~~ 5.0 wt% U-235, or spent fuel regardless of the discharge fuel burnup. ~~[Region 2]~~ High Density Racks, with ~~[2670]~~ 1470 storage positions, is designed to accommodate fuel of various initial enrichments which have accumulated minimum burnups within the acceptable domains of one out of four or two out of four storage according to Figure 3.7.17-1 ~~in the accompanying LCO~~. Fuel assemblies not meeting the criteria of Figure [3.7.17-1] shall be stored in accordance with paragraph 4.3.1.1 in Section 4.3, Fuel Storage. Q-3.7.G-1

The water in the spent fuel storage pool normally contains soluble boron, which results in large subcriticality margins under actual operating conditions. However, the NRC guidelines, based upon the accident condition in which all soluble poison is assumed to have been lost, specify that the limiting k_{eff} of 0.95 be evaluated in the absence of soluble boron. Hence, the design of both regions is based on the use of unborated water, which maintains each region in a subcritical condition during normal operation with the regions fully loaded. The double contingency principle discussed in ANSI N-16.1-1975 and the April 1978 NRC letter (Ref. 3) allows credit for soluble boron under other abnormal or accident conditions, since only a single accident need be considered at one time. For example, the most severe accident scenario is associated with the movement of fuel from ~~[Region 1 to Region 2]~~ LDR or one out of four HDR storage, and accidental misloading of a fuel assembly in ~~[Region 2]~~ one out of one HDR storage. This could potentially increase the criticality of ~~[Region 2]~~ HDR storage. To mitigate these postulated criticality related accidents, boron is dissolved in the pool water. Safe operation of the ~~MDR~~ HDR with no movement of assemblies may therefore be achieved by controlling the location of each assembly in accordance with the accompanying LCO. ~~Prior to movement of an assembly, it is necessary to perform SR 3.7.16.1.~~

B 3.7 PLANT SYSTEMS

B 3.7.18 Secondary Specific Activity

BASES

BACKGROUND

Activity in the secondary coolant results from steam generator tube outleakage from the Reactor Coolant System (RCS). Under steady state conditions, the activity is primarily iodines with relatively short half lives and, thus, indicates current conditions. During transients, I-131 spikes have been observed as well as increased releases of some noble gases. Other fission product isotopes, as well as activated corrosion products in lesser amounts, may also be found in the secondary coolant.

A limit on secondary coolant specific activity during power operation minimizes releases to the environment because of normal operation, anticipated operational occurrences, and accidents.

This limit is lower than the activity value that might be expected from a 1 gpm tube leak (LCO 3.4.13, "RCS Operational LEAKAGE") of primary coolant at the limit of 1.0 μCi/gm (LCO 3.4.16, "RCS Specific Activity"). The steam line failure is assumed to result in the release of the noble gas and iodine activity contained in the steam generator inventory, the feedwater, and the reactor coolant LEAKAGE. Most of the iodine isotopes have short half lives, (i.e., < 20 hours). ~~I-131, with a half life of 8.04 days, concentrates faster than it decays, but does not reach equilibrium because of blowdown and other losses~~.

Q-3.7.G-1

TR-3.7-001

~~With the specified activity limit, the resultant 2 hour thyroid dose to a person at the exclusion area boundary (EAB) would be about 0.58 rem if the main steam safety valves (MSSVs) open for 2 hours following a trip from full power.~~

~~Operating a unit at the allowable limits could result in a 2 hour EAB exposure of a small fraction of the 10 CFR 100 (Ref. 1) limits, or the limits established as the NRC staff approved licensing basis.~~

BASES (continued)

APPLICABLE SAFETY ANALYSES

The accident analysis of the main steam line break (MSLB), as discussed in the FSAR, Chapter 15 (Ref. 2) assumes the initial secondary coolant specific activity to have a radioactive isotope concentration of 0.10 μCi/gm DOSE EQUIVALENT I-131. This assumption is used in the analysis for determining the radiological consequences of the postulated accident. The accident analysis, based on this and other assumptions, shows that the radiological consequences of an MSLB do not exceed a small fraction of the unit EAB limits (Ref. 1) for whole body and thyroid dose rates. Q-3.7.G-1

With the loss of offsite power, the remaining steam generators are available for core decay heat dissipation by venting steam to the atmosphere through the MSSVs ~~and steam generator atmospheric relief dump valves (ARVs)~~. The Auxiliary Feedwater System supplies the necessary makeup to the steam generators. ~~Venting continues until the reactor coolant temperature and pressure have decreased sufficiently for the Residual Heat Removal System to complete the cooldown~~. CP-3.7-013

In the evaluation of the radiological consequences of this accident, the activity released from the steam generator connected to the failed steam line is assumed to be released directly to the environment. ~~The unaffected steam generators are is assumed to discharge steam and any entrained activity through the MSSVs and ARVs during the event.~~ Since no credit is taken in the analysis for activity plateout or retention, the resultant radiological consequences represent a conservative estimate of the potential integrated dose due to the postulated steam line failure.

Secondary specific activity limits satisfy Criterion 2 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

As indicated in the Applicable Safety Analyses, the specific activity of the secondary coolant is required to be ≤ 0.10 μCi/gm DOSE EQUIVALENT I-131 to limit the radiological consequences of a Design Basis Accident (DBA) to a small fraction of the required limit (Ref. 1).

Monitoring the specific activity of the secondary coolant ensuresthat when secondary specific activity limits are exceeded, appropriate actions are taken in a timely manner to place the unit in an operational MODE that would minimize the radiological consequences of a DBA.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.1-1 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: CTS 3.7.1.1, LCO Statement
ITS 3.7.1, LCO Statement
DOC 01-01-A

CTS 3.7.1.1 LCO requires the MSSVs operable per Table 3.7-2. The STS 3.7.1 requires the MSSVs Operable as specified in Table 3.7.1-1 and Table 3.7.1-2. The ITS 3.7.1 states the MSSVs are Operable but deletes the phrase "as specified in Table 3.7.1-1 and Table 3.7.1-2".

Comment: DOC 01-01-A states this is consistent with the NUREG-1431. This is not the case. Revise the submittal to retain the STS format which is an administrative reformatting change of the CTS requirement.

FLOG RESPONSE: DOC 1-01-A was used to revise the CTS LCO based on NUREG-1431 as modified by TSTF-235. See Comment Number Q 3.7.1-4 concerning TSTF-235.

To address the administrative reformatting discussion in the comment, the FLOG discussed in the transmittal letter and the "Methodology For Mark-Up of Current TS" in the back of Enclosure 2, the CTS has been marked up to reflect the substance of NUREG-1431, Revision 1. In general, only technical changes have been identified. However, some non-technical changes have also been included when the changes cannot easily be determined to be non-technical by a reviewer, or if an explanation is required to demonstrate that the change is non-technical. DOC 1-13-A was created and added to the top of the page for each CTS Section 3.7 Specification. DOC 1-13-A states: "All reformatting, renumbering, and editorial rewording is in accordance with the Westinghouse Standard Technical Specifications, NUREG-1431. During the development certain wording preferences or English language conventions were adopted. As a result, the Technical Specifications (TS) should be more readily readable, and therefore understandable, by plant operators and other users. During the reformatting, renumbering, and rewording process, no technical changes (either actual or interpretational) to the TS were made unless they were identified and justified. This justification is used in those instances where, for improved clarity, the CTS was reformatted to conform to the ITS ".

ATTACHED PAGES:

Encl 2	3/4.7-1, 3/4.7-3, 3/4.7-5, 3/4.7-6, 3/4.7-8, 3/4.7-9, 3/4.7-12, 3/4.7-14, 3/4.7-15, 3/4.7-16, 3/4.7-17, 3/4.7-19, 3/4.7-23, 3/4.7-24, 3/4.7-30, 3/4.7-31 and 3/4.7-32
Encl 3A	3
Encl 3B	2

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAF[illegible] VALVES

LIMITING CONDITION FOR OPERATION

1-13-A
Q-3.7.1-1

3.7.1.1 All main steam line Code safety valves associated with each steam generator shall be OPERABLE ~~with lift settings as specified in Table 3.7-2~~. 1-01-A

APPLICABILITY: MODES 1, 2, and 3.

ACTION:*

1-02-LS

a. With one or more steam generators with one MSSV inoperable and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels reduce THERMAL POWER level to ≤ 87% RTP. 1-04-LS Q-3.7.1-4

~~a~~b. With four reactor coolant loops and associated steam generators in operation and with ~~one~~ two or more main steam line Code safety valves inoperable or any steam generator with one MSSV inoperable and the MTC positive at any power level, operation in MODES 1, 2, and 3 may proceed provided, that within 4 hours, either the inoperable valve(s) is restored to OPERABLE status or power is reduced to less than or equal to the Maximum Allowed Power listed in Table 3.7-1, and, within the 72 hours the Power Range Neutron Flux High Trip Setpoint# is reduced per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. 1-04-LS 1-05-MA Q-3.7.1-5

b. ~~The provisions of Specification 3.0.4 are not applicable.~~

(New) With one or more steam generators with less than two MSSVs OPERABLE, be in HOT STANDBY within the next six hours and HOT SHUTDOWN within the following six hours. 1-06-M Q-3.7.1-7

SURVEILLANCE REQUIREMENTS

1-05-MA
Q-3.7.1-5

4.7.1.1 ~~No additional requirements other than those required by Specification 4.0.5.~~ Verify each required MSSV lift setpoint per Table 3.7-2 in accordance with the Inservice Testing Program.** Following testing, lift settings shall be within ±1%. 1-07-A Q-3.7.1-5 1-04-LS Q-3.7.1-4

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* Separate Condition entry ~~time~~ is allowed for each MSSV.
** Only required to be performed in MODES 1 and 2.
\# Only required in MODE 1.

1-05-MA
Q-3.7.1-5

1-02-LS
Q-3.7.1-2

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

1-13-A Q-3.7.1-1

3.7.1.2 ~~At least~~ three ~~independent steam generator~~ auxiliary feedwater trains ~~pumps and associated flow paths~~ shall be OPERABLE ~~with~~: 2-01-LG Q-3.7.5-5

~~a. Two motor-driven auxiliary feedwater pumps, each capable of being powered from separate emergency busses, and~~ 2-01-LG

~~b. One steam turbine-driven auxiliary feedwater pump capable of being powered from two OPERABLE steam supplies.~~

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one auxiliary feedwater train ~~pump or associated flow path~~ inoperable (for reasons other than one steam supply to the turbine driven AFW pump inoperable), restore the required auxiliary feedwater train ~~pump or associated flow path~~ to OPERABLE status within 72 hours (AND within 10 days from discovery of failure to meet the LCO) or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following ~~6~~ 12 hours. 2-16-A 2-01-LG Q-3.7.5-5 2-03-M 2-20-LS

b. With two auxiliary feedwater trains ~~pump or associated flow path~~ inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following ~~6~~ 12 hours. 2-01-LG Q-3.7.5-5 2-20-LS

c. With three auxiliary feedwater trains ~~pump or associated flow path~~ inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater train ~~pump or associated flow path~~ to OPERABLE status as soon as possible*. 2-01-LG Q-3.7.5-5 2-05-A

d. With only one OPERABLE steam supply system capable of providing power to the turbine-driven auxiliary feedwater pump, restore the required OPERABLE steam supplies within 7 days (AND within 10 days from discovery to meet the LCO) or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following ~~6~~ 12 hours. 2-03-M 2-20-LS

* LCO 3.0.3 and all other LCO REQUIRED ACTIONS requiring MODE changes are suspended until one AFW train is restored to OPERABLE status. 2-05-A

PLANT SYSTEMS

1-13-A
Q-3.7.1-1

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tank (CST) shall be OPERABLE with an indicated water level of at least 53%.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With the CST inoperable, within 4 hours either:

a. Restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following ~~6~~ ~~12~~ 6 hours, or

~~2-20-LS~~
Q-3.7.6-5

b. Demonstrate the OPERABILITY of the Station Service Water (SSW) system as a backup supply to the auxiliary feedwater pumps and restore the CST to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following ~~6~~ ~~12~~ 6 hours.

~~2-20-LS~~
Q-3.7.6-5

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The CST shall be demonstrated OPERABLE at least once per 12 hours ~~by verifying the indicated water level is within its limits when the tank is the supply source for the auxiliary feedwater pumps.~~

3-03-LG
Q-3.7.6-3

4.7.1.3.2 The SSW system shall be demonstrated OPERABLE by administrative means at least once per 12 hours whenever the SSW system is being used as an alternate supply source ~~to the auxiliary feedwater pumps by verifying the SSW system OPERABLE and each motor operated valve between the SSW system and each OPERABLE auxiliary feedwater pump is OPERABLE~~.

3-03-LG

PLANT SYSTEMS

1-13-A
Q-3.7.1-1

SPECIFIC ACTIVITY

LIMITING CONDITION FOR OPERATION

3.7.1.4 The specific activity of the Secondary Coolant System shall be less than or equal to 0.1 microCurie/gram DOSE EQUIVALENT I-131.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the specific activity of the Secondary Coolant System greater than 0.1 microCurie/gram DOSE EQUIVALENT I-131, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.4 The specific activity of the Secondary Coolant System shall determined to be within the limit by performance of the sampling and analysis program of Table 4.7-1.

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

1-13-A
Q-3.7.1-1

3.7.1.5 Four MSIVs shall be OPERABLE.

APPLICABILITY: MODES 1, ~~2 and 3~~
MODES 2 and 3 except when all MSIVs are closed and deactivated. 5-01-LS

ACTION:

MODE 1:

With one MSIV inoperable but open, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 8 ~~72~~ 8 hours; otherwise be in STARTUP within the next 6 hours. ~~5-03-LS~~ Q-3.7.2-1

MODES 2* and 3*:

With one or more ~~or more~~ MSIVs inoperable, subsequent operation in MODE 2 or 3 may proceed provided the MSIV is closed within 8 ~~72~~ 8 hours and verified closed once per 7 days. Otherwise, be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. ~~5-03-LS~~ Q-3.7.2-1

~~(NEW) With two or more MSIVs inoperable, subsequent operation in MODE 2 or 3 may proceed provided the MSIV is closed within 8 hours and verified closed once per 7 days. Otherwise, be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.~~ ~~5-03-LS~~ Q-3.7.2-1

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each MSIV shall be demonstrated OPERABLE by verifying full closure time within 5 seconds when tested pursuant to Specification 4.0.5**. ~~The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.~~ 5-07-LS

(NEW) Verify each MSIV actuates to the isolation position on an actual or simulated signal every 18 months**. 5-08-M

*Separate entry times into Action Statement is allowed for each MSIV.
**Only required to be performed in MODES 1 and 2. 5-07-LS

PLANT SYSTEMS

MAIN FEEDWATER ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

1-13-A Q-3.7.1-1

7-01-A

3.7.1.6 ~~Each main feedwater line shall have~~ Four FIVs and associated bypass valves shall be OPERABLE ~~a feedwater isolation valve, feedwater isolation bypass valve, and feedwater preheater bypass valve~~.

7-17-LG Q-3.7.3-6

APPLICABILITY: MODES 1, 2, and 3 except when the feedwater isolation valve or associated~~, feedwater isolation~~ bypass valve ~~or feedwater preheater bypass valve~~ is closed and de-activated or isolated by a closed manual valve. 7-02-LS

ACTION: NOTE: Separate entry is allowed for each valve. 7-03-LS

MODE 1:

~~7-08-LS~~ Q-3.7.3-2

a. With one or more feedwater isolation valve inoperable, ~~but open,~~ operations may continue provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ the inoperable feedwater isolation valve is restored to OPERABLE status, isolated or closed** within ~~4~~ ~~72~~ 4 hours, otherwise be in HOT STANDBY within the next 6 hours. 7-06-LS 7-05-LS 7-11-M

~~7-08-LS~~ Q-3.7.3-2

b. With one or more feedwater isolation bypass valves inoperable, operations may continue provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ each affected feedwater isolation bypass valve is restored to OPERABLE status, isolated or closed** within ~~4~~ ~~72~~ 4 hours, otherwise be in HOT STANDBY within the next 6 hours. 7-05-LS 7-11-M

~~7-08-LS~~ Q-3.7.3-2

c. With one or more feedwater preheater bypass valves inoperable, operations may continue provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ each affected feedwater preheater bypass valve is restored to OPERABLE status, isolated or closed** within ~~4~~ ~~72~~ 4 hours, otherwise be in HOT STANDBY within the next 6 hours. 7-05-LS 7-11-M

~~(NEW) With any feedwater isolation or associated bypass valve inoperable and the feedwater control and associated bypass valve in the same flow path unavailable, operations may continue provided the affected flow path is isolated or closed** within 8 hours; otherwise be in HOT STANDBY within the next 6 hours.~~

~~7-09-LS~~ Q-3.7.3-2

~~7-08-LS~~ Q-3.7.3-2

~~* Verify within 4 hours the feedwater control and associated bypass valves are available for feedwater isolation.~~

** Verify valve is isolated or closed once per 7 days. 7-11-M

STEAM GENERATOR ATMOSPHERIC RELIEF VALVES

1-13-A
Q-3.7.1-1

LIMITING CONDITION FOR OPERATION

3.7.1.7 At least four atmospheric relief lines ~~valves and associated remote manual controls~~ shall be OPERABLE. 6-03-M 6-01-LG Q-3.7.4-9

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one less than the required atmospheric relief lines ~~valves~~ OPERABLE, restore the required atmospheric relief lines ~~valves~~ to OPERABLE status within 7 days*; or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 ~~12~~ 6 hours and place the required RCS/RHR loops in operation for decay heat removal. 6-03-M 6-02-LS ~~2-20-LS~~ Q-3.7.4-8 6-10-A

b. With two less than the required atmospheric relief lines ~~valves~~ OPERABLE, restore at least three atmospheric relief lines ~~valves~~ to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 ~~12~~ 6 hours and place the required RCS/RHR loops in operation for decay heat removal. 6-03-M ~~2-20-LS~~ Q-3.7.4-8 6-10-A

(new) With three or more less than the required atmospheric relief lines OPERABLE, restore at least two atmospheric relief lines to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours and place the required RCS/RHR loops in operation for decay heat removal. 6-05-LS 6-10-A

SURVEILLANCE REQUIREMENTS

4.7.1.7. Each atmospheric relief valve and each ARV block valve ~~and associated manual controls~~ shall be demonstrated OPERABLE by: 6-04-M

~~a. At least once per 24 hours by verifying that the air accumulator tank is at pressure greater than or equal to 80 psig.~~ 6-06-LG

~~b.~~ Testing pursuant to Specification 4.0.5.

* LCO 3.0.4 is not applicable. 6-02-LS

1-13-A
Q-3.7.1-1

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3 At least two independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With only one component cooling water loop OPERABLE*, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. 8-02-A

SURVEILLANCE REQUIREMENTS

4.7.3 Each component cooling water loop shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position**; and 8-08-A 8-04-A

b. At least once per 18 months*, by verifying that: 2-17-A

1) Each automatic valve*** servicing safety-related ~~equipment~~ actuates to its correct position on ~~its associated engineered safety feature~~ an actual or simulated actuation signal, and 8-05-A 8-06-TR

2) Each Component Cooling Water System pump starts automatically on an actual or simulated actuation ~~a safety injection test~~ signal. 8-06-TR

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* ~~The surveillance test interval is extended to 24 months for Train A, Unit 2, to remain in effect until the completion of the second refueling outage for Unit 2.~~ 2-17-A

* Enter applicable Required Actions of LCO 3.4.1.3, RCS Hot Shutdown, for residual heat removal loops made inoperable by CCW. 8-02-A

** Isolation of CCW flow to individual components does not render the CCW system inoperable. 8-04-A

*** In the flowpath that is not locked, sealed, or otherwise secured in position.

8-05-A
Q-3.7.7-2

1-13-A
Q-3.7.1-1

3/4.7.4 STATION SERVICE WATER SYSTEM

OPERATING

LIMITING CONDITION FOR OPERATION

3.7.4.1 At least two independent station service water loops per unit and the cross-connect between the Station Service Water Systems of each unit shall be OPERABLE.

APPLICABILITY: Units 1 and 2 in MODES 1, 2, 3 and 4.

ACTION:

a. With only one station service water loop in a unit OPERABLE,* restore at least two loops per unit to OPERABLE status within 72 hours, or for the unit(s) with the inoperable station service water loop be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. 9-02-A

b. With one or more of the cross-connects inoperable, within 7 days restore the cross-connect(s) to OPERABLE status. Otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.4.1.1 Each station service water loop shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position **; and 9-07-A

b. At least once per 18 months* during shutdown, by verifying that each station service water pump starts automatically on ~~a Safety Injection test~~ an actual or simulated actuation signal. 2-17-A 9-05-TR

4.7.4.1.2 At least once per 92 days the cross-connects shall be demonstrated OPERABLE by cycling the cross-connect valves in the flow path or verifying that these valves are locked open.

~~* The surveillance test interval is extended to 24 months for Train A, Unit 2, to remain in effect until the completion of the second refueling outage for Unit 2.~~ 2-17-A

* Enter applicable Required Actions of LCO 3/4.4.1.3, RCS Hot Shutdown, for residual heat removal loops made inoperable by SSWS. 9-02-A
Enter applicable Required Actions of LCO 3/4.8.1, AC Sources - Operating, for emergency diesel generator made inoperable by SSWS.

** Isolation of SSW flow to individual components does not render SSWS inoperable. 9-07-A

PLANT SYSTEMS

1-13-A
Q-3.7.1-1

STATION SERVICE WATER SYSTEM

ONE UNIT SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.7.4.2 At least two independent station service water loops in the operating unit*, at least one station service water pump in the shutdown unit** and the cross-connects from the OPERABLE station service water pump(s) in the shutdown unit to the station service water loops of the operating unit shall be OPERABLE.

APPLICABILITY: Unit 1 (Unit 2) in MODES 1, 2, 3 and 4
Unit 2 (Unit 1) in MODES 5, 6 and Defueled

ACTION:

a. With one station service water loop in the operating unit inoperable#, restore two loops in the operating unit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. 9-02-A

b. With one or more of the cross-connects between the OPERABLE station service water pump(s) in the shutdown unit and the station service water loops in the operating unit inoperable, within 7 days restore the cross-connect(s) to OPERABLE status. Otherwise place the operating unit in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. If neither station service water pump in the shutdown unit is OPERABLE, restore at least one pump to OPERABLE status within 7 days or place the operating unit in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.4.2.1 Each station service water loop in the operating unit shall be demonstrated OPERABLE per the requirements of Specification 4.7.4.1.1.~~***~~ 2-17-A

4.7.4.2.2 At least once per 92 days the cross-connect(s) between the OPERABLE station service water pump(s) in the shutdown unit and the station service water loops in the operating unit shall be demonstrated OPERABLE by cycling the cross-connect valves in the flow path or verifying that these valves are locked open.

* A unit in MODE 1, 2, 3 or 4 is designated as the "operating unit".

** A unit in MODE 5, 6 or Defueled is designated as the "shutdown unit".

~~*** The surveillance test interval for the 18 month requirement is extended to 24 months for Train A, Unit 2, to remain in effect until the completion of the second refueling outage for Unit 2.~~ 2-17-A

\# Enter applicable Required Actions of LCO 3/4.4.1.3, RCS Hot Shutdown, for residual heat removal loops made inoperable by SSWS. 9-02-A
Enter applicable Required Actions of LCO 3/4.8.1, AC Sources - Operating, for emergency diesel generator made inoperable by SSWS.

1-13-A
Q-3.7.1-1

3/4.7.5 ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.5 The ultimate heat sink (UHS) shall be OPERABLE with:

a. A minimum water level at or above elevation 770 feet Mean Sea Level, USGS datum,

b. A station service water intake temperature of less than or equal to 102°F, and

~~c. A maximum average sediment depth of less than or equal to 1.5 feet in the service water intake channel.~~ 13-03-R

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION: (Units 1 and 2)

a. With the above requirements for ~~water level and~~ intake temperature not satisfied, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours. With the above requirements for water level not satisfied, restore level within 7 days or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours. 13-05-LS

~~b. With the average sediment depth in the service water intake channel greater than 1.5 feet, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report that provides a record of all surveillances performed pursuant to Specification 4.7.5c and specify what measures will be employed to remove sediment from the service water intake channel.~~ 13-03-R

SURVEILLANCE REQUIREMENTS

4.7.5 The ultimate heat sink shall be determined OPERABLE:

a. At least once per 24 hours by verifying the station service water intake temperature and UHS water level to be within their limits,

~~b. At least once per 12 months by visually inspecting the dam and verifying no abnormal degradation or erosion, and~~ 13-03-R

~~c. At least once per 12 months by verifying that the average sediment depth in the service water intake channel is less than or equal to 1.5 feet.~~ 13-03-R

1-13-A
Q-3.7.1-1

3/4.7.7 CONTROL ROOM HVAC SYSTEM

CONTROL ROOM EMERGENCY FILTRATION/PRESSURIZATION SYSTEM

OPERATING

LIMITING CONDITION FOR OPERATION

3.7.7.1 Two Control Room Emergency Filtration/Pressurization System trains shall be OPERABLE.

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

ACTION:

MODES 1, 2, 3, and 4:

With one Control Room Emergency Filtration/Pressurization System train inoperable, except for inability to mauntain ≥ 0.125 inches of water gauge in the emergency recirculation mode of operation, restore the inoperable train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. 10-20-LS

(NEW) With Control Room Pressure not capable of being maintained ≥ 0.125 inches of water gauge in the emergency recirculation mode of operation, restore capability to maintain pressure within limit within 24 hours or be in HOT STANDBY within 6 hours and COLD SHUTDOWN within the following 30 hours. 10-20-LS

(NEW) With two Control Room Emergency Filtration/Pressurization System trains inoperable, except for capability to maintain CR pressure, enter LCO 3.0.3 immediately. 10-04-

MODES 5, 6 and during movement of irradiated fuel assemblies:

a. With one Control Room Emergency Filtration/Pressurization System train inoperable, restore the inoperable train to OPERABLE status within 7 days or immediately place the OPERABLE Control Room Emergency Filtration/Pressurization System train in the emergency recirculation mode or immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.

b. With two Control Room Emergency Filtration/Pressurization System trains inoperable immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.

(NEW) With Control Room Pressure not capable of being maintained ≥ 0.125 inches of water gauge in the emergency recirculation mode of operation, immediately place the OPERABLE Control Room Emergency Filtration/Pressurization System train in the emergency recirculation mode and suspend CORE ALTERATIONS and movement of irradiated fuel assemblies. 10-20-LS

1-13-A
Q-3.7.1-1

PLANT SYSTEMS

CONTROL ROOM HVAC SYSTEM

CONTROL ROOM AIR CONDITIONING SYSTEM (CRACS)

LIMITING CONDITION FOR OPERATION

3.7.7.2 Two CRACS trains shall be OPERABLE

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

ACTION:

MODES 1, 2, 3 and 4:

a. With one CRACS train inoperable, restore the inoperable train to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With two CRACS trains inoperable and at least 100% of the required heat removal capability equivalent to a single OPERABLE CRACS train available, restore the inoperable trains to OPERABLE status within 30 days or ~~be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.~~enter LCO 3.0.3. 10-18-LS

MODES 5, 6 and during movement of irradiated fuel assemblies:

a. With one CRACS train inoperable, restore the inoperable train to OPERABLE status within 30 days or immediately place the OPERABLE CRACS train in operation or immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.

b. With two CRACS trains inoperable and at least 100% of the required heat removal capability equivalent to a single OPERABLE CRACS train available, restore the inoperable trains to OPERABLE status within 30 days or immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.

c. With two CRACS trains inoperable and with b. above not applicable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.

SURVEILLANCE REQUIREMENTS

4.7.7.2 At least once per 18 months verify each CRACS train has the capability to remove the assumed heat load.

1-13-A
Q-3.7.1-1

3/4.7.8 PRIMARY PLANT VENTILATION SYSTEM - ESF FILTRATION UNITS

LIMITING CONDITION FOR OPERATION

3.7.8 Two independent ESF Filtration Trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With one ESF Filtration Train inoperable, restore the inoperable ESF Filtration Train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With the inability to reach and maintain a negative pressure in the negative pressure envelope of the Auxiliary, Safeguards, and Fuel Buildings greater than or equal to 0.05 inch water gauge, restore the PRIMARY PLANT VENTILATION SYSTEM to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With the inability to reach and maintain a negative pressure in the negative pressure envelope of the Auxiliary, Safeguards, and Fuel Buildings greater than or equal to 0.01 inch water gauge, restore the PRIMARY PLANT VENTILATION SYSTEM'S ability to maintain a negative pressure of greater than or equal to 0.01 inch water gauge within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.8 Each ESF Filtration Train shall be demonstrated OPERABLE:

12-05-LS
Q-3.7.12.1-4

a. 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 each ESF Filtration Train operates for at least 10 continuous hours with the heaters operating; 12-06-LG

b. By performing required ESF Filtration Unit filter testing in accordance with the Ventilation Filter Testing Program (VFTP). At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by: 10-08-A

1-13-A
Q-3.7.1-1

3/4.7.11 UPS HVAC SYSTEM [Without LAR 96-004]

OPERATING

LIMITING CONDITION FOR OPERATION

3.7.11 Two independent UPS HVAC trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION: (Units 1 and 2)

With only one UPS HVAC train OPERABLE, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.11.1 Each UPS HVAC train shall be demonstrated OPERABLE at least once per 18 months~~*~~ by: 2-17-A

a. Verifying that each UPS HVAC train starts automatically on ~~a Safety Injection test~~ actual or simulated actuation signal. 20-02-TR

~~b. Verifying that each UPS HVAC train starts automatically on a Blackout test signal.~~

4.7.11.2 Each UPS HVAC train shall be demonstrated OPERABLE at least once per 31 days by starting the non-operating UPS HVAC train and verifying that the train operates for at least 1 hour.

~~* The surveillance test interval is extended to 24 months for Train A, Unit 2, to remain in effect until the completion of the second refueling outage for Unit 2.~~ 2-17-A

1-13-A
Q-3.7.1-1

3/4.7.11P UPS HVAC SYSTEM [With LAR 96-004]

OPERATING

LIMITING CONDITION FOR OPERATION

3.7.11P The Uninterruptible Power Supply (UPS) HVAC System shall be OPERABLE ~~such that each UPS & Distribution Room is supported by either:~~ 20-01-LG

~~a. An OPERABLE UPS Room Fan Coil Unit, or~~

~~b. An OPERABLE UPS Air Conditioning A/C Train which is the same train as the UPS in the room.~~

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one or more UPS & Distribution Room supported only by an OPERABLE UPS A/C Train, which is not the same Train as the UPS in that room, restore the required support for each UPS & Distribution Room to an OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours..

b. With one or more UPS & Distribution Room not supported by an OPERABLE UPS Fan Coil Unit or A/C Train, but with a UPS A/C Train circulating air, restore the required support to an OPERABLE status within 72 hours while complying with Technical Specification 3/4.7.10 for the UPS Room or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With one or more UPS & Distribution Room not supported by forced cooling or circulating air, restore the required support within 1 hour, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.11P.1 Each required UPS A/C train shall be demonstrated OPERABLE at least once per 18 months by verifying it actuates on an actual or simulated actuation signal.

4.7.11P.2 Each required UPS A/C train shall be demonstrated OPERABLE at least once per 31 days by verifying that the train operates for at least 1 hour.

4.7.11P.3 Each required UPS Room Fan Coil Unit shall be demonstrated OPERABLE at least once per 31 days by verifying that the UPS Room Fan Coil Unit operates for at least one hour.

1-13-A
Q-3.7.1-1

3/4.7.12 SAFETY CHILLED WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.12 At least two ~~independent~~ safety chilled water trains shall be OPERABLE.

18-04-LG
Q-3.7.19-1

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one safety chilled water train OPERABLE, restore at least two trains to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.12 The safety chilled water trains shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety-related equipment that is not locked, sealed or otherwise secured in position, is in its correct position.** 18-01-A

b. At least once per 18 months* by demonstrating that each safety chilled water train pump and chiller ~~and electrical switchgear area emergency fan coil~~ units start on a simulated or actual actuation ~~Safety Injection test~~ signal. 2-17-A 18-02-LG 18-03-TR

* ~~The surveillance test interval is extended to 24 months for Train A, Unit 2, to remain in effect until the completion of the second refueling outage for Unit 2.~~ 2-17-A

** Isolation of safety chilled water flow to individual components does not render the safety chilled water system inoperable. 18-01-A

CHANGE NUMBER	NSHC	DESCRIPTION	
01-06	M	The new ACTION adds an explicit requirement to be in MODE 3 in 6 hours and MODE 4 in 12 hours if any steam generator (SG) loop has less than two MSSVs operable. NUREG-1431 requires that the plant only be placed in a mode where the specification is no longer applicable, which in this case would be MODE 4. The CTS would require the plant to enter TS 3.0.3 because operation with less than two MSSVs OPERABLE per SG is an undefined condition and thus not permitted. Therefore, the new ACTION eliminates the one hour allowed for action via TS 3.0.3. This requirement is more restrictive with the loss of the one hour for actions required by TS 3.0.3.	
01-07	A	The CTS SR is revised to specifically reference the In-service Testing (IST) Program developed per TS 4.0.5 and contained in the Administrative section of the ITS. The surveillance directly references Table 3.7-2 for lift points and incorporates the requirement that the MSSV as left lift points to be within ± 1% of the nominal setpoint.	
01-08		Not used	
01-09	~~LS-31~~	Not used ~~applicable to CPSES. See Conversion Comparison Table (enclosure 3B).~~	DC-3.7-001
01-10	LG	The note on Table 3.7-2 stating that the set pressures of the MSSVs shall correspond to the ambient conditions of the valve at normal operating temperatures is moved to the Bases of ITS SR 3.7.1.1. This change is acceptable because it removes details from the TS that are not required to protect the health and safety of the public while retaining he basic limiting condition for operation.	
01-11	LG	The MSSV ~~line~~ orifice size is moved from Table 3.7-2 to a licensee controlled document. This is design information that is not required in the ITS for operating or OPERABILITY concerns.	DC-ALL-002
01-12	LS-32	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).	
01-13	A	All reformatting, renumbering, and editorial rewording is in accordance with the Westinghouse Standard Technical Specifications, NUREG-1431. During the development certain wording preferences or English language conventions were adopted. As a result, the Technical Specifications (TS) should be more readily readable, and therefore understandable, by plant operators and other users. During the reformatting, renumbering, and rewording process, no technical changes (either actual or interpretational) to the TS were made unless they were identified and justified. This justification is used in those instances where, for improved clarity, the CTS was reformatted to conform to the ITS.	Q-3.7.1-1

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
01-09 ~~LS-31~~	Not used ~~This DCPP specific change revises maximum power range neutron high flux trip setpoints required for one or more inoperable MSSVs in accordance with the recommendations of Westinghouse NSAL 94-001, dated January 20, 1994 and specific analysis and calculations performed to confirm the conclusions of the Westinghouse NSAL.~~	N/A ~~YES; LAR 97-06 submitted justifying revised high flux trip set points for inoperable MSSVs.~~	N/A ~~NO; refer to 01-04-LS-3.~~	N/A ~~NO; refer to 01-04-LS-3.~~	N/A ~~NO; refer to 01-04-LS-3.~~ DC-3.7-001
01-10 LG	The note on Table 3.7-2 stating that the set pressures shall correspond to the ambient conditions of the valve at normal operating temperatures is moved to the Bases of ITS SR 3.7.1.1.	YES	YES	YES	YES
01-11 LG	The MSSV ~~line~~ orifice size is moved to a licensee-controlled documents.	YES; moved to FSAR.	YES; moved to FSAR.	YES; moved to USAR.	YES; moved to FSAR. DC-ALL-002
01-12 A	The proposed change would require that the plant be placed in HOT SHUTDOWN within 12 hours instead of COLD SHUTDOWN within 36 hours.	NO. already part of CTS.	NO; part of CTS.	YES	YES
01-13 A	All reformating, renumbering, and editorial wording is in accordance with the Westinghouse Standard Technical Specifications, NUREG-1431.	YES	YES	YES	YES Q-3.7.1-1
02-01 LG	The descriptive material, definition of an AFW train in the LCO is moved to the Bases.	YES	YES	YES	YES
02-02 LS-5	The ACTION specifies the requirements for AOT should one of the steam supply valves to the TDAFW pump become inoperable.	YES	NO; part of CTS.	YES	YES
02-03 M	ACTIONs are modified to require restoration of the systems to meet the LCO within 10 days of discovery of failure to meet the LCO.	YES	YES	YES	YES
02-04 M	In this DCPP specific revision, the APPLICABILITY and ACTIONS are revised to include MODE 4 when the SGs are relied upon for heat removal.	YES	NO	NO	NO

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.1-2 **APPLICABILITY:** CP

REQUEST: CTS 3.7.1.1 Action a
ITS 3.7.1 Actions Note
DOC 01-02-LS1

ITS 3.7.1 adds a new Actions Note that states, "Separate Condition entry is allowed for each MSSV". The markup for CTS 3.7.1.1 states "Separate entry time is allowed for each MSSV."

Comment: Revise the CTS markup to be consistent with the ITS 3.7.1 Actions Note.

FLOG RESPONSE: The CTS 3.7.1.1 markup and DOC 1-02-LS have been revised to use the words "separate Condition entry".

ATTACHED PAGES:

Encl 2	3/4.7-1
Encl 3A	1

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE 1-13-A Q-3.7.1-1

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line Code safety valves associated with each steam generator shall be OPERABLE ~~with lift settings as specified in Table 3.7-2.~~ 1-01-A

APPLICABILITY: MODES 1, 2, and 3.

ACTION:* 1-02-LS

a. With one or more steam generators with one MSSV inoperable and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels reduce THERMAL POWER level to ≤ 87% RTP. 1-04-LS Q-3.7.1-4

~~a~~b. With four reactor coolant loops and associated steam generators in operation and with ~~one~~ two or more main steam line Code safety valves inoperable or any steam generator with one MSSV inoperable and the MTC positive at any power level, operation in MODES 1, 2, and 3 may proceed provided, that within 4 hours, either the inoperable valve(s) is restored to OPERABLE status or power is reduced to less than or equal to the Maximum Allowed Power listed in Table 3.7-1, and, within the 72 hours the Power Range Neutron Flux High Trip Setpoint# is reduced per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. 1-04-LS 1-05-MA Q-3.7.1-5

b. ~~The provisions of Specification 3.0.4 are not applicable.~~

(New) With one or more steam generators with less than two MSSVs OPERABLE, be in HOT STANDBY within the next six hours and HOT SHUTDOWN within the following six hours. 1-06-M Q-3.7.1-7

SURVEILLANCE REQUIREMENTS 1-05-MA Q-3.7.1-5

4.7.1.1 ~~No additional requirements other than those required by Specification 4.0.5.~~ Verify each required MSSV lift setpoint per Table 3.7-2 in accordance with the Inservice Testing Program.** Following testing, lift settings shall be within ±1%. 1-07-A Q-3.7.1-5 1-04-LS Q-3.7.1-4

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* Separate Condition entry ~~time~~ is allowed for each MSSV. 1-05-MA Q-3.7.1-5
** Only required to be performed in MODES 1 and 2.
# Only required in MODE 1. 1-02-LS Q-3.7.1-2

DESCRIPTION OF PROPOSED CHANGES TO TECHNICAL SPECIFICATION SECTION 3/4.7

This enclosure contains a brief description/justification for each marked-up change to current Technical Specifications. The changes are identified by change numbers contained in enclosure 2 (Mark-up of the current Technical Specifications). In addition, the referenced No Significant Hazards Considerations (NSHCs) are contained in enclosure 4. All technical changes are discussed; administrative changes (i.e., format, presentation, and editorial changes) made to conform to the NUREG-1431 Revision 1 are not discussed. For enclosures 3A, 3B, 4, 6A and 6B, text in brackets "[ ]" indicates the information is plant specific and is not common to all the Joint Licensing Subcommittee (JLS) plants. Empty brackets indicate that other JLS plants may have plant specific information in that location.

CHANGE NUMBER	NSHC	DESCRIPTION
01-01	A	A reference to Table 3.7-2 is deleted from the Limiting Condition of Operation (LCO) and moved to the Surveillance Requirement (SR) (refer to change 01-07-A). This change is consistent with NUREG-1431.
01-02	LS-1	A note is added to allow separate Condition entry for each main steam safety valve (MSSV). The current specification requires that all MSSVs discovered to be inoperable, be returned to OPERABLE within the initial four hours provided for the first inoperable MSSV. For example, if a second inoperable MSSV were discovered three hours into the action statement of the first inoperable MSSV, both MSSVs would have to be returned to OPERABLE within the following one hour or the plant power level would have to be reduced to that specified in Table 3.7-1. The addition of the note allowing separate entry for each inoperable MSSV provides the full four hours for each inoperable MSSV. Q-3.7.1-2
01-03	LS-2	The CTS Limiting Condition for Operation (LCO) requires that each MSSV "as-found" setpoint be within ±1% of the nominal lift pressure. The MSSVs are tested in accordance with the Inservice Testing (IST) program. If the MSSV is found outside of the ±1% of the nominal lift pressure, the lift setting is adjusted (i.e., "as-left") to within ±-1%. The non-conforming as-found condition is documented in a Licensee Event Report (LER). The NUREG-1431 tolerance for the as-found lift pressure is ±3% while retaining the ±1% as-left tolerance. The net result of this change is the elimination of the requirement to issue an LER when MSSVs are found to be outside the ±1% tolerance but within the ±3% tolerance.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.1-4 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: CTS 3.7.1.1 Action a
ITS 3.7.1 Action A.1 and A.2 and Table 3.7.1-1
DOC 01-04-LS3
JFD 3.7-01

This change is beyond the scope of a conversion because of the industry travelers referenced in this DOC (WOG-83, Rev 0 and Rev. 1) that have not been approved by the NRC.

Comment: Withdraw the change or adopt the STS.

FLOG RESPONSE: WOG-83 has been approved by the TSTF and is designated as TSTF-235. This traveler has been submitted to the NRC and is under review. The proposed wording in TSTF-235 was modified from WOG-83 and these modifications have been incorporated into the ITS. Comanche Peak, Wolf Creek, and Callaway continue to pursue the changes proposed by this traveler. Diablo Canyon will no longer pursue this change due to issuance of LAs 125/123 (dated May 28, 1998) which revised CTS 3/4.7.1.1, Table 3.7-1, "Maximum Allowable Power Range Neutron Flux High Setpoint With Inoperable Steam Line Safety Valves" and the associated Bases. See licensee-initiated number DC 3.7-008 for more details.

ATTACHED PAGES:

Encl. 2	3/4.7-1 and 3/4.7- 2
Encl 3A	2
Encl 3B	1
Encl. 4	22 and 22a
Encl. 5A	Traveler Status page, 3.7-1, 3.7-2 and 3.7.3
Encl. 5B	B 3.7-1, 2, 2a, 2b, 3, 4, 5, 5a and 6
Encl. 6A	1, 1a and 4
Encl. 6B	1 and 2

3/4.7 PLANT SYSTEMS

1-13-A
Q-3.7.1-1

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line Code safety valves associated with each steam generator shall be OPERABLE ~~with lift settings as specified in Table 3.7-2.~~ 1-01-A

APPLICABILITY: MODES 1, 2, and 3.

ACTION:* 1-02-LS

a. With one or more steam generators with one MSSV inoperable and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels reduce THERMAL POWER level to ≤ 87% RTP. 1-04-LS Q-3.7.1-4

~~a~~b. With four reactor coolant loops and associated steam generators in operation and with ~~one~~ two or more main steam line Code safety valves inoperable or any steam generator with one MSSV inoperable and the MTC positive at any power level, operation in MODES 1, 2, and 3 may proceed provided, that within 4 hours, either the inoperable valve(s) is restored to OPERABLE status or power is reduced to less than or equal to the Maximum Allowed Power listed in Table 3.7-1, and, within the 72 hours the Power Range Neutron Flux High Trip Setpoint# ~~is reduced~~ per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. 1-04-LS 1-05-MA Q-3.7.1-5

b. ~~The provisions of Specification 3.0.4 are not applicable.~~

(New) With one or more steam generators with less than two MSSVs OPERABLE, be in HOT STANDBY within the next six hours and HOT SHUTDOWN within the following six hours. 1-06-M Q-3.7.1-7

SURVEILLANCE REQUIREMENTS

1-05-MA
Q-3.7.1-5

4.7.1.1 ~~No additional requirements other than those required by Specification 4.0.5.~~ Verify each required MSSV lift setpoint per Table 3.7-2 in accordance with the Inservice Testing Program.** Following testing, lift settings shall be within ±1%. 1-07-A Q-3.7.1-5 1-04-LS Q-3.7.1-4

....

* Separate Condition entry ~~time~~ is allowed for each MSSV. 1-05-MA Q-3.7.1-5
** Only required to be performed in MODES 1 and 2.
\# Only required in MODE 1. 1-02-LS Q-3.7.1-2

TABLE 3.7-1

~~MAXIMUM ALLOWABLE POWER RANGE NEUTRON FLUX HIGH SETPOINT WITH INOPERABLE STEAM LINE SAFETY VALVES~~ OPERABLE Main Steam Safety Valves versus ~~Applicable~~ Maximum Allowed Power ~~in Percent of RATED THERMAL POWER~~

1-04-LS
Q-3.7.1-4

~~MAXIMUM~~ NUMBER OF ~~INOPERABLE~~ OPERABLE SAFETY VALVES PER ~~ON ANY OPERATING~~ STEAM GENERATOR ~~OPERABLE~~	MAXIMUM ALLOWABLE POWER ~~RANGE NEUTRON FLUX HIGH SETPOINT OPERABLE (PERCENT OF RATED THERMAL POWER)~~	~~MAXIMUM ALLOWABLE POWER %RTP)~~
~~1~~	~~87~~	
2	~~65~~ 43	~~≤ 40~~
3	~~43~~ 65	~~≤ 60~~
4	87	~~≤ 80~~
5	N/A	~~N/A~~

TABLE 3.7-2

STEAM LINE SAFETY VALVES PER LOOP

VALVE NUMBER				LIFT SETTING(± ~~1~~ 3 %)*	~~ORIFICE SIZE~~
LOOP 1	LOOP 2	LOOP 3	LOOP 4		
MS-021,	058,	093,	129	1185 psig	~~16 in²~~
MS-022,	059,	094,	130	1195 psig	~~16 in²~~
MS-023,	060,	095,	131	1205 psig	~~16 in²~~
MS-024,	061,	096,	132	1215 psig	~~16 in²~~
MS-025,	062,	097,	133	1235 psig	~~16 in²~~

1-03-LS
1-10-LG
1-11-LG

~~* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.~~ 1-10-LG

CHANGE NUMBER	NSHC	DESCRIPTION
01-04	LS-3	The CTS allow continued operation with inoperable MSSVs if the power range neutron flux high trips are reduced. ~~[~~NUREG-1431 as revised ~~modified by~~ proposed TSTF-235, ~~industry traveler WOG-83, Rev. 0 and draft Rev. 1,~~ provided revised ACTIONs to require that: 1) the reactor power be reduced to compensate for the loss of pressure relief capacity to a maximum allowable power determined in accordance with Westinghouse NSAL 94-001 and NRC Information Notice 94-60, 2) the power range neutron flux high trip setpoint be reduced for inoperable MSSVs if a positive moderator temperature coefficient (MTC) exists at the allowed percent rated thermal power in MODE 1, and 3) the power range neutron flux high trip setpoints be reduced to account for a control rod withdrawal at partial power with more than one MSSV inoperable. Based on Westinghouse Nuclear Safety Advisory Letter, NSAL 94-001, for plants licensed to operate at partial power levels with a positive MTC, changes are made to require a reduction in the Power Range Neutron Flux-High reactor trip setpoint in addition to a reduction in reactor power when the MTC is positive. This is necessary to limit the primary side heat generation that may occur during a RCS heatup event. With a positive MTC a heatup of the coolant will result in a power increase which requires additional steam relieving capacity. Changes are made to require a reduction in the Power Range Neutron Flux-High reactor trip setpoint in addition to a reduction in the reactor power when there is more than one inoperable MSSV on any single steam generator. For a reactivity insertion accident such as an uncontrolled RCCA bank withdrawal from a partial power level the reactor power will increase during the transient until a reactor trip occurs on Overtemperature [N-16] or Power Range Neutron Flux-High. With more than one inoperable MSSV on any steam generator the combined steam flow capacity of the inoperable MSSVs and the turbine may be insufficient in some cases to prevent overpressurization of the Main Steam System prior to reaching the reactor trip setpoint. The Action for reducing the Power Range Neutron Flux-High reactor trip setpoint is modified by a footnote to indicate that reducing the setpoint is only required in MODE 1. In MODES 2 and 3 the reactor protection system trips in CTS 3.3.1 provides sufficient protection. In addition, the completion time for resetting the high flux trips is revised from four hours to 72 hours and the ACTION is revised to specifically require an appropriate power reduction within four hours. This is a relaxation since the CTS require the high neutron flux trip setpoint to be reduced as required within four hours for inoperable MSSVs regardless of the MTC value. ~~Pending approval of draft Rev. 1 of WOG-83, the changes proposed in the traveler have been modified to retain the current TS requirement to reset the power range neutron flux-high trip setpoints based on the number of MSSVs inoperable to a maximum allowable power determined in accordance with calculations or analysis to account for Westinghouse NSAL 94-001 and NRC Information Notice 94-60. However, the completion time of 72 hours proposed by WOG-83 has been retained and is justified based on the low probability of an event occurring during this time and the need to provide sufficient time to reset the channels in an orderly manner without inducing a transient due to human error. Retention of the CTS requirement for resetting the reactor trip setpoints is acceptable because this requirement is more conservative than the ACTIONS specified by either the ISTS or WOG-83, as revised.[ ]~~

Q-3.7.1-4

CONVERSION COMPARISON TABLE - CURRENT TS 3/4.7

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
01-01 A	Reference to Table 3.7-2 is deleted from the LCO and moved to the SR (refer to 01-07-A).	YES	YES	YES	YES
01-02 LS-1	A note is added to allow separate condition entry for each MSSV which allows the full four hours for each inoperable MSSV.	YES	YES	YES	YES
01-03 LS-2	This CPSES specific revision relaxes the as-found MSSV lift tolerances from +/- 1% to +/- 3%.	NO: LA 108/107 issued 10/1/95 to relax setpoint (refer also to 01-13-LS20)	YES	NO	NO
01-04 LS-3	Revised ACTIONs for inoperable MSSVs: 1) specifically requires a power reduction within four hours and 2) requires the reactor power neutron flux high trip set point to be reduced within 72 hours.	~~YES~~NO - maintaining CTS	YES	YES	YES Q-3.7.1-4
01-05 MA	The ACTION of the CTS which allowed an exception to TS 3.0.4 is deleted due to the note associated with revised SR 4.7.1.1 which allows a MODE change into MODE 3, one of the MODES of APPLICABILITY of the LCO.	YES	YES	YES	YES Q-3.7.1-5
01-06 M	The new ACTION adds an explicit requirement to be in MODE 3 in 6 hours and MODE 4 in 12 hours if any SG loop has less than 2 MSSVs operable. This is one hour less than allowed by LCO 3.0.3.	YES	YES	YES	YES
01-07 A	The CTS SR is revised to specifically reference the IST Program. The surveillance directly references Table 3.7-2 for lift points and incorporates the footnote from the table requiring the MSSV as left setpoints to be within +/- 1% of the nominal setpoint.	YES	YES	YES	YES
01-08	NOT USED	NA	NA	NA	NA

IV. SPECIFIC NO SIGNIFICANT HAZARDS CONSIDERATIONS

NSHC LS-3
10 CFR 50.92 EVALUATION
FOR
TECHNICAL CHANGES THAT IMPOSE LESS RESTRICTIVE REQUIREMENTS WITHIN THE TECHNICAL SPECIFICATIONS

The CTS allow continued operation with inoperable MSSVs if the power range neutron flux high reactor trip setpoints are reduced. The amount of reduction in the trip setpoint is dependent on the total number of inoperable MSSVs per SG and is intended to compensate for the lost relief capacity (heat removal capability and thus overpressure protection) should a transient requiring their operation occur. Based on Westinghouse Nuclear Safety Advisory Letter, NSAL 94-001, for plants licensed to operate at partial power levels with a positive MTC, changes are made to require a reduction in the Power Range Neutron Flux-High reactor trip setpoint in addition to a reduction in reactor power when the MTC is positive. This is necessary to limit the primary side heat generation that may occur during a RCS heatup event. With a positive MTC a heatup of the coolant will result in a power increase which requires additional steam relieving capacity. Changes are made to require a reduction in the Power Range Neutron Flux-High reactor trip setpoint in addition to a reduction in the reactor power when there is more than one inoperable MSSV on any single steam generator. For a reactivity insertion accident such as an uncontrolled RCCA bank withdrawal from a partial power level the reactor power will increase during the transient until a reactor trip occurs on Overtemperature [N-16] or Power Range Neutron Flux-High. With more than one inoperable MSSV on any steam generator the combined steam flow capacity of the inoperable MSSVs and the turbine may be insufficient in some cases to prevent overpressurization of the Main Steam System prior to reaching the reactor trip setpoint. The Action for reducing the Power Range Neutron Flux-High reactor trip setpoint is modified by a footnote to indicate that reducing the setpoint is only required in MODE 1. In MODES 2 and 3 the reactor protection system trips in CTS 3.3.1 provides sufficient protection. In the proposed specification, the CTS requirement to reduce the power range high neutron flux reactor trip setpoint is retained; however, the time to complete resetting the trip setpoints would be changed from four to 72 hours. Q-3.7.1-4

The CTS require that, if the MSSV cannot be restored to an OPERABLE status within four hours, the power range high neutron flux reactor trip setpoints must be reset in the same 4-hour period. NUREG-1431 requires that the reactor power be reduced in four hours if the MSSV cannot be returned to an OPERABLE status; however, NUREG-1431 would not require resetting the power range neutron flux high setpoints. The Westinghouse Owners Group (WOG) has proposed changes to NUREG-1431 ~~(Traveler WOG-83, as revised through draft Rev. 1 via TSTF-235)~~ that: 1) propose that the completion time for resetting the power range neutron flux high trip setpoint [ ] to compensate for a positive MTC or a control rod withdrawal event at partial reactor power to be 72 hours, 2) specifies that power level reductions be per the Westinghouse Nuclear Safety Advisory Letter, NSAL 94-01 and 3) deletes the Maximum Allowable % RTP for 5 MSSVs OPERABLE. ~~However, pending approval of draft Rev. 1 of WOG-83, the changes proposed in the traveler have been modified to retain the current TS requirement to reset the power range~~ DC-3.7-001 Q-3.7.1-4

NSHC LS-3
(continued)

~~neutron flux-high trip setpoints based on the number of MSSVs inoperable to a maximum allowable power determined in accordance with calculations or analysis to account for Westinghouse NSAL 94-001.~~ The allowed Completion Time to reduce the Power ~~Range Neutron~~ Flux trip setpoints is reasonable based on operating experience to accomplish the required ACTIONs in an orderly manner. The power levels specified per NSAL 94-001 are based on a conservative algorithm developed by Westinghouse to bound the required relief capacity. Q-3.7.1-4

The above changes are consistent with NUREG-1431 as revised by ~~WOG-83~~ TSTF-235. ~~and NSAL 94-001.~~

This proposed TS change has been evaluated and it has been determined that it involves no significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92(c) as quoted below:

> *"The Commission may make a final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility licensed under 50.21(b) or 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:*

INDUSTRY TRAVELERS APPLICABLE TO SECTION 3.7

TRAVELER NUMBER	STATUS	JUSTIFICATION NUMBER	COMMENTS
TSTF-36, Rev 2	Incorporated	3.7-42	Only applicable to DCPP
TSTF-51	Not Incorporated	Not Applicable	Requires plant-specific reanalysis to establish decay time dependence for fuel handling accident.
TSTF-70, Rev 1	Not Incorporated	Not Applicable.	NRC approved TSTF not adopted since change was not applicable. TR-3.7-005
TSTF-100	Incorporated	3.7-05 and 3.7-19	NRC approved.
TSTF-101	Incorporated	3.7-29	NRC approved.
TSTF-139, Rev 1	Incorporated	~~3.7-29~~ Not Applicable - Bases change	NRC approved TR-3.7-005
TSTF-140, Rev 1	Not incorporated	NA	Not NRC approved as of traveler cutoff date.
TSTF-173	Incorporated		NRC approved. TR-3.7-001
TSTF-174	Incorporated		NRC approved. TR-3.7-002
~~WOG-64~~	~~Incorporated~~	~~3.7-34~~	Q-3.7.2-1
~~WOG-83~~ TSTF-235	~~Partially~~ Incorporated	3.7-01	~~Retained CTS except for the extension to 72 hours for trip reset.~~ Q-3.7.1-4
~~WOG-86~~TSTF-287	Incorporated	3.7-57	Not applicable to DCPP Q-3.7-10-14 TR-3.7-005
~~WOG-98~~TSTF-289	Incorporated	3.7-56	Q-3.7.2-3

3.7 PLANT SYSTEMS

3.7.1 Main Steam Safety Valves (MSSVs)

LCO 3.7.1 ~~The~~ ~~Five~~ MSSVs per steam generator shall be OPERABLE. ~~as specified in Table 3.7.1-1 and Table 3.7.1-2.~~ 3.7-01

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

------------------------------NOTE------------------------------
Separate Condition entry is allowed for each MSSV.

CONDITION	REQUIRED ACTION	COMPLETION TIME	
A. One or more steam generators with one MSSV inoperable [and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels]*.	A. Reduce THERMAL POWER to ≤ [87]% RTP.	4 hours	3.7-01 Q-3.7.1-4
~~A~~B. One or more ~~required~~ steam generators with two or more MSSVs inoperable. [OR One or more steam generators with one MSSV inoperable and the MTC positive at any power level]*.	~~A~~B.1 Reduce Thermal Power to less than or equal to the ~~applicable~~ Maximum Allowable % RTP ~~listed in~~ specified in Table 3.7.1-1 for the number of OPERABLE MSSVs. AND -------NOTE------- Only required in MODE 1. ------------------------- ~~A~~B.2 Reduce the Power Range ~~High~~ Neutron Flux ~~High~~ reactor Trip setpoint to less than or equal to the Maximum Allowable % RTP specified in Table 3.7.1-1 for the number of OPERABLE MSSVs.	4 hours 72 hours	3.7-01 Q-3.7.1-4 ~~3.7-12~~ Q-3.7.1-4

CONDITION	REQUIRED ACTION	COMPLETION TIME
BC. Required Action and associated Completion Time not met. OR One or more steam generators with ≥ 4 ~~less than two~~ MSSVs inoperable ~~OPERABLE~~.	BC.1 Be in MODE 3. AND BC.2 Be in MODE 4.	6 hours 12 hours

3.7-01
Q-3.7.1-4

B

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.1.1	----------------NOTE---------------- Only required to be performed in MODES 1 and 2. ------------------------------------ Verify each required MSSV lift setpoint per Table 3.7.1-2 in accordance with the Inservice Testing Program. Following testing, lift setting shall be within ±1%.	In accordance with the Inservice Testing Program

Table 3.7.1-1 (page 1 of 1)
OPERABLE Main Steam Safety Valves versus
~~Applicable~~ Maximum Allowable Power ~~in Percent of RATED THERMAL POWER~~

~~MINIMUM~~ NUMBER OF ~~OPERABLE~~ MSSVs PER STEAM GENERATOR ~~REQUIRED OPERABLE~~	MAXIMUM ALLOWABLE ~~APPLICABLE~~ POWER (% RTP)	~~POWER RANGE HIGH NEUTRON FLUX SETPOINT (% RTP)~~
5	~~≤ 100~~ NA	~~NA~~
4	≤ ~~80~~87	~~≤ 87~~
3	≤ ~~60~~65	~~≤ 65~~
2	≤ ~~40~~43	~~≤ 43~~

~~3.7-12~~
3.7.1-4

B-PS

B 3.7 PLANT SYSTEMS

B 3.7.1 Main Steam Safety Valves (MSSVs)

BASES

BACKGROUND

The primary purpose of the MSSVs is to provide overpressure protection for the secondary system. The MSSVs also provide protection against overpressurizing the reactor coolant pressure boundary (RCPB) by providing a heat sink for the removal of energy from the Reactor Coolant System (RCS) if the preferred heat sink, provided by the Condenser and Circulating Water System, is not available.

Five MSSVs are located on each main steamline ~~header~~, outside containment, upstream of the main steam isolation valves, as described in the FSAR~~, Section 10.3.1~~ (Ref. 1). The MSSVs ~~capacity criteria is 110% of rated steam flow at~~ must have sufficient capacity to limit secondary system pressure to ≤ 110% of the steam generator design pressure in order to meet ~~This meets~~ the requirements of the ASME Code, Section III (Ref. 2). The MSSV design includes staggered setpoints, according to Table 3.7.1-2 in the accompanying LCO, so that only the needed valves will actuate. Staggered setpoints reduce the potential for valve chattering that is due to steam pressure insufficient to fully open all valves following a turbine reactor trip.

Q-3.7.1-4

Operation with one or more inoperable MSSVs is allowable if the reactor power is appropriately reduced. This action ensures that if an event were to occur, the operable MSSVs would continue to provide adequate overpressure protection.

APPLICABLE SAFETY ANALYSES

The design basis for the MSSVs comes from Reference 2 and its purpose is to limit the secondary system pressure to ≤ 110% of design pressure ~~when passing 100% of design steam flow. This design basis is sufficient to cope with~~ for any anticipated operational occurrence (AOO) or accident considered in the Design Basis Accident (DBA) and transient analysis.

The events that most significantly challenge the relieving capacity of the MSSVs, and thus RCS pressure, are those characterized as decreased heat removal events, which are

(Continued)

presented in the FSAR, Section 15.2 (Ref. 3). Of these, the full power turbine trip without steam dump is typically the limiting AOO. This event also terminates normal feedwater flow to the steam generators.

The safety analysis demonstrates that the transient response for turbine trip occurring from full power without a direct reactor trip presents no hazard to the integrity of the RCS or the Main Steam System. ~~If a minimum reactivity feedback is assumed, the reactor is tripped on high pressurizer pressure. In this case, the pressurizer safety valves open, and RCS pressure remains below 110% of the design value. The MSSVs also open to limit the secondary steam pressure.~~ Q-3.7.1-4 CP-3.7-15

~~If maximum reactivity feedback is assumed, the reactor is tripped on overtemperature ΔT N-16 or steam generator water level - low-low. The departure from nucleate boiling ratio increases throughout the transient, and never drops below its initial value. Pressurizer relief valves and MSSVs are activated and prevent overpressurization in the primary and secondary systems.~~ The turbine trip is performed assuming no primary system pressure control, but crediting reactor trip on high pressurizer pressure and operation of the pressurizer safety valves. This analysis demonstrates that RCS integrity is maintained by showing that the maximum RCS pressure does not exceed 110% of the design pressure. All cases analyzed demonstrate that the MSSVs maintain Main Steam System integrity by limiting the maximum steam pressure to less than 110% of the steam generator design pressure.

In addition to the decreased heat removal events, reactivity insertion events may also challenge the relieving capacity of the MSSVs. The uncontrolled rod duster control assembly (RCCA) bank withdrawal at power event is characterized by an increase in core power and steam generation rate until reactor trip occurs when either the Overtemperature N-16 or Power Range Neutron Flux-High setpoint is reached. Steam flow to the turbine will not increase from its initial value for this event The increased heat transfer to the secondary side causes an increase in steam pressure and may result in opening of the MSSVs prior to reactor trip, assuming no credit for operation of the atmospheric or condenser steam dump valves . The FSAR safety analysis of the RCCA bank withdrawal at power event for a range of initial core power levels demonstrates that the MSSVs are capable of preventing secondary side overpressurization for this AOO. Q-3.7.1-4

(Continued)

BASES

Q-3.7.1-4

CP-3.7-15

The FSAR safety analyses discussed above assume that all of the MSSVs for each steam generator are OPERABLE. It there are inoperable MSSV(s), it is necessary to limit the primary system power during steady state operation and AOOs to a value that does not result in exceeding the combined steam flow capacity of the turbine (if available) and the remaining OPERABLE MSSVs. The required limitation on primary system power necessary to prevent secondary system overpressurization may be determined by system transient analyses. In some circumstances it is necessary to limit the primary side heat generation that can be achieved during an AOO by reducing the setpoint of the Power Range Neutron Flux-High reactor trip function. For example, if more than one MSSV on a single steam generator is inoperable, an uncontrolled RCCA bank withdrawal at power event occurring from a partial power level may result in an increase in reactor power that exceeds the combined steam flow capacity of the turbine and the remaining OPERABLE MSSVs. Thus, for multiple inoperable MSSVs on the same steam generator it is necessary to prevent exceeding this power by lowering the Power Range Neutron Flux-High setpoint to an appropriate value. When the Moderator Temperature Coefficient (MTC) is positive, the reactor power may increase above the initial value during an RCS heatup event (e.g., turbine trip). Thus, for any number of inoperable MSSVs it is necessary to reduce the trip setpoint if a positive MTC may exist at partial power conditions, unless it is demonstrated by analysis that a specified reactor power reduction alone is sufficient to prevent overpressurization of the steam system. The MSSVs are ~~assumed to have two~~ one ~~active and one passive~~ failure modes. The active failure modes ~~are spurious~~ is an inadvertent opening and failure to reclose once opened. ~~The passive failure mode is~~ Failure to open upon demand is not assumed (Ref. 3).

The MSSVs satisfy Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

Q-3.7.1-4

The accident analysis requires ~~four~~ that five MSSVs per steam generator be OPERABLE to provide overpressure protection for design basis transients occurring at 102% RTP. ~~An MSSV will be considered inoperable if it fails to open on demand when the process pressure is within the lift set pressure tolerance~~. The LCO requires that five MSSVs per steam generator be OPERABLE in compliance with Reference 2, ~~even though this is not a requirement of~~ and the DBA analysis.

(Continued)

BASES

~~This is because operation with less than the full number of MSSVs requires limitations on allowable THERMAL POWER (to meet ASME Code requirements). These limitations are according to Table 3.7.1-1 in the accompanying LCO, and Required Action A.2.~~

Q-3.7.1-4

The OPERABILITY of the MSSVs is defined as the ability to open upon demand within the setpoint tolerances, to relieve steam generator overpressure, and reseat when pressure has been reduced. The

(Continued)

BASES

OPERABILITY of the MSSVs is determined by periodic surveillance testing in accordance with the Inservice Testing Program.

~~The lift settings, according to Table 3.7.1-2 in the accompanying LCO, correspond to ambient conditions of the valve at nominal operating temperature and pressure.~~ Q-3.7.1-4

This LCO provides assurance that the MSSVs will perform their designed safety functions to mitigate the consequences of accidents that could result in a challenge to the RCPB or Main Steam System integrity.

APPLICABILITY

~~In MODE 1 above 40% RTP, the number of MSSVs per steam generator required to be OPERABLE must be according to Table 3.7.1-1 in the accompanying LCO. Below 40% RTP in~~ Q-3.7.1-4 MODES 1, 2, and 3, ~~only two~~ five MSSVs per steam generator are required to be OPERABLE to prevent Main Steam System overpressurization.

In MODES 4 and 5, there are no credible transients requiring the MSSVs. The steam generators are not normally used for heat removal in MODES 5 and 6, and thus cannot be overpressurized; there is no requirement for the MSSVs to be OPERABLE in these MODES.

ACTIONS

The ACTIONS table is modified by a Note indicating that separate Condition entry is allowed for each MSSV.

~~A.1~~

With one or more MSSVs inoperable, action must be taken ~~reduce power~~ so that the available MSSV relieving capacity meets ~~the Reference 2~~ overpressure protection requirements. ~~for the applicable THERMAL POWER as specified in Table 3.7.1-1.~~ Q-3.7.1-4 CP-3.7-15

Operation with less than all five MSSVs OPERABLE for each steam generator is permissible, if THERMAL POWER is proportionally limited to the relief capacity of the remaining MSSVs. This is accomplished by restricting THERMAL POWER so that the energy transfer to the most limiting steam generator is not greater than the available relief capacity in that steam generator. ~~For example, if one MSSV is inoperable in one steam generator, the relief capacity of that steam generator is reduced by~~

BASES

~~approximately 20%. To offset this reduction in relief capacity, energy transfer to that steam generator must be similarly reduced by at least 20%. This is accomplished by reducing THERMAL POWER by at least 20%, which conservatively limits the energy transfer to all steam generators to approximately 80% of total capacity, consistent with the relief capacity of the most limiting steam generator.~~ Q-3.7.1-4

~~For each steam generator, at a specified pressure, the fractional relief capacity (FRC) of each MSSV is conservatively approximated determined as follows:~~

$$\cancel{FRC = \frac{A}{B}}$$

~~where:~~

~~A = the relief capacity of the MSSV; and~~

~~B = the total relief capacity of all the MSSVs of the steam generator.~~

~~The FRC is the relief capacity necessary to address operation with reduced THERMAL POWER.~~

~~The reduced THERMAL POWER levels in the LCO prevent operation at power levels greater than the relief capacity of the remaining MSSVs. The reduced THERMAL POWER is determined as follows:~~

$$\cancel{RP = \left[1 - \left(N_1 \times FRC_1 + N_2 \times FRC_2 + \cdots + N_5 \times FRC_5\right)\right] \times 100\%}$$

~~where:~~

~~RP = Reduced THERMAL POWER for the most limiting steam generator expressed as a percent of RTP;~~

~~N_1, N_2, ..., N_5 represent the status of the MSSV 1, 2, ..., 5, respectively.~~

~~= 0 if the MSSV is OPERABLE,~~
~~= 1 if the MSSV is inoperable;~~

~~FRC_1, FRC_2, ..., FRC_5 = the relief capacity of the MSSV 1, 2, ..., 5, respectively, as defined above.~~

(Continued)

BASES

~~The adequacy of the power reductions have been verified on a plant specific basis.~~ Q-3.7.1-4

A.1

In the case of only a single inoperable MSSV on one or more steam generators when the Moderator Temperature Coefficient is not positive a reactor power reduction alone is sufficient to limit primary side heat generation such that overpressurization of the secondary side is precluded for any RCS heatup event. Furthermore, for this case there is sufficient total steam flow capacity provided by the turbine and remaining OPERABLE MSSVs to preclude overpressurization in the event of an increased reactor power due to reactivity insertion, such as in the event of an uncontrolled RCCA bank withdrawal at power. Therefore, Required Action A.1 requires an appropriate reduction in reactor power within 4 hours.

The maximum THERMAL POWER corresponding to the heat removal capacity of the remaining OPERABLE MSSVs is determined via a system transient analysis with an appropriate allowance for calorimetric power uncertainty and instrument uncertainties.

~~A.2~~

~~Under some plant conditions when operating at a reduced power level, the RCS heatup following a turbine trip event could result in a core power increase which may not be attenuated without overpressurizing the main steam system. To preclude this condition, an additional requirement is imposed, to reduce the power range neutron flux -- high reactor trip setpoint to a power level consistent with the number of operable safety valves. The adequacy of the reduced setpoints has been verified on a plant specific basis. The completion time of 72 hours is reasonable based on plant operating experience.~~

B.1 and B.2

In the case of multiple inoperable MSSVs on one or more steam generators, with a reactor power reduction alone there may be insufficient total steam flow capacity provided by the turbine and remaining OPERABLE MSSVs to preclude overpressurization in the event of an increased reactor power due to reactivity insertion, such as in the event of an uncontrolled RCCA bank withdrawal at power. Furthermore, for a single inoperable MSSV on one or more steam generators when the Moderator Temperature

(Continued)

BASES

Coefficient is positive the reactor power may increase as a result of an RCS heatup event such that flow capacity of the remaining OPERABLE MSSVs is insufficient. Therefore, in addition to Required Action B.1, which specifies an appropriate reduction in reactor power within 4 hours, Required Action B.2 specifies that the Power Range Neutron Flux-High reactor trip setpoint be reduced within 72 hours.

The maximum THERMAL POWER corresponding to the heat removal capacity of the remaining OPERABLE MSSVs is determined wi... an appropriate allowance for Nuclear Instrumentation System trip channel uncertainties.

Required Acton B.2 is modified by a Note, indicating that the Power Range Neutron Flux-High reactor trip setpoint reduction is only required in MODE 1. In MODES 2 and 3 the reactor protection system trips specified in LCO 3.3.1. "Reactor Trip System Instrumentation," provide sufficient protection.

The allowed Completion Times are reasonable based on operating experience to accomplish the Required Actions in an orderly manner without challenging unit systems.

C~~B.1 and C~~B.2

If the Required Actions are not completed ~~MSSVs cannot be restored to OPERABLE status within the associated Completion Time, or if one or more steam~~ generators have > 4 inoperable ~~less than two~~ MSSVs ~~OPERABLE~~, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

CP-3.7-15

Q-3.7.1-4

SURVEILLANCE REQUIREMENTS

SR 3.7.1.1

This SR verifies the OPERABILITY of the MSSVs by the verification of each MSSV lift setpoint in accordance with the Inservice Testing Program. The ASME Code, Section XI (Ref. ~~4~~ ~~5~~ 4), requires that safety and relief valve tests be performed in accordance with ANSI/ASME OM-1-1987 (Ref. ~~5~~ ~~6~~ 5). According to Reference ~~5~~ ~~6~~ 5, the following tests are required: CP-3.7-13

a. Visual examination;

BASES

e. Verification of the balancing device integrity on balanced valves.

The ANSI/ASME Standard requires that all valves be tested every 5 years, and a minimum of 20% of the valves be tested every 24 months. The ASME Code specifies the activities and frequencies necessary to satisfy the requirements. Table 3.7.1-2 allows a ± 3% setpoint tolerance for OPERABILITY; however, the valves are reset to ± 1% during the Surveillance to allow for drift. The lift settings, according to Table 3.7.1-2 correspond to ambient conditions of the valve at nominal operating temperature and pressure.

Q-3.7.1-4

This SR is modified by a Note that allows entry into and operation in MODE 3 prior to performing the SR. The MSSVs may be either bench tested or tested in situ at hot conditions using an assist device to simulate lift pressure. If the MSSVs are not tested at hot conditions, the lift setting pressure shall be corrected to ambient conditions of the valve at operating temperature and pressure.

REFERENCES

1. FSAR, Section 10.3.1 and 10.3.2.

Q-3.7.1-4

2. ASME, Boiler and Pressure Vessel Code, Section III, Article NC-7000, Class 2 Components.

CP-3.7-015

3. FSAR, ~~Section~~ Chapter 15.

4. ASME, Boiler and Pressure Vessel Code, Section XI.

5. ANSI/ASME OM-1-1987.

(Continued)

JUSTIFICATIONS FOR DIFFERENCES FROM NUREG-1431
Section 3.7

This enclosure contains a brief discussion/justification for each marked-up technical change to NUREG-1431, Revision 1, to make them plant-specific or to incorporate generic changes resulting from the Industry/NRC generic change process. The change numbers are referenced directly from the NUREG-1431 mark-ups. For enclosures 3A, 3B, 4, 6A and 6B, text in brackets "[ ]" indicates the information is plant specific and is not common to all the Joint Licensing Subcommittee (JLS) plants. Empty brackets indicate that other JLS plants may have plant specific information in that location.

CHANGE NUMBER	JUSTIFICATION
3.7-01	~~ACTION A.1 is revised [and new ACTION A.2 is added to be consistent with the CTS (also see CN-3.7-12) and traveler WOG-83, Rev 0. WOG-83 was developed to account for] plants which may operate for some part of a fuel cycle with a positive moderator temperature coefficient (MTC). Per Westinghouse Nuclear Safety Advisory Letter, NSAL 94-001, if the MTC is positive at the required [ ] reduced power level, the reactor coolant system (RCS) heat up following a turbine trip event could result in a core power increase and additional heat transfer to the secondary system which may not be attenuated without over pressurizing the main steam system. To preclude this condition the power range neutron flux high trip set point is required to be reset to a power level consistent with the number of inoperable safety valves within 72 hours. [ ] These changes are consistent with Westinghouse Owners Group (WOG) Traveler WOG-83 and NSAL 94-001.A recent revision to WOG-83 (rev.1) has been proposed requiring that the power range neutron flux trip high setpoints be reduced when at a reduced reactor power level to account for a control rod withdrawal event at reduced reactor power. The identification of this issue has identified a non-conservatism in NUREG-1431. Consequently, the requirement in the CTS to reduce the power range neutron flux trip high setpoints with inoperable MSSVs [regardless of the value of MTC is retained]. However, the 72 hour Completion Time proposed in the traveler is incorporated into the ITS. These changes are acceptable because the retention of the requirement to reduce the power range flux trip high setpoint is more conservative than NUREG-1431 or WOG-83 and the extended Completion Time recognizes the low probability of an event occurring during the 72 hours allowed to reset the trip setpoints.~~ Q-3.7.1-4

CHANGE <u>NUMBER</u> | <u>JUSTIFICATION</u>

Q-3.7.1-4

The Actions are revised consistent with TSTF-235 to account for the fact that a reduction in power level is not directly proportional to the reduction in main steam safety valve (MSSV) relieving capability and plants which may operate for some part of a fuel cycle with a positive Moderator Temperature Coefficient (MTC). Based on Westinghouse Nuclear Safety Advisory Letter, NSAL 94-001, for plants licensed to operate at partial power levels with a positive MTC, changes are made to require a reduction in the Power Range Neutron FLux-High reactor trip setpoint in addition to a reduction in reactor power when the MTC is positive. This is necessary to limit the primary side heat generation that may occur during a RCS heatup event. With a positive MTC a heatup of the coolant will result in a power increase which requires additional steam relieving capacity. Changes are made to require a reduction in the Power Range Neutron Flux-High reactor trip setpoint in addition to a reduction in the reactor power when there is more than one inoperable MSSV on any single steam generator. For a reactivity insertion accident such as an uncontrolled RCCA bank withdrawal from a partial power level the reactor power will increase during the transient until a reactor trip occurs on Overtemperature [N-16] or Power Range Neutron Flux-High. With more than one inoperable MSSV on any steam generator the combined steam flow capacity of the inoperable MSSVs and the turbine may be insufficient in some cases to prevent overpressurization of the Main Steam System prior to reaching the reactor trip setpoint.

3.7-02 Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).

3.7-03 Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).

CHANGE NUMBER	JUSTIFICATION
3.7-12	~~WOG traveler 83 (Rev 0) revised Condition A and Table 3.7-1 to account for plants that credit the Power Range High Neutron Flux trip function when MTC is positive (See CN 3.7-01 above). The wording of the traveler has been modified for CPSES to account for plant specific differences. as follows:~~ Q-3.7.1-4 ~~1) The Traveler revised Table 3.7-1 to have 2 columns titled "Maximum Allowable Power" with footnotes explaining that one column provided maximum allowable power levels when MTC is zero or negative and the other column provided maximum allowable power level when MTC is positive. This was to satisfy a NASL 94-001 concern indicating that the maximum allowable power may have to be lower when MTC is positive. A plant specific analysis performed by CPSES has verified that CPSES may operate at the power levels provided in the CTS. (which corresponds to the values provided by the traveler for zero and negative MTC) regardless of whether MTC is positive or negative. Thus two columns of maximum allowable power (and the explanatory footnotes) as provided by the WOG traveler are unnecessary for CPSES.~~ ~~2) The current TS provides values for Power Range Neutron Flux trip Setpoints as a function Operable MSSVs which are 3% to 7% above the corresponding Maximum Allowable Power. The traveler reduces the setpoint to that specified by the Maximum Allowable Power. This would require that the plant operate at 3% to 7% below the Maximum Allowable Power to ensure that an inadvertent reactor trip does not occur. CPSES has verified that the current TS trip setpoints remain valid for the concerns expressed in NASL 94-001 and has elected to retain this column in the ITS.~~ Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B)
3.7-13	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-14	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-15	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-16	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-17	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-18	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-19	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-20	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
3.7-01	~~ACTION A.1 is revised[and new ACTION A.2 is added] to account for operation with inoperable MSSVs and resetting the power range neutron flux high trip setpoints with inoperable MSSVs. The Completion Time to reset the power range neutron flux high trip setpoints is extended to 72 hours. [ ]~~ The Actions are revised consistent with TSTF-235 to account for the fact that a reduction in power level is not directly proportional to the reduction in main steam safety valve (MSSV) relieving capability and plants which may operate for some part of a fuel cycle with a positive Moderator Temperature Coefficient (MTC).	~~YES~~ NO; maintaining CTS	YES	YES	YES Q-3.7.1-4
3.7-02	The CTS Applicability of Modes 1, 2, and 3 is being retained in ITS 3.7.2, MSIVs, and ITS 3.7.3, [MFIVs].	NO; DCPP is adopting ITS.	NO; CPSES is adopting ITS.	YES	YES
3.7-03	SR 3.7.3.1 is divided into two surveillances since both the stroke time and the frequency requirements are different at DCPP for the feedwater regulation/bypass valves and the feedwater isolation valve.	YES (per LA 77/76)	NO	NO	NO
3.7-04	Requirements involving reliance on the SG heat removal system for heat removal in Mode 4 would be deleted.	NO - DCPP is adopting ITS	YES	YES	YES
3.7-05	REQUIRED ACTION B.1 and new C.1 are revised to state that restoration of "all but " and "all but two" [ARV] lines is required which will effectively exit the respective REQUIRED ACTION.	YES	YES	NO; refer to 3.7-19.	NO; refer to 3.7-19.
3.7-06	The CONDITION and REQUIRED ACTION for two or more inoperable [ARV] lines is limited to two [ARV] lines and the COMPLETION TIME is revised from 24 to 72 hours per the current licensing basis. A new CONDITION C is added.	YES	YES	NO; not part of CTS.	NO; not part of CTS.
3.7-07	Revised Conditions A and C to be consistent with CTS. The ITS as written would have allowed the OPERABLE EES train to remain in standby during movement of irradiated fuel.	NO; not part of CTS.	NO; not part of CTS.	YES	YES
3.7-08	SR 3.7.5.1 is revised to add a note consistent with the CTS and the plant specific design. The verification of flow control valve position is deferred until conditions are appropriate.	NO; AFW valves have a correct position.	YES	YES	YES

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
3.7-09	New Conditions E., F. and H and the surveillance requirement associated with the FWST AFW pump supply are relocated from the CTS on AFW supply and included in the DCPP AFW specification for completeness.	YES	NO	NO	NO
3.7-10	The specification description, the LCO, the action requirements and the surveillance are revised to incorporate the DCPP plant specific requirement for operable AFW supply sources via the CST and the FWST per the current licensing basis.	YES	NO	NO	NO
3.7-11	The REQUIRED ACTIONS for CPSES feedwater isolation and associated bypass valves inoperable are revised consistent with the current licensing basis. ~~for a COMPLETION TIME of 4 hours and to credit the MFRVs (feedwater control valves (FCVs)) and associated bypass valves for a completion time of 72 hours. A new SR is added for the FCVs and associated bypass valves.~~	NO	YES	NO	NO Q-3.7.3-2
3.7-12	~~WOG-83 revised Condition A and Table 3.7-1 to account for plants that credit the Power Range High Neutron Flux trip function when MTC is positive (See CN 3.7-01 above). The wording of the traveler has been modified for CPSES to account for plant specific differences~~ For Callaway, two setpoints are given in Table 3.7.1-1 for the case of 4 OPERABLE MSSVs per steam generator. A Note is added to Table 3.7.1-1 and to the Required Action A.1 to address the plant specific requirement.	NO	~~YES~~NO	NO	~~NO~~ YES Q-3.7.1-4
3.7-13	Note 1. under ACTION REQUIRED A.1 is deleted. The DCPP emergency diesel generators have self contained cooling systems that do not rely upon an external source of cooling water.	YES	NO	NO	NO
3.7-14	The note for SR 3.7.8.1 is deleted since the DCPP ASW system supplies only the CCW heat exchanger and no other individual components.	YES	NO	NO	NO
3.7-15	SR 3.7.8.1 is revised to include a DCPP specific requirement to verify the availability of power and air so that the valves can be placed in their correct position as described in the bases.	YES	NO	NO	NO
3.7-16	SR 3.7.8.2 is revised to include only power operated valves since there are no automatically operated valves in the DCPP ASW system. The surveillance is revised to require movement of power operated valves to demonstrate the ability to reconfigure the ASW system as described in the FSAR and the ITS bases.	YES	NO	NO	NO

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.1-5 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: CTS 3.7.1.1 Action b
ITS 3.0.4 and ITS SR 3.7.1.1
DOC 01-05-M

CTS 3.7.1.1 Action b states that "The provisions of Specification 3.0.4 are not applicable." A note in ITS SR 3.7.1.1 states the SR is only required in Modes 1 and 2.

Comment: This change is in accordance with the STS and it is acceptable. However, the DOC is incorrectly justified as a "more restrictive change. ITS 3.0.4 has been revised to permit the placement of Notes, as in this case, that permit entry into Modes of operation where the LCO Operability can be established. This is an administrative change that reformats the CTS requirements for the purpose of clarification by explicitly stating the reason for Specification 3.0.4 not being applicable. Revise the submittal to provide an "A" DOC.

FLOG RESPONSE: DOC 01-05-M has been revised to be DOC -1-05-A. The justification of the change has been revised to indicate that the ITS Note is equivalent to the CTS 3.0.4 exception.

ATTACHED PAGES:

Encl 2	3/4.7-1
Encl 3A	2a
Encl 3B	1

3/4.7 PLANT SYSTEMS

1-13-A
Q-3.7.1-1

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line Code safety valves associated with each steam generator shall be OPERABLE ~~with lift settings as specified in Table 3.7-2.~~ 1-01-A

APPLICABILITY: MODES 1, 2, and 3.

ACTION:* 1-02-LS

a. With one or more steam generators with one MSSV inoperable and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels reduce THERMAL POWER level to ≤ 87% RTP. 1-04-LS Q-3.7.1-4

~~a~~b. With four reactor coolant loops and associated steam generators in operation and with ~~one~~ two or more main steam line Code safety valves inoperable or any steam generator with one MSSV inoperable and the MTC positive at any power level, operation in MODES 1, 2, and 3 may proceed provided, that within 4 hours, either the inoperable valve(s) is restored to OPERABLE status or power is reduced to less than or equal to the Maximum Allowed Power listed in Table 3.7-1, and, within the 72 hours the Power Range Neutron Flux High Trip Setpoint# is reduced per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. 1-04-LS 1-05-HA Q-3.7.1-5

b. ~~The provisions of Specification 3.0.4 are not applicable.~~

(New) With one or more steam generators with less than two MSSVs OPERABLE, be in HOT STANDBY within the next six hours and HOT SHUTDOWN within the following six hours. 1-06-M Q-3.7.1-7

SURVEILLANCE REQUIREMENTS

1-05-HA
Q-3.7.1-5

4.7.1.1 ~~No additional requirements other than those required by Specification 4.0.5.~~ Verify each required MSSV lift setpoint per Table 3.7-2 in accordance with the Inservice Testing Program.** Following testing, lift settings shall be within ±1%. 1-07-A Q-3.7.1-5 1-04-LS Q-3.7.1-4

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* Separate Condition entry ~~time~~ is allowed for each MSSV.

~~** Only required to be performed in MODES 1 and 2~~ 1-05-HA Q-3.7.1-5

\# Only required in MODE 1. 1-02-LS Q-3.7.1-2

CHANGE NUMBER	NSHC	DESCRIPTION
01-05	MA	The exception to TS 3.0.4 is no longer needed due to the note associated with the revised surveillance. The exception was allowed to 3.0.4 due to the fact that the applicable MODES must be entered in order to perform the required surveillance (if the MSSVs are tested in place) and to allow Mode changes to be made if the applicable action was met. In the CTS, MODE 1, 2, or 3 could be entered. In NUREG-1431, the surveillance is modified by a ~~more restrictive~~ note that specifies that the surveillance need ~~only be~~ current prior to reaching MODE 2. The surveillance note is equivalent to the CTS 3.0.4 exception because it still allows MODE changes into the MODE of APPLICABILITY of the LCO, i.e., MODE 3 for testing purposes and thus the change is administrative. Q-3.7.1-5

CONVERSION COMPARISON TABLE - CURRENT TS 3/4.7

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
01-01 A	Reference to Table 3.7-2 is deleted from the LCO and moved to the SR (refer to 01-07-A).	YES	YES	YES	YES
01-02 LS-1	A note is added to allow separate condition entry for each MSSV which allows the full four hours for each inoperable MSSV.	YES	YES	YES	YES
01-03 LS-2	This CPSES specific revision relaxes the as-found MSSV lift tolerances from +/- 1% to +/- 3%.	NO: LA 108/107 issued 10/1/95 to relax setpoint (refer also to 01-13-LS20).	YES	NO	NO
01-04 LS-3	Revised ACTIONs for inoperable MSSVs: 1) specifically requires a power reduction within four hours and 2) requires the reactor power neutron flux high trip set point to be reduced within 72 hours.	~~YES~~NO - maintaining CTS	YES	YES	YES Q-3.7.1-4
01-05 MA	The ACTION of the CTS which allowed an exception to TS 3.0.4 is deleted due to the note associated with revised SR 4.7.1.1 which allows a MODE change into MODE 3, one of the MODES of APPLICABILITY of the LCO.	YES	YES	YES	YES Q-3.7.1-5
01-06 M	The new ACTION adds an explicit requirement to be in MODE 3 in 6 hours and MODE 4 in 12 hours if any SG loop has less than 2 MSSVs operable. This is one hour less than allowed by LCO 3.0.3.	YES	YES	YES	YES
01-07 A	The CTS SR is revised to specifically reference the IST Program. The surveillance directly references Table 3.7-2 for lift points and incorporates the footnote from the table requiring the MSSV as left setpoints to be within +/- 1% of the nominal setpoint.	YES	YES	YES	YES
01-08	NOT USED	NA	NA	NA	NA

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.1-7 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: CTS 3.7.1.1 Actions
ITS 3.7.1 Action B
DOC 01-06-M

ITS Action B adds a new condition for when "one or more steam generators with less than two MSSVs OPERABLE", then MODE 4 is entered to exit LCO Applicability. CTS 3.7.1.1 Actions would require the more severe LCO 3.0.3 shutdown for this degraded condition.

Comment: This change is not "more restrictive". In this degraded condition, the loss of one hour is immaterial since the one hour is insufficient time to return all the MSSVs to Operable. The one hour period is the normal allocation of time to plan for an orderly plant shutdown. It is less restrictive to place the unit in Mode 4 rather than in Mode 5. The "more" and the "less" restrictive features of this change are acting as opposites. Therefore, this change should include all this discussion and then be revised as an administrative reformatting of the CTS Table 3.7-1 requirements.

FLOG RESPONSE: The applicability for this specification is Modes 1, 2 and 3. In the CTS, LCO 3.0.3 shutdown only requires that the licensee "... place the unit in a MODE, in which the specification does not apply by placing it, as applicable, in..." Mode 3 in next 6 hours, Mode 4 in the following 6 hours and Mode 5 in the subsequent 24 hours. Thus, for this specification, LCO 3.0.3 is satisfied upon entry into Mode 4. LCO 3.0.3 allows 1 hour to prepare for an orderly shutdown but the new Condition B does not; therefore the change is more restrictive.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.2-1 **APPLICABILITY:** CP, WC, CA

REQUEST: CTS 3.7.1.5, All Actions
ITS 3.7.2, Action A, C, D, and E
DOC 05-03-LS-12
JFD 3.7-34

These changes are beyond the scope of a conversion because the industry travelers referenced in this DOC (WOG-64 and TSTF 30) have not been approved by the NRC.

Comment: Withdraw the changes or adopt the STS.

FLOG RESPONSE: WOG-64 has been approved by the TSTF and is designated TSTF-281. This traveler has been submitted to the NRC and the industry status reports indicate that the reviewer recommends rejection of this traveler. Therefore, the FLOG has decided to withdraw the changes proposed by the traveler and adopt the 8 hour Completion Time as identified in NUREG-1431.

ATTACHED PAGES:

Encl. 2	3/4.7-8
Encl. 3A	6
Encl. 3B	5
Encl. 4	1, 35, 36, 37 and 38
Encl. 5A	Traveler Status page, 3.7-5 and 3.7-6
Encl. 5B	B 3.7-10, B 3.7-11 and B 3.7-12
Encl. 6A	6
Enc. 6B	4

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

1-13-A
Q-3.7.1-1

3.7.1.5 Four MSIVs shall be OPERABLE.

APPLICABILITY: MODES 1, ~~2 and 3~~
MODES 2 and 3 except when all MSIVs are closed and deactivated. 5-01-LS

ACTION:

MODE 1:

With one MSIV inoperable but open, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 8 ~~72~~ 8 hours; otherwise be in STARTUP within the next 6 hours. ~~5-03-LS~~ Q-3.7.2-1

MODES 2* and 3*:

With one or more ~~or more~~ MSIVs inoperable, subsequent operation in MODE 2 or 3 may proceed provided the MSIV is closed within 8 ~~72~~ 8 hours and verified closed once per 7 days. Otherwise, be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. ~~5-03-LS~~ Q-3.7.2-1

~~(NEW) With two or more MSIVs inoperable, subsequent operation in MODE 2 or 3 may proceed provided the MSIV is closed within 8 hours and verified closed once per 7 days. Otherwise, be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.~~ ~~5-03-LS~~ Q-3.7.2-1

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each MSIV shall be demonstrated OPERABLE by verifying full closure time within 5 seconds when tested pursuant to Specification 4.0.5**. ~~The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.~~ 5-07-LS

(NEW) Verify each MSIV actuates to the isolation position on an actual or simulated signal every 18 months**. 5-08-M

*Separate entry times into Action Statement is allowed for each MSIV.
**Only required to be performed in MODES 1 and 2. 5-07-LS

CHANGE NUMBER	NSHC	DESCRIPTION
04-02	LS-8	The SR of Table 4.7-1 to determine Gross Radioactivity is deleted. The change is acceptable because radioiodines and the resulting thyroid dose are limiting; not noble gases and whole-body dose. The primary to secondary leakage limits and dose equivalent I-131 limits ensure the dose analyses in the [Final Safety Analysis Report] remain valid.
05-01	LS-9	The MODE of APPLICABILITY for the main steam safety valves (MSIVs) is revised to clarify that in MODES 2 and 3 with all MSIVs closed [and de-activated], the safety function of the MSIVs is already met. Thus, operability of the MSIVs in this condition is not required.
05-02	LS-11	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
05-03	~~LS-12~~	~~The Completion Time for closing one inoperable MSIV is extended to 72 hours and separate Required Actions are included for either one MSIV inoperable or two or more MSIVs inoperable in Modes 2 and 3. The completion time of 72 hours is considered appropriate because the Main Steam System is a closed system. The closed system is subjected to Type A testing, is seismic Category I piping, is missile protected, and typically has pressurized flow through it during normal operation such that loss of integrity would be expected to be observed through leakage detection systems and during walkdowns of the system. This is consistent with the 72 hour restoration time for containment isolation valves on closed systems. This change is consistent with WOG-64.~~ Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B). Q-3.7.2-1
05-04	A	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
05-05	M	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
05-06		Not used.
05-07	LS-23	A footnote is added to the SR to indicate that demonstration of MSIV OPERABILITY is only required to be performed for entry into (and continued operation in) MODES 1 and 2. The footnote is added in lieu of the current exception to CTS 4.0.4. While the footnote is intended to establish the same exemption, it is in fact less restrictive because the footnote permits an indefinite stay in MODE 3 while the exception to CTS 4.0.4 requires testing within 24 hours of establishing the necessary plant conditions per TS 4.0.3 as described in Generic Letter (GL) 87-09.

CONVERSION COMPARISON TABLE - CURRENT TS 3/4.7

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
03-03 LG	The CPSES specific description of how to verify the operability of the service water system when acting as backup to the CST for AFW supply is moved to the Bases. The surveillance will now require that the operability of the backup system be verified "by administrative means."	NO. The service water system is not accredited AFW supply backup.	YES	NO; refer to 03-02-LS-22.	NO; refer to 03-02-LS-22.
04-01 M	Isotopic analysis for DOSE EQUIVALENT I-131 concentration is to be performed on a 31 day frequency. The conditional performance requirements in the CTS are deleted.	YES	YES	YES	YES
04-02 LS-8	The SR of Table 4.7-1 to determine Gross Radioactivity is deleted.	YES	YES	YES	YES
05-01 LS-9	The MODE of APPLICABILITY for MSIVs is revised to clarify that in MODES 2 and 3 with all MSIVs closed [and de-activated], the safety function of the of the MSIVs is met.	YES	YES	NO; maintaining CTS.	NO; maintaining CTS.
05-02 LS-11	This DCPP specific change revises the AOT/completion time for an inoperable MSIV from 4 hours to 8 hours in MODE 1 and in MODES 2 and 3. This change also deletes the MODE 1 requirement to place the plant in MODE 3, and then MODE 4 due to an inoperable MSIV and only requires entry into MODE 2 since the ACTIONS for MODE 2 or 3 operation would then be applicable. Operation in MODES 2 and 3 is revised to allow more than one MSIV to be inoperable and by a note to allow a separate condition entry for each inoperable MSIV.	YES	NO	NO	NO
05-03 LS-12	The completion time for closing one inoperable MSIV is extended to 8 ~~72~~ hours and separate Required ACTIONs are included for either one ~~MSIV inoperable~~ or ~~two or~~ more MSIVs inoperable in MODES 2 or 3.	NO - Refer to 05-02-LS-11	~~YES~~ NO - already in CTS.	YES	YES Q-3.7.2-1
05-04 A	The LCO is changed from the OPERABILITY of each MSIV to the OPERABILITY of four MSIVs.	YES	NO; already in CTS	YES	YES

NO SIGNIFICANT HAZARDS CONSIDERATIONS (NSHC)
CONTENTS

Q-3.7.2-1

DC-3.7-001

IV. SPECIFIC NO SIGNIFICANT HAZARDS CONSIDERATIONS

~~NSHC LS-12~~
~~10 CFR 50.92 EVALUATION~~
~~FOR~~
~~TECHNICAL CHANGES THAT IMPOSE LESS RESTRICTIVE~~
~~REQUIREMENTS WITHIN THE TECHNICAL SPECIFICATIONS~~

Q-3.7.2-1

~~The current Technical Specifications (CTS) Actions require that with one main steam isolation valve (MSIV) inoperable and open in MODE 1 , OPERABILITY be restored within [eight] hours. Also, the CTS Actions require that, with one MSIV inoperable in MODES 2 and 3, subsequent operation in MODE 2 or MODE 3 may proceed provided the MSIV is closed and maintained closed. Failure to meet these conditions would require placing the plant in at least HOT STANDBY within the next six hours and in HOT SHUTDOWN within the following six hours. The changes to the CTS to be evaluated are:~~

~~1) The AOT for a single MSIV inoperable would be extended from [8] hours to 72 hours both in MODE 1. The AOT specified in NUREG-1431 was 8 hours. Industry traveler WOG-64 proposes to revise this to 72 hours. According to the BASES of NUREG-1431, the AOT of 8 hours is justified because of the low probability of an accident occurring during this time period that would require MSIV closure and because the MSIVs are isolation valves in a closed system (the SG and connected systems) that provide a passive barrier for containment isolation.~~

~~Extending the AOT from [8] to 72 hours would not alter the argument that the probability of an accident requiring MSIV closure occurring during a 72-hour period would remain very low. The MSIVs close to mitigate postulated design basis main steam and main feedwater line breaks and SG tube rupture events. These are Condition IV events ("Limiting Faults") and have an expected frequency of less than one occurrence in a hundred years.~~

~~WOG-64 applies the logic used in another industry traveler (TSTF-30) to extend, to the MSIVS, the AOT of containment isolation valves in closed systems from 8 to 72 hours. The MSIVs are in a system that is effectively an extension of containment. The SG systems inside containment are designed to similar ASME standards and have system design pressures many times greater than the containment design pressure. Thus, the SG and connected systems provide an effective barrier similar to that evaluated in TSTF-30.~~

~~In addition, the revised AOT would provide a more reasonable time to diagnose problems associated with an inoperable MSIV and mobilize corrective actions, obtain administrative clearances, complete the maintenance, restore the valve to an operable condition, and, where appropriate, perform a post maintenance verification. The additional time reduces the probability of unnecessary unit transients and unit shutdowns, thus improving unit safety and increasing unit availability. The proposed changes to increase the MSIV AOTs are consistent with the recommendations from NUREG-1024, "Technical Specifications Enhancing the Safety Impact." NUREG-1024 states in part.~~

> ~~*Allowable outage times that are too short will subject the unit to unnecessary trips, transients and fatigue cycling. Outage times that are too short also may result in less thorough repair and post-repair testing before equipment is returned to service.*~~

IV. SPECIFIC NO SIGNIFICANT HAZARDS CONSIDERATIONS

~~NSHC LS-12~~
~~(continued)~~

Q-3.7.2-1

~~2) The MODE 2 and 3 requirements for a single MSIV inoperable would be revised to extend the time to close the valve to 72 hours. No AOT was enumerated in CTS; the implication was that the valve would be closed immediately. The AOT specified in NUREG-1431 was 8 hours. Industry traveler WOG-64 proposes to revise this to 72 hours. The justification for this proposed change is the same as provided above for one MSIV inoperable in MODE 1, i.e., the low probability of an event requiring MSIV closure and the effective barrier provided by the SG systems inside containment.~~

~~3) Upon failure to meet the requirements for MODE 1, the plant would be required to shutdown to MODE 2 within 6 hours rather than MODE 3 within 6 hours and MODE 4 within 12 hours. This change is in accordance with NUREG-1431. The CTS requirement to take the unit to HOT SHUTDOWN if the valve cannot be restored to OPERABLE status is overly restrictive. Once the transition to MODE 2 occurs, the ACTIONS of MODE 2 should apply; the CTS allow continued operation in MODES 2 and 3 with one MSIV inoperable and closed. The safety function of the MSIVs is to close when required. Therefore, a closed MSIV is performing its safety function even if it is not operable. However, an MSIV cannot be closed with the unit operating in MODE 1 without initiating a unit shutdown. To provide the option to close the MSIV, the unit must be in at least MODE 2. Therefore, the proposed change would eliminate an overly restrictive shutdown requirement and apply a more logical sequence to MSIV OPERABILITY requirements as a unit shutdown progresses.~~

~~4) A new Action Statement would be added to allow a condition of "two or more" MSIVs inoperable in MODE 2 and 3 and to add a note to allow separate condition entry and completion times for each inoperable MSIV. The proposed AOT to be applied to this condition is 8 hours. These proposed changes are in accordance with NUREG-1431. Justification for the changes is based on the Required Action to close and maintain closed the inoperable MSIVS. NUREG-1431 recognizes that, if the MSIV is closed, it is performing its safety function and that, if other MSIVs become inoperable, their closure will allow them to perform their safety function. The addition of the note allowing separate entry for each inoperable MSIV provides the full completion time/allowed outage time for each inoperable MSSV. This is acceptable based upon the fact that the action is to close the valve and also on the low probability of a accident requiring the closure of the MSIVs in MODES 2 and 3 while in the 8-hour action. Therefore, the condition that more than one MSIV may be inoperable is offset by the shorter specified Completion Time.~~

~~If any of the proposed Actions cannot be accomplished within the specified Completion Times, the proposed specifications require a unit shutdown to MODE 3 within 6 hours and to MODE 4 within 12 hours. This is in accordance with CTS. In MODE 4 the LCO is no longer applicable.~~

~~This proposed TS change has been evaluated and it has been determined that it involves no significant hazards consideration. This determination has been~~

~~NSHC LS-12~~
~~(continued)~~

Q-3.7.2-1

~~performed in accordance with the criteria set forth in 10 CFR 50.92(c) as quoted below:~~

~~"The Commission may make a final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility licensed under 50.21(b) or 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:~~

~~1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or~~

~~2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or~~

~~3. Involve a significant reduction in a margin of safety.~~

~~The following evaluation is provided for the three categories of the significant hazards consideration standards:~~

~~1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?~~

~~The proposed changes to the MSIV TS would not alter the unit configuration or operating methods or the function of any safety related systems. Even though there is a slight risk increase associated with an increase in AOT owing to the consequences of a postulated accident with an inoperable MSIV, the risk is very small and not significant. The proposed changes do not increase the probability of an accident previously evaluated.~~

~~The proposed change to require entry into MODE 2 instead of MODES 3 and 4 with an inoperable MSIV in MODE 1 recognizes that since the MSIVs are closed they are performing their intended function and there is no need to place the plant in a MODE where the Limiting Condition for Operation is not applicable.~~

~~The proposed change allowing more than one MSIV to be inoperable in MODES 2 and 3 would have an insignificant effect on the probability or consequences of previously evaluated accidents. These effects would tend to be compensated by the short Completion Time to close the inoperable valves.~~

~~Furthermore, the increases in Completion Time would provide an increased opportunity to identify and correct the cause of MSIV inoperability before a shutdown and cooldown to MODE 4 would be required. This would have the effect of reducing the chances of occurrence for accidents and transients that could occur because of forced MODE changes.~~

~~Therefore, the proposed changes would not involve a significant increase in the probability or consequences of any accident previously evaluated.~~

~~NSHC LS-12~~
~~(continued)~~

Q-3.7.2-1

~~2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?~~

~~The proposed changes do not require physical alteration to any plant system or change the method by which any safety-related system performs its function. The Required Actions ultimately would place the MSIVs in their accident mitigating position, thus fulfilling their required function.~~

~~Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.~~

~~3. Does the change involve a significant reduction in a margin of safety?~~

~~The proposed changes do not alter the basic regulatory requirements and do not change any accident analysis assumptions, initial conditions or results. Consequently, the proposed changes do not involve a significant reduction in any margins of safety.~~

~~NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION~~

~~Based on the above evaluation, it is concluded that the activities associated with NSHC "LS-12" resulting from the conversion to the improved TS format satisfy the no significant hazards consideration standards of 10 CFR 50.92(c); and accordingly, a no significant hazards consideration finding is justified.~~

INDUSTRY TRAVELERS APPLICABLE TO SECTION 3.7

TRAVELER NUMBER	STATUS	JUSTIFICATION NUMBER	COMMENTS
TSTF-36, Rev 2	Incorporated	3.7-42	Only applicable to DCPP
TSTF-51	Not Incorporated	Not Applicable	Requires plant-specific reanalysis to establish decay time dependence for fuel handling accident.
TSTF-70, Rev 1	Not Incorporated	Not Applicable.	NRC approved TSTF not adopted since change was not applicable. TR-3.7-005
TSTF-100	Incorporated	3.7-05 and 3.7-19	NRC approved.
TSTF-101	Incorporated	3.7-29	NRC approved.
TSTF-139, Rev 1	Incorporated	~~3.7-29~~ Not Applicable - Bases change	NRC approved TR-3.7-005
TSTF-140, Rev 1	Not incorporated	NA	Not NRC approved as of traveler cutoff date.
TSTF-173	Incorporated		NRC approved. TR-3.7-001
TSTF-174	Incorporated		NRC approved. TR-3.7-002
~~WOG-64~~	~~Incorporated~~	~~3.7-34~~	Q-3.7.2-1
~~WOG-83~~ TSTF-235	~~Partially~~ Incorporated	3.7-01	~~Retained CTS except for the extension to 72 hours for trip reset.~~ Q-3.7.1-4
~~WOG-86~~TSTF-287	Incorporated	3.7-57	Not applicable to DCPP Q-3.7-10-14 TR-3.7-005
~~WOG-98~~TSTF-289	Incorporated	3.7-56	Q-3.7.2-3

3.7 PLANT SYSTEMS

3.7.2 Main Steam Isolation Valves (MSIVs)

LCO 3.7.2 Four MSIVs shall be OPERABLE. B

APPLICABILITY: MODE 1,
MODES 2 and 3 except when all MSIVs are closed and deactivated. B

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME	
A. One MSIV inoperable in MODE 1.	A.1 Restore MSIV to OPERABLE status.	~~72~~ 8 8 hours	~~3.7-34~~ Q-3.7.2-1
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 2.	6 hours	
C. ~~-------NOTE--------- Separate Condition entry is allowed for each MSIV.~~ ------------------- ---------NOTE--------- Separate Condition entry is allowed for each MSIV. ------------------- One ~~or more~~ or more MSIVs inoperable in MODE 2 or 3.	C.1 Close MSIV. AND C.2 Verify MSIV is closed.	72 8 ~~8~~ hours / Once per 7 days	~~3.7-34~~ Q-3.7.2-1
~~D. -------NOTE--------- Separate Condition entry is allowed for each MSIV.~~ ------------------- ~~Two or more MSIVs inoperable in MODE 2 or 3.~~	~~D.1 Close MSIV.~~ ~~AND~~ ~~D.2 Verify MSIV is closed.~~	~~8 hours~~ / ~~Once per 7 days~~	~~3.7-34~~ Q-3.7.2-1

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME	
EDD. Required Action and associated Completion Time of Condition C ~~or D~~ not met.	EDD.1 Be in MODE 3. AND EDD.2 Be in MODE 4.	6 hours 12 hours	~~ED~~ Q-3.7.2-1

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY	
SR 3.7.2.1	------------NOTE------------ Only required to be performed in MODES 1 and 2. ---------------------------- Verify the isolation ~~closure~~ time of each MSIV is ≤ ~~4.6~~ 5 seconds. ~~on an actual or simulated signal.~~	In accordance with the Inservice Testing Program ~~or [18] months~~	B-PS 3.7-56 Q-3.7.2-3 B-PS
SR 3.7.2.2	------------NOTE------------ Only required to be performed in MODES 1 and 2. ---------------------------- Verify each MSIV actuates to the isolation position on an actual or simulated actuation signal.	18 months	3.7-56 Q-3.7.2-3

the operator to maintain the pressure of the steam generator with the ruptured tube at the MSSV setpoints, a necessary step toward isolating the flow through the rupture.

e. The MSIVs are also utilized during other events such as a feedwater line break and LOCA (for containment isolation). ~~This event is~~ These events are less limiting so far as MSIV OPERABILITY is concerned.

The MSIVs satisfy Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

This LCO requires that four MSIVs in the steam lines be OPERABLE. The MSIVs are considered OPERABLE when the isolation times are within limits, and they close on an isolation actuation signal.

This LCO provides assurance that the MSIVs will perform their design safety function to mitigate the consequences of accidents that could result in offsite exposures comparable to the 10 CFR 100 (Ref. ~~1~~ 4) limits ~~or~~ and the NRC staff approved licensing basis. CP-3.7-13

APPLICABILITY

The MSIVs must be OPERABLE in MODE 1, and in MODES 2 and 3, except when closed and de-activated, when there is significant mass and energy in the RCS and steam generators. When the MSIVs are closed, they are already performing the safety function.

In MODE 4, normally most of the MSIVs are closed, and the steam generator energy is low.

In MODE 5 or 6, the steam generators do not contain much energy because their temperature is below the boiling point of water; therefore, the MSIVs are not required for isolation of potential high energy secondary system pipe breaks in these MODES.

ACTIONS

Q-3.7.2-1

A.1

With one MSIV inoperable in MODE 1, action must be taken to restore OPERABLE status within ~~8~~ ~~72~~ 8 hours. Some repairs to the MSIV can be

(Continued)

made with the unit hot. The ~~8~~ ~~72~~ 8 hour Completion Time is reasonable, considering the low probability of an accident occurring during this time period that would require a closure of the MSIVs. Q-3.7.2-1

The ~~8~~ ~~72~~ 8 hour Completion Time is ~~greater than~~ greater than ~~consistent with~~ that normally allowed for GDC-55 and GDC-56 containment isolation valves ~~because the MSIVs are valves~~ because the MSIVs are GDC-57 valves that isolate a closed system penetrating containment. ~~These valves differ from other containment isolation valves in that the closed system~~ ~~This time is reasonable due to the relative stability of the closed system which~~ These valves differ from ~~other~~ GDC-55 and GDC-56 containment isolation valves in ~~that the closed system~~ provides an additional ~~passive~~ means for containment isolation. CP-3.7-13

B.1

If the MSIV cannot be restored to OPERABLE status within ~~8~~ ~~72~~ 8 hours, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in MODE 2 within 6 hours and Condition C would be entered. The Completion Times are reasonable, based on operating experience, to reach MODE 2 and to close the MSIVs in an orderly manner and without challenging unit systems.

C.1 and ~~and C.2~~ ~~D.1 and D.2~~ Q-3.7.2-1

Condition C ~~D~~ ~~C~~ is modified by a Note indicating that ~~when two or more MSIVs are inoperable,~~ separate Condition entry is allowed for each MSIV. Since the MSIVs are required to be OPERABLE in MODES 2 and 3, the inoperable MSIVs may either be restored to OPERABLE status or closed. When closed, the MSIVs are already in the position required by the assumptions in the safety analysis.

The ~~8~~ ~~72~~ 8 hour Completion Time ~~of Required Action C.1~~ is consistent with that allowed in Condition A ~~,~~ ~~for one MISV inoperable. For two or more MSIVs inoperable, a more restrictive Completion Time of 8 hours is imposed by Required Action D.1.~~ Q-3.7.2-1

For inoperable MSIVs that cannot be restored to OPERABLE status within the specified Completion Time, but are closed but not deactivated, the inoperable MSIVs must be verified on a periodic basis to be closed. This is necessary to ensure that the assumptions in the safety analysis remain valid. The ~~7~~ ~~31~~ 7 day Completion Time is reasonable, based on engineering judgment, in view of MSIV status indications CP-3.7-13 CP-3.7.ED

available in the control room, and other administrative controls, to ensure that these valves are in the closed position.

~~E~~D.1 and ~~E~~D.2 ~~D.1 and D.2~~ Q-3.7.2-1

If the MSIVs cannot be restored to OPERABLE status or are not closed within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed at least in MODE 3 within 6 hours, and in MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from MODE 2 conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.2.1

This SR verifies that MSIV closure time is ≤ ~~[4.6]~~ 5 seconds. ~~on an actual or simulated actuation signal.~~ The hand switch may be used as the actuation signal to perform this surveillance. The MSIV ~~closure~~ isolation time is assumed in the accident and containment analyses. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. ~~The MSIVs should not be tested at power, since even a part stroke exercise increases the risk of a valve closure when the unit is generating power. As the MSIVs are not full-stroke tested at power, they are exempt from the ASME Code, Section XI (Ref. 5), requirements during operation in MODE 1 or 2.~~ Q-3.7.2-3 CP-3.7-008

The Frequency is in accordance with the Inservice Testing (IST) Program. ~~or 18 months. The [18] month Frequency for valve closure time is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month frequency specified by the IST program. Therefore, the Frequency is acceptable from a reliability standpoint.~~ Q-3.7.2-3

This test is allowed to be conducted in MODE 3 with the unit at operating temperature and pressure~~, as discussed in Reference 5 exercising requirements~~. This SR is modified by a Note that allows entry into and operation in MODE 3 prior to performing the SR. This allows a delay of testing until MODE 3, to establish

(Continued)

CHANGE NUMBER	JUSTIFICATION
3.7-32	CONDITION A is changed to "SSI level less than required" and SR 3.7.9.3 and 3.7.9.4 are deleted because the plant specific design does not use cooling towers. The "SSI level less than required" is a condition comparable to an inoperable cooling tower fan since the surface area (i.e., cooling capacity) decreases with level.
3.7-33	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-34	Q-3.7.2-1 ~~In accordance with traveler WOG-64, the Completion Time for closing one inoperable MSIV is extended to 72 hours and separate Required Actions are included for either one MSIV inoperable or two or more in Modes 2 and 3. The Completion Time of 72 hours is considered appropriate according to the BASES of NUREG-1431, because of the low probability of an accident occurring during this time period that would require MSIV closure and because the MSIVs are isolation valves in a closed system (the SG and connected systems) that provide a passive barrier for containment isolation. Extending the AOT to 72 hours would not alter the argument that the probability of an accident requiring MSIV closure occurring during a 72-hour period would remain very low. The MSIVs close to mitigate postulated design basis main steam and main feedwater line breaks and SG tube rupture events. These are Condition IV events ("Limiting Faults") and have an expected frequency of less than one occurrence in a hundred years.~~ ~~Also, the MSIVs are in a system that is effectively an extension of containment. The SG systems inside containment are designed to similar ASME standards and have system design pressures many times greater than the containment design pressure. Thus, the SG and connected systems provide an effective barrier similar to that evaluated in TSTF-30.~~ ~~In addition, the revised AOT would provide a more reasonable time to diagnose problems associated with an inoperable MSIV and mobilize corrective actions, obtain administrative clearances, complete the maintenance, restore the valve to an operable condition, and, where appropriate, perform a post maintenance verification. The additional time reduces the probability of unnecessary unit transients and unit shutdowns, thus improving unit safety and increasing unit availability.~~ Not used
3.7-35	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-36	REQUIRED ACTIONS D and E are revised for two trains inoperable where at least 100% of the required heat removal capacity is available. These changes are consistent with the current licensing basis. These actions are acceptable based on the number of cooling units available and the flexibility and redundancy in the power supplies and the support cooling water.

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
3.7-26	CONDITION D is deleted to reflect the CPSES plant specific design of primary FIVs and associated bypass valves and isolation backup via the in series FCVs and associated bypass valves.	NO	YES	NO	NO
3.7-27	A note is added to DCPP Table 3.7.1-2 under LIFT SETTING that specifies that the lift point of the lowest set safety is +3% and -2%.	YES (per LA 108/107)	No	No	No
3.7-28	Revise [ARV] frequency from 18 months to "in accordance with Inservice Test Program."	NO; CTS is 18 months.	YES	YES	YES
3.7-29	Revise AFW pump testing to be "In accordance with Inservice Test Program."	YES	YES	YES	YES
3.7-30	LCO 3.7.8 and ACTIONs are revised to incorporate requirements for two units with station service water system cross connections.	NO; covered by ECG per GL91-13 response.	YES	NO; single unit plant.	NO; single unit plant.
3.7-31	SR 3.7.8.2 is replaced with the current CPSES specific surveillance of the cross connections between units. The CPSES design has no automatic valves as per this SR in the ITS.	NO; refer to 3.7-15 and 3.7-16.	YES	NO	NO
3.7-32	CONDITION A for CPSES is changed to "SSI level less than required" and SR 3.7.9.3 and 3.7.9.4 are deleted.	NO	YES	NO	NO
3.7-33	The requirement to verify a make-up flow rate during the tests demonstrating the capability to maintain control room differential pressure above atmospheric pressure would be deleted.	YES; per CTS	NO; retained CTS requirement.	YES	YES
3.7-34	~~In accordance with traveler WOG-64, the Completion Time for closing one inoperable MSIV is extended to 72 hours; and separate required actions are included for either one MSIV inoperable or two or more MSIVs inoperable in Modes 2 and 3.~~ Not used	~~NO; adopting 8 hour AOT from STS.~~ NA	~~YES~~NA	~~YES~~NA	~~YES~~NA Q-3.7.2-1
3.7-35	SR 3.7.10.3 is revised to reflect DCPP specific plant configuration and CTS required testing.	YES	NO	NO	NO
3.7-36	REQUIRED ACTIONS D and E are revised for CPSES for two trains inoperable where at least 100% of the required heat removal capacity is available.	NO	YES	NO	NO
3.7-37	Modifies LCO 3.7.2 CONDITION A and adds new CONDITION B and C to be consistent with the CPSES CTS.	NO	YES	NO	NO

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.2-3 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: CTS 4.7.1.5
ITS SR 3.7.2.1 and SR 3.7.2.2
DOC 05-08-M
JFD 3.7-56

These changes are beyond the scope of a conversion because the industry traveler referenced in this DOC (WOG-98) has not been approved by the NRC.

Comment: Withdraw the changes or adopt the STS.

FLOG RESPONSE: WOG-98 has been approved by the TSTF and is designated as TSTF-289. The August 18, 1998 industry status reports indicates this traveler has been approved by the NRC. The proposed wording in TSTF-289 was modified from WOG-98 and these modifications have been incorporated into the ITS. The FLOG continues to pursue the changes proposed by this traveler.

ATTACHED PAGES:

Encl. 3A	7
Encl. 5A	Traveler Status page, 3.7-6 and 3.7-9
Encl. 5B	B 3.7-12, B 3.7-13, B 3.7-20 and B 3.7-21
Encl. 6A	8

CHANGE NUMBER	NSHC	DESCRIPTION
05-08	M	This change creates a new SR for the MSIVs [and feedwater isolation valves] to distinguish between the IST and the automatic actuation testing of these isolation valves. The surveillance allows credit for an actual actuation, if one occurs, to satisfy the SRs. This change is consistent with TSTF-289 WOG-98. This proposed change is acceptable because it results in more stringent TS requirements that are both appropriate and consistent with NUREG-1431. Although this is a new surveillance requirement, it may be performed in conjunction with existing surveillance requirements. Therefore, the statement allowing testing to be performed in MODE 3 is also needed for this new surveillance requirement. Q-3.7.2-3
06-01	LG	~~Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).~~ This change revises the CTS to delete the descriptive material from the CTS LCO and moves this material to the Bases. Q-3.7.4-9
06-02	LS-14	This change adds an exception to LCO 3.0.4 for the 7 day ACTION to restore the atmospheric [relief] valves OPERABILITY. This revision allows the plant to change MODES if one atmospheric [relief] valve is found inoperable while in MODE 2 or 3. Allowing MODE transition with an inoperable atmospheric [relief] valve does not significantly increase that risk since the remaining valves are OPERABLE.
06-03	M	Consistent with NUREG-1431, the specification is revised to be applicable to the "atmospheric [relief] lines" rather than only to the atmospheric [relief] valves [and associated controls]. This terminology extends the applicability of the specification to include the atmospheric [relief] [block] valve. This is more restrictive than the current specification.
06-04	M	A surveillance is added that requires the manual cycling of the atmospheric [relief] valve [block] valves [in accordance with the IST program]. This proposed change is acceptable because it results in more stringent TS requirements that are both appropriate and consistent with NUREG-1431.
06-05	LS-24	This change adds a new ACTION for three or more inoperable atmospheric [relief] valves that requires action within 24 hours. The CTS would require entry into TS 3.0.3 for three inoperable atmospheric [relief] valves. However, NUREG-1431 recognizes the availability of the [Steam Dump System] and the MSSVs, and the low probability of an accident requiring the atmospheric [relief] valves, thus permitting this configuration. Q-3.7.4-1

INDUSTRY TRAVELERS APPLICABLE TO SECTION 3.7

TRAVELER NUMBER	STATUS	JUSTIFICATION NUMBER	COMMENTS
TSTF-36, Rev 2	Incorporated	3.7-42	Only applicable to DCPP
TSTF-51	Not Incorporated	Not Applicable	Requires plant-specific reanalysis to establish decay time dependence for fuel handling accident.
TSTF-70, Rev 1	Not Incorporated	Not Applicable.	NRC approved TSTF not adopted since change was not applicable. TR-3.7-005
TSTF-100	Incorporated	3.7-05 and 3.7-19	NRC approved.
TSTF-101	Incorporated	3.7-29	NRC approved.
TSTF-139, Rev 1	Incorporated	~~3.7-29~~ Not Applicable - Bases change	NRC approved TR-3.7-005
TSTF-140, Rev 1	Not incorporated	NA	Not NRC approved as of traveler cutoff date.
TSTF-173	Incorporated		NRC approved. TR-3.7-001
TSTF-174	Incorporated		NRC approved. TR-3.7-002
~~WOG-64~~	~~Incorporated~~	~~3.7-34~~	Q-3.7.2-1
~~WOG-83~~ TSTF-235	~~Partially~~ Incorporated	3.7-01	~~Retained CTS except for the extension to 72 hours for trip reset.~~ Q-3.7.1-4
~~WOG-86~~TSTF-287	Incorporated	3.7-57	Not applicable to DCPP Q-3.7-10-14 TR-3.7-005
~~WOG-98~~TSTF-289	Incorporated	3.7-56	Q-3.7.2-3

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E~~D~~. Required Action and associated Completion Time of Condition C ~~or D~~ not met.	E~~D~~.1 Be in MODE 3. AND E~~D~~.2 Be in MODE 4.	6 hours 12 hours

~~ED~~
Q-3.7.2-1

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.2.1	---------------NOTE--------------- Only required to be performed in MODES 1 and 2. ------------------------------------ Verify the isolation ~~closure~~ time of each MSIV is ≤ ~~4.6~~ 5 seconds. ~~on an actual or simulated signal.~~	In accordance with the Inservice Testing Program ~~or [18] months~~
SR 3.7.2.2	---------------NOTE--------------- Only required to be performed in MODES 1 and 2. ------------------------------------ Verify each MSIV actuates to the isolation position on an actual or simulated actuation signal.	18 months

B-PS
3.7-56
Q-3.7.2-3
B-PS

3.7-56
Q-3.7.2-3

CONDITION	REQUIRED ACTION	COMPLETION TIME	
~~E~~C. Required Action and associated Completion Time not met.	~~E~~C.1 Be in MODE 3. AND ~~E~~C.2 Be in MODE 4.	6 hours 12 hours	ED B

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY	
SR 3.7.3.1	Verify the ~~closure~~ isolation time of each ~~MFIV~~ FIV~~, MFRV~~ and associated bypass valves is ≤ ~~7~~ 5 seconds. ~~on an actual or simulated actuation signal.~~	In accordance with the Inservice Testing Program ~~or [18] months~~	3.7-11 Q-3.7.2-3 3.7-56 B-PS
~~SR 3.7.3.2~~	~~Verify the closure time of each FCV and associated bypass valve which is being used to complete a required action is ≤ 5 seconds.~~	~~18 months~~	3.7-11 Q-3.7.3-2
SR 3.7.3.~~3~~2	Verify each FIV and associated bypass valves actuates to the isolation position on an actual or simulated actuation signal.	18 months	3.7-11 3.7-56
~~SR 3.7.3.4~~	~~Verify each FCV and associated bypass valve which is being used to complete a required action actuates to the isolation position on an actual or simulated actuation signal.~~	~~18 months~~	3.7-56 3.7-11 Q-3.7.3-2

available in the control room, and other administrative controls, to ensure that these valves are in the closed position.

~~E.1 and~~ ~~E~~D.2 D.1 and D.2

Q-3.7.2-1

If the MSIVs cannot be restored to OPERABLE status or are not closed within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed at least in MODE 3 within 6 hours, and in MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from MODE 2 conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.2.1

This SR verifies that MSIV closure time is ≤ ~~[4.6]~~ 5 seconds. ~~on an actual or simulated actuation signal.~~ The hand switch may be used as the actuation signal to perform this surveillance. The MSIV ~~closure~~ isolation time is assumed in the accident and containment analyses. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. ~~The MSIVs should not be tested at power, since even a part stroke exercise increases the risk of a valve closure when the unit is generating power. As the MSIVs are not full stroke tested at power, they are exempt from the ASME Code, Section XI (Ref. 5), requirements during operation in MODE 1 or 2.~~

Q-3.7.2-3

CP-3.7-008

The Frequency is in accordance with the Inservice Testing (IST) Program. ~~or 18 months. The [18] month Frequency for valve closure time is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month frequency~~ specified by the IST program. ~~Therefore, the Frequency is acceptable from a reliability standpoint.~~

Q-3.7.2-3

This test is allowed to be conducted in MODE 3 with the unit at operating temperature and pressure. ~~as discussed in Reference 5 exercising requirements.~~ This SR is modified by a Note that allows entry into and operation in MODE 3 prior to performing the SR. This allows a delay of testing until MODE 3, to establish

(Continued)

conditions consistent with those under which the acceptance criterion was generated.

~~SR 3.7.2.2~~

This ~~surveillance~~ SR verifies that each MSIV can ~~closure~~ close on an actual or simulated main steam line isolation actuation signal. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. The frequency of MSIV testing is every 18 months. The 18 month Frequency for testing is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, this Frequency is acceptable from a reliability standpoint. Q-3.7.2-3

This test is allowed to be conducted in MODE 3 with the unit at operating temperature and pressure. This SR is modified by a Note that allows entry into and operation in MODE 3 prior to performing the SR. This allows a delay of testing until MODE 3, to establish conditions consistent with those under which the acceptance criterion was generated. CP-3.7-13

REFERENCES

1. FSAR, Section 10.3.
2. FSAR, Section 6.2.
3. FSAR, ~~Section 15.1.5~~ Chapter 15.
4. 10 CFR 100.11.
5. ~~ASME, Boiler and Pressure Vessel Code, Section XI.~~ CP-3.7-13

BASES

unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.3.1

This SR verifies that the closure time of each ~~MFIV~~ FIV ~~, MFRV,~~ and associated bypass valves is ≤ ~~7~~ 5 seconds. ~~on an actual or simulated actuation signal.~~ The ~~MFIV~~ FIV ~~and MFRV~~ isolation ~~closure~~ times are assumed in the accident and containment analyses. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. ~~These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~ This is consistent with ~~the ASME Code, Section XI (Ref. 2), quarterly stroke requirements during operation in MODES 1 and 2.~~ RG 1.22. (Ref. 4)

Q-3.7.2-3

CP-3.7-009

The Frequency for this SR is in accordance with the Inservice Testing Program. ~~or 18 months The IST 18 month Frequency for valve closure is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the IST 18 month Frequency~~.

Q-3.7.2-3

~~SR 3.7.3.2~~

Q-3.7.3-2

~~This SR verifies that the closure time of each FCV and associated bypass valve which is being used to complete a required action is ≤ 7 5 seconds. Packing adustments on the FCV will not invalidate this SR because if the valve responds to normal control commands its closure time will not be affected. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~

~~The 18 month Frequency for valve closure is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency.~~

BASES

~~SR 3.7.3.3~~2

This SR verifies that each FIV and associated bypass valve can close~~s~~ on an actual or simulated actuation signal. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. ~~These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~ CP-3.7-009

The frequency of this surveillance is every 18 months. The 18 month Frequency for ~~valve closure~~ testing is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, this Frequency is acceptable from a reliabilty standpoint. Q-3.7.2-3

~~SR 3.7.3.4~~ Q-3.7.3-2

~~This SR verifies that each FCV and bypass valve which is being used to complete a required action closes on an actual or simulated actuation signal. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~

~~The 18 month Frequency for valve closure is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency.~~

REFERENCES

1. FSAR, ~~10.4.7~~ Chapters 6, 7, 10 and 15.

2. ~~ASME, Boiler and Pressure Vessel Code, Section XI.~~ Not used CP-3.7-009

3. NUREG-0138, "Staff Discussion of Fifteen Technical Issues Listed in Attachment to November 3, 1076 Memorandum from Director, NRR to NRR Staff," November 1976.

4. RG 1.22, "Periodic Testing of Protection System Actuation Functions, (2/17/72).

CHANGE NUMBER	JUSTIFICATION	
3.7-49	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-50	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-51	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-52	Not ~~used.~~ Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	DC-ALL-002
3.7-53	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-54	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-55	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-56	This change creates a new SR for the MSIVs [and feedwater isolation valves] to distinguish between the IST and the automatic actuation testing of these isolation valves. The surveillance allows credit for an actual actuation, if one occurs, to satisfy the surveillance requirements. These changes are consistent with TSTF-289 ~~WOG-98~~. [Although SR 3.7.2.2 is a new SR, it may be performed in conjuction with SR 3.7.2.1. Therefore, the note allowing testing to be performed in MODE 3 is also used for this SR.]	DC-ALL-002 Q-3.7.2-3
3.7-57	This change establishes appropriate Required Actions and Completion Times for ventilation system pressure envelope degradation. These changes are consistent with TSTF-287 ~~WOG-86~~.	Q-3.7.10-14

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.2-4 **APPLICABILITY:** CP

REQUEST: CTS 3.7.1.5 Action for Modes 2 and 3
ITS 3.7.2 Actions Note
DOC 05-ww-LSw

ITS 3.7.2 adds a new Actions Note that states, "Separate Condition entry is allowed for each MSIV". The markup for CTS 3.7.1.5 states "Separate entry time is allowed for each MSIV."

Comment: Revise the CTS markup to be consistent with the ITS 3.7.2 Actions Note.

FLOG RESPONSE: The wording in the CTS " Separate entry times into Action Statement is allowed for each MSIV" was adopted in License Amendment 54/40 as part of the CPSES "line item" adoption of the NUREG-1431. The wording was chosen and accepted by the NRC as the best CTS equivalent of the ITS Note, "Separate Condition entry is allowed for each MSIV". No DOC number is necessary because the existing CTS wording is equivalent to the ITS wording.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.3-2 **APPLICABILITY:** CP

REQUEST: CTS 3.7.1.6 LCO and Actions
ITS 3.7.3 LCO, Applicability, Actions and SRs
DOC 07-08-LS26
DOC 07-09-LS10
JFD 3.7-11, 3.7-26
DOC 07-10-M
DOC 07-17-A

These changes are beyond the scope of a conversion.

Comment: Provide additional justification.

FLOG RESPONSE: A discussion was held with the NRR staff on 10/9/98 concerning the proposed ITS for specification 3.7.3 for Comanche Peak Steam Electric Station (CPSES) (the TU Electric position is described below). The staff opposed the CPSES ITS on the basis that the changes might be generic, might be beyond scope, and that the licensee either had to retain the Current Technical Specifications (CTS) specification in its entirety or adopt the improved Standard Technical Specifications (STS) in its entirety. Based on the NRC's position on this issue, CPSES ITS 3.7.3 has been revised to adopt the CTS requirements

The CPSES ITS has an LCO which requires the Feedwater Isolation Valves and Associated Bypass Valves to be operable in the appropriate unit conditions of operation (Specification 3/4.7.1.6). The Main Feedwater Regulation Valves (Feedwater Control Valves or FCVs at CPSES) are not required to be operable by CTS because the FSAR does not assume the single active failure of an FIV or an MSIV and this assumption is not a regulatory requirement. The FCVs are not designated as active (i.e. are not full safety grade) but are designed as highly reliable backups to the FIVs. The NRC found this to be generically acceptable for PWRs in NUREG-0138*. This licensing basis is reflected in FSAR Figure 15.0-10 for MSLB which does not apply the single failure requirement to the feedwater or main steam isolation valves and FSAR Section 6.2.1 Reference 21. [*USNRC Office of Nuclear Reactor Regulation, NUREG-0138, "Staff Discussion of Fifteen Technical Issues Listed in Attachment to November 3, 1976 Memorandum from Director, NRR to NRC Staff", November 1976.]

The STS in specification 3.7.3 requires the Main Feedwater Isolation Valves and Main Feedwater Regulation Valves to be operable. Since the Main Feedwater Regulation Valves (FCVs at CPSES) are not in the CTS LCO, CPSES chose to retain the CTS for the ITS LCO. The remainder of STS 3.7.3 was retained and modified to be consistent with the revised LCO. Since the FCVs are not in the ITS, the conditions, actions and surveillances only took credit for the FCVs if they had been properly verified to be capable of performing the required function. As noted above, the capability of these valves to serve as a backup to the FIVs is consistent with the current licensing basis for the FCVs as approved by the NRC. The CPSES CTS was marked up to reflect the ITS and the changes were justified. The CPSES basis for proposing this was to improve safety of the plant. The CTS allows only 4 hours to correct an FIV problem even though the FCV is fully capable of performing the function. Allowing 72 hours to correct an FIV problem given credit for the FCV is consistent with the STS and could prevent an unnecessary plant shutdown transient or prevent a feedwater transient due to a less than adequate time allowed for a repair. The proposed ITS would retain the CTS 4 hours action time should the FCV not be available to perform the function.

These changes are not beyond scope. This is a proper retention of CTS and modification of the STS to do so.

This should not be classified as a generic change. Although other plants may be similar and may have similar CTS requirements, the choice to retain the CTS is made by each Licensee individually. Retention of the CTS is not a generic change.

The basis for the STS conditions, actions and surveillances, as modified to be consistent with the CTS LCO, has not been invalidated by the CPSES proposed ITS. The FCVs are only credited if they have been properly verified to be capable of performing the required function. All proposed actions, conditions, and surveillances of the CPSES proposed ITS are just as valid as the actions, conditions and surveillance in the STS. If these are not acceptable for CPSES, they should not be considered acceptable for the STS either. At some point a member of the NRR staff said that we cannot take credit for a component in the actions if that component is not in the LCO. Of course that is not true. There are many cases in which the required actions credit the functioning of a component which is not covered by the LCO (e.g., if an isolation valve is inoperable, the required actions allow isolation of the affected penetration flow path by at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured - these valves are not necessarily in the scope of the LCO). Requiring CPSES to add the FCVs to the LCO is counter to the CTS and to safety. If the FCVs are added to the ITS LCO, it is possible that a deficiency in the isolation capability of the FCVs could result in a unit shutdown when such a shutdown is not required by the CTS and would not be necessary per the CPSES licensing basis. Such a shutdown would put the unit through a transient that would be less safe than continuing to operate.

ATTACHED PAGES:

Encl 2	3/4.7-9 and 3/4.7-10
Encl 3A	9
Encl 3B	8
Encl 4	1, 33, 34, 53 and 54
Encl 5A	3.7-7, 3.7-8 and 3.7-9
Encl 5B	B 3.7-16 thru B 3.7-21
Encl 6A	3 and 5
Encl 6B	2 and 4

PLANT SYSTEMS

1-13-A
Q-3.7.1-1

MAIN FEEDWATER ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

7-01-A

3.7.1.6 ~~Each main feedwater line shall have~~ Four FIVs and associated bypass valves shall be OPERABLE ~~a feedwater isolation valve, feedwater isolation bypass valve, and feedwater preheater bypass valve~~.

7-17-LG
Q-3.7.3-6

APPLICABILITY: MODES 1, 2, and 3 except when the feedwater isolation valve or associated~~, feedwater isolation~~ bypass valve ~~or feedwater preheater bypass valve~~ is closed and de-activated or isolated by a closed manual valve. 7-02-LS

ACTION: NOTE: Separate entry is allowed for each valve. 7-03-LS

MODE 1:

~~7-08-LS~~
Q-3.7.3-2

a. With one or more feedwater isolation valve inoperable, ~~but open,~~ operations may continue provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ the inoperable feedwater isolation valve is restored to OPERABLE status, isolated or closed** within ~~4~~ ~~72~~ 4 hours, otherwise be in HOT STANDBY within the next 6 hours. 7-06-LS 7-05-LS 7-11-M

~~7-08-LS~~
Q-3.7.3-2

b. With one or more feedwater isolation bypass valves inoperable, operations may continue provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ each affected feedwater isolation bypass valve is restored to OPERABLE status, isolated or closed** within ~~4~~ ~~72~~ 4 hours, otherwise be in HOT STANDBY within the next 6 hours. 7-05-LS 7-11-M

~~7-08-LS~~
Q-3.7.3-2

c. With one or more feedwater preheater bypass valves inoperable, operations may continue provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ each affected feedwater preheater bypass valve is restored to OPERABLE status, isolated or closed** within ~~4~~ ~~72~~ 4 hours, otherwise be in HOT STANDBY within the next 6 hours. 7-05-LS 7-11-M

~~(NEW) With any feedwater isolation or associated bypass valve inoperable and the feedwater control and associated bypass valve in the same flow path unavailable, operations may continue provided the affected flow path is isolated or closed** within 8 hours; otherwise be in HOT STANDBY within the next 6 hours.~~

~~7-09-LS~~
Q-3.7.3-2

~~* Verify within 4 hours the feedwater control and associated bypass valves are available for feedwater isolation.~~

~~7-08-LS~~
Q-3.7.3-2

** Verify valve is isolated or closed once per 7 days. 7-11-M

PLANT SYSTEMS

MAIN FEEDWATER ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

MODES 2 and 3:

a. With one or more feedwater isolation valves inoperable, operations may proceed ~~provided the feedwater control and associated bypass valves are available for feedwater isolation* and~~ the affected feedwater isolation valve(s) is restored to OPERABLE status, isolated or closed** within ~~4~~ 72 4 hours, except that the valve may be opened as needed for a period of up to 1 hour for post maintenance testing; otherwise be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. ~~7-08-LS~~ Q-3.7.3-2 7-11-M 7-05-LS 7-17-A

b. With one or more feedwater isolation bypass valves inoperable, operations may proceed provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ the affected feedwater isolation bypass valve(s) is restored to OPERABLE status or is isolated or closed** within ~~4~~ 72 4 hours, except the valve may be opened as needed for a period of up to 1 hour for post maintenance testing; otherwise be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the following 6 hours. ~~7-08-LS~~ Q-3.7.3-2 7-11-M 7-05-LS 7-17-A

c. With one or more feedwater preheater bypass valves inoperable, operations may proceed provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ the affected feedwater preheater bypass valve(s) is restored to OPERABLE status, isolated or closed** within ~~4~~ 72 4 hours, except the valve may be opened as needed for a period of up to 1 hour for post maintenance testing; otherwise be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the following 6 hours. ~~7-08-LS~~ Q-3.7.3-2 7-11-M 7-05-LS 7-17-A

~~(NEW) With any feedwater isolation or associated bypass valve inoperable and the feedwater control and associated bypass valves in the same flow path unavailable, operations may proceed provided the affected flow path is isolated or closed** within 8 hours; except the valve may be opened as needed for a period of up to 1 hour for post maintenance testing; otherwise be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the following 6 hours.~~ ~~7-09-LS~~ Q-3.7.3-2 7-11-M 7-17-A

~~* Verify within 4 hours that the feedwater control and associated bypass valves are available for feedwater isolation.~~ ~~7-08-LS~~ Q-3.7.3-2

** Verify valve is closed or isolated once per 7 days. 7-11-M

CHANGE NUMBER	NSHC	DESCRIPTION
07-05	LS-17	The action for inoperable feedwater isolation valves in MODE 1 is revised to include the option to isolate or close the inoperable valve and the restriction of the action to an inoperable "but open" valve is deleted. The action for inoperable feedwater isolation valves in MODES 2 and 3 is revised to include the option to isolate the inoperable valve. The actions for inoperable feedwater isolation bypass valves in MODES 1, 2 and 3 are revised to include the option to isolate the inoperable valve.
07-06	LS-33	This change revises the ACTION to apply to one "or more" [feedwater isolation valves] inoperable. This is less restrictive than the CTS which applied to only one inoperable valve. The proposed change is acceptable due to the low probability of an event for which the feedwater isolation valves are required to be OPERABLE and the availability of alternate methods of performing the required function.
07-07	A	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
07-08	~~LS-26~~	~~NUREG-1431 allows a 72 hour COMPLETION TIME for feedwater isolation valves based on the redundant isolation provided by the feedwater control and associated bypass valves. The action completion times are changed from four to 72 hours when credit for the feedwater control and associated bypass valves may be taken and is verified within 4 hours.~~ Not used. Q-3.7.3-2
07-09	~~LS-10~~	~~A new action is added which retains the action requirements which were modified by Change Number 07-08. The Completion Time for this ACTION is further revised from 4 to 8 hours.~~ Not used. Q-3.7.3-2
07-10	M	~~A new surveillance for each feedwater control valve and control valve bypass is added.~~ Not used. Q-3.7.3-2
07-11	M	A new requirement for a 7 day periodic verification of the closure [or isolation] of inoperable isolation valves is added. This proposed change is acceptable because it results in more stringent TS requirements that are both appropriate and consistent with NUREG-1431.
07-12	LS-4	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
07-13		Not used
07-14		Not used
07-15		Not used
07-16	LS-34	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).

CONVERSION COMPARISON TABLE - CURRENT TS 3/4.7

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
07-05 LS-17	The CPSES specific action for inoperable feedwater isolation valves in MODE 1 is revised to include the option to isolate or close the inoperable valve and the restriction of the action to an inoperable "but open" valve is deleted. The action for inoperable feedwater isolation valves in MODES 2 and 3 is revised to include the option to isolate the inoperable valve. The actions for inoperable feedwater isolation bypass valves in MODES 1, 2 and 3 are revised to include the option to isolate the inoperable valve.	NO	YES	NO	NO
07-06 LS-33	This change revises the ACTION to apply to one "or more" feedwater valves inoperable.	YES	YES	YES	YES
07-07 A	The ACTIONs were revised that require achieving MODE 4 within 12 hours when the ACTIONs or COMPLETION TIMEs are not met.	NO; part of CTS.	NO; part of CTS.	YES	YES
~~07-08~~ ~~LS-26~~	~~The CPSES specific allowed completion time for an inoperable feedwater isolation valve is revised from 4 to 72 hours when credit for the feedwater control and associated bypass valves may be taken and is verified within 4 hours.~~ Not used	~~NO~~NA	~~YES~~NA	~~NO~~NA	~~NO~~NA Q-3.7.3-2
07-09 ~~LS-10~~	~~A new CPSES specific ACTION is added that retains the ACTION requirement which was modified by CN 07-08-LS-26 and revises the Completion Time from 4 to 8 hours.~~ Not used	~~NO~~NA	~~YES~~NA	~~NO~~NA	~~NO~~NA Q-3.7.3-2
07-10 ~~M~~	~~A new CPSES specific surveillance for each feedwater control and associated bypass valve is added.~~ Not used	~~NO~~NA	~~YES~~NA	~~NO~~NA	~~NO~~NA Q-3.7.3-2
07-11 M	Verification of valve [isolation or] closure once every 7 days is added.	YES	YES	YES	YES
07-12 LS-4	The ACTIONS associated with inoperable MFIVs would be revised to provide the alternative of closing [or isolating] an inoperable valve.	NO; part of CTS.	NO; refer to 07-05-LS-17.	YES	YES
07-13	NOT USED	NA	NA	NA	NA

NO SIGNIFICANT HAZARDS CONSIDERATIONS (NSHC)
CONTENTS

IV. SPECIFIC NO SIGNIFICANT HAZARDS CONSIDERATIONS

Q-3.7.3-2

~~NSHC LS-10~~

~~10 CFR 50.92 EVALUATION~~

~~FOR~~

~~TECHNICAL CHANGES THAT IMPOSE LESS RESTRICTIVE REQUIREMENTS WITHIN THE TECHNICAL SPECIFICATIONS~~

~~The completion time for restoring an inoperable main feedwater isolation valve to OPERABLE status, to isolate the flow path, or to close the affected valve is changed from 4 to 8 hours, consistent with NUREG-1431. Eight hours is reasonable based on the normal availability of the main feedwater control and bypass valves to perform the feedwater isolation function and the fact that the steam generators function as the primary containment isolation barrier. In addition, feedwater isolation signals also trip the main feedwater pumps. Providing the additional time will allow the operator to verify the availability of these alternate isolation valves and barriers and potentially avoid unnecessary plant transients.~~

~~This proposed TS change has been evaluated and it has been determined that it involves no significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10CFR 50.92(c) as quoted below:~~

> ~~*"The Commission may make a final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility licensed under 50.21 (b) or 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:*~~
>
> ~~*1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or*~~
>
> ~~*2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or*~~
>
> ~~*3. Involve a significant reduction in a margin of safety."*~~

~~The following evaluation is provided for the three categories of the significant hazards consideration standards:~~

~~1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?~~

~~The proposed change does not result in any hardware changes or changes to operating methodologies. This revision does not affect an accident initiator of any analyzed accident. The proposed change only recognizes the fact that with a main feedwater isolation valve inoperable, means are still available to perform its safety functions.~~

~~Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.~~

~~NSHC LS-10 (Continued)~~

Q-3.7.3-2

~~2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?~~

~~The proposed change does not necessitate a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will still ensure the containment boundary is maintained. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.~~

~~3. Does this change involve a significant reduction in a margin of safety?~~

~~The proposed change does not change any accident analysis assumptions, initial conditions or results. Consequently, it does not have an effect on a margin of safety.~~

~~Therefore, the proposed change does not involve a significant reduction in a margin of safety.~~

~~NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION~~

~~Based on the above evaluation, it is concluded that the activities associated with NSHC "LS-10" resulting from the conversion to the improved TS format satisfy the no significant hazards consideration standards of 10 CFR 50.92(c); and accordingly, a no significant hazards consideration finding is justified.~~

Q-3.7.3-2

~~NSHC LS-26~~
~~10 CFR 50.92 EVALUATION~~
~~FOR~~
~~TECHNICAL CHANGES THAT IMPOSE LESS RESTRICTIVE REQUIREMENTS WITHIN THE TECHNICAL SPECIFICATIONS~~

~~Similar to NUREG-1431 which allows a 72 hour action completion time for feedwater isolation valves based on the redundant isolation provided by the feedwater control and associated bypass valves, the action completion times are changed from 4 to 72 hours when credit for the feedwater control and associated bypass valves may be taken and is verified within 4 hours.~~

~~The main feedwater regulation valves (Feedwater Control Valves, FCVs) and associated bypass valves are non-Nuclear Safety Related and not classified as active valves because single active mechanical failure of the main feedwater isolation valves (FIVs) and associated bypass valves (Feedwater Isolation Bypass Valves, FIBVs and Feedwater Preheater Bypass Valves, FPBVs) is not assumed in the accident analyses. The FCVs and associated bypass valves are credited as backup in the unlikely event a feedwater isolation valve or associated bypass valve fails. The credit for availability of the FCVs and associated bypass valves as backup is taken in the ACTIONs in lieu of requiring operability in the LCO. Because the FCVs and associated bypass valves are not safety related, they are not in the scope of the IST Program. Therefore, a surveillance on the same frequency as the FIVs is added to ensure availability of these valves. Similar to the FIVs, these valves should not be tested at power.~~

~~This proposed TS change has been evaluated and it has been determined that it involves no significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10CFR 50.92(c) as quoted below:~~

> ~~*"The Commission may make a final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility licensed under 50.21 (b) or 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:*~~
>
> ~~*1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or*~~
>
> ~~*2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or*~~
>
> ~~*3. Involve a significant reduction in a margin of safety."*~~

~~NSHC LS-26 (Continued)~~

Q-3.7.3-2

~~The following evaluation is provided for the three categories of the significant hazards consideration standards:~~

~~1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?~~

~~The proposed change does not result in any hardware or safety analysis changes. The safety analyses already credit the main feedwater regulation valves as backup to the feedwater isolation valves to ensure the isolation function is achieved. The added surveillance ensures the availability of the backup function. Therefore, this change will not involve a significant increase in the probability or consequences of an accident previously evaluated.~~

~~2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?~~

~~The proposed change does not necessitate a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.~~

~~3. Does this change involve a significant reduction in a margin of safety?~~

~~The proposed change does not affect the margin of safety as the main feedwater regulation valves isolation function controls and performance are the same as for the feedwater isolation valves. The isolation response time will be verified on the same frequency as the feedwater isolation valves. Because these valves modulate in normal operation, they are also equivalent to the isolation valves which are partially stroked (10%) periodically at power. As such any reduction in a margin of safety will be insignificant and offset by the benefit gained through avoiding an unnecessary plant transient.~~

~~NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION~~

~~Based on the above evaluation, it is concluded that the activities associated with NSHC "LS-26" resulting from the conversion to the improved TS format satisfy the no significant hazards consideration standards of 10 CFR 50.92(c); and accordingly, a no significant hazards consideration finding is justified.~~

3.7 PLANT SYSTEMS

3.7.3 ~~Main~~ Feedwater Isolation Valves ~~(MFIVs)~~ (FIVs) ~~and Main Feedwater Regulation Valves (MFRVs)~~ and Associated Bypass Valves 3.7-11

LCO 3.7.3 Four ~~MFIVs, [four] MFRVs, [~~ FIVs and associated bypass valves shall be OPERABLE. 3.7-11

~~NOTE~~
~~The associated bypass valves for each FIV are the feedwater isolation bypass valve and the associated feedwater preheater bypass valve~~ ~~3.7-11~~ Q-3.7.3-6

APPLICABILITY: MODES 1, 2, and 3 except when ~~MFIV~~ FIV~~, MFRV,~~ or associated bypass valve is closed and de-activated or isolated by a closed manual valve. B-PS

ACTIONS

NOTE
Separate Condition entry is allowed for each valve.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more ~~MFIVs~~ FIVs inoperable.	~~A.1.1 Verify, by administrative means, the Feedwater Control Valve (FCV) and associated bypass valve in the same flowpath are available to perform feedwater isolation~~	~~4 hours~~
	~~AND~~	
	~~A.1.2 Close or isolate FIVs.~~	~~72 hours~~
	~~AND~~	
	~~A.1.3 Verify FIV is closed or isolated.~~	~~Once per 7 days~~
	~~OR~~	
	A.2.1 Close or isolate ~~MFIV~~ FIV.	~~8~~ 4 hours
	AND	
	A.2.2 Verify ~~MFIV~~ FIV is closed or isolated.	Once per 7 days

PS
3.7-11
Q-3.7.3-2
~~3.7-26~~
Q-3.7.3-2
PS

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME	
~~B. One or more MFRVs inoperable.~~	~~B.1 Close or isolate MFRV .~~ ~~AND~~ ~~B.2 Verify MFRV is closed or isolated.~~	~~[72] hours~~ ~~Once per 7 days~~	3.7-11
~~C~~B. One or more FIV ~~[MFRV or preheater]~~ bypass valves inoperable.	~~CB.1.1 Verify the FCV and associated bypass valve in the same flowpath are available to perform feedwater isolation~~ ~~AND~~ ~~CB.1.2 Close or isolate bypass valve.~~ ~~AND~~ ~~CB.1.3 Verify bypass valve is closed or isolated.~~ ~~OR~~ ~~C~~B.2.1 Close or isolate bypass valve. AND ~~C~~B.2.2 Verify bypass valve is closed or isolated.	~~4 hours~~ ~~72 hours~~ ~~Once per 7 days~~ 8 4 hours Once per 7 days	ED 3.7-11 Q-3.7.3-2 ~~3.7-26~~ Q-3.7.3-2
~~D. Two valves in the same flow path inoperable.~~	~~D.1 Isolate affected flow path.~~	~~8 hours~~	~~3.7-26~~ 3.7-11 Q-3.7.3-2

CONDITION	REQUIRED ACTION		COMPLETION TIME	
~~E~~C. Required Action and associated Completion Time not met.	~~E~~C.1	Be in MODE 3.	6 hours	ED
	AND			
	~~E~~C.2	Be in MODE 4.	12 hours	B

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY	
SR 3.7.3.1	Verify the ~~closure~~ isolation time of each ~~MFIV~~ FIV~~, MFRV~~ and associated bypass valves is ≤ ~~7~~ 5 seconds. ~~on an actual or simulated actuation signal.~~	In accordance with the Inservice Testing Program ~~or [18] months~~	3.7-11 Q-3.7.2-3 3.7-56 B-PS
~~SR 3.7.3.2~~	~~Verify the closure time of each FCV and associated bypass valve which is being used to complete a required action is ≤ 5 seconds.~~	~~18 months~~	3.7-11 Q-3.7.3-2
SR 3.7.3.~~3~~2	Verify each FIV and associated bypass valves actuates to the isolation position on an actual or simulated actuation signal.	18 months	3.7-11 3.7-56
~~SR 3.7.3.4~~	~~Verify each FCV and associated bypass valve which is being used to complete a required action actuates to the isolation position on an actual or simulated actuation signal.~~	~~18 months~~	3.7-56 3.7-11 Q-3.7.3-2

BASES

APPLICABLE SAFETY ANALYSES

The design basis of the ~~MFIVs~~ FIVs ~~and MFRVs~~ is established by the analyses for the large SLB. It is also influenced by the accident analysis for the large FLB ~~FWLB~~. Closure of the ~~MFIVs~~ FIVs and associated bypass valves~~, or MFRVs and associated bypass valves,~~ may also be relied on to terminate an SLB for core response analysis and excess feedwater event upon the receipt of a steam generator water level — high high signal ~~or a feedwater isolation signal on high steam generator level~~.

Failure of an ~~MFIV~~ FIV, ~~MFRV~~, or the associated bypass valves to close following an SLB or FLB ~~FWLB~~ can result in additional mass and energy being delivered to the steam generators, contributing to cooldown. This failure also results in additional mass and energy releases following an SLB or FLB ~~FWLB~~ event. The FCVs and feedwater pump trips are credited in the safety analyses as highly reliable back-ups in the event of such failures. Q-3.7.3-2

The ~~MFIVs~~ FIVs and ~~MFRVs~~ and associated bypass valves satisfy Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii)..

LCO

This LCO ensures that the ~~MFIVs~~ FIVs~~, MFRVs ,~~ and their associated bypass valves will isolate MFW flow to the steam generators, following an FLB ~~FWLB~~ or main steam line break. ~~These valves, will also isolate the nonsafety related portions from the safety related portions of the system.~~ The associated bypass valves for each FIV are the feedwater isolation bypass valve and the associated feedwater preheater bypass valve. Q-3.7.3-6

This LCO requires that ~~[four]~~ ~~MFIVs~~ FIVs and associated bypass valves ~~and [four] MFRVs [and associated bypass valves]~~ be OPERABLE. The ~~MFIVs~~ FIVs ~~and MFRVs~~ and the associated bypass valves are considered OPERABLE when isolation times are within limits and they close on an isolation actuation signal.

Failure to meet the LCO requirements can result in additional mass and energy being released to containment following an SLB or FLB ~~FWLB~~ inside containment. Because ~~If~~ a feedwater isolation signal on high steam generator level is relied on to terminate an excess feedwater flow event, failure to meet the LCO may result in the introduction of water into the main steam lines.

BASES

APPLICABILITY

The ~~MFIVs~~ FIVs ~~and MFRVs~~ and the associated bypass valves must be OPERABLE whenever there is significant mass and energy in the Reactor Coolant System and steam generators. This ensures that, in the event of an HELB, a single failure cannot result in the blowdown of more than one steam generator. In MODES 1, 2, ~~[~~and 3~~]~~, the ~~MFIVs~~ FIVs ~~and MFRVs~~ and the associated bypass valves are required to be OPERABLE to limit the amount of available fluid that could be added to containment in the case of a secondary system pipe break inside containment. When the valves are closed and de-activated or isolated by a closed manual valve, they are already performing their safety function. In MODES 4, 5, and 6, steam generator energy is low. Therefore, the ~~MFIVs~~ FIVs~~, MFRVs,~~ and the associated bypass valves are normally closed since MFW is not required.

ACTIONS

The ACTIONS table is modified by a Note indicating that separate Condition entry is allowed for each valve.

A.1 and A.2

With one ~~MFIV~~ FIV in one or more flow paths inoperable, action must be taken to ~~verify by administrative means that the back-up isolation function is available within 4 hours and to~~ restore the affected valves to OPERABLE status, or to close or isolate inoperable affected valves within ~~72~~ 4 hours. ~~If the back-up function is not available, the affected inoperable valves must be closed in 8 hours.~~ When these valves are closed or isolated, they are performing their required safety function.

Q-3.7.3-2

The ~~72~~ 4 hour Completion Time takes into account the redundancy afforded by the remaining OPERABLE valves and the low probability of an event occurring during this time period that would require isolation of the MFW flow paths. The ~~72~~ 4 hour Completion Time is reasonable, based on operating experience.

Q-3.7.3-2

~~With a FIV inoperable and FCVs and associated bypass valves unavailable in the same flow path, there may be no redundant system to operate automatically and perform the required safety function. Under these conditions, affected valves in each flow path must be restored to OPERABLE status, or the affected flow path isolated within 8 hours.~~

BASES

Inoperable ~~MFIVs~~ FIVs that are closed or isolated must be verified on a periodic basis that they are closed or isolated. This is necessary to ensure that the assumptions in the safety analysis remain valid. The ~~7~~ ~~31~~ 7 day Completion Time is reasonable, based on engineering judgment, in view of valve status indications available in the control room, and other administrative controls, to ensure that these valves are closed or isolated. LCO 3.0.5 allows the FIVs to be opened as needed for post maintenance testing to demonstrate operability. CP-3.7-ED Q-3.7.3-2

B.1 and B.2

~~With one MFRV in one or more flow paths inoperable, action must be taken to restore the affected valves to OPERABLE status, or to close or isolate inoperable affected valves within [72] hours. When these valves are closed or isolated, they are performing their required safety function.~~

~~The [72] hour Completion Time takes into account the redundancy afforded by the remaining OPERABLE valves and the low probability of an event occurring during this time period that would require isolation of the MFW flow paths. The [72] hour Completion Time is reasonable, based on operating experience.~~

~~Inoperable MFRVs FCVs, that are closed or isolated, must be verified on a periodic basis that they are closed or isolated. This is necessary to ensure that the assumptions in the safety analysis remain valid. The 7 day Completion Time is reasonable, based on engineering judgment, in view of valve status indications available in the control room, and other administrative controls to ensure that the valves are closed or isolated.~~

~~C.1 and C.2~~

With one associated bypass valve in one or more flow paths inoperable, action must be taken to ~~verify by administrative means that the back-up isolation function is available within 4 hours and~~ restore the affected valves to OPERABLE status, or to close or isolate inoperable affected valves within ~~72~~ 4 hours. When these valves are closed or isolated, they are performing their required safety function. Q-3.7.3-2

The ~~72~~ 4 hour Completion Time takes into account the redundancy afforded by the ~~remaining OPERABLE valves~~ remaining OPERABLE valves ~~FCV and associated bypass valve~~ and the low probability of an event occurring during this time period that would require isolation of the MFW flow paths. ~~If~~

BASES

~~the back-up function is not available, the inoperable affected valves must be closed in 8 hours.~~ The ~~72~~ 4 hour Completion Time is reasonable, based on operating experience. Q-3.7.3-2

~~With a FIV bypass valve inoperable and the FCV and associated bypass valves unavailable in the same flow path, there may be no redundant system to operate automatically and perform the required safety function. Under these conditions, affected valves in each flow path must be restored to OPERABLE status, or the affected flow path isolated within 8 hours.~~

Inoperable associated bypass valves that are closed or isolated must be verified on a periodic basis that they are closed or isolated. This is necessary to ensure that the assumptions in the safety analysis remain valid. The 7 day Completion Time is reasonable, based on engineering judgment, in view of valve status indications available in the control room, and other administrative controls, to ensure that these valves are closed or isolated. LCO 3.0.5 allows the FIV bypass valves to be opened as needed for post maintenance testing to demonstrate operability. Q-3.7.3-2

~~D.1~~

~~With two inoperable valves in the same flow path, there may be no redundant system to operate automatically and perform the required safety function. Although the containment can be isolated with the failure of two valves in parallel in the same flow path, the double failure can be an indication of a common mode failure in the valves of this flow path, and as such, is treated the same as a loss of the isolation capability of this flow path. Under these conditions, affected valves in each flow path must be restored to OPERABLE status, or the affected flow path isolated within 8 hours. This action returns the system to the condition where at least one valve in each flow path is performing the required safety function. The 8 hour Completion Time is reasonable, based on operating experience, to complete the actions required to close the MFIV or MFRV, or otherwise isolate the affected flow path.~~

~~E~~C.1 and ~~E~~C.2

If the ~~MFIV(s)~~ FIVs ~~and MFRV~~ and the associated bypass valve(s) cannot be restored to OPERABLE status, or closed, or isolated within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required

BASES

unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.3.1

This SR verifies that the closure time of each ~~MFIV~~ FIV ~~, MFRV,~~ and associated bypass valves is ≤ ~~7~~ 5 seconds. ~~on an actual or simulated actuation signal.~~ The ~~MFIV~~ FIV ~~and MFRV~~ isolation ~~closure~~ times are assumed in the accident and containment analyses. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. ~~These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~ This is consistent with ~~the ASME Code, Section XI (Ref. 2), quarterly stroke requirements during operation in MODES 1 and 2.~~ RG 1.22. (Ref. 4) Q-3.7.2-3 CP-3.7-009

The Frequency for this SR is in accordance with the Inservice Testing Program. ~~or 18 months The IST 18 month Frequency for valve closure is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the IST 18 month Frequency.~~ Q-3.7.2-3

~~SR 3.7.3.2~~ Q-3.7.3-2

~~This SR verifies that the closure time of each FCV and associated bypass valve which is being used to complete a required action is ≤ 7 5 seconds. Packing adustments on the FCV will not invalidate this SR because if the valve responds to normal control commands its closure time will not be affected. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~

~~The 18 month Frequency for valve closure is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency.~~

BASES

SR 3.7.3.2

This SR verifies that each FIV and associated bypass valve can closes on an actual or simulated actuation signal. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. ~~These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~ CP-3.7-009

The frequency of this surveillance is every 18 months. The 18 month Frequency for ~~valve closure~~ testing is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, this Frequency is acceptable from a reliability standpoint. Q-3.7.2-3

~~SR 3.7.3.4~~ Q-3.7.3-2

~~This SR verifies that each FCV and bypass valve which is being used to complete a required action closes on an actual or simulated actuation signal. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~

~~The 18 month Frequency for valve closure is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency.~~

REFERENCES

1. FSAR, ~~10.4.7~~ Chapters 6, 7, 10 and 15.

2. ~~ASME, Boiler and Pressure Vessel Code, Section XI.~~ Not used CP-3.7-009

3. NUREG-0138, "Staff Discussion of Fifteen Technical Issues Listed in Attachment to November 3, 1076 Memorandum from Director, NRR to NRR Staff," November 1976.

4. RG 1.22, "Periodic Testing of Protection System Actuation Functions, (2/17/72).

CHANGE NUMBER	JUSTIFICATION	
3.7-11	The REQUIRED ACTIONS for the main feedwater isolation valves (FIVs) and associated bypass valves inoperable are revised consistent with the current licensing basis. All LCO, Conditions/Required Actions and Surveillance requirements associated with the feedwater control valves (FCVs) and FCV bypass valves are deleted since the FCVs are not in the CTS. ~~A COMPLETION TIME of 4 hours is provided to confirm availability of the main feedwater control valves (FCVs) and associated bypass valves. A completion time of 72 hours is provided to close or isolate the FIVs. A new SR is added for the FCVs and associated bypass valves.~~	Q-3.7.3-2
	~~The main FCVs and associated bypass valves are non-Nuclear Safety Related and not classified as active valves because a single active mechanical failure of the FIVs and associated bypass valves (feedwater isolation (FIBVs) and feedwater preheater bypass valves (FPBVs)) is not assumed in the accident analyses. The FCVs and the associated bypass valves are credited as backup in the unlikely event a FIV or associated bypass valve fails. The credit for availability of the FCVs and associated bypass valves as backup is taken in the ACTIONS in lieu of requiring operability in the LCO. Because the FCVs and associated bypass valves are not safety related, they are not in the scope of the Inservice Test Program. Therefore, a surveillance on the same frequency as the FIVs is added to ensure availability of these valves. Similar to the FIVs, these valves should not be tested at power.~~	
	~~A note was added to the LCO to clarify the plant specific associated bypass valves at CPSES for each FIV.~~	Q-3.7.3-6

CHANGE NUMBER	JUSTIFICATION
3.7-21	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-22	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-23	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-24	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-25	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-26	~~CONDITION D (for two valves in the same flow path inoperable) is deleted to reflect changes to Required Actions A and C and plant specific design of primary FIVs and associated bypass valves and isolation backup via the in series FCVs and associated bypass valves. The applicable 8 hour completion time is moved to the revised Actions A and C.~~ Not used. Q-3.7.3-2
3.7-27	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-28	Revise [ARV] frequency from 18 months to "in accordance with Inservice Test Program." to be consistent with other valves in the CTS which are included in the Inservice Test Program (IST). The CTS for the [ARV] surveillance frequency is per the IST Program. [This change is also applicable to the [ARV] block valves that are included in the IST program.]
3.7-29	Revise AFW pump testing frequency to be "In accordance with Inservice Test Program." These changes are consistent with TSTF-101, and will eliminate any ambiguity associated with pump testing frequency as a result of ASME changes.
3.7-30	LCO 3.7.8 and SRs are revised to incorporate requirements for two units with station service water system cross connections. These changes are [consistent with the CTS and are] more restrictive than NUREG-1431, but are consistent with NRC Generic Letter 91-13. [STS are based on station service water systems which are 100% redundant and are not shared with another unit which is the case for CPSES. The STS 3.7.8 meets satisfies Criterion 3 of 10CFR50.36(c)(2)(ii). The requirements for cross connections and an opposite unit pump satisfy Criterion 4 of 10CFR50.36(c)(2)(ii). These additional requirements were added to CPSES Unit 1 Tech Specs by ITS 3.7.8 reference 6, TXX-92410. The ITS BASES APPLICABLE SAFETY ANALYSIS has been revised to clarify this.] Q-3.7.8-4

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
3.7-09	New Conditions E., F. and H and the surveillance requirement associated with the FWST AFW pump supply are relocated from the CTS on AFW supply and included in the DCPP AFW specification for completeness.	YES	NO	NO	NO
3.7-10	The specification description, the LCO, the action requirements and the surveillance are revised to incorporate the DCPP plant specific requirement for operable AFW supply sources via the CST and the FWST per the current licensing basis.	YES	NO	NO	NO
3.7-11	The REQUIRED ACTIONS for CPSES feedwater isolation and associated bypass valves inoperable are revised consistent with the current licensing basis. ~~for a COMPLETION TIME of 4 hours and to credit the MFRVs (feedwater control valves (FCVs)) and associated bypass valves for a completion time of 72 hours. A new SR is added for the FCVs and associated bypass valves.~~	NO	YES	NO	NO Q-3.7.3-2
3.7-12	~~WOG-83 revised Condition A and Table 3.7-1 to account for plants that credit the Power Range High Neutron Flux trip function when MTC is positive (See CN 3.7-01 above). The wording of the traveler has been modified for CPSES to account for plant specific differences~~	NO	~~YES~~NO	NO	NO Q-3.7.1-4
3.7-13	Note 1. under ACTION REQUIRED A.1 is deleted. The DCPP emergency diesel generators have self contained cooling systems that do not rely upon an external source of cooling water.	YES	NO	NO	NO
3.7-14	The note for SR 3.7.8.1 is deleted since the DCPP ASW system supplies only the CCW heat exchanger and no other individual components.	YES	NO	NO	NO
3.7-15	SR 3.7.8.1 is revised to include a DCPP specific requirement to verify the availability of power and air so that the valves can be placed in their correct position as described in the bases.	YES	NO	NO	NO
3.7-16	SR 3.7.8.2 is revised to include only power operated valves since there are no automatically operated valves in the DCPP ASW system. The surveillance is revised to require movement of power operated valves to demonstrate the ability to reconfigure the ASW system as described in the FSAR and the ITS bases.	YES	NO	NO	NO

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
3.7-26	~~CONDITION D is deleted to reflect the CPSES plant specific design of primary FIVs and associated bypass valves and isolation backup via the in series FCVs and associated bypass valves.~~ Not used	~~NO~~NA	~~YES~~NA	~~NO~~NA	~~NO~~ NA Q-3.7.3-2
3.7-27	A note is added to DCPP Table 3.7.1-2 under LIFT SETTING that specifies that the lift point of the lowest set safety is +3% and -2%.	YES (per LA 108/107)	No	No	No
3.7-28	Revise [ARV] frequency from 18 months to "in accordance with Inservice Test Program."	NO; CTS is 18 months.	YES	YES	YES
3.7-29	Revise AFW pump testing to be "in accordance with Inservice Test Program."	YES	YES	YES	YES
3.7-30	LCO 3.7.8 and ACTIONs are revised to incorporate requirements for two units with station service water system cross connections.	NO; covered by ECG per GL91-13 response.	YES	NO; single unit plant.	NO; single unit plant.
3.7-31	SR 3.7.8.2 is replaced with the current CPSES specific surveillance of the cross connections between units. The CPSES design has no automatic valves as per this SR in the ITS.	NO; refer to 3.7-15 and 3.7-16.	YES	NO	NO
3.7-32	CONDITION A for CPSES is changed to "SSI level less than required" and SR 3.7.9.3 and 3.7.9.4 are deleted.	NO	YES	NO	NO
3.7-33	The requirement to verify a make-up flow rate during the tests demonstrating the capability to maintain control room differential pressure above atmospheric pressure would be deleted.	YES; per CTS	NO; retained CTS requirement.	YES	YES
3.7-34	~~In accordance with traveler WOG-64, the Completion Time for closing one inoperable MSIV is extended to 72 hours; and separate required actions are included for either one MSIV inoperable or two or more MSIVs inoperable in Modes 2 and 3.~~ Not used	~~NO; adopting 8 hour AOT from STS.~~ NA	~~YES~~NA	~~YES~~NA	~~YES~~NA Q-3.7.2-1
3.7-35	SR 3.7.10.3 is revised to reflect DCPP specific plant configuration and CTS required testing.	YES	NO	NO	NO
3.7-36	REQUIRED ACTIONS D and E are revised for CPSES for two trains inoperable where at least 100% of the required heat removal capacity is available.	NO	YES	NO	NO
3.7-37	Modifies LCO 3.7.2 CONDITION A and adds new CONDITION B and C to be consistent with the CPSES CTS.	NO	YES	NO	NO

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.3-3 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: CTS 4.7.1.6[7]
ITS SR 3.7.3.1 and SR 3.7.3.2
DOC 05-08-M
JFD 3.7-56

These changes are beyond the scope of a conversion because the industry traveler referenced in this DOC (WOG-98) has not been approved by the NRC.

Comment: Withdraw the changes or adopt the STS.

FLOG RESPONSE: See the response to Comment Number 3.7.2-3.

ATTACHED PAGES:

See attached pages for response to Comment Number 3.7.2-3.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.3-6 **APPLICABILITY:** CP

REQUEST: ITS 3.7.3 LCO Note
JFD 3.7-11

The ITS 3.7.3 has an LCO Note that states "The associated bypass valves for each FIV are the feedwater isolation bypass valve and the associated feedwater preheater bypass valve."

Comment: This type of system description should be located in the Bases Background discussion or LCO discussion to define the Operability requirements for the components in this LCO. Revise the ITS submittal to move this information to the Bases.

FLOG RESPONSE: The added ITS 3.7.3 LCO Note that states "The associated bypass valves for each FIV are the feedwater isolation bypass valve and the associated feedwater preheater bypass valve," will be deleted from the LCO and moved to the Bases discussion of the LCO.

ATTACHED PAGES:

Encl 2	3/4.7-9
Encl 3A	10
Encl 3B	9
Encl 5A	3.7-7
Encl 5B	B 3.7-16
Encl 6A	3a

PLANT SYSTEMS

MAIN FEEDWATER ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

1-13-A
Q-3.7.1-1

7-01-A

3.7.1.6 ~~Each main feedwater line shall have~~ Four FIVs and associated bypass valves shall be OPERABLE ~~a feedwater isolation valve, feedwater isolation bypass valve, and feedwater preheater bypass valve~~.

7-17-LG
Q-3.7.3-6

APPLICABILITY: MODES 1, 2, and 3 except when the feedwater isolation valve or associated~~, feedwater isolation~~ bypass valve ~~or feedwater preheater bypass valve~~ is closed and de-activated ~~or isolated by a closed manual valve~~. 7-02-LS

ACTION: NOTE: Separate entry is allowed for each valve. 7-03-LS

MODE 1:

~~7-08-LS~~
Q-3.7.3-2

a. With one or more feedwater isolation valve inoperable, ~~but open,~~ operations may continue provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ the inoperable feedwater isolation valve is restored to OPERABLE status, isolated or closed** within ~~4~~ ~~72~~ 4 hours, otherwise be in HOT STANDBY within the next 6 hours. 7-06-LS 7-05-LS 7-11-M

~~7-08-LS~~
Q-3.7.3-2

b. With one or more feedwater isolation bypass valves inoperable, operations may continue provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ each affected feedwater isolation bypass valve is restored to OPERABLE status, isolated or closed** within ~~4~~ ~~72~~ 4 hours, otherwise be in HOT STANDBY within the next 6 hours. 7-05-LS 7-11-M

~~7-08-LS~~
Q-3.7.3-2

c. With one or more feedwater preheater bypass valves inoperable, operations may continue provided ~~the feedwater control and associated bypass valves are available for feedwater isolation* and~~ each affected feedwater preheater bypass valve is restored to OPERABLE status, isolated or closed** within ~~4~~ ~~72~~ 4 hours, otherwise be in HOT STANDBY within the next 6 hours. 7-05-LS 7-11-M

~~7-09-LS~~
Q-3.7.3-2

~~(NEW) With any feedwater isolation or associated bypass valve inoperable and the feedwater control and associated bypass valve in the same flow path unavailable, operations may continue provided the affected flow path is isolated or closed** within 8 hours; otherwise be in HOT STANDBY within the next 6 hours.~~

~~7-08-LS~~
Q-3.7.3-2

~~* Verify within 4 hours the feedwater control and associated bypass valves are available for feedwater isolation.~~

** Verify valve is isolated or closed once per 7 days. 7-11-M

CHANGE NUMBER	NSHC	DESCRIPTION
07-17	A	The allowance to open a valve closed per an action in this specification is enveloped by ITS SR 3.0.5.
07-18	LG	The identification of the specific bypass valves associated with feedwater isolation valves in LCO and the Applicability is descriptive material and is moved to the Bases consistent with the level of detail provided in NUREG-1431. Q-3.7.3-6
08-01	LG	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
08-02	A	A note is added to the ACTION that references a potential interaction with ITS 3.4.6 dealing with operability of the RHR system in MODE 4. The Note requires that the applicable TS be entered for the RHR train made inoperable by the inoperable [component cooling water (CCW)] System. The ACTIONS of the referenced TS (RCS Loops-MODE 4) require more immediate action than are required by the [CCW] ACTIONS.
08-03	LG	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
08-04	A	A note is added to the [CCW] surveillance that clarifies that the system is not made inoperable by the isolation of individual components. This change is in accordance with NUREG-1431, Rev. 1, and provides clarification only.
08-05	A	The surveillance is modified to clarify that valves that are locked, sealed or otherwise secured in their correct position are not required to be tested. This change is in accordance with NUREG-1431, Rev. 1, and provides clarification only. The clarification allows automatic valves, which are in their secured position under administrative controls, to be exempted from the surveillance. These automatic valves are secured in their accident position and are not required to actuate to perform their safety function. Proper positioning of valves is administratively controlled by equipment out of service programs and locked valve programs. These programs ensure valves are maintained in their proper position by requiring independent verification of safety-related or other important equipment, documentation of the position of locked equipment in a surveillance program, and periodic reviews of equipment normally required to be locked. Exempting automatic valves that are secured in their required position is perceived as the intent of the CTS wording, and therefore, the addition of the phrase more accurately reflects this intent and is considered to be administrative. Q-3.7.7-2 Q-3.7.5-9
08-06	TR-1	The SR is revised to allow credit for an actual actuation, if one occurs, to satisfy the SRs. The identification of the initiating signals is moved to the Bases.

CONVERSION COMPARISON TABLE - CURRENT TS 3/4.7

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
07-14	NOT USED	NA	NA	NA	NA
07-15	NOT USED	NA	NA	NA	NA
07-16 LS-34	CTS are revised to add a note to allow separate condition entry for each inoperable MFIV.	NO; Refer to change 07-03-LS-15.	NO; Refer to change 07-03-LS-15.	YES	YES
07-17 A	The CPSES specific allowance to open a valve closed per an action in this specification is enveloped by ITS SR 3.0.5.	NO	YES	NO	NO
07-18 LG	The identification of the CPSES specific bypass valves associated with feedwater isolation valves in LCO and the Applicability is descriptive material and is moved to the Bases.	NO	YES	NO	NO Q-3.7.3-6
08-01 LG	The requirement to perform ACOTs and Channel Calibrations would be moved to licensee controlled documents.	NO; not in CTS.	NO; not in CTS.	YES; moved to USAR.	YES; moved to FSAR.
08-02 A	A note is added to ACTION that references potential interaction with ITS 3.4.6 for RHR MODE 4 operability.	YES	YES	YES	YES
08-03 LG	The requirement to perform the 18 month surveillance "during shutdown" would be moved to the Bases.	NO; not in CTS.	NO; not in CTS.	YES	YES
08-04 A	A Note is added that clarifies [CCW] operability.	YES	YES	YES	YES
08-05 A	Surveillance is modified to exclude valves that are locked, sealed or otherwise secured in their correct position.	YES	YES	YES	YES
08-06 TR-1	The SR is revised to allow credit for an actual actuation and moves signal specifics to the Bases.	YES	YES	YES	YES
08-07 M	A new surveillance specific to DCPP is added that requires verifying that each CCW pump starts automatically on an actual or simulated signal actuation at least once per ~~18~~ 24 months.	YES	NO	NO	NO DC-ALL-001
08-08 A	Surveillance is modified to only be applicable to flow path valves.	YES	YES	YES	YES

3.7 PLANT SYSTEMS

3.7.3 ~~Main~~ Feedwater Isolation Valves ~~(MFIVs)~~ (FIVs) ~~and Main Feedwater Regulation Valves (MFRVs)~~ and Associated Bypass Valves 3.7-11

LCO 3.7.3 Four ~~MFIVs, [four] MFRVs, [~~ FIVs and associated bypass valves shall be OPERABLE. 3.7-11

~~NOTE~~
~~The associated bypass valves for each FIV are the feedwater isolation bypass valve and the associated feedwater preheater bypass valve~~ ~~3.7-11~~ Q-3.7.3-6

APPLICABILITY: MODES 1, 2, and 3 except when ~~MFIV~~ FIV~~, MFRV,~~ or associated bypass valve is closed and de-activated or isolated by a closed manual valve. B-PS

ACTIONS

NOTE
Separate Condition entry is allowed for each valve.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more ~~MFIVs~~ FIVs inoperable.	~~A.1.1 Verify, by administrative means, the Feedwater Control Valve (FCV) and associated bypass valve in the same flowpath are available to perform feedwater isolation~~	~~4 hours~~
	~~AND~~	
	~~A.1.2 Close or isolate FIVs.~~	~~72 hours~~
	~~AND~~	
	~~A.1.3 Verify FIV is closed or isolated.~~	~~Once per 7 days~~
	~~OR~~	
	A.~~2.~~1 Close or isolate ~~MFIV~~ FIV.	~~8~~ 4 hours
	AND	
	A.~~2.~~2 Verify ~~MFIV~~ FIV is closed or isolated.	Once per 7 days

PS
3.7-11 Q-3.7.3-2
~~3.7-26~~ Q-3.7.3-2
PS

BASES

APPLICABLE SAFETY ANALYSES

The design basis of the ~~MFIVs~~ FIVs ~~and MFRVs~~ is established by the analyses for the large SLB. It is also influenced by the accident analysis for the large FLB ~~FWLB~~. Closure of the ~~MFIVs~~ FIVs and associated bypass valves~~, or MFRVs and associated bypass valves,~~ may also be relied on to terminate an SLB for core response analysis and excess feedwater event upon the receipt of a steam generator water level — high high signal ~~or a feedwater isolation signal on high steam generator level~~.

Failure of an ~~MFIV~~ FIV, ~~MFRV~~, or the associated bypass valves to close following an SLB or FLB ~~FWLB~~ can result in additional mass and energy being delivered to the steam generators, contributing to cooldown. This failure also results in additional mass and energy releases following an SLB or FLB ~~FWLB~~ event. The FCVs and feedwater pump trips are credited in the safety analyses as highly reliable back-ups in the event of such failures. Q-3.7.3-2

The ~~MFIVs~~ FIVs and ~~MFRVs~~ and associated bypass valves satisfy Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii)..

LCO

This LCO ensures that the ~~MFIVs~~ FIVs~~, MFRVs ,~~ and their associated bypass valves will isolate MFW flow to the steam generators, following an FLB ~~FWLB~~ or main steam line break. ~~These valves, will also isolate the nonsafety related portions from the safety related portions of the system.~~ The associated bypass valves for each FIV are the feedwater isolation bypass valve and the associated feedwater preheater bypass valve. Q-3.7.3-6

This LCO requires that ~~[four] MFIVs~~ FIVs and associated bypass valves ~~and [four] MFRVs [and associated bypass valves]~~ be OPERABLE. The ~~MFIVs~~ FIVs ~~and MFRVs~~ and the associated bypass valves are considered OPERABLE when isolation times are within limits and they close on an isolation actuation signal.

Failure to meet the LCO requirements can result in additional mass and energy being released to containment following an SLB or FLB ~~FWLB~~ inside containment. Because ~~If~~ a feedwater isolation signal on high steam generator level is relied on to terminate an excess feedwater flow event, failure to meet the LCO may result in the introduction of water into the main steam lines.

CHANGE NUMBER | JUSTIFICATION

3.7-11 The REQUIRED ACTIONS for the main feedwater isolation valves (FIVs) and associated bypass valves inoperable are revised consistent with the current licensing basis. All LCO, Conditions/Required Actions and Surveillance requirements associated with the feedwater control valves (FCVs) and FCV bypass valves are deleted since the FCVs are not in the CTS. ~~A COMPLETION TIME of 4 hours is provided to confirm availability of the main feedwater control valves (FCVs) and associated bypass valves. A completion time of 72 hours is provided to close or isolate the FIVs. A new SR is added for the FCVs and associated bypass valves.~~ Q-3.7.3-2

~~The main FCVs and associated bypass valves are non-Nuclear Safety Related and not classified as active valves because a single active mechanical failure of the FIVs and associated bypass valves (feedwater isolation (FIBVs) and feedwater preheater bypass valves (FPBVs)) is not assumed in the accident analyses. The FCVs and the associated bypass valves are credited as backup in the unlikely event a FIV or associated bypass valve fails. The credit for availability of the FCVs and associated bypass valves as backup is taken in the ACTIONS in lieu of requiring operability in the LCO. Because the FCVs and associated bypass valves are not safety related, they are not in the scope of the Inservice Test Program. Therefore, a surveillance on the same frequency as the FIVs is added to ensure availability of these valves. Similar to the FIVs, these valves should not be tested at power.~~

~~A note was added to the LCO to clarify the plant specific associated bypass valves at CPSES for each FIV.~~ Q-3.7.3-6

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.4-1 **APPLICABILITY:** DC, CP

REQUEST: CTS 3.7.1.6[7] Actions a and b
ITS 3.7.4 Actions B and C
DOC 06-05-LS24
JFDs 3.7-05 and 3.7-06

CTS 3.7.1.6[7] Actions have been modified and new requirements are added for when three or more ADVs are inoperable. ITS 3.7.3 Actions B and C contain these new requirements.

Comment: Per the Bases LCO discussion, two ADVs are required for unit cool down. Therefore, TSTF-100 is not applicable. Hence, ITS Actions B and C can be accepted if the Required Action wording is changed to match the CTS markup. Required Action B.1 should state "Restore at least one ADV [ARV] line to OPERABLE status." Required Action C.1 should state "Restore at least two ADV [ARV] lines to OPERABLE status." **[Note for CPSES: The CTS Action b appears to be incorrect or overly conservative requiring 3 Operable while in a multiple condition entry with Action a.]** The DOC 06-05-LS24 does not contain the technical justification that this is acceptable which is the acknowledgement of the diverse backup methods of the Steam Bypass System and the MSSVs. Also, the corresponding JFD's 3.7-05 and 3.7-06 do not contain any technical justification for these changes. Revise the submittal accordingly.

FLOG RESPONSE: ITS Required Action B.1 has been revised to read: Restore at least one ARV line to OPERABLE status. ITS Required Action C.1 has been revised to read: Restore at least two ARV lines to OPERABLE status. The Bases for ITS Actions B.1 and C.1 have been revised to read: ...restore at least one ARV line to OPERABLE status and ...restore at least two ARV lines to OPERABLE status, respectively.

In additions, DOC 06-05-LS-24, JFD 3.7-05, and JFD 3.7-06 have been revised.

For CPSES, CTS Action b may be somewhat confusing but it is not overly conservative. With 2 out of 4 ARVs inoperable, the phrase "...restore at least three atmospheric relief valves to OPERABLE status..." is equivalent to saying restore one of the inoperable valves. The word "restore" seems to imply that three ARVs that were inoperable need to be restored. However, in the CTS, it refers to the total number of ARVs operable, regardless of whether they were previously inoperable or were always operable. We believe that the as-marked ITS Actions are consistent with the corresponding CTS Actions. The ITS Bases have been revised to clarify the restoration of inoperable valves.

Also (for Diablo Canyon) the Bases for TS 3.7.4, Background (first paragraph) was revised as follows: "Steam Bypass System" and "Steam Dump System" were replaced with "40% steam dump valves."

ATTACHED PAGES:

Encl 3A	7
Encl 5A	3.7-10
Encl 5B	B 3.7-24
Encl 6A	2

CHANGE NUMBER	NSHC	DESCRIPTION
05-08	M	This change creates a new SR for the MSIVs [and feedwater isolation valves] to distinguish between the IST and the automatic actuation testing of these isolation valves. The surveillance allows credit for an actual actuation, if one occurs, to satisfy the SRs. This change is consistent with TSTF-289 ~~WOG-98~~. This proposed change is acceptable because it results in more stringent TS requirements that are both appropriate and consistent with NUREG-1431. Although this is a new surveillance requirement, it may be performed in conjunction with existing surveillance requirements. Therefore, the statement allowing testing to be performed in MODE 3 is also needed for this new surveillance requirement. Q-3.7.2-3
06-01	LG	~~Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).~~ This change revises the CTS to delete the descriptive material from the CTS LCO and moves this material to the Bases. Q-3.7.4-9
06-02	LS-14	This change adds an exception to LCO 3.0.4 for the 7 day ACTION to restore the atmospheric [relief] valves OPERABILITY. This revision allows the plant to change MODES if one atmospheric [relief] valve is found inoperable while in MODE 2 or 3. Allowing MODE transition with an inoperable atmospheric [relief] valve does not significantly increase that risk since the remaining valves are OPERABLE.
06-03	M	Consistent with NUREG-1431, the specification is revised to be applicable to the "atmospheric [relief] lines" rather than only to the atmospheric [relief] valves [and associated controls]. This terminology extends the applicability of the specification to include the atmospheric [relief] [block] valve. This is more restrictive than the current specification.
06-04	M	A surveillance is added that requires the manual cycling of the atmospheric [relief] valve [block] valves [in accordance with the IST program]. This proposed change is acceptable because it results in more stringent TS requirements that are both appropriate and consistent with NUREG-1431.
06-05	LS-24	This change adds a new ACTION for three or more inoperable atmospheric [relief] valves that requires action within 24 hours. The CTS would require entry into TS 3.0.3 for three inoperable ~~atmospheric [relief] valves. However, NUREG-1431~~ recognizes the availability of the [Steam Dump System] and the MSSVs, and ~~the~~ low probability of an accident requiring the atmospheric [relief] valves, thus permitting this configuration. Q-3.7.4-1

3.7 PLANT SYSTEMS

3.7.4 Steam Generator Atmospheric ~~Dump~~ Relief Valves ~~(ADVs)~~ (ARVs)

PS

LCO 3.7.4 ~~Three~~ Four ~~ADV~~ ARV lines shall be OPERABLE.

B-PS

APPLICABILITY: MODES 1, 2, and 3,
~~MODE 4 when steam generator is relied upon for heat removal.~~

3.7-04

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required ~~ADV~~ ARV line inoperable.	A.1 -------NOTE-------- LCO 3.0.4 is not applicable. ------------------ Restore required ~~ADV~~ ARV line to OPERABLE status.	7 days
B. Two ~~or more~~ required ~~ADV~~ ARV lines inoperable.	B.1 Restore ~~all but~~ at least one ~~ADV~~ ARV ~~line to~~ OPERABLE status.	~~24~~ 72 hours
C. Three or more required ARV lines inoperable.	C.1 Restore ~~all but~~ at least two ARV lines to OPERABLE status.	24 hours

PS

3.7-05
Q-3.7.4-1

3.7-6

3.7-05
Q-3.7.4-1

3.7-6

inoperable ~~if operator action time to open the block valve is supported in the accident analysis~~ as it cannot be operated remotely from the control room.

Failure to meet the LCO can result in the inability to cool the unit to RHR entry conditions following an event in which the condenser is unavailable for use with the Steam Dump ~~Bypass~~ System.

An ~~ADV~~ ARV is considered OPERABLE when it is capable of providing controlled relief of the main steam flow and capable of fully opening and closing on demand using associated remote manual control.

APPLICABILITY

In MODES 1, 2, and 3, ~~and in MODE 4, when a steam generator is being relied upon for heat removal,~~ the ~~ADVs~~ ARVs are required to be OPERABLE.

In MODE 4, 5 or 6, an SGTR is not a credible event.

ACTIONS

A.1

With one required ~~ADV~~ ARV line inoperable, action must be taken to restore OPERABLE status within 7 days. The 7 day Completion Time allows for the redundant capability afforded by the remaining OPERABLE ~~ADV~~ ARV lines, a nonsafety grade backup in the Steam Dump ~~Bypass~~ System, and MSSVs. Required Action A.1 is modified by a Note indicating that LCO 3.0.4 does not apply.

B.1

Q-3.7.4-1

With two ~~or more~~ ~~ADV~~ ARV lines inoperable, action must be taken to restore ~~all but~~ at least one ~~ADV~~ ARV line to OPERABLE status. This will result in at least three OPERABLE ARVs. Since the block valve can be closed to isolate an ARV, some repairs may be possible with the unit at power. The 72 ~~24~~ hour Completion Time is reasonable to repair inoperable ~~ADV~~ ARV lines, based on the availability of the Steam Dump ~~Bypass~~ System and MSSVs, and the low probability of an event occurring during this period that would require the ~~ADV~~ ARV lines.

C.1

Q-3.7.4-1

With three or more ARV lines inoperable, action must be taken to restore ~~all but~~ at least two ~~one~~ ARV line to OPERABLE status. This will result in at least two OPERABLE ARVs. Since the block valve can be closed to isolate an ARV, some repairs may be possible with the unit at power. The 24 hour Completion Time is reasonable

CHANGE NUMBER	JUSTIFICATION

3.7-04 Requirements involving reliance on the steam generator heat removal system for heat removal in MODE 4 would be deleted consistent with current licensing basis. The SG heat removal system is designed to cool the plant to MODE 4 entry conditions at which time the RHR system may be placed in service. However, there must be some period of time during MODE 4 for the SG heat removal system cooling to be transitioned to the RHR system. ~~The RHR system, which is required to be OPERABLE, is capable of adequate heat removal.~~ Although the SG heat removal system may be used for additional cooling below 350^{0}F, the SG heat removal system operability is not an assumption of any safety analysis and is not consistent with the current licensing basis. The MODE applicability for the SG heat removal system in the CTS is MODES 1, 2, and 3. The SG heat removal system would be used during a normal startup or shutdown and thus would be capable of providing the heat removal function during the transition to and from RHR in MODE 4 even if not required to be OPERABLE by this TS. Q-3.7.5-1

STS 3.7.5 LCO NOTE, MODE 4 Applicability, Condition E, the SR 3.7.5.3 NOTE, and the SR 3.7.5.4 NOTE 2 are deleted based on CTS applicability in only MODES 1-3. Conditions B, C, and D are revised to delete MODES 1-3 since this is redundant to the revised applicability.

3.7-05 REQUIRED ACTION B.1 is revised to state and new C.1 states respectively that restoration of "~~all but~~ at least one" and "~~all but~~ at least two" atmospheric [relief] valves [(ARVs)] is required which will effectively exit the respective REQUIRED ACTIONS. This is consistent with the BASES of NUREG-1431, which recognizes the availability of the [Steam Dump System] and the MSSVs, and the low probability of an accident requiring the [atmospheric relief] valves. The specific change proposed by Industry Traveler TSTF-100 is to add the "~~all but~~ at least one" phrase to REQUIRED ACTION B for plants that only require three [ARVs] to be OPERABLE. The addition of the "~~all but~~ at least two" phrase to new REQUIRED ACTION C.1 is to account for the requirement to have four [ARVs] OPERABLE. Q-3.7.4-1

3.7-06 The CONDITION and REQUIRED ACTION for two or more inoperable [ARV] lines is revised to limit the applicability to only two inoperable [ARV] lines and the COMPLETION TIME is revised from 24 to 72 hours per the current licensing basis. A new CONDITION C for three or more [ARV] lines inoperable for plants that require four [ARV] lines is proposed. The original CONDITION C is retained and relabeled CONDITION D. These changes are consistent with the intent of NUREG 1431, which recognizes the availability of the [Steam Dump System] and the MSSVs, and the low probability of an accident requiring the [atmospheric relief] valves. Q-3.7.4-1

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.4-5 **APPLICABILITY:** CP, WC, CA

REQUEST: CTS 4.7.1.6[7]
ITS SR 3.7.4.1
JFD 3.7-28

CTS 4.7.1.6[7] states the surveillance is in accordance with Specification 4.0.5. ITS SR 3.7.4.1 requires one complete cycle of the ASD[ARV] in accordance with the Inservice Testing Program. The STS requires a frequency of "18 months" instead of "per the IST Program." This change is beyond the scope of a conversion.

Comment: Withdraw the change or adopt the STS.

FLOG RESPONSE: The CTS reference "pursuant to Specification 4.0.5" refers to the Inservice Testing Program. The Inservice Testing Program specifies the testing requirements and the testing frequency for pumps and valves included in the Inservice Testing Program. There is no specification corresponding to CTS 4.0.5 in the STS. The Inservice Testing Program is now controlled under ITS 5.5.8. Thus adopting the Inservice Testing Program frequency in the ITS is equivalent to the CTS Specification 4.0.5 frequency.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.4-6 **APPLICABILITY:** CP, CA

REQUEST: CTS 4.7.1.7
ITS SR 3.7.4.2
DOC 06-04-M
JFD 3.7-28

CTS 4.7.1.7 states the surveillance is in accordance with Specification 4.0.5. ITS SR 3.7.4.2 adds a new SR requirement to verify one complete cycle of the ASD[ARV] manual isolation valve in accordance with the Inservice Testing Program. The STS requires a frequency of 18 months instead of per the IST Program.

Comment: Withdraw the change or adopt the STS.

FLOG RESPONSE: Callaway and Comanche Peak have included the ASD (ARV) manual isolation valves in their respective Inservice Test Programs. By including the valves in the Inservice Test Program and requiring a new surveillance in the Specification, the requirements are more stringent than before.

The STS requires a frequency of 18 months for the new surveillance, however this is provided in brackets. Under TS conversion procedures, bracketed material may be replaced with adequate justification. The ASD (ARV) manual isolation valves provide a support function for the ASD (ARV) valves. Because it is acceptable for the surveillance frequency for the ASD (ARV) valves to be provided in accordance with the Inservice Test Progam, then it is also acceptable for the ASD (ARV) manual isolation valves.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.4-7 **APPLICABILITY:** CP, WC, CA

REQUEST: CTS 4.7.1.6[7], [Item a]
Bases ITS 3.7.4, LCO discussion
DOC 06-06-LG

For CPSES, the CTS 4.7.1.7, item a surveillance on the air accumulator tank pressure is not retained in the ITS but it is moved to a licensee controlled document. For Callaway and WCGS, there is no CTS requirement but the Bases LCO discussion states the Operability requirements for the nitrogen accumulator tank pressure.

Comment: <u>For DCPP</u>, this equivalent CTS surveillance is retained in the ITS. <u>For all others</u>, it is required to explain why this similar surveillance is not being retained or added to the ITS. Revise the submittal to add this new SR performed every 24 hours to ITS 3.7.4.

FLOG RESPONSE: NUREG-1431 evolved over many years of industry and NRC review and comment. Part of the process included the removal from the TS, descriptive details and in some cases whole specifications and surveillances that were not required to be in the TS. As a result, TS requirements on many of the support systems for equipment required to be in the TS were moved out of the TS. The accumulators are such a support system for the relief valves. The designs and safety functions of the relief valve accumulator tank for the FLOG plants are typical of that found in the industry. The accumulator provides a backup means for operation of the valves in the event of a loss of instrument air. The CPSES requirement to perform a 24 hour surveillance on the accumulator tank pressure, while important, does not meet the criteria in 10CFR50.36(c)(2)(ii) for information required to be in the TS. Neither is there a similar requirement in NUREG-1431. As result CPSES included a discussion of the basis of the accumulator pressure in the Bases and moved the requirement for performing the surveillance to the TRM. Callaway and WCGS, which do not have this surveillance requirement in the CTS, likewise did not include it in the ITS. While not required to do so, Diablo Canyon's Operations department chose to carry their CTS requirement into the ITS.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.4-8 **APPLICABILITY:** CP

REQUEST: CTS 3.7.1.7, Applicability, Action a and b
ITS 3.7.4, Applicability, Required Action C.2, and Completion Time
DOC 02-20-LS35
JFD 3.7-04

If one or two ADV's are not restored to Operable, CTS 3.7.1.7 Actions requires Mode 3 entry in 6 hours and entry into Mode 4 in an additional 6 hours. ITS 3.7.4 permits an additional 12 hours for entry into Mode 4.

Comment: CPSES has not adopted the STS Applicability extending into Mode 4 until the "steam generator is no longer relied upon for heat removal." CTS 3.7.1.7 Action a and b both require the RCS/RHR loops to be placed in operation which directly implies the STS Applicability is a CTS requirement (perhaps due to the transition temperature being below the Mode 4 limits). The STS permitted total 18 hour Completion Time, for entry into Mode 4, is only for when the Applicability of the LCO has been extended to cover the extra time spent in Mode 4, while the steam generator is relied upon for heat removal. Therefore, CPSES should adopt the revised STS Applicability or retain the current licensing basis of 12 hours total time. JFD 3.7-04 does not discuss the technical basis for receiving the extra 6 hours of Completion Time. The DOC referenced is not applicable and not specific enough for this CTS change. Provide a new DOC and revise the submittal.

FLOG RESPONSE: (Also responses to Comment Numbers Q 3.7.5-1 and Q 3.7.6-5) CPSES did not adopt the STS applicability for ITS 3.7.4 for the following reasons.

1. CTS 3.7.1.7 does not require ARVs operable prior to MODE 3. For a normal or Technical Specification forced shutdown, ARVs are not the primary method of cooling down the RCS. Two motor driven AFW pumps and the main condenser provide the normal heat sink for the RCS loops/steam generators in MODE 3 and 4 cooldown until RHR loops are operation.

2. CTS 3.7.1.7 actions place the unit in MODE 4 under the applicable requirements for CTS 3.4.1.3 which does not require operable ARVs. CTS 3.7.1.3 (and ITS 3.4.6) require 2 cooling loops from six possible choices (4 RCS loops or 2 RHR loops) in Mode 4. Actions a and b in CTS 3.7.1.7 lead directly to CTS 3.4.1.7. One motor driven AFW pump provides the required support for two RCS loops. Extending CTS 3.7.1.7/ITS 3.7.4 into MODE 4 when the steam generator is required for heat removal would require 4 ARVs operable when none are currently required and when only 2 would be required when compared to CTS 3.4.1.3 and ITS 3.7.5 for AFW.

3. ARV Operability requirements for the STS LCO are based on SGTR mitigation and are more restrictive than they should be in MODE 4.

The increase in allowed outage time from 6 to 12 hours (DOC 2-20-LS) has been withdrawn for CTS 3.7.1.7 and 3.7.1.3. The increased outage time has been retained for CTS 3.7.1.2 (See response to Comment Number Q 3.7.5-1)

ATTACHED PAGES:

Encl 2	3/4.7-12
Encl 4	63
Encl 5A	3.7-11
Encl 5B	B3.7-25

1-13-A
Q-3.7.1-1

STEAM GENERATOR ATMOSPHERIC RELIEF VALVES

LIMITING CONDITION FOR OPERATION

6-03-M

3.7.1.7 At least four atmospheric relief lines ~~valves and associated remote manual controls~~ shall be OPERABLE.

6-01-LG
Q-3.7.4-9

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

6-03-M
6-02-LS

a. With one less than the required atmospheric relief lines ~~valves~~ OPERABLE, restore the required atmospheric relief lines ~~valves~~ to OPERABLE status within 7 days*; or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 ~~12~~ 6 hours and place the required RCS/RHR loops in operation for decay heat removal.

~~2-20-LS~~
Q-3.7.4-8
6-10-A

6-03-M

b. With two less than the required atmospheric relief lines ~~valves~~ OPERABLE, restore at least three atmospheric relief lines ~~valves~~ to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 ~~12~~ 6 hours and place the required RCS/RHR loops in operation for decay heat removal.

~~2-20-LS~~
Q-3.7.4-8
6-10-A

(new) With three or more less than the required atmospheric relief lines OPERABLE, restore at least two atmospheric relief lines to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours and place the required RCS/RHR loops in operation for decay heat removal.

6-05-LS
6-10-A

SURVEILLANCE REQUIREMENTS

4.7.1.7. Each atmospheric relief valve and each ARV block valve ~~and associated manual controls~~ shall be demonstrated OPERABLE by:

6-04-M

~~a. At least once per 24 hours by verifying that the air accumulator tank is at pressure greater than or equal to 80 psig.~~

6-06-LG

~~b.~~ Testing pursuant to Specification 4.0.5.

* LCO 3.0.4 is not applicable.

6-02-LS

IV. SPECIFIC NO SIGNIFICANT HAZARDS CONSIDERATIONS

NSHC LS-35
10 CFR 50.92 EVALUATION
FOR
TECHNICAL CHANGES THAT IMPOSE LESS RESTRICTIVE REQUIREMENTS WITHIN THE TECHNICAL SPECIFICATIONS

Consistent with NUREG-1431, Rev. 1, the required completion time to shut the plant down would be revised from achieving HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours to achieving HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 12 hours. An additional 6 hours would be allowed to ~~achieve HOT SHUTDOWN for the auxiliary~~ feedwater (AFW) system~~, the Condensate Storage Tank, and the [atmospheric relief valve] lines if they~~ if an inoperable AFW pump could not be restored within the required completion time or if two AFW pumps were inoperable. Once HOT SHUTDOWN was achieved, the plant would be in a MODE where the residual heat removal (RHR) system would be OPERABLE in addition to the OPERABLE AFW train(s) used to perform the cooldown to HOT SHUTDOWN conditions. Since the inoperable AFW train(s) may affect the normal cooldown rate, the ITS allows an additional six hours to achieve MODE 4. The added time provides additional margin to perform an orderly transfer from the SG method of heat removal to the RHR system to regain the heat removal function without challenging unit systems.

Q-3.7.4-8
Q-3.7.5-1
Q-3.7.6-5

The AFW system is designed to cool the plant to MODE 4 entry conditions at which time the RHR system may be placed in service. The RHR system, which is required to be OPERABLE, is capable of adequate heat removal. Although AFW may be used for additional cooldown below 350°F, AFW operability in MODE 4 is not an assumption of any safety analysis and is not consistent with the current licensing basis. The MODE applicability for AFW in the current TS is MODES 1, 2, and 3. In general, the AFW system would be available to remove heat during a normal startup or shutdown and thus would be capable of providing the heat removal function even if not technically OPERABLE.

This proposed TS change has been evaluated and it has been determined that it involves no significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10CFR 50.92(c) as quoted below:

> *"The Commission may make a final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility licensed under 50.21 (b) or 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:*
>
> 1. *Involve a significant increase in the probability or consequences of an accident previously evaluated; or*
>
> 2. *Create the possibility of a new or different kind of accident from any accident previously evaluated; or*
>
> 3. *Involve a significant reduction in a margin of safety."*

The following evaluation is provided for the three categories of the significant hazards consideration standards:

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
~~C~~ D. Required Action and associated Completion Time not met.	~~C~~D.1 Be in MODE 3.	6 hours
	AND	
	~~C~~D.2 Be in MODE 4 ~~without reliance upon steam generator for heat removal.~~	~~18~~ 12 hours

ED

3.7-04
Q-3.7.4-8

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.4.1	Verify one complete cycle of each ~~ADV~~ ARV.	~~[18] months~~ In accordance with the Inservice testing Program
SR 3.7.4.2	Verify one complete cycle of each ~~ADV~~ ARV block valve.	~~[18] months~~ In accordance with the Inservice testing Program

PS
3.7-28
B
PS
3.7-28

to repair inoperable ARV lines, based on the availability of the Steam Dump System and MSSVs, and the low probability of an event occurring during this period that would require the ARV lines.

~~C~~D.1 and ~~C~~D.2

If the ~~ADV~~ ARV lines cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4, ~~without reliance upon steam generator for heat removal,~~ within 12 ~~18~~ hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. Q-3.7.4-8

SURVEILLANCE REQUIREMENTS

SR 3.7.4.1

To perform a controlled cooldown of the RCS, the ~~ADVs~~ ARVs must be able to be opened either remotely ~~or locally~~ and throttled through their full range. This SR ensures that the ~~ADVs~~ ARVs are tested through a full control cycle at least once per fuel cycle. Performance of inservice testing or use of an ~~ADV~~ ARV during a unit cooldown may satisfy this requirement. Operating experience has shown that these components usually pass the Surveillance when performed at the Inservice Testing Program ~~18 month~~ Frequency. The Frequency is acceptable from a reliability standpoint.

SR 3.7.4.2

The function of the block valve is to isolate a failed open ARV. Cycling the block valve both closed and open demonstrates its capability to perform this function. Performance of inservice testing or use of the block valve during unit cooldown may satisfy this requirement at least once per fuel cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the Inservice Testing Program ~~18 month~~ Frequency. The Frequency is acceptable from a reliability standpoint.

REFERENCES

1. FSAR, Sections 3.9B, 5A, 9.3 and 10.3.
2. FSAR, Chapter 15.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.4-9 **APPLICABILITY:** CP

REQUEST: CTS 3.7.1.7 LCO Statement
ITS 3.7.4 LCO Statement, BASES-LCO
DOC 06-zz-LG

CTS 3.7.1.7 states that the ARV and "associated remote manual controls" shall be OPERABLE." This CTS requirement has been moved to the ITS 3.7.4 Bases LCO discussion.

Comment: This CTS change is not specifically discussed in DOC 06-03-M. This is the movement of CTS requirement which is a less restrictive generic movement or "LG" change. DOC 06-01-LG is a similar justification which was not used for CPSES. Revise the submittal to provide a DOC and revise the CTS markup for this missing "LG" change.

FLOG RESPONSE: CPSES has adopted DOC 06-01-LG to move the LCO 3.7.1.7 statement concerning the ARV "associated remote manual controls" to the Bases.

ATTACHED PAGES:

Encl 2	3/4.7-12
Encl 3A	7
Encl 3B	6
Encl 5B	B 3.7-22

PLANT SYSTEMS

STEAM GENERATOR ATMOSPHERIC RELIEF VALVES

LIMITING CONDITION FOR OPERATION

1-13-A
Q-3.7.1-1

3.7.1.7 At least four atmospheric relief lines ~~valves and associated remote manual controls~~ shall be OPERABLE. 6-03-M 6-01-LG Q-3.7.4-9

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one less than the required atmospheric relief lines ~~valves~~ OPERABLE, restore the required atmospheric relief lines ~~valves~~ to OPERABLE status within 7 days*; or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 ~~12~~ ~~6~~ hours and place the required RCS/RHR loops in operation for decay heat removal. 6-03-M 6-02-LS ~~2-20-LS~~ Q-3.7.4-8 6-10-A

b. With two less than the required atmospheric relief lines ~~valves~~ OPERABLE, restore at least three atmospheric relief lines ~~valves~~ to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 ~~12~~ ~~6~~ hours and place the required RCS/RHR loops in operation for decay heat removal. 6-03-M ~~2-20-LS~~ Q-3.7.4-8 6-10-A

(new) With three or more less than the required atmospheric relief lines OPERABLE, restore at least two atmospheric relief lines to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours and place the required RCS/RHR loops in operation for decay heat removal. 6-05-LS 6-10-A

SURVEILLANCE REQUIREMENTS

4.7.1.7. Each atmospheric relief valve and each ARV block valve ~~and associated manual controls~~ shall be demonstrated OPERABLE by: 6-04-M

~~a. At least once per 24 hours by verifying that the air accumulator tank is at pressure greater than or equal to 80 psig.~~ 6-06-LG

~~b.~~ Testing pursuant to Specification 4.0.5.

* LCO 3.0.4 is not applicable. 6-02-LS

CHANGE NUMBER	NSHC	DESCRIPTION	
05-08	M	This change creates a new SR for the MSIVs [and feedwater isolation valves] to distinguish between the IST and the automatic actuation testing of these isolation valves. The surveillance allows credit for an actual actuation, if one occurs, to satisfy the SRs. This change is consistent with TSTF-289 ~~WOG-98~~. This proposed change is acceptable because it results in more stringent TS requirements that are both appropriate and consistent with NUREG-1431. Although this is a new surveillance requirement, it may be performed in conjunction with existing surveillance requirements. Therefore, the statement allowing testing to be performed in MODE 3 is also needed for this new surveillance requirement.	Q-3.7.2-3
06-01	LG	~~Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).~~ This change revises the CTS to delete the descriptive material from the CTS LCO and moves this material to the Bases.	Q-3.7.4-9
06-02	LS-14	This change adds an exception to LCO 3.0.4 for the 7 day ACTION to restore the atmospheric [relief] valves OPERABILITY. This revision allows the plant to change MODES if one atmospheric [relief] valve is found inoperable while in MODE 2 or 3. Allowing MODE transition with an inoperable atmospheric [relief] valve does not significantly increase that risk since the remaining valves are OPERABLE.	
06-03	M	Consistent with NUREG-1431, the specification is revised to be applicable to the "atmospheric [relief] lines" rather than only to the atmospheric [relief] valves [and associated controls]. This terminology extends the applicability of the specification to include the atmospheric [relief] [block] valve. This is more restrictive than the current specification.	
06-04	M	A surveillance is added that requires the manual cycling of the atmospheric [relief] valve [block] valves [in accordance with the IST program]. This proposed change is acceptable because it results in more stringent TS requirements that are both appropriate and consistent with NUREG-1431.	
06-05	LS-24	This change adds a new ACTION for three or more inoperable atmospheric [relief] valves that requires action within 24 hours. The CTS would require entry into TS 3.0.3 for three inoperable atmospheric [relief] valves. However, NUREG-1431 recognizes the availability of the [Steam Dump System] and the MSSVs, and the low probability of an accident requiring the atmospheric [relief] valves, thus permitting this configuration.	Q-3.7.4-1

CONVERSION COMPARISON TABLE - CURRENT TS 3/4.7

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
05-05 M	A new requirement for a 7 day periodic verification of the closure [or isolation] of inoperable isolation valves is added.	YES	NO: already in CTS	YES	YES
05-06	NOT USED	NA	NA	NA	NA
05-07 LS-23	A footnote is added to the SR (in lieu of the current exception to TS 4.0.4) to indicate that demonstration of isolation valve operability is only required to be performed for entry into (and continued operation in) MODES 1 and 2.	YES	YES	NO; part of CTS.	NO; part of CTS.
05-08 M	This change creates a new SR for the MSIVs and feedwater isolation valves to distinguish between the IST and the automatic actuation testing of these isolation valves. The surveillance allows credit for an actual actuation, if one occurs, to satisfy the SRs.	YES	YES	YES	YES
06-01 LG	This ~~DCPP specific~~ change revises the LCO to move the descriptive material to the Bases.	YES	~~NO~~YES	NO; not in CTS.	NO; not in CTS Q-3.7.4-9
06-02 LS-14	Adds an exception to LCO 3.0.4 for the 7 day action statement to restore the [ARV] Operability.	YES	YES	NO; part of CTS.	NO; part of CTS.
06-03 M	Revises the specification to be applicable to the [ARV] lines, rather than only to the [ARV]. This includes the [block] valves.	NO. CTS includes the block valves.	YES	YES	YES
06-04 M	Surveillance is added that requires the manual cycling of the [block] valves every 18 months.	YES	YES	YES	YES
06-05 LS-24	Adds a new ACTION for three or more inoperable [ARV] that requires action within 24 hours.	YES	YES	NO; similar requirement in CTS.	NO; similar requirement in CTS.
06-06 LG	Moves the requirements for the surveillances to the Bases and the testing specifics to licensee controlled documents.	YES; testing specifics moved to FSAR.	YES; testing specifics moved to TRM.	NO; not in CTS.	NO; not in CTS.

B 3.7 PLANT SYSTEMS

B 3.7.4 Steam Generator Atmospheric ~~Dump~~ Relief Valves ~~(ADVs)~~ (ARVs)

BASES

BACKGROUND

The ~~ADVs~~ ARVs provide a method for cooling the unit to residual heat removal (RHR) entry conditions should the preferred heat sink via the Steam Dump ~~Bypass~~ System to the condenser not be available, as discussed in the FSAR, Section 10.3 (Ref. 1). This is done in conjunction with the Auxiliary Feedwater System providing cooling water from the condensate storage tank (CST). The ~~ARDs~~ ARVs may also be required to meet the design cooldown rate during a normal cooldown when steam pressure drops too low for maintenance of a vacuum in the condenser to permit use of the Steam Dump ~~Bypass~~ System.

One ~~ADV~~ ARV line for each of the four steam generators is provided. Each ~~ADV~~ ARV line consists of one ~~ADV~~ ARV, its associated remote manual controls and an associated block valve. Q-3.7.4-9

The ~~ADVs~~ ARVs are provided with upstream block valves to permit their being tested at power and to provide an alternate means of isolation. The ~~ADVs~~ ARVs are equipped with pneumatic controllers to permit control of the cooldown rate.

The ~~ADVs~~ ARVs are ~~usually~~ provided with ~~a~~ pressurized air accumulators ~~gas supply of bottled nitrogen~~ that, on a loss of pressure in the normal instrument air supply, automatically supply ~~nitrogen~~ air to operate the ~~ADVs~~ ARVs. With 80 psig pressure, the ~~nitrogen~~ air accumulators have sufficient capacity ~~supply is sized to provide the sufficient pressurized gas~~ to operate the ~~ADVs~~ ARVs for the time required for Steam Generator Tube Rupture mitigation ~~Reactor Coolant System cooldown to RHR entry conditions~~. In addition, handwheels are provided for local manual operation should the accumulator pressure fall to the point where it can no longer control the ~~ADVs~~ ARVs.

A description of the ~~ADVs~~ ARVs is found in Reference 1. The ~~ADVs~~ ARVs are OPERABLE with only a DC power source available, however, the automatic controls for the ARVs do not perform a safety function.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.5-1 **APPLICABILITY:** CP

REQUEST: CTS 3.7.1.2, Applicability
ITS 3.7.5, Applicability or Actions A, B, & C
DOC 02-20-LS35
DOC 06-10-A
JFD 3.7-04

CTS 3.7.1.2 Applicability is Mode 1, 2 and 3. ITS 3.7.5 Applicability is Mode 1, 2 and 3.

Comment: **Issue #1** - CPSES has not adopted the STS Applicability extending into Mode 4 until the "steam generator is no longer relied upon for heat removal"; however, CTS 3.7.1.7 Actions a and b requires the RCS/RHR loops be placed in operation for Mode 4 entry. ITS 3.7.5 Applicability should be the same as the STS because (as stated in DOC 06-10-A) ITS 3.4.6 permits any combination of RCS/RHR loops in Mode 4. These CTS requirements for RCS/RHR loop operation directly imply the STS Applicability is due to the RCS/RHR transition temperature being at or below the Mode 4 350°F temperature limits. Explain these differences or adopt the STS. **Issue #2** - Correspondingly due to Issue #1, the ITS markup is incorrect, as presented, because MODES 1, 2, and 3 should be deleted from the Condition statements of Actions B, C, and D. Provide a revised JFD or adopt the STS text. **Issue #3** - This STS permits a total 18 hour Completion Time, for entry into Mode 4, when the Applicability of the LCO has been extended to cover the extra time spent in Mode 4, while the steam generator is relied upon for heat removal. Therefore, CPSES should adopt the STS Applicability or retain the current licensing basis of 12 hours total time. JFD 3.7-04 does not discuss the technical basis for receiving the extra 6 hours of Completion Time. Provide a new DOC because the DOC referenced is not applicable and not specific enough for this CTS change. **Issue #4** - JFD B-PS or 3.7-04 does not specifically explain the deletion of the STS 3.7.5 LCO Note. Revise this JFD or provide a new DOC to adopt the STS text. **Issue #5** - JFD 3.7-04 does not specifically explain the deletion of ITS Action E. Revise this JFD or provide a new DOC to adopt the STS text. **Issue #6** - JFD 3.7-04 does not specifically explain the deletion of the note to ITS SR 3.7.5.3 and the ITS SR 3.7.5.4, Note #2. Revise this JFD or provide a new DOC to adopt the STS text. Revise the submittal for these six related issues.

FLOG RESPONSE: Issue #1 - (Also responses to Comment Numbers Q 3.7.4-8 and Q 3.7.6-5) CPSES did not adopt the STS MODE 4 applicability for ITS 3.7.5 for the following reasons:

1. CTS 3.7.1.2 does not require AFW operable prior to MODE 3. For a normal or Technical Specification forced shutdown, AFW is the primary method of cooling down the RCS. The two motor driven AFW pumps provide cooling water and the main condenser is the normal heat sink for the RCS loops/steam generators in MODE 3 and 4 cooldown until RHR loops are operation.

2. CTS 3.7.1.2 actions place the unit in MODE 4 under the applicable requirements for CTS 3.4.1.3 which does not require operable AFW pumps. CTS 3.4.1.3 (and ITS 3.4.6) require 2 cooling loops from six possible choices (4 RCS loops or 2 RHR loops) in Mode 4. Actions a and b in CTS 3.7.1.7 lead directly to 3.4.1.3. One motor driven AFW pump provides the required support for two RCS loops. Extending CTS 3.7.1.2/ITS 3.7.5 into MODE 4 when the steam generator is required for heat removal would require 1 motor driven AFW pump operable when none are currently required.

Issue #2- The ITS markup has been revised to delete the reference to MODES 1-3 in the conditions since this is redundant to the revised applicability.

Issue #3- (Also see the response to Q 3.7.4-8.)
The technical basis for receiving the extra 6 hours of Completion time is provided in DOC 02-20-LS-35 and NSHC LS-35. The STS permitted total 18 hour Completion Time, for entry into Mode 4, is applicable to CPSES consistent with the STS BASES. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. In MODE 4 with two AFW trains inoperable, operation is allowed to continue because only one motor driven pump AFW train is required to satisfy ITS 3.4.6. Although not required, the unit may continue to cool down and initiate RHR. The extra 6 hours is not dependent on the Applicability of the LCO being extended to cover the extra time spent in Mode 4, while the steam generator is relied upon for heat removal. The additional time is applicable in MODE 3 to allow a more orderly and controlled cooldown to reach MODE 4. The required action in ITS 3.7.5 Action C.2 is to be in MODE 4 only and 18 hours is an appropriate completion time given that only one AFW pump may be available for the cooldown.

Issue #4- As discusssed above, the CTS do not require an operable AFW train or a motor driven pump in MODE 4. The B-PS notation indicates the bracketed plant specific note is not applicable to CPSES CTS.

Issue #5- JFD 3.7-4 is revised to explain the deletion of STS action E.

Issue #6- JFD 3.7-4 is revised to explain the deletion of note in ITS SR 3.7.5.3 and 3.7.5.4.

ATTACHED PAGES:

Encl 4	63
Encl 5B	B 3.7-31
Encl 6A	2

IV. SPECIFIC NO SIGNIFICANT HAZARDS CONSIDERATIONS

NSHC LS-35
10 CFR 50.92 EVALUATION
FOR
TECHNICAL CHANGES THAT IMPOSE LESS RESTRICTIVE REQUIREMENTS WITHIN THE TECHNICAL SPECIFICATIONS

Consistent with NUREG-1431, Rev. 1, the required completion time to shut the plant down would be revised from achieving HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours to achieving HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 12 hours. An additional 6 hours would be allowed to achieve HOT SHUTDOWN for the auxiliary feedwater (AFW) system~~, the Condensate Storage Tank, and the [atmospheric relief valve] lines if they~~ **if an inoperable AFW pump could not be restored within the required completion time or if two AFW pumps** were inoperable. Once HOT SHUTDOWN was achieved, the plant would be in a MODE where the residual heat removal (RHR) system would be OPERABLE in addition to the OPERABLE AFW train(s) used to perform the cooldown to HOT SHUTDOWN conditions. Since the inoperable AFW train(s) may affect the normal cooldown rate, the ITS allows an additional six hours to achieve MODE 4. The added time provides additional margin to perform an orderly transfer from the SG method of heat removal to the RHR system to regain the heat removal function without challenging unit systems.

Q-3.7.4-8
Q-3.7.5-1
Q-3.7.6-5

The AFW system is designed to cool the plant to MODE 4 entry conditions at which time the RHR system may be placed in service. The RHR system, which is required to be OPERABLE, is capable of adequate heat removal. Although AFW may be used for additional cooldown below 350°F, AFW operability in MODE 4 is not an assumption of any safety analysis and is not consistent with the current licensing basis. The MODE applicability for AFW in the current TS is MODES 1, 2, and 3. In general, the AFW system would be available to remove heat during a normal startup or shutdown and thus would be capable of providing the heat removal function even if not technically OPERABLE.

This proposed TS change has been evaluated and it has been determined that it involves no significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10CFR 50.92(c) as quoted below:

> *"The Commission may make a final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility licensed under 50.21 (b) or 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:*
>
> 1. *Involve a significant increase in the probability or consequences of an accident previously evaluated; or*
>
> 2. *Create the possibility of a new or different kind of accident from any accident previously evaluated; or*
>
> 3. *Involve a significant reduction in a margin of safety."*

The following evaluation is provided for the three categories of the significant hazards consideration standards:

between 72 hours and 10 days dictates that both Completion Times apply simultaneously, and the more restrictive must be met.

C.1 and C.2

When Required Action A.1 or B.1 cannot be completed within the required Completion Time, or if two AFW trains are inoperable in MODE 1, 2, or 3, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4 within 18 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

~~In MODE 4 with two AFW trains inoperable, operation is allowed to continue because only one motor driven pump AFW train is required in accordance with the Note that modifies the LCO.~~ In MODE 4, either the reactor coolant pumps or the RHR loops can be used to provide forced circulation. This is addressed in LCO 3.4.6, "RCS Loops — MODE 4." ~~Although not required, the unit may continue to cool down and initiate RHR.~~ Q-3.7.5-1

D.1

If all three AFW trains are inoperable in MODE 1, 2, or 3, the unit is in a seriously degraded condition with no safety related means for conducting a cooldown, and only limited means for conducting a cooldown with nonsafety related equipment. In such a condition, the unit should not be perturbed by any action, including a power change, that might result in a trip. The seriousness of this condition requires that action be started immediately to restore one AFW train to OPERABLE status.

Required Action D.1 is modified by a Note indicating that all required MODE changes or power reductions are suspended until one AFW train is restored to OPERABLE status. In this case, LCO 3.0.3 is not applicable because it could force the unit into a less safe condition.

~~E.1~~

~~In MODE 4, either the reactor coolant pumps or the RHR loops can be used to provide forced circulation. This is addressed in LCO 3.4.6, "RCS Loops — MODE 4." With one required AFW train inoperable, action must be taken to immediately restore the inoperable train to OPERABLE status. The immediate Completion Time is consistent with LCO 3.4.6.~~

CHANGE NUMBER	JUSTIFICATION
3.7-04	Requirements involving reliance on the steam generator heat removal system for heat removal in MODE 4 would be deleted consistent with current licensing basis. The SG heat removal system is designed to cool the plant to MODE 4 entry conditions at which time the RHR system may be placed in service. However, there must be some period of time during MODE 4 for the SG heat removal system cooling to be transitioned to the RHR system. ~~The RHR system, which is required to be OPERABLE, is capable of adequate heat removal.~~ Although the SG heat removal system may be used for additional cooling below 350°F, the SG heat removal system operability is not an assumption of any safety analysis and is not consistent with the current licensing basis. The MODE applicability for the SG heat removal system in the CTS is MODES 1, 2, and 3. The SG heat removal system would be used during a normal startup or shutdown and thus would be capable of providing the heat removal function during the transition to and from RHR in MODE 4 even if not required to be OPERABLE by this TS. Q-3.7.5-1 STS 3.7.5 LCO NOTE, MODE 4 Applicability, Condition E, the SR 3.7.5.3 NOTE, and the SR 3.7.5.4 NOTE 2 are deleted based on CTS applicability in only MODES 1-3. Conditions B, C, and D are revised to delete MODES 1-3 since this is redundant to the revised applicability.
3.7-05	REQUIRED ACTION B.1 is revised to state and new C.1 states respectively that restoration of "~~all but~~ at least one" and "~~all but~~ at least two" atmospheric [relief] valves [(ARVs)] is required which will effectively exit the respective REQUIRED ACTIONS. This is consistent with the BASES of NUREG-1431, which recognizes the availability of the [Steam Dump System] and the MSSVs, and the low probability of an accident requiring the [atmospheric relief] valves. The specific change proposed by Industry Traveler TSTF-100 is to add the "~~all but~~ at least one" phrase to REQUIRED ACTION B for plants that only require three [ARVs] to be OPERABLE. The addition of the "~~all but~~ at least two" phrase to new REQUIRED ACTION C.1 is to account for the requirement to have four [ARVs] OPERABLE. Q-3.7.4-1
3.7-06	The CONDITION and REQUIRED ACTION for two or more inoperable [ARV] lines is revised to limit the applicability to only two inoperable [ARV] lines and the COMPLETION TIME is revised from 24 to 72 hours per the current licensing basis. A new CONDITION C for three or more [ARV] lines inoperable for plants that require four [ARV] lines is proposed. The original CONDITION C is retained and relabeled CONDITION D. These changes are consistent with the intent of NUREG 1431, which recognizes the availability of the [Steam Dump System] and the MSSVs, and the low probability of an accident requiring the [atmospheric relief] valves. Q-3.7.4-1

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.5-5 **APPLICABILITY:** CP

REQUEST: CTS 3.7.1.2 LCO and Actions
ITS 3.7.5 LCO, Actions and Bases
DOC 02-01-LG

CTS 3.7.1.2 requires "At least three independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:" ITS 3.7.5 requires "Three AFW trains shall be OPERABLE."

Comment: The CTS markup should show the LCO statement as follows " three auxiliary feedwater trains shall be OPERABLE " Also, in all Actions and Surveillance Requirements "pumps" should be "trains" and "the associated flow paths" are moved to the Bases. Revise the CTS markup and the submittal.

FLOG RESPONSE: The CTS markup has been revised to show the LCO statement as " three auxiliary feedwater trains shall be OPERABLE ." Also, in all Actions and Surveillance Requirements "pumps" have been revised to be "trains" and "the associated flow paths" are moved to the Bases. The above changes were done under existing DOC 02-01-LG.

ATTACHED PAGES:

Encl 2 3/4.7-3 and 3/4.7-4

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

1-13-A
Q-3.7.1-1

LIMITING CONDITION FOR OPERATION

3.7.1.2 ~~At least~~ three ~~independent steam generator~~ auxiliary feedwater trains ~~pumps and associated flow paths~~ shall be OPERABLE ~~with~~: 2-01-LG Q-3.7.5-5

~~a. Two motor-driven auxiliary feedwater pumps, each capable of being powered from separate emergency busses, and~~ 2-01-LG

~~b. One steam turbine-driven auxiliary feedwater pump capable of being powered from two OPERABLE steam supplies.~~

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

2-16-A

a. With one auxiliary feedwater train ~~pump or associated flow path~~ inoperable (for reasons other than one steam supply to the turbine driven AFW pump inoperable), restore the required auxiliary feedwater train ~~pump or associated flow path~~ to OPERABLE status within 72 hours (AND within 10 days from discovery of failure to meet the LCO) or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following ~~6~~ 12 hours. 2-01-LG Q-3.7.5-5 2-03-M 2-20-LS

b. With two auxiliary feedwater trains ~~pump or associated flow path~~ inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following ~~6~~ 12 hours. 2-01-LG Q-3.7.5-5 2-20-LS

c. With three auxiliary feedwater trains ~~pump or associated flow path~~ inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater train ~~pump or associated flow path~~ to OPERABLE status as soon as possible*. 2-01-LG Q-3.7.5-5 2-05-A

d. With only one OPERABLE steam supply system capable of providing power to the turbine-driven auxiliary feedwater pump, restore the required OPERABLE steam supplies within 7 days (AND within 10 days from discovery to meet the LCO) or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following ~~6~~ 12 hours. 2-03-M 2-20-LS

* LCO 3.0.3 and all other LCO REQUIRED ACTIONS requiring MODE changes are suspended until one AFW train is restored to OPERABLE status. 2-05-A

4.7.1.2 Each auxiliary feedwater train ~~pump or associated flow path~~ shall be demonstrated OPERABLE: 2-01-LG Q-3.7.5-5

a. At least once per 31 days by:

1) Verifying that each ~~non-automatic~~ manual, power operated, and automatic valve (except the flow control valves) in the flow path and in both steam supply lines to the turbine driven AFW pump, that is not locked, sealed, or otherwise secured in position, is in its correct position; and 2-07-MA Q-3.7.5-6

2) Verifying that each auxiliary feedwater flow control ~~and isolation~~ valve in the flow path is in the fully open position whenever the Auxiliary Feedwater System is in standby for auxiliary feedwater automatic initiation or when above 10% RATED THERMAL POWER. 2-07-MA Q-3.7.5-6

b. ~~At least once per 92 days on a STAGGERED TEST BASIS~~ In accordance with the frequency in the Inservice Test Program by: 2-08-LS

1) Verifying that each motor-driven pump ~~develops a differential pressure of greater than or equal to 1372 psid at a flow of greater than or equal to 430 gpm~~ developed head at the flow test point is greater than or equal to the required developed head; 2-15-LG

2) Verifying that the steam turbine-driven pump# ~~develops a differential pressure of greater than or equal to 1450 psid at a test flow of greater than or equal to 860 gpm~~ developed head at the flow test point is greater than or equal to the required developed head when the secondary steam supply pressure is greater than 532 psig. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3; 2-14-M 2-15-LG

c. At least once per 18 months by: 8-05-A Q-3.7.5-9

1) Verifying that each automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to its correct position upon receipt of an ~~Auxiliary Feedwater Actuation test~~ actual or simulated actuation signal, and 2-12-TR

2) Verifying that each auxiliary feedwater pump# starts as designed automatically upon receipt of an ~~Auxiliary Feedwater Actuation test~~ actual or simulated actuation signal*. The provisions of Specification 4.0.4 are not applicable to the turbine driven auxiliary feedwater pump for entry into MODE 3. 2-17-A 2-12-TR

~~* The surveillance test interval is extended to 24 months for testing the start of the Unit 2, Train A Motor Driven Auxiliary Feedwater Pump upon receipt of an Auxiliary Feedwater Actuation test signal, to remain in effect until the completion of the second refueling outage for Unit 2.~~ 2-17-A

Not required to be performed for the turbine driven AFW pump until 24 hours after ≥ 532 psig in the steam generator. 2-14-M

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.5-6 **APPLICABILITY:** CP, WC, CA

REQUEST: CTS 4.7.1.2, Action a[b].1 and 2
ITS SR 3.7.5.1
DOC 2-07-M
JFD 3.7-08

CTS 4.7.1.2, Action a[b].1 verifies each non-automatic valve and Action a[b].2 verifies each automatic valve is in its correct position. ITS SR 3.7.5.1 collectively verifies each manual, power-operated and automatic valve is in its correct position with a new note excepting certain valves.

Comment: **Issue #1** - Contrary to DOC 02-07-M, these CTS requirements have always applied to automatic valves. Therefore, this is not a more restrictive change but an administrative reformatting change to combine separate surveillances into one ITS SR. Provide a DOC with the appropriate justification for this CTS administrative change.
Issue #2 - The Note to this ITS is taken from the CTS but it is superfluous because the CTS and ITS requirements both are to verify each valve is in its correct position, regardless if the unit is in Mode 1, 2, or 3. If the unit is still in Mode 2 or 3, the AFW flow control is in its correct position if it is closed. In Mode 1, the valve should be open. These are procedural details of how and when this SR is performed. This ITS Note should be deleted and these details moved to and explained in depth in the SR Bases. For WCGS only, the CTS markup does not explain the conversion basis for 4.7.1.2.1 b.2. Provide a DOC with the appropriate justification for this CTS change. Revise the submittal for these two issues.

FLOG RESPONSE: Issue #1: DOC 2-07-M has been revised to DOC 2-07-A. The ITS surveillance results from the combination of two CTS surveillances. Combining the two CTS surveillances into one CTS surveillance does not impact technical content, but involves a reformatting administrative change. Enclosures 3A and 3B have been revised to show the DOC 2-07-A. DOC 2-07-A incorporates the following:

> "Two CTS surveillance requirements, CTS [4.7.1.2a1) and 4.7.1.2a2)], are combined into one ITS SR 3.7.5.1 surveillance requirement. Combining the two surveillances does not impact the technical content. The proposed change is acceptable because it involves an administrative change that reformats surveillance requirements without changing technical content."

Issue #2: The ITS Note to SR 3.7.5.1 is appropriately located and should not be removed to the Bases. The Note is supported by current licensing bases basis and provides clarification for operability of the auxiliary feedwater (AFW) pumps with the discharge valves throttled to maintain steam generator levels during plant heatup or cooldown. The AFW system is a dual use system. Under current licensing bases basis, the AFW trains are considered OPERABLE during alignment and operation for steam generator level control, when the AFW flow control valves are not in the full open position (not the correct position) and when the unit thermal power is less than or equal to 10%RTP. The correct position for these valves for accident conditions is the full open position. By retaining the Note for clarification, current flexibility remains and unnecessary Action entry is prevented. Maintaining the CTS SR as an ITS SR Note is consistent with proposed traveler TSTF-245.

The comment indicating that the WCGS CTS markup does not explain the conversion basis for 4.7.1.2.1b.2) is not clear. As noted above, CTS SRs 4.7.1.2.1b.1) and b.2) are combined into one ITS surveillance requirement, SR 3.7.5.1. There were no changes made to CTS SR 4.7.1.2b.1) and DOC 2-07-A explains the combining of the CTS SRs.

ATTACHED PAGES:

Encl 2	3/4.7-4
Encl 3A	4
Encl 3B	3

4.7.1.2 Each auxiliary feedwater train ~~pump or associated flow path~~ shall be demonstrated OPERABLE: 2-01-LG Q-3.7.5-5

a. At least once per 31 days by:

1) Verifying that each ~~non-automatic~~ manual, power operated, and automatic valve (except the flow control valves) in the flow path and in both steam supply lines to the turbine driven AFW pump, that is not locked, sealed, or otherwise secured in position, is in its correct position; and 2-07-MA Q-3.7.5-6

2) Verifying that each auxiliary feedwater flow control ~~and isolation~~ valve in the flow path is in the fully open position whenever the Auxiliary Feedwater System is in standby for auxiliary feedwater automatic initiation or when above 10% RATED THERMAL POWER. 2-07-MA Q-3.7.5-6

b. ~~At least once per 92 days on a STAGGERED TEST BASIS~~ In accordance with the frequency in the Inservice Test Program by: 2-08-LS

1) Verifying that each motor-driven pump ~~develops a differential pressure of greater than or equal to 1372 psid at a flow of greater than or equal to 430 gpm~~ developed head at the flow test point is greater than or equal to the required developed head; 2-15-LG

2) Verifying that the steam turbine-driven pump# ~~develops a differential pressure of greater than or equal to 1450 psid at a test flow of greater than or equal to 860 gpm~~ developed head at the flow test point is greater than or equal to the required developed head when the secondary steam supply pressure is greater than 532 psig. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3; 2-14-M 2-15-LG

c. At least once per 18 months by: 8-05-A Q-3.7.5-9

1) Verifying that each automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to its correct position upon receipt of an ~~Auxiliary Feedwater Actuation test~~ actual or simulated actuation signal, and 2-12-TR

2) Verifying that each auxiliary feedwater pump# starts as designed automatically upon receipt of an ~~Auxiliary Feedwater Actuation test~~ actual or simulated actuation signal*. The provisions of Specification 4.0.4 are not applicable to the turbine driven auxiliary feedwater pump for entry into MODE 3. 2-17-A 2-12-TR

~~* The surveillance test interval is extended to 24 months for testing the start of the Unit 2, Train A Motor Driven Auxiliary Feedwater Pump upon receipt of an Auxiliary Feedwater Actuation test signal, to remain in effect until the completion of the second refueling outage for Unit 2.~~ 2-17-A

Not required to be performed for the turbine driven AFW pump until 24 hours after ≥ 532 psig in the steam generator. 2-14-M

CHANGE NUMBER	NSHC	DESCRIPTION
02-03	M	The ACTIONs are modified to require restoration of the systems to meet the LCO within 10 days of discovery of failure to meet the LCO. This new requirement is intended to prevent multiple overlapping ACTION entries such that the intended AOT is exceeded. This proposed change is acceptable because it results in more stringent TS requirements that are both appropriate and consistent with NUREG-1431.
02-04	M	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
02-05	A	Although previously implied, the addition of the footnote for three inoperable AFW trains assures that LCO 3.0.3 will not be entered and that no other ACTION statement for other inoperable components will be applied that might force the unit into an unsafe condition.
02-06	LG	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
02-07	~~M~~A	~~The surveillance to verify valve alignments is revised to include automatic valves. This proposed change is acceptable because it results in more stringent TS requirements that are both appropriate and consistent with NUREG-1431.~~ Two CTS surveillance requirements, CTS [4.7.1.2a1) and 4.7.1.2a2)], are combined into one ITS SR 3.7.5.1 surveillance requirement. Combining the two surveillances does not impact the technical content. The proposed change is acceptable because it involves an administrative change that reformats surveillance requirements without changing technical content. Q-3.7.5-6
02-08	LS-6	The surveillance interval for the AFW pump performance is changed from once per 92 days on a STAGGERED TEST BASIS (STB) to "in accordance with the IST Program." This proposed change will eliminate any potential ambiguity associated with AFW pump testing as a result of ASME changes and results in consistent presentation of pump testing throughout the TS.
02-09	A	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
02-10	LS-21	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
02-11	A	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
02-12	TR-1	The respective valve and pump SRs are revised to allow credit for an actual actuation, if one occurs, to satisfy the SRs. The identification of initiating signals is moved to the Bases.

CONVERSION COMPARISON TABLE - CURRENT TS 3/4.7

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
02-05 A	The addition of the note for three inoperable AFW trains assures that TS 3.0.3 will not be entered and that no other action statement for other inoperable components will be applied that might force the unit into an unsafe condition.	YES	YES	YES	YES
02-06 LG	The change would move details regarding AFW motor operated discharge valves and ESW supply valve descriptions to the Bases.	NO; descriptive material not part of CTS.	NO; descriptive material not part of CTS.	YES	YES
02-07 MA	~~The verification of valve alignments is revised to include automatic valves.~~ Two CTS surveillance requirements, CTS [4.7.1.2a1) and 4.7.1.2a2)] are combined into one ITS SR 3.7.5.1 surveillance requirement.	YES	YES	YES	YES Q-3.7.5-5
02-08 LS-6	The surveillance interval for the AFW pump performance is changed from 31 days on a STB to in accordance with the IST Program.	YES	YES	YES	YES
02-09 A	This DCPP specific surveillance is revised to combine the water and steam flow paths.	YES	NO	NO	NO
02-10 LS-21	The time to achieve HOT SHUTDOWN if actions are not completed is changed from 6 to 12 hour. This time is reasonable to reach the required conditions under the circumstances since the SG heat removal system is the system performing the cooldown to MODE 4.	YES; also refer to 02-04-M.	NO; refer to 02-20-LS-35.	NO; refer to 02-20-LS-35.	NO; refer to 02-20-LS-35.
02-11 A	In this DCPP specific revision, the testing requirements for pumps and valves are separated into two SRs.	YES	NO	NO	NO
02-12 TR-1	The SR is revised to allow credit for an actual actuation and moves signal specifics to the Bases.	YES	YES	YES	YES
02-13 A	In this DCPP specific revision, the verification that the fire water storage tank is capable of realignment as an AFW water source is moved to the AFW ITS.	YES	NO	NO	NO
02-14 M	The note for testing of the steam turbine-driven AFW pump is revised to explicitly define when testing must be performed.	YES	YES	YES	NO; part of CTS.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.5-7 **APPLICABILITY:** CP, WC, CA

REQUEST: CTS 4.7.1.2
Bases ITS 3.7.5, LCO discussion
DOC 06-06-LG

For Callaway and WCGS, there is no CTS requirement but the Bases ITS 3.7.5 LCO discussion states the Operability requirements for the TDAFW pump control valve and the ARV[ASD]'s nitrogen accumulator tank pressure. For CPSES, CTS 4.7.1.7 item a, is a surveillance on the accumulator tank air pressure for the ARVs.

Comment: This comment is related to item #8 of ITS 3.7.4. There is no CTS DOC or ITS JFD provided to explain these Operability requirements listed in the Bases for ITS 3.7.5. An explanation is required to explain why there is no surveillance for the TDAFW pump control valve or ARV[ASD] nitrogen accumulator tank pressure. Revise the submittal to add this new SR performed every 24 hours to either ITS 3.7.4 or ITS 3.7.5, as is similarly done at DCPP.

FLOG RESPONSE: See response to Comment Number Q3.7.4-7. The same discussion provided for the ARVs/ASDs accumulators applies to the TDAFW pump control valve accumulators.

ATTACHED PAGES:

Ncne

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.5-8 **APPLICABILITY:** DC, CP

REQUEST: CTS 4.7.1.2.1.c
ITS SRs 3.7.5.3 and 3.7.5.4
DOC 02-12-TR1

CTS 4.7.1.2.1.c verifies at least once per 18 months that each AFW pump starts and each automatic valve actuates as designed upon receipt of a AFW actuation test signal. This SR was divided into two ITS SRs, 3.7.5.3 and 3.7.5.4, except an actual signal may be substituted for the simulated signal.

Comment: Issue #1 - The DOC states that the specific identity of the simulated signal, is no longer retained in the SR but it is to be moved to the Bases. A review of the ITS Bases discussion for these SRs shows they do not identify these testing details. Revise the Bases in accordance with the DOC. **Issue #2** - For DCPP, the CTS Markup has been revised from a Frequency of 18 months to at each refueling interval. ITS SRs state the Frequency is 24 months. The ITS Bases state the Frequency is 24 months which is not consistent with the CTS markup. These changes have been proposed without any DOC or JFD. There is no technical justification provided for these CTS changes. Adopt the STS text or withdraw these CTS changes.

FLOG RESPONSE: The Bases for TS 3.7.5.3 has been revised to read: "This SR verifies that AFW can be delivered to the appropriate steam generator in the event of any accident or transient that generates an ESFAS, by demonstrating that each automatic valve in the flow path actuates to its correct position on an actual or simulated actuation generated by an auxiliary feedwater actuation signal. ..."

The Bases for TS 3.7.5.4 has been revised to read: "This SR verifies that the AFW pumps will start in the event of an accident or transient that generates an ESFAS by demonstrating that each AFW pump starts automatically on an actual or simulated actuation generated by an auxiliary feedwater actuation signal. ..."

For DCPP - An errata to LAR 97-09 was submitted to the NRC January 8, 1998 in DCL-98-003. Errata changes on pages affected by NRC comment numbers are indicated with "DC-ALL-002." Errata changes that dealt with issuance of LAs 119/117 and 118/116 (issued 7/13/97) that addressed CTS surveillance interval increases due to 24-month fuel cycles are indicated with "DC-ALL-001."

LAs 118/116, referenced above, defined the CTS frequency notation in Table 1.1. Per LAs 118/116 and LAR 97-09 errata, the notation "R24, REFUELING INTERVAL" is defined as, "At least once per 24 months." Thus, the CTS mark-up stating "each REFUELING INTERVAL" is consistent with the ITS mark-up of "24 months."

ATTACHED PAGES:

Encl. 5B B 3.7-33

BASES (continued)

This SR is modified by a Note indicating that the SR should be deferred until suitable test conditions are established. This deferral is required because there is insufficient steam pressure to perform the test.

SR 3.7.5.3

This SR verifies that AFW can be delivered to the appropriate steam generator in the event of any accident or transient that generates an ESFAS, by demonstrating that each automatic valve in the flow path actuates to its correct position on an actual or simulated actuation generated by an auxiliary feedwater actuation signal. The Steam Generator Blowdown, Steam Generator Blowdown Sample, and Feedwater Split Flow Bypass valves close on an auxiliary feedwater actuation to ensure auxiliary feedwater is delivered to the steam generator upper nozzles and is retained in the steam generator for decay heat removal. The AFW flow control valves trip to auto (open) on an auxiliary feedwater actuation to ensure full flow is delivered to each steam generator flow path. The steam admission valves open to supply the turbine driven auxiliary feedwater pump. This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. The 18 month Frequency is acceptable based on operating experience and the design reliability of the equipment. Q-3.7.5-8 CP-3.7-13

~~This SR is modified by a Note that states the SR is not required in MODE 4. In MODE 4, the required AFW train is already aligned and operating.~~

SR 3.7.5.4

This SR verifies that the AFW pumps will start in the event of any accident or transient that generates an ESFAS by demonstrating that each AFW pump starts automatically on an actual or simulated actuation generated by an auxiliary feedwater actuation signal in ~~MODES 1, 2, and 3. In MODE 4, the required pump is already operating and the autostart function is not required.~~ The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Q-3.7.5-8 Q-3.7.G-1

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.5-9 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: CTS 4.7.1.2.1.c[1]
ITS SR 3.7.5.3
DOC 02-xx-LSx

CTS 4.7.1.2.1 item c[1] verifies all automatic valves actuate to their correct [full open] position. ITS SR 3.7.5.3 verifies only those valves "that are not locked, sealed or otherwise secured in position .."

Comment: This CTS change was made to the ITS markup but there was no DOC provided to justify this less restrictive technical CTS change for verifying a reduced number of valves. Provide the missing DOC and revise the submittal.

FLOG RESPONSE: CTS 4.7.1.2.1 item c(1) was revised to verify only those valves "that are not locked, sealed or otherwise secured in position" actuate to their correct position on receipt of an actuation test signal. DOC 08-05-A was added to address this change which we believe to be administrative rather than less restrictive. The NRC accepted a similar change at Vogtle as an administrative change, as discussed in Section 3.1.3.7 item (13) of the Vogtle SER.

DOC 08-05-A (as revised in response to Comment Number Q3.7.7-2) states: "The clarification allows automatic valves, which are in their secured position under administrative controls, to be exempted from the surveillance. These automatic valves are secured in their accident position and are not required to actuate to perform their safety function. Proper positioning of valves is administratively controlled by equipment out of service programs and locked valve programs. These programs ensure valves are maintained in their proper position by requiring independent verification of safety-related or other important equipment, documentation of the position of locked equipment in a surveillance program, and periodic reviews of equipment normally required to be locked. Exempting automatic valves that are secured in their required position is perceived as the intent of the CTS wording, and therefore, the addition of the phrase more accurately reflects this intent and is considered to be administrative."

ATTACHED PAGES:

Encl 2 3/4.7-4
Encl 3A 10

4.7.1.2 Each auxiliary feedwater train ~~pump or associated flow path~~ shall be demonstrated OPERABLE: 2-01-LG Q-3.7.5-5

a. At least once per 31 days by:

1) Verifying that each ~~non-automatic~~ manual, power operated, and automatic valve (except the flow control valves) in the flow path and in both steam supply lines to the turbine driven AFW pump, that is not locked, sealed, or otherwise secured in position, is in its correct position; and 2-07-MA Q-3.7.5-6

2) Verifying that each auxiliary feedwater flow control ~~and isolation~~ valve in the flow path is in the fully open position whenever the Auxiliary Feedwater System is in standby for auxiliary feedwater automatic initiation or when above 10% RATED THERMAL POWER. 2-07-MA Q-3.7.5-6

b. ~~At least once per 92 days on a STAGGERED TEST BASIS~~ In accordance with the frequency in the Inservice Test Program by: 2-08-LS

1) Verifying that each motor-driven pump ~~develops a differential pressure of greater than or equal to 1372 psid at a flow of greater than or equal to 430 gpm~~ developed head at the flow test point is greater than or equal to the required developed head; 2-15-LG

2) Verifying that the steam turbine-driven pump# ~~develops a differential pressure of greater than or equal to 1450 psid at a test flow of greater than or equal to 860 gpm~~ developed head at the flow test point is greater than or equal to the required developed head when the secondary steam supply pressure is greater than 532 psig. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3; 2-14-M 2-15-LG

c. At least once per 18 months by: 8-05-A Q-3.7.5-9

1) Verifying that each automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to its correct position upon receipt of an ~~Auxiliary Feedwater Actuation test~~ actual or simulated actuation signal, and 2-12-TR

2) Verifying that each auxiliary feedwater pump# starts as designed automatically upon receipt of an ~~Auxiliary Feedwater Actuation test~~ actual or simulated actuation signal*. The provisions of Specification 4.0.4 are not applicable to the turbine driven auxiliary feedwater pump for entry into MODE 3. 2-17-A 2-12-TR

~~* The surveillance test interval is extended to 24 months for testing the start of the Unit 2, Train A Motor Driven Auxiliary Feedwater Pump upon receipt of an Auxiliary Feedwater Actuation test signal, to remain in effect until the completion of the second refueling outage for Unit 2.~~ 2-17-A

Not required to be performed for the turbine driven AFW pump until 24 hours after ≥ 532 psig in the steam generator. 2-14-M

CHANGE NUMBER	NSHC	DESCRIPTION
07-17	A	The allowance to open a valve closed per an action in this specification is enveloped by ITS SR 3.0.5.
07-18	LG	The identification of the specific bypass valves associated with feedwater isolation valves in LCO and the Applicability is descriptive material and is moved to the Bases consistent with the level of detail provided in NUREG-1431. Q-3.7.3-6
08-01	LG	Not applicable to CPSES See Conversion Comparison Table (enclosure 3B).
08-02	A	A note is added to the ACTION that references a potential interaction with ITS 3.4.6 dealing with operability of the RHR system in MODE 4. The Note requires that the applicable TS be entered for the RHR train made inoperable by the inoperable [component cooling water (CCW)] System. The ACTIONS of the referenced TS (RCS Loops-MODE 4) require more immediate action than are required by the [CCW] ACTIONS.
08-03	LG	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
08-04	A	A note is added to the [CCW] surveillance that clarifies that the system is not made inoperable by the isolation of individual components. This change is in accordance with NUREG-1431, Rev. 1, and provides clarification only.
08-05	A	The surveillance is modified to clarify that valves that are locked, sealed or otherwise secured in their correct position are not required to be tested. This change is in accordance with NUREG-1431, Rev. 1, and provides clarification only. The clarification allows automatic valves, which are in their secured position under administrative controls, to be exempted from the surveillance. These automatic valves are secured in their accident position and are not required to actuate to perform their safety function. Proper positioning of valves is administratively controlled by equipment out of service programs and locked valve programs. These programs ensure valves are maintained in their proper position by requiring independent verification of safety-related or other important equipment, documentation of the position of locked equipment in a surveillance program, and periodic reviews of equipment normally required to be locked. Exempting automatic valves that are secured in their required position is perceived as the intent of the CTS wording, and therefore, the addition of the phrase more accurately reflects this intent and is considered to be administrative. Q-3.7.7-2 Q-3.7.5-9
08-06	TR-1	The SR is revised to allow credit for an actual actuation, if one occurs, to satisfy the SRs. The identification of the initiating signals is moved to the Bases.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.5-10 **APPLICABILITY:** DC, CP

REQUEST: CTS 3.7.1.2 and CTS 3.7.1.3 Action a
STS SR 3.7.5.5
DOC 02-yy-A
JFD B-PS

For DCPP, CTS 3.7.1.3 Action a, requires the Condensate Storage Tank flowpath open to the AFW pump suction. STS SR 3.7.5.5 verifies the required CST flowpaths to each steam generator are properly aligned. For CPSES, there is no CST flow path verified and hence there is no DOC, JFD, or Bases discussion provided.

Comment: For DCPP, ITS SR 3.7.5.5 was not adopted when there appear to be CTS requirements to ensure AFW flowpaths are properly aligned. The ITS 3.7.5 Bases LCO discussion in the first sentence of the third paragraph states the need to "assure" the CTS outlet valve is open. If this verification does not occur in ITS SR 3.7.5.1, retain the STS SR 3.7.5.5. If this verification does occur in ITS SR 3.7.5.1, modify ITS SR 3.7.5.1 and the Bases to include this specific component verification. The partial plant specific justification/reason provided as the third paragraph of ITS Bases SR 3.7.5.6 should be moved back to SR 3.7.5.5 or adopt the STS text. For CPSES, provide a DOC or JFD, as appropriate to justify how the CTS is affected by adopting the STS SR 3.7.5.5 text. Revise the submittal for these issues.

FLOG RESPONSE: For DCPP - STS SR 3.7.5.5 is not required for those units that use AFW for normal startup and shutdown. DCPP uses AFW for startups and shutdowns. The CST flowpath to the AFW pump suction is verified to be properly aligned by completing or verifying the current sealed valve checklist, Operating Procedure OP K-10D, Sealed Valve Checklist for Auxiliary Feedwater System," in accordance with the "Mode 4 to 3 Transition Checklist" included in OP L-0, "Mode Transition Checklists." STS SR 3.7.5.1 verifies that each AFW manual, power operated, and automatic valve in each water flow path, and in both steam supply flow paths to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position. Since the position of the valves in the CST flow path to the AFW pump suction are controlled by the sealed valve checklist, they are not part of the STS SR 3.7.5.1 verification. The following has been added to the Bases for STS SR 3.7.5.1 to describe how valves in the CST flowpath to the AFW pump suction are controlled: "The valves in the flowpath from the CST to the AFW pump suction are verified to be in the correct position prior to use of the AFW system for normal startup, and are subsequently controlled by a sealed valve checklist. Use of AFW for normal startups and shutdowns, and performance of the quarterly pump surveillance tests confirm that the CST flowpath to the AFW pump suction is properly aligned." The third paragraph of ITS Bases SR 3.7.5.6 should remain unchanged.

For CPSES - The justification for not incorporating ITS SR 3.7.5.5 is provided by the marginal notation in the ITS markup of "B-PS". The "B-PS" notation per the FLOG mark-up methodology means "Bracketed - Plant Specific" (i.e., the plant is adopting the current TS requirements). ITS SR 3.7.5.5 is bracketed in the STS and per the STS conversion methodology would not be required to be adopted unless a comparable requirement already exists in the CTS. A comparable SR does not exist in the CPSES CTS.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.6-2 **APPLICABILITY:** CP, WC, CA

REQUEST: CTS 3.7.1.3 Action a
ITS 3.7.6 Action A
DOC 03-yy-LSy

CTS 3.7.1.3 Action a explicitly ... ST restored Operable in 4 hours or verify an Operable ESW [SSWS] as a back... ...pply in 7 days. These Actions and Completion Times have been reversed in the ITS ... ...tions.

Comment: ITS 3.7.6 is acceptab... ...ed; however, the CTS Actions have been extensively reformatted and chan... ...he CTS markup indicating and providing a technical justification for these C... ...ged requirements. CPSES has provided no CTS markup of this Action to indicate c... ...s and WCGS is the nearest to identifying changes but is without an explanation. Provide ...ised DOC, JFD, or CTS markup with the appropriate explanations and justifications.

FLOG RESPONSE: Except for the extension in completion time (DOC 2-20-LS) the unmodified CTS 3.7.1.3 ACTIONs a and b are technically equivalent to ITS Conditions A and B (as modified by JFD 3.7-04). Based on the FLOG methodology, which does not require that technically equivalent statements be revised solely for the purpose of conforming the CTS to the ITS format, CPSES chose not to modify the CTS. WCGS and Callaway elected to reformat the CTS to more closely approximate the ITS format but failed to identify that those changes were purely administrative. Based on the response to Comment Number Q 3.7.1-1, DOC 01-13-A was added to each specification to address the fact that changes would not be made such as reformatting, renumbering, and editorial rewording to conform the CTS the Westinghouse Standard Technical Specifications, NUREG-1431. This DOC also is used for those case where some non-technical changes were made to conform the CTS to the ITS.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.6-3 **APPLICABILITY:** CP

REQUEST: CTS 4.7.1.3.1 and 4.7.1.3.2
ITS 3.7.6 Required Action A.1
DOC 03-03-LG

CTS 4.7.1.3.1 and 4.7.1.3.2 each contain details for when and how to verify the Operability of the CST level and the backup SSWS. These details are moved to the ITS Bases.

Comment: It is acceptable that the verification for the 4.7.1.3.2 details is moved to the ITS Bases discussion of Background. However, the CTS markup of 4.7.1.3.1 does not show the text moved to the Bases and does not indicate the DOC for this CTS change. Revise the CTS markup. Also, DOC 03-03-LG is incorrect because the verification by "administrative means" is added to the Required Action A.1 and not the surveillance as the CTS markup shows and is described in the DOC. Revise the CTS markup and DOC to correctly explain and justify this CTS change.

FLOG RESPONSE: CTS 4.7.1.3.1 has been marked up to show that the details of that surveillance have been moved to the Bases per DOC 03-03-LG. ITS Bases for SR 3.7.6.1 indicates that CST level is verified every 12 hours whenever the plant is in MODE 1, 2 or 3 without any stipulations as to what the CST is supplying. This encompasses the requirements of operability that were moved from CTS SRs 4.7.1.3.1.

The format of the ITS for this specification is different than the CTS. However, there is no technical difference between the CTS surveillance to "demonstrate OPERABLE by administrative means at least once per 12 hours whenever the SSW system is being used as an alternate supply source" and the ITS Required Action "verify by administrative means OPERABILITY of backup water supply" with a completion time of "once per 12 hours". Per the Flog markup methodology only technical differences are identified. Administrative change DOC 1-13-A was added to this specification per Comment 3.7.1-1 to indicate that format changes are not identified in the CTS mark-up.

ATTACHED PAGES:

Encl 2 3/4.7-5
See attached pages for Comment 3.7.1-1

PLANT SYSTEMS

1-13-A
Q-3.7.1-1

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tank (CST) shall be OPERABLE with an indicated water level of at least 53%.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With the CST inoperable, within 4 hours either:

~~2-20-LS~~
Q-3.7.6-5

a. Restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 ~~12~~ 6 hours, or

~~2-20-LS~~
Q-3.7.6-5

b. Demonstrate the OPERABILITY of the Station Service Water (SSW) system as a backup supply to the auxiliary feedwater pumps and restore the CST to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following ~~6-12~~ 6 hours.

SURVEILLANCE REQUIREMENTS

3-03-LG
Q-3.7.6-3

4.7.1.3.1 The CST shall be demonstrated OPERABLE at least once per 12 hours ~~by verifying the indicated water level is within its limits when the tank is the supply source for the auxiliary feedwater pumps.~~

4.7.1.3.2 The SSW system shall be demonstrated OPERABLE by administrative means at least once per 12 hours whenever the SSW system is being used as an alternate supply source ~~to the auxiliary feedwater pumps by verifying the SSW system OPERABLE and each motor operated valve between the SSW system and each OPERABLE auxiliary feedwater pump is OPERABLE~~. 3-03-LG

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.6-5 **APPLICABILITY:** CP

REQUEST: CTS 3.7.1.3, Applicability, Action a and b
ITS 3.7.6, Applicability, Required Action B.2, and Completion Time
DOC 02-20-LS35
JFD 3.7-04

If the CST level is not within limits and is not restored Operable, CTS 3.7.1.3 Actions requires Mode 3 entry in 6 hours and entry into Mode 4 in an additional 6 hours. ITS 3.7.6 permits an additional 12 hours for entry to Mode 4.

Comment: **Issue #1** - CPSES has not adopted the STS Applicability extending into Mode 4 until the "steam generator is no longer relied upon for heat removal". As previously noted, CTS 3.7.1.7 Action a and b both require the RCS/RHR loops to be placed in operation which directly implies the STS Applicability is a CTS requirement (perhaps due to the transition temperature being below the Mode 4 limits). Adopt the STS Applicability. **Issue #2** - This STS permitted total 18 hour Completion Time, for entry into Mode 4, is only for when the Applicability of the LCO has been extended to cover the extra time spent in Mode 4, while the steam generator is relied upon for heat removal. Therefore, CPSES should adopt the revised STS Applicability or retain the current licensing basis of 12 hours total time. JFD 3.7-04 does not discuss the technical basis for receiving the extra 6 hours of Completion Time. DOC 02-20-LS35 is not applicable and not specific enough for this CTS change. Provide a revised JFD and DOC as appropriate for this CTS change.

FLOG RESPONSE: Issue #1- (Also see the responses to Comment Numbers Q 3.7.4-8 and Q 3.7.5-1.) CPSES did not adopt the STS applicability for ITS 3.7.6 for the following reasons:

1. CTS 3.7.1.3 does not require CST operable prior to MODE 3. For a normal or Technical Specification forced shutdown, the CST is the primary source of cooling water for the RCS. The AFW system and the main condenser is the normal heat sink for the RCS loops/steam generators in MODE 3 and 4 cooldown until RHR loops are operation.

2. CTS 3.7.1.3 actions place the unit in MODE 4 under the applicable requirements for CTS 3.4.1.3 which does not require an operable CST. CTS 3.7.1.3 actions a and b result in a MODE that requires 2 cooling loops from six possible choices (4 RCS loops or 2 RHR loops). One motor driven AFW pump provides the required support for two RCS loops. Extending CTS 3.7.1.3/ITS 3.7.6 into MODE 4 when the steam generator is required for heat removal would require the CST operable when it is not currently required.

3. CST Operability requirements for the STS LCO in MODE 4 are based on FWLB mitigation and are more restrictive than they should be in MODE 4.

Issue #2 - The increase in allowed outage time from 6 to 12 hours (DOC 2-20-LS) has been withdrawn for CTS 3.7.1.7 and 3.7.1.3. The increased outage time has been retained for CTS 3.7.1.2 (See response to Comment Number Q 3.7.5-1)

ATTACHED PAGES:

Encl 2	3/4.7-5
Encl 4	63
Encl 5A	3.7-16
Encl 5B	B 3.7-37

PLANT SYSTEMS

CONDENSATE STORAGE TANK

1-13-A
Q-3.7.1-1

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tank (CST) shall be OPERABLE with an indicated water level of at least 53%.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With the CST inoperable, within 4 hours either:

a. Restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following ~~6~~ ~~12~~ 6 hours, or

~~2-20-LS~~
Q-3.7.6-5

b. Demonstrate the OPERABILITY of the Station Service Water (SSW) system as a backup supply to the auxiliary feedwater pumps and restore the CST to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following ~~6~~ ~~12~~ 6 hours.

~~2-20-LS~~
Q-3.7.6-5

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The CST shall be demonstrated OPERABLE at least once per 12 hours ~~by verifying the indicated water level is within its limits when the tank is the supply source for the auxiliary feedwater pumps.~~

3-03-LG
Q-3.7.6-3

4.7.1.3.2 The SSW system shall be demonstrated OPERABLE by administrative means at least once per 12 hours whenever the SSW system is being used as an alternate supply source ~~to the auxiliary feedwater pumps by verifying the SSW system OPERABLE and each motor operated valve between the SSW system and each OPERABLE auxiliary feedwater pump is OPERABLE~~.

3-03-LG

IV. SPECIFIC NO SIGNIFICANT HAZARDS CONSIDERATIONS

NSHC LS-35
10 CFR 50.92 EVALUATION
FOR
TECHNICAL CHANGES THAT IMPOSE LESS RESTRICTIVE REQUIREMENTS WITHIN THE TECHNICAL SPECIFICATIONS

Consistent with NUREG-1431, Rev. 1, the required completion time to shut the plant down would be revised from achieving HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours to achieving HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 12 hours. An additional 6 hours would be allowed to achieve HOT SHUTDOWN for the auxiliary feedwater (AFW) system~~, the Condensate Storage Tank, and the [atmospheric relief valve] lines if they~~ if an inoperable AFW pump could not be restored within the required completion time or if two AFW pumps were inoperable. Once HOT SHUTDOWN was achieved, the plant would be in a MODE where the residual heat removal (RHR) system would be OPERABLE in addition to the OPERABLE AFW train(s) used to perform the cooldown to HOT SHUTDOWN conditions. Since the inoperable AFW train(s) may affect the normal cooldown rate, the ITS allows an additional six hours to achieve MODE 4. The added time provides additional margin to perform an orderly transfer from the SG method of heat removal to the RHR system to regain the heat removal function without challenging unit systems.

Q-3.7.4-8
Q-3.7.5-1
Q-3.7.6-5

The AFW system is designed to cool the plant to MODE 4 entry conditions at which time the RHR system may be placed in service. The RHR system, which is required to be OPERABLE, is capable of adequate heat removal. Although AFW may be used for additional cooldown below 350°F, AFW operability in MODE 4 is not an assumption of any safety analysis and is not consistent with the current licensing basis. The MODE applicability for AFW in the current TS is MODES 1, 2, and 3. In general, the AFW system would be available to remove heat during a normal startup or shutdown and thus would be capable of providing the heat removal function even if not technically OPERABLE.

This proposed TS change has been evaluated and it has been determined that it involves no significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10CFR 50.92(c) as quoted below:

> *"The Commission may make a final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility licensed under 50.21 (b) or 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:*
>
> *1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or*
>
> *2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or*
>
> *3. Involve a significant reduction in a margin of safety."*

The following evaluation is provided for the three categories of the significant hazards consideration standards:

3.7 PLANT SYSTEMS

3.7.6 Condensate Storage Tank (CST)

LCO 3.7.6 The CST level shall be ≥ ~~110,000 gal.~~ 53%. B-PS

APPLICABILITY: MODES 1, 2, and 3.
~~MODE 4 when steam generator is relied upon for heat removal.~~ 3.7-04

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. CST level not within limit.	A.1 Verify by administrative means OPERABILITY of backup water supply.	4 hours AND Once per 12 hours thereafter
	AND	
	A.2 Restore CST level to within limit.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	AND	
	B.2 Be in MODE 4~~, without reliance on steam generator for heat removal.~~	12 ~~18~~ hours

3.7-04
Q-3.7.6-5

B

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.6.1 Verify the CST level is ≥ ~~110,000 gal.~~ 53%.	12 hours

B-PS

BASES

LCO (Continued)

MODE 3 for 4 hours, followed by a cooldown to RHR entry conditions at 50°F/hour for 5 hours. This basis is established in Reference ~~4~~ 5 and exceeds the volume required by the accident analysis.

The OPERABILITY of the CST is determined by maintaining the tank level at or above the minimum required level.

APPLICABILITY

In MODES 1, 2, and 3, ~~and in MODE 4, when steam generator is being relied upon for heat removal,~~ the CST is required to be OPERABLE.

In MODE 4, 5 or 6, the CST is not required because the AFW System is not required.

ACTIONS

A.1 and A.2

If the CST level is not within limits, the OPERABILITY of the backup supply should be verified by administrative means within 4 hours and once every 12 hours thereafter. OPERABILITY of the backup feedwater supply must include verification that the flow paths from the backup water supply to the AFW pumps are OPERABLE, and that the ~~backup supply has the required volume of water available~~ SSWS is Operable. In addition, each motor operated valve between the SSWS and each Operable AFW pump must be OPERABLE. The CST must be restored to OPERABLE status within 7 days, because the backup supply is not condensate grade water. ~~may be performing this function in addition to its normal functions.~~ The 4 hour Completion Time is reasonable, based on operating experience, to verify the OPERABILITY of the backup water supply. Additionally, verifying the backup water supply every 12 hours is adequate to ensure the backup water supply continues to be available. The 7 day Completion Time is reasonable, based on an OPERABLE backup water supply being available, and the low probability of an event occurring during this time period requiring the CST. TR-3.7-002

B.1 and B.2

If the CST cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4, ~~without reliance on the steam generator for heat removal~~, within ~~18~~ 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. Q-3.7.6-5

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.7-2 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: CTS 4.7.3.[1].b
ITS SR 3.7.7.2
DOC 08-05-A

CTS 4.7.3.[1].b requires that each automatic valve is verified to actuate to its correct position. Corresponding ITS SR 3.7.7.2 limits this verification by excepting those valves that are "locked, sealed or otherwise secured in position."

Comment: This CTS change is acceptable; however, this results in fewer valves that need this verification which is a "less restrictive" change. In addition, for CPSES, the (***) footnote in the CTS markup has omitted the beginning phrase "in the flow path." Revise the submittal to provide the appropriate justification for the proposed change.

FLOG RESPONSE: The FLOG believes that the proposed change is an administrative change. The NRC accepted a similar change at Vogtle as an administrative change, as discussed in Section 3.1.3.7 item (13) of the Vogtle SER.

DOC 08-05-A is revised to include: "The clarification allows automatic valves, which are in their secured position under administrative controls, to be exempted from the surveillance. These automatic valves are secured in their accident position and are not required to actuate to perform their safety function. Proper positioning of valves is administratively controlled by equipment out of service programs and locked valve programs. These programs ensure valves are maintained in their proper position by requiring independent verification of safety-related or other important equipment, documentation of the position of locked equipment in a surveillance program, and periodic reviews of equipment normally required to be locked. Exempting automatic valves that are secured in their required position is perceived as the intent of the CTS wording, and therefore, the addition of the phrase more accurately reflects this intent and is considered to be administrative."

In response to the CPSES specific comment, CPSES has included a revised CTS page to add the words "in the flow path" to the (***) footnote.

ATTACHED PAGES:

Encl 2	3/4.7-14
Encl. 3A	10

1-13-A
Q-3.7.1-1

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3 At least two independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With only one component cooling water loop OPERABLE*, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. 8-02-A

SURVEILLANCE REQUIREMENTS

4.7.3 Each component cooling water loop shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position**; and 8-08-A 8-04-A

b. At least once per 18 months*, by verifying that: 2-17-A

1) Each automatic valve*** servicing safety-related-equipment actuates to its correct position on ~~its associated engineered safety feature~~ an actual or simulated actuation signal, and 8-05-A 8-06-TR

2) Each Component Cooling Water System pump starts automatically on an actual or simulated actuation ~~a safety injection test~~ signal. 8-06-TR

* ~~The surveillance test interval is extended to 24 months for Train A, Unit 2, to remain in effect until the completion of the second refueling outage for Unit 2.~~ 2-17-A

* Enter applicable Required Actions of LCO 3.4.1.3, RCS Hot Shutdown, for residual heat removal loops made inoperable by CCW. 8-02-A

** Isolation of CCW flow to individual components does not render the CCW system inoperable. 8-04-A

*** In the flowpath that is not locked, sealed, or otherwise secured in position. 8-05-A Q-3.7.7-2

CHANGE NUMBER	NSHC	DESCRIPTION
07-17	A	The allowance to open a valve closed per an action in this specification is enveloped by ITS SR 3.0.5.
07-18	LG	The identification of the specific bypass valves associated with feedwater isolation valves in LCO and the Applicability is descriptive material and is moved to the Bases consistent with the level of detail provided in NUREG-1431. Q-3.7.3-6
08-01	LG	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
08-02	A	A note is added to the ACTION that references a potential interaction with ITS 3.4.6 dealing with operability of the RHR system in MODE 4. The Note requires that the applicable TS be entered for the RHR train made inoperable by the inoperable [component cooling water (CCW)] System. The ACTIONS of the referenced TS (RCS Loops-MODE 4) require more immediate action than are required by the [CCW] ACTIONS.
08-03	LG	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
08-04	A	A note is added to the [CCW] surveillance that clarifies that the system is not made inoperable by the isolation of individual components. This change is in accordance with NUREG-1431, Rev. 1, and provides clarification only.
08-05	A	The surveillance is modified to clarify that valves that are locked, sealed or otherwise secured in their correct position are not required to be tested. This change is in accordance with NUREG-1431, Rev. 1, and provides clarification only. The clarification allows automatic valves, which are in their secured position under administrative controls, to be exempted from the surveillance. These automatic valves are secured in their accident position and are not required to actuate to perform their safety function. Proper positioning of valves is administratively controlled by equipment out of service programs and locked valve programs. These programs ensure valves are maintained in their proper position by requiring independent verification of safety-related or other important equipment, documentation of the position of locked equipment in a surveillance program, and periodic reviews of equipment normally required to be locked. Exempting automatic valves that are secured in their required position is perceived as the intent of the CTS wording, and therefore, the addition of the phrase more accurately reflects this intent and is considered to be administrative. Q-3.7.7-2 Q-3.7.5-9
08-06	TR-1	The SR is revised to allow credit for an actual actuation, if one occurs, to satisfy the SRs. The identification of the initiating signals is moved to the Bases.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.7-4 **APPLICABILITY:** DC, CP

REQUEST: CTS 4.7.3.[1].b
ITS SRs 3.7.7.2 and 3.7.7.3
DOC 08-06-TR1

CTS 4.7.3.[1].b verifies at least once per 18 months that each CCW automatic valve [and pump] actuates as designed upon receipt of its [associated ESF], Safety Injection or [Phase "B" Isolation] test signal. ITS SR 3.7.7.2 and ITS SR 3.7.7.3 [new for DCPP] verify the automatic CCW valves and the CCW pumps actuate on an "actual signal or a simulated signal."

Comment: The DOC states the specific identity of the simulated signal is no longer retained in the SR but is moved to the Bases. A review of the ITS SRs 3.7.7.2 and 3.7.7.3 Bases discussion shows these signals are not identified there. Revise the Bases accordingly per the DOC.

FLOG RESPONSE: The Bases for SR 3.7.7.2 and SR 3.7.7.3 have been updated to include ESF actuation signals.

ATTACHED PAGES:

Encl 5B B 3.7-42

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.7.1

This SR is modified by a Note indicating that the isolation of the CCW flow to individual components may render those components inoperable but does not affect the OPERABILITY of the CCW System.

Verifying the correct alignment for manual, power operated, and automatic valves in the CCW flow path provides assurance that the proper flow paths exist for CCW operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves are verified to be in the correct position prior to locking, sealing, or securing. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This Surveillance does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position.

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

SR 3.7.7.2

This SR verifies proper automatic operation of each automatic ~~the~~ CCW valve~~s~~ on its associated ~~an~~ actual or simulated ESF actuation signal. The CCW System is a normally operating system that cannot be fully actuated as part of routine testing during normal operation. This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint. Q-3.7.7-4

SR 3.7.7.3

This SR verifies proper automatic operation of the CCW pumps on an actual or simulated Safety Injection actuation signal. The CCW System is a normally operating system that cannot be fully actuated as part of routine testing during normal operation. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage Q-3.7.7-4

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.8-1 **APPLICABILITY:** CP

REQUEST: CTS LCOs 3/4.7.4.1 and 3/4.7.4.2, Applicability, Actions, SRs
ITS 3.7.8 LCO Applicability, Actions, SRs
DOC 09-ww-A

CTS 3/4.7.4.1 and 3/4.7.4.2 are complete LCOs which are combined, changed and converted into ITS 3.7.8.

Comment: **Issue #1** - There are no DOCs provided by CPSES in the CTS markup to describe and justify how these two CTS LCOs are converted into the ITS 3.7.8. **Issue #2** - There are no explanations to define how these shared unit systems CTS requirements are retained in the ITS. **Issue #3** - There are no explanations for how the CTS 3/4.7.4.2 Applicability in Modes 5, 6 and Refueling requirements are satisfied in the ITS. **Issue #4** - There are no explanations of how the CTS Actions are adapted to the ITS format. Revise this entire LCO submittal.

FLOG RESPONSE: Issue #1- Two CTS LCOs are converted into the ITS 3.7.8, however, there are no technical changes associated with this conversion. They are changes in format only. DOC 1-13-A was added to indicate that no specific justifications are provided for non-technical changes such as format changes (See response and attached pages for Comment Number Q 3.7.1-1).

Issue #2- The SSWS is not a shared system. Each unit has a redundant SSWS independent of the other unit in full conformance with GDC-5. Each unit will comply with ITS 3.7.8 separately.

Issue #3- See response to Issue #1 above.

Issue #4- See response to Issue #1 above

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.8-2 **APPLICABILITY:** CP

REQUEST: CTS 3.7.4.1 and 3.7.4.2 Applicabilities and Bases
ITS 3.7.8 Applicability and Bases
JFD 3.7-30

CTS 3/4.7.4.1 Applicability is Modes 1, 2, 3 and 4. CTS 3/4.7.4.2 Applicability is Mode 5, 6, and Defueled. ITS 3.7.8 Applicability is Mode 1, 2, 3 and 4.

Comment: The submittal has contradictory Applicability requirements. The Bases have not been modified to explain the changes and/or the requirements. It appears the ITS Applicability should be "Both units in Modes 1, 2, 3, and 4"; (next line) "When one unit is in Modes 1, 2, 3, and 4 and the opposite is in Mode 5, 6 or Defueled". Revise the submittal.

FLOG RESPONSE: It is not necessary to deviate from the STS applicability. Either unit in MODES 1-4 with ITS 3.7.8 as proposed is equivalent to the CTS 3/4.7.4.1 and 3/4.7.4.2.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.8-3 **APPLICABILITY:** CP

REQUEST: CTS 3.7.4.1 and 3.7.4.2 Actions and Bases
ITS 3.7.8 Actions and Bases
JFD 3.7-30

CTS 3/4.7.4.1 and 3/4.7.4.2 are complete and different LCOs with separate Actions which are now combined, changed and converted into ITS 3.7.8 Actions.

Comment: **Issue #1** - The Bases Background and LCO discussions contain descriptions which appear to permit SSWS operating configurations that were never intended. There is nothing to prevent two inoperable SSWS trains in one unit being cross-tied to two Operable SSWS trains in the opposite unit. Therefore, a preventive condition should be logically connected by an OR to ITS Condition C stating "Two trains are inoperable in one unit and two trains are Operable in the opposite unit with the associated cross-connects Operable". **Issue #2** - ITS Action B should be placed ahead of ITS Action A due to the length of the Completion Times and ITS 3.7.8 Action B should be split into two separate Actions. **Issue #3** - By this ITS being a shared unit LCO (with no further prevents), "Separate condition entry" is implied. Therefore, a SSWS train could be assumed to be inoperable in each unit plus either the associated cross-connects or the required pump, or both, could be inoperable. Should this Condition still permit 72 hours or warrant a shorter Completion Time of 24 hours or be directed to an immediate LCO 3.0.3. CPSES should explain the technical basis for risking continued operation in this configuration. **Issue #4** - The Bases LCO discussion has two final paragraphs which are two new degraded operating conditions with required actions for continued operation. These Bases appear to contradict other statements in the Bases and they may not meet the Standard Review Plan requirements. These "Bases Conditions" must be formally included into the LCO following a technical review or otherwise resolved. CPSES should explain the technical basis for risking continued operation in these configurations.

> Note: Issues #1 and #3 can also be limited by putting in an Actions note which specifically states "The Conditions and Required Actions apply simultaneously to both units."

FLOG RESPONSE: Issue #1- The ITS 3.7.8 BASES background paragraph 4 states: "Train isolation by two normally closed valves in series or one locked closed valve is provided to satisfy GDC-44. Unit isolation by one locked closed valve is provided to satisfy GDC-5." If an operable SSW train In MODES 1-4 were cross-tied to either an operable or an inoperable train or unit, it would become inoperable and Condition A would be entered. Flushing of the lines between trains of the same unit is performed during shutdown. Flushing of the lines between two trains of both units is performed under Condition A.

Issue #2- The order of Conditions A and B have been switched. The action for Condition A (old Condition B) has been split into two Actions (A.1 and A.2) both with a completion time of 7 days.

Issue #3- The technical justification for the 72 hour completion time was included in TXX-92410 (Ref. 6 in ITS 3.7.8 BASES). It is the CTS completion time.

Issue #4- The CPSES LCO for SSWS is unique because it includes a Loss of Service Water Event (LOSSW). There are no SRP requirements for such an event. The STS and the SRP are limited to Design Basis Accidents and safe shutdown events assuming a single active failure. The additions to the BASES are required to explain the unique operability requirements of the opposite unit and cross connect valves for a beyond the design basis event.

ATTACHED PAGES:

Encl 5A	3.7-19
Encl 5B	B 3.7-46 and B 3.7-47

3.7 PLANT SYSTEMS

3.7.8 Station Service Water System (SSWS)

PS

LCO 3.7.8 Two SSWS trains and a SSW Pump on the opposite unit with its associated cross-connects shall be OPERABLE. 3.7-30

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
AB. Required SSW Pump on the opposite unit or its associated cross-connects inoperable.	AB.1 Restore a SSW Pump on the opposite unit to OPERABLE status AND A.2 ~~its~~ Restore associated cross-connects to OPERABLE status.	7 days 7 days
AB One SSWS train inoperable.	AB.1 --------NOTES------- 1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources—Operating," for emergency diesel generator made inoperable by SSWS. 2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops—MODE 4," for residual heat removal loops made inoperable by SSWS. -------------------- Restore SSWS train to OPERABLE status.	 72 hours

3.7-30
Q-3.7.8-3

PS

(continued)

LCO (Continued)

An SSWS train is considered OPERABLE during MODES 1, 2, 3, and 4 when:

a. The pump is OPERABLE; and

b. The associated piping, valves, ~~heat exchanger,~~ and instrumentation and controls required to perform the safety related function are OPERABLE.

A SSW Pump on the opposite unit is OPERABLE as back-up in the event of a LOSSW if it is capable of providing required flow rates. An emergency diesel generator power source is not required because loss of offsite power is not assumed coincident with a LOSSW event.

A cross-connect valve is OPERABLE if it can be cycled or is locked open. A valve that cannot be demonstrated OPERABLE by cycling is considered inoperable until the valve is surveilled in the locked open position. However, at least one cross-connect valve between units is required to be maintained closed in accordance with GDC-5 unless required for flushing or due to total loss of Station Service Water pumps for either unit.

APPLICABILITY

In MODES 1, 2, 3, and 4, the SSWS is a normally operating system that is required to support the OPERABILITY of the equipment serviced by the SSWS and required to be OPERABLE in these MODES.

In MODES 5 and 6, the OPERABILITY requirements of the SSWS are determined by the systems it supports.

ACTIONS

AB.1 ~~and A.2~~ ~~and B.2~~

CP-3.7-13

Q-3.7.8-3

If no SSW pump on the opposite unit or its associated cross-connects are operable, the overall reliability is degraded since a back-up in the event of a Loss of Station Service Water System (LOSSWS) event may not be capable of performing the function. The 7 day completion time is based on the low probability of a LOSSWS during this time period.

BA.1

If one SSWS train is inoperable, action must be taken to restore OPERABLE status within 72 hours. In this Condition, the remaining OPERABLE SSWS train is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure in the OPERABLE SSWS train could result in loss of SSWS function. Required Action A.1 is modified by two Notes. The first Note indicates that the applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources — Operating," should be entered if an inoperable SSWS train results in an inoperable emergency diesel generator. The second Note indicates that the applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops — MODE 4," should be entered if an inoperable SSWS train results in an inoperable decay heat removal train. This is an exception to LCO 3.0.6 and ensures the proper actions are taken for these components. The 72 hour Completion Time is based on the redundant capabilities afforded by the OPERABLE train, and the low probability of a DBA occurring during this time period. Q-3.7.8-3

C.1 and C.2

If the SSWS train or an SSW Pump on the opposite unit and its associated cross-connects cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours and in MODE 5 within 36 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.8.1

This SR is modified by a Note indicating that the isolation of the SSWS components or systems may render those components inoperable, but does not affect the OPERABILITY of the SSWS.

Verifying the correct alignment for manual, power operated, and automatic valves in the SSWS flow path provides assurance that the proper flow paths exist for SSWS operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since they are verified to be in the correct position prior to being locked, sealed, or secured. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.8-4 **APPLICABILITY:** CP

REQUEST: CTS 4.7.4.1.1.a and CTS 4.7.4.2.1
ITS SR 3.7.8.2 and ITS Bases Background
DOC 09-yy-LSy
JFD 3.7-31

CTS 4.7.4.1.1.a and CTS 4.7.4.2.1 verify that each "manual, power operated or automatic" valve is in its correct position. ITS SR 3.7.8.2 requires the verification in accordance with Section XI but only of the cross connect valves.

Comment: Issue #1 - The Bases Background discussion, second paragraph, third sentence states that there are remotely aligned valves in the SSWS which seems to agree with the CTS 4.7.4.1.1.a. The Bases, the CTS and the ITS are in contradiction. The STS SR 3.7.8.2 which verifies the automatic valves of CTS 4.7.4.1.1.a every 18 months has not been adopted. Also, there are no CTS DOCs for these CTS changes. Provide sufficient information and explanations to resolve these discrepancies. **Issue #2** - The ITS SR 3.7.8.2 has not adopted the phrase "in the flow path" which is a part of CTS 4.7.4.1.1.a requirements. Revise the ITS SR to retain this CTS requirement. **Issue #3** - The JFD 3.7-31 states this change is more restrictive than the STS and is consistent with NRC Generic Letter 91-13 but there is no technical discussion provided to make this same determination. Revise the submittal to remove these contradictions and provide the missing technical justification for these changes.

FLOG RESPONSE: Issue #1- The JFD 3.7-31 and the ITS 3.7.8 BASES have been revised to clarify the SSWS automatic valves with respect to STS SR 3.7.8.2. The CTS does not include a surveillance of automatic valves on a Safety Injection test signal as is required for the pumps because there are no such valves in the system. The pump discharge valve is automatic and is interlocked to open on a pump start. STS SR 3.7.8.2 is not applicable to CPSES because verification of the automatic pump discharge valve is covered by ITS SR 3.7.8.3. The valves in the SSWS cooling water flow path for the emergency diesel generators are interlocked to open automatically on an EDG start. CTS do not require direct surveillance of this interlock.

Issue #2- ITS 3.7.8.2 uses the term "required" in lieu of the CTS 4.7.4.1.2 "in the flow path" which are equivalent in meaning. "Required" is the STS terminology.

Issue #3- JFD 3.7-30 has been revised to provide additional information.

ATTACHED PAGES:

Encl 5B	B 3.7-44 and B 3.7-45
Encl 6A	5 and 5a

B 3.7 PLANT SYSTEMS

B 3.7.8 Station Service Water System (SSWS)

BASES

BACKGROUND

The SSWS provides a heat sink for the removal of process and operating heat from safety related components during a Design Basis Accident (DBA) or transient. During normal operation, and a normal shutdown, the SSWS also provides this function for various safety related ~~and nonsafety related components~~. The safety related functions ~~are~~ is covered by this LCO. Q-3.7.8-4

The SSWS consists of two separate, 100% capacity, safety related, cooling water trains. Each train consists of two 100% capacity pumps, ~~one component cooling water (CCW) heat exchanger,~~ piping, valving, and instrumentation~~, and two cyclone separators~~. The pumps and valves are remote and manually aligned~~, except~~ to be operable in the unlikely event of a loss of coolant accident (LOCA). The pumps aligned to ~~the critical~~ their respective loops are automatically started upon receipt of a safety injection signal~~, and all essential valves are aligned to their post accident positions~~. An automatic valve in the discharge of each pump is interlocked to open on a pump start. An automatic valve in the SSWS cooling water flow path for each emergency diesel generator automatically opens on a diesel generator start. All other valves are manual valves operated locally. The SSWS also ~~provides emergency makeup to the spent fuel pool and CCW System and~~ is the backup water supply to the Auxiliary Feedwater System. Q-3.7.8-4 Q-3.7.G-1

Cross-connections are provided between trains and between units such that any pump can supply any other pump's required flow.

Train isolation by two normally closed valves in series or one locked closed valve is provided to satisfy GDC-44. Unit isolat ion by one locked closed valve is provided to satisfy GDC-5. (Ref. 5)

In the event of a total Loss of Station Service Water (LOSSW) event in one unit at Comanche Peak, backup cooling capability is available via a cross-connect between the two units (References 1, 4 and ~~4~~ 6). An OPERABLE pump is manually realigned and flow balanced to provide cooling to essential heat loads to one or both units as required. The OPERABILITY of the unit cross-connect along with a Station Service Water pump in the shutdown unit ensures the availability of sufficient redundant cooling capacity for the operating unit. The Limiting Condition of Operation will ensure a significant risk reduction as indicated by the analyses of a Loss of Station Service Water System event. The surveillance requirements ensure the short and long-term OPERABILITY of the Station Service Water System and cross-connect between the two units. CP-3.7-13

BASES

BACKGROUND (Continued)

The Station Service Water System cross-connect between the two units consists of appropriate piping and cross-connect valves connecting the discharge of the Station Service Water pumps of the two units. By aligning the cross-connect flow paths, additional redundant cooling capacity from one unit is available to the Station Service Water System of the other unit.

Additional information about the design and operation of the SSWS, along with a list of the components served, is presented in the FSAR, Section 9.2.1 (Ref. 1). The principal safety related function of the SSWS is the removal of decay heat from the reactor via the CCW System.

Q-3.7.G-1

APPLICABLE SAFETY ANALYSES

The design basis of the SSWS is for one SSWS train, in conjunction with the CCW System and a 100% capacity containment cooling system, to remove core decay heat following a design basis LOCA as discussed in the FSAR, Section 6.2 (Ref. 2). This prevents the containment sump fluid from increasing in temperature during the recirculation phase following a LOCA and provides for a gradual reduction in the temperature of this fluid as it is supplied to the Reactor Coolant System by the ECCS pumps. The SSWS is designed to perform its function with a single failure of any active component, assuming the loss of offsite power.

The SSWS, in conjunction with the CCW System, also cools the unit from residual heat removal (RHR), as discussed in the FSAR, Section 5.4.7, (Ref. 3) entry conditions to MODE 5 during normal and post accident operations. The time required for this evolution is a function of the time after shutdown and number of CCW and RHR System trains that are operating. One SSWS train is sufficient to remove decay heat during subsequent operations in MODES 5 and 6. This assumes a maximum SSWS temperature of ~~95~~ 102°F occurring simultaneously with maximum heat loads on the system.

CP-3.7-13

The SSWS satisfies Criterion 3 of ~~the NRC Policy Statement~~ 10CFR50.36(c)(2)(ii). The requirement for cross connections and opposite unit pumps satisfy Criterion 4 of 10CFR50.36(c)(2)(ii).

Q-3.7.8-4

LCO

Two SSWS trains are required to be OPERABLE to provide the required redundancy to ensure that the system functions to remove post accident heat loads, assuming that the worst case single active failure occurs coincident with the loss of offsite power.

CHANGE NUMBER	JUSTIFICATION
3.7-21	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-22	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-23	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-24	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-25	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-26	~~CONDITION D (for two valves in the same flow path inoperable) is deleted to reflect changes to Required Actions A and C and plant specific design of primary FIVs and associated bypass valves and isolation backup via the in series FCVs and associated bypass valves. The applicable 8 hour completion time is moved to the revised Actions A and C.~~ Not used. Q-3.7.3-2
3.7-27	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).
3.7-28	Revise [ARV] frequency from 18 months to "in accordance with Inservice Test Program." to be consistent with other valves in the CTS which are included in the Inservice Test Program (IST). The CTS for the [ARV] surveillance frequency is per the IST Program. [This change is also applicable to the [ARV] block valves that are included in the IST program.]
3.7-29	Revise AFW pump testing frequency to be "In accordance with Inservice Test Program." These changes are consistent with TSTF-101, and will eliminate any ambiguity associated with pump testing frequency as a result of ASME changes.
3.7-30	LCO 3.7.8 and SRs are revised to incorporate requirements for two units with station service water system cross connections. These changes are [consistent with the CTS and are] more restrictive than NUREG-1431, but are consistent with NRC Generic Letter 91-13. [STS are based on station service water systems which are 100% redundant and are not shared with another unit which is the case for CPSES. The STS 3.7.8 meets satisfies Criterion 3 of 10CFR50.36(c)(2)(ii). The requirements for cross connections and an opposite unit pump satisfy Criterion 4 of 10CFR50.36(c)(2)(ii). These additional requirements were added to CPSES Unit 1 Tech Specs by ITS 3.7.8 reference 6, TXX-92410. The ITS BASES APPLICABLE SAFETY ANALYSIS has been revised to clarify this.] Q-3.7.8-4

CHANGE NUMBER	JUSTIFICATION
3.7-31	SR 3.7.8.2 is replaced with the current plant specific surveillance of the cross connections of station service water system between units. The plant specific design for the station service water system does not contain any automatic valves which actuate on an ESF signal in the safety related flow path, therefore SR 3.7.8.2 of NUREG-1431 is not applicable. Q-3.7.8-4

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.8-5 **APPLICABILITY:** CP

REQUEST: CTS 4.7.4.1.1.b
ITS SRs 3.7.8.2 and 3.7.8.3
DOC 09-05-TR1

CTS 4.7.4.1.1.b verifies at least once per 18 months that each SSWS pump actuates as designed upon receipt of a Safety Injection test signal. ITS SR 3.7.8.2 and ITS SR 3.7.8.3 verify the automatic SSWS valves and the SSWS pumps actuate on an actual signal or a simulated signal.

Comment: The DOC states the specific identity of the simulated signal is no longer retained in the SR but is moved to the Bases. A review of the ITS SRs 3.7.8.2 and 3.7.8.3 Bases discussion shows this is not identified there. Revise the Bases accordingly per the DOC.

FLOG RESPONSE: The ITS SR 3.7.8.3 Bases have been revised to included the specific actuation signal for SSWS pump start. CPSES has no corresponding SSWS specification requiring verification of automatic valve actuation on an actual or simulated signal. SR 3.7.8.2 (the STS surveillance for verification of automatic valve actuation) was modified to incorporate a plant specific surveillance requirement to cycle the SSWS required cross-connect valves every 92 days.

ATTACHED PAGES:

Encl 5B B 3.7-48

BASES

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

SR 3.7.8.2

~~This SR verifies proper automatic operation of the SWS valves on an actual or simulated actuation signal. The SWS is a normally operating system that cannot be fully actuated as part of normal testing. This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. The [18] month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.~~ This SR verifies proper position or manual operation of the cross-connect valves between units. The 92 day frequency is based on the frequency in ASME XI (Ref. 7) for testing of Category A and B valves and is consistent with Generic Letter 91-13 (Ref. 4).

SR 3.7.8.3

This SR verifies proper automatic operation of the SSWS pumps on an actual or simulated Safety Injection actuation signal. The SSWS is a normally operating system that cannot be fully actuated as part of normal testing during normal operation. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

Q-3.7.8-5

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.9-3 **APPLICABILITY:** CP

REQUEST: CTS 3/4.7.5 LCO, Actions, and SRs
Licensee Controlled Documents
DOC 13-03-R

CTS 3.7.5 item c, Action b, 4.7.5.b and 4.7.5.c have not been retained in ITS 3.7.9 but have been relocated to Licensee Controlled Documents.

Comment: There is no technical basis provided to justify the relocation of these CTS requirements. The generic "R" NSHC is inadequate. Also, this not an "R" change since the R category is used only for the complete LCO relocations. Revise the submittal to provide this information.

FLOG RESPONSE: The portion of the existing specification that was relocated could easily have been an independent specification in the CTS. CPSES considers this change to be a legitimate "R" because the requirements relocated contain all the elements of a specification; an LCO requirement, an Action statement and surveillance requirements to determine operability. DOC 13-03-R has been revised to provide additional justification for the change. Also screening sheets have been provided to verify that the relocated specification does not meet any of the 4 criteria in 10CFR50.36(c)(2)(ii) governing components, systems and structures that must be included in the TS.

ATTACHED PAGES:

Encl 3A 15

Attachment 21 page 27 and 28

CHANGE NUMBER	NSHC	DESCRIPTION
13-01	LG	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
13-02	LG	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
13-03	R	The LCO for sedmentation depth and the Surveillance Requirements for SSI Dam inspections and for sedimentation depths are relocated to a licensee controlled document. The Bases for this limiting condition for operation (LCO) state that the purpose is to limit the average sediment depth on the possibility that excessive sediment buildup in the service water intake channel could occur. As noted in the CPSES FSAR, during the postulated 100-year drought conditions and after 40 years of sedimentation, the Ultimate Heat Sink (the Safe Shutdown Impoundment, SSI) is determined to have 284-acre feet of water. The maximum consumption of SSI water during the 39-day post accident shutdown cooldown period amounts to 92 acre-feet, resulting in a decrease in surface elevation of 3.8 ft., allowing adequate margin for post-30-day operation without exceeding the service water pump submergence requirements. This proposed TS revision relocates requirements, which do not meet the TS criteria in 10CFR50.36(c)(2)(ii), to documents with established control programs. This regulation addresses the scope and purpose of TS. In doing so, it sets forth a specific set of objective criteria for determining which regulatory requirements and operating restrictions should be included in the TS. Relocation of these requirements allows the TS to be reserved only for those conditions or limitations upon reactor operation which are necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety thereby focusing the scope of the TS. An evaluation of the applicability of these criteria to this specification is provided in attachment 21. To ensure an appropriate level of control, these requirements will be relocated to 1) documents that are subject to the provisions of 10 CFR 50.59, 2) other licensee documents which have similar regulatory controls (e.g., the Quality Assurance Plan, as described in the FSAR, which is controlled by 10CFR50.54a), or 3) to programs that are controlled via the Administrative Controls section of the improved TS. The identification of the specific licensee controlled document containing this requirement is provided in Enclosure 3B of the conversion submittal. Compliance with the relocated requirements will not be affected by this proposed change to the current Technical Specifications. The required periodic surveillances will continue to be performed to ensure that limits on parameters are maintained. Therefore, relocation of these requirements will have no impact on system operability or the maintenance of controlled parameters within limits. Q-3.7.9-3

(1) TECHNICAL SPECIFICATION 3.7.5c ULTIMATE HEAT SINK SEDIMENT DEPTH

Applicable MODES: MODES 1, 2, 3, and 4.

(2) EVALUATION OF POLICY STATEMENT CRITERIA

Is the Technical Specification applicable to:

YES	NO		
__	X	(1)	Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
__	X	(2)	A process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident (DBA) or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
__	X	(3)	A structure, system, or component (SSC) that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
__	X	(4)	An SSC which operating experience or probabilistic safety assessment (PSA) has shown to be significant to public health and safety.

If the answer to any one of the above questions is "YES", then the Technical Specification (TS) shall be retained in the TS.

If the answer to all four of the above questions is "NO", the TS may be relocated to a controlled document.

(3) DISCUSSION

The Bases for this limiting condition for operation (LCO) state that the purpose is to limit the average sediment depth on the possibility that excessive sediment buildup in the service water intake channel could occur. As noted in the CPSES FSAR, during the postulated 100-year drought conditions and after 40 years of sedimentation, the Ultimate Heat Sink (the Safe Shutdown Impoundment, SSI) is determined to have 284-acre feet of water. The maximum consumption of SSI water during the 39-day post accident shutdown cooldown period amounts to 92 acre-feet, resulting in a decrease in surface elevation of 3.8 ft., allowing adequate margin for post-30-day operation without exceeding the service water pump submergence requirements.

The TS requirements for the sediment depth of the ultimate heat sink are not applicable to installed instrumentation used to detect a significant abnormal degradation of the RCPB; therefore, this TS does not satisfy criterion 1.

The sediment depth of the ultimate heat sink TS is associated with a design feature or operating restriction that is an initial condition of a DBA or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. However, the sediment depth of the ultimate heat sink requirements are not explicitly considered in the accident analysis. The availability of the ultimate heat sink is assumed based on an evaluation of the 40 year buildup of sediment and the performance of periodic inspections. The sediment depth of the ultimate heat sink operability is not required to be monitored and controlled during plant operation. Thus, this TS does not satisfy criterion 2.

The ultimate heat sink is a feature which is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. However, the sediment depth of the ultimate heat sink is not explicitly considered in DBA or transient analyses but is a design feature which is assured by an inspection program. Therefore, this TS does not satisfy criterion 3.

The sediment depth of the ultimate heat sink had not been shown to be significant to public health and safety by either operating experience or PRA. Therefore, this TS does not satisfy criterion 4.

(4) CONCLUSION

__ This Technical Specification is retained.

X The Technical Specification may be relocated to a licensee controlled document.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.9-4 **APPLICABILITY:** CP

REQUEST: CTS 3/4.7.5
ITS 3.7.9
DOC 13-xx-A

CTS 3/4.7.5 is written as a common LCO to both units shown as "ACTION: (Units 1 and 2"). The LCO or the Bases for ITS 3.7.9 does not explicitly state the UHS is a shared system.

Comment: This is a shared system LCO for both units which must be identified in the ITS LCO and not placed in the BASES. The Applicability should be "Any unit in Mode 1, 2, 3, and 4" and the Actions should have a note inserted which states "Actions apply simultaneously for both units."

FLOG RESPONSE: It is not necessary to deviate from the STS applicability. Either unit in MODE 1-4 will take the unit specific action if the intake water temperature exceeds its limit or the level is not restored within the completion time.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.10-9 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: CTS 4.7.5.1.c.3; [4.7.6.c.1 and 3]; [4.7.7.1.b.2&3]
ITS SR 3.7.10.4
DOC 10-17-A
DOC [10-15-LG]
DOC [10-24-A]
JFD 3.7-33

CTS 4.7.5.1.c.3 [4.7.6.c.1 and 3] [4.7.7.1.b.3] verifies a system flow rate(s) of 2100 [for DCPP, 2000/2200/750 for WCGS, and 2000/500 for Callaway cfm ± 10% at least once per 18 months. This CTS requirement is not retained in ITS 3.7.10.4.

Comment: Issue #1 - ITS SR 3.7.10.4 should state the required flow rate for each train because for the HEPA filter to be effective, the train flow must be within the specified flow rate range of ± 10% and still meet the room pressurization requirement. **Issue #2** - For DCPP, ITS SR 3.7.10.3 has a JFD 3.7-33 that is referenced; however, it is not understood what purpose this JFD has to do with this SR. For all, explain why the makeup flow requirement was not adopted in more detail and/or revise this JFD accordingly.

FLOG RESPONSE: (Issue #1) The ventilation flow requirements of CTS 4.7.5.1.c.3 (4.7.6.c.1 and 3) (4.7.7.1.b.3) were moved to ITS 5.5.11a and b. See the response to NRC comment Q 5.5-8 for a complete explanation of where the specific CTS ventilation system requirements were moved. ITS SR 3.7.10.4 corresponds to CPSES CTS 4.7.7.1.i (DCPP 4.7.5.1.e.3, WCGS and Callaway 4.7.6e.3). While the CPSES surveillance included a specific maximum makeup flowrate as part of the surveillance, the other licensees did not. The purpose of this surveillance is to verify the positive pressure of the control room with limited intake of outside air. Thus the testing should limit the makeup flowrate. For CPSES the maximum makeup flowrate is in the CTS and thus is included in the ITS. For the others, the makeup flowrate is not in the CTS and is controlled by the testing procedures.

(Issue #2) (for DCPP) - The reference to JFD 3.7-33 has been deleted for ITS SR 3.7.10.3. It is applicable to ITS SR 3.7.10.4 only. For the explanation regarding why the makeup flow requirement was not adopted, see response to issue #1.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.10-11 **APPLICABILITY:** CP

REQUEST: CTS 4.7.7.1.j
ITS SR 3.7.10.4
DOC 10-11-LS19

CTS 4.7.7.1.j requires demonstration that each CREFS train can maintain a positive pressure at least once per 18 months. The CTS markup shows this test is conducted once each 36 months on a "staggered test basis". ITS SR 3.7.10.4 requires performance of this test once every 18 months on a "Staggered Test Basis."

Comment: The proposed ITS SR 3.7.10.4 is acceptable; however, the CTS markup is not consistent with the DOC, CTS or ITS requirement. Revise the CTS markup.

FLOG RESPONSE: The CTS markup frequency of the staggered test basis (STB) does not appear to be the same as the ITS frequency STB because the definition of staggered test basis is different between the CTS and the ITS. However, the actual testing frequency has not changed. The following description was provided in Section 1.0 (attachment 4) for converting the definition of STB to the NUREG-1431 version per DOC 1-23-A:

> "The current TS definition for Staggered Test Basis would be revised to be consistent with NUREG-1431, but the test intervals for surveillance requirements throughout the improved TS that are to be performed on a staggered test basis will be revised to be consistent with the new definition so that there will be no net change in current TS implementation of staggered test intervals. For example, under the current TS, if a parameter is monitored by three channels of instrumentation, and the test interval is quarterly, one channel would be tested each month during any given quarter by dividing the test interval into three equal subintervals. Under the new definition, the test interval for that same instrumentation in the improved TS would be specified as monthly so that the net effect is the same. One channel would be tested each month during any given quarter."

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.10-14 **APPLICABILITY:** CP, WC, CA

REQUEST: CTS 3.7.6 Action b, Modes 1, 2, 3 & 4;
Action c, Modes 5 & 6
ITS 3.7.10 Action B, C, D, E, and F
DOC 10-20-LS39
JFD 3.7-57

These changes are beyond the scope of a conversion because the industry traveler referenced in this DOC (WOG-86) has not been approved by the NRC.

In addition, for CPSES, the Action D condition statement appears to be contradictory because with two inoperable trains, it is not clear how any pressurization occurs.

Comment: Withdraw the changes or adopt the STS.

FLOG RESPONSE: WOG-86 has been approved by the TSTF and is designated as TSTF-287. This traveler has been submitted to the NRC and is under review. The proposed wording in TSTF-287 was modified from WOG-86, and these modifications have been incorporated into the ITS. This results in changes only to the Bases for the Required Actions for ITS 3.7.10. The FLOG continues to pursue the changes proposed by this traveler.

This TSTF is not applicable to DCPP but is applicable to CPSES.

For CPSES, Condition D refers to two CREFS trains inoperable <u>due to inoperable CR boundary</u>. The CR boundary inoperablity is usually the result of boundary degradation such that with either CREFS trains running the system is unable to maintain a pressurization of $\geq$ .125 inches water gauge at 800 cfm. Action D merely requires repair of the degraded pressure boundary.

ATTACHED PAGES:

Encl 3A	17
Encl 4	69
Encl 5A	Traveler Status page, 3.7-23, 3.7-24 and 3.7-24a
Encl 5B	B 3.7-57, B 3.7-58, B 3.7-58a and B 3.7-59
Encl 6A	8

Also see the WC and CA response to Comment Number 3.7.13.2-2.

CHANGE NUMBER	NSHC	DESCRIPTION
10-18	LS-36	The action shutdown requirement is revised from MODE 3 in the next 6 hours and MODE 5 in the following 30 hours to enter LCO 3.0.3. This effectively adds up to one hour to the completion time.
10-19	A	Clarifies that, for CPSES, the "pressurization" mode is called the "emergency recirculation" mode.
10-20	LS-39	This change establishes appropriate Required Actions and Completion Times for ventilation system pressure envelope degradation. The proposed change would allow 24 hours to restore the capability to maintain the proper pressure by allowing for routine repairs before requiring the unit to perform an orderly shutdown. This change recognizes that the ventilation trains associated with the pressure envelope would still be OPERABLE and providing the appropriate flows even if the required pressure limit cannot be met. These changes are consistent with TSTF-287 ~~WOG-86~~. Q-3.7.10-14
10-21	LS-38	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
10-22	M	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
10-23	LS-13	The "within 31 days after removal" requirement for completion of laboratory analyses is deleted. This requirement is not contained in the ISTS nor is it contained in the RG 1.52 or the applicable ANSI standards. Failure to complete an analysis within 31 days has insignificant safety consequences because the results would be available within approximately the same time period and it is very unlikely that the charcoal would be degraded to the extent that there would be a complete loss of a safety function.
10-24	A	The 30°C temperature specified for laboratory testing of filter carbon samples is added to be consistent with NUREG-1431. [The requirement to test per ASTMD 3803-1979 at $\geq$ 70% relative humidity is added per current TS.] This proposed change is acceptable because it adds a requirement already required to be performed when testing in accordance with the standard already specified in the TS; no change to the technical requirements would result.
11-01	M	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
11-02	LS-28	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).

IV. SPECIFIC NO SIGNIFICANT HAZARDS CONSIDERATIONS

NSHC LS-39
10 CFR 50.92 EVALUATION
FOR
TECHNICAL CHANGES THAT IMPOSE LESS RESTRICTIVE REQUIREMENTS WITHIN THE TECHNICAL SPECIFICATIONS

This change provides specific required actions for failed surveillances designed to detect ventilation system pressure envelope degradation. These surveillances require a positive or negative pressure limit be satisfied in the area with the associated required ventilation train operating. While other surveillances in the same specification test the operability of the ventilation train, these surveillances ensure the pressure envelope leak tightness is adequate to meet the design assumptions. However, there are no corresponding Conditions, Required Actions, or Completion Times associated with these surveillances. Under the CTS, LCO 3.0.3 must be entered [ ]. The proposed change would allow 24 hours to restore the capability to maintain the proper pressure by allowing for routine repairs before requiring the unit to perform an orderly shutdown. These changes have been modeled after the Shield Building specification (3.6.19) for a Dual or Ice Condenser containment and provides consistency with the NUREG. This change is consistent with TSTF-287 ~~WOG-86~~. Q-3.7.10-14

This proposed TS change has been evaluated and it has been determined that it involves no significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92(c) as quoted below:

> *"The Commission may make a final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility licensed under 50.21 (b) or 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:*
>
> *1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or*
>
> *2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or*
>
> *3. Involve a significant reduction in a margin of safety."*

The following evaluation is provided for the three categories of the significant hazards consideration standards:

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed change does not result in any hardware changes or changes to operating methodologies. This change recognizes that the ventilation trains associated with the pressure envelope would still be OPERABLE and providing the appropriate flows even if the required pressures limits cannot be met. The change also recognizes the low probability of a Design Basis accident during the allowed Completion Time.

INDUSTRY TRAVELERS APPLICABLE TO SECTION 3.7

TRAVELER NUMBER	STATUS	JUSTIFICATION NUMBER	COMMENTS
TSTF-36, Rev 2	Incorporated	3.7-42	Only applicable to DCPP
TSTF-51	Not Incorporated	Not Applicable	Requires plant-specific reanalysis to establish decay time dependence for fuel handling accident.
TSTF-70, Rev 1	Not Incorporated	Not Applicable.	NRC approved TSTF not adopted since change was not applicable. TR-3.7-005
TSTF-100	Incorporated	3.7-05 and 3.7-19	NRC approved.
TSTF-101	Incorporated	3.7-29	NRC approved.
TSTF-139, Rev 1	Incorporated	~~3.7-29~~ Not Applicable - Bases change	NRC approved TR-3.7-005
TSTF-140, Rev 1	Not incorporated	NA	Not NRC approved as of traveler cutoff date.
TSTF-173	Incorporated		NRC approved. TR-3.7-001
TSTF-174	Incorporated		NRC approved. TR-3.7-002
~~WOG-64~~	~~Incorporated~~	~~3.7-34~~	Q-3.7.2-1
~~WOG-83~~ TSTF-235	~~Partially~~ Incorporated	3.7-01	~~Retained CTS except for the extension to 72 hours for trip reset.~~ Q-3.7.1-4
~~WOG-86~~TSTF-287	Incorporated	3.7-57	Not applicable to DCPP Q-3.7-10-14 TR-3.7-005
~~WOG-98~~TSTF-289	Incorporated	3.7-56	Q-3.7.2-3

3.7 PLANT SYSTEMS

3.7.10 Control Room Emergency Filtration/Pressurization System (CREFS) PS

LCO 3.7.10 Two CREFS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4, 5, 6, B-PS
During movement of irradiated fuel assemblies
~~During CORE ALTERATIONS~~

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME	
A. One CREFS train inoperable.	A.1 Restore CREFS train to OPERABLE status.	7 days	
B~~D~~. Two CREFS Trains inoperable due to inoperable CR boundary.	B~~D~~.1 Restore control room boundary to OPERABLE status. ~~capability to maintain pressure in the Control Room within limit.~~	24 hours	3.7-57 Q-3.7.10-14
CB. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	CB.1 Be in MODE 3. AND CB.2 Be in MODE 5.	6 hours 36 hours	3.7-57 Q-3.7.10-14

CONDITION	REQUIRED ACTION	COMPLETION TIME	
~~C~~D. Required Action and associated Completion Time of Condition A not met in MODE 5 or 6, or during movement of irradiated fuel assemblies~~, or during CORE ATERATIONS~~.	~~C~~D.1 ~~-------NOTE--------- Place in toxic gas protection mode if automatic transfer to toxic gas protection mode is inoperable~~ --------------------- Place OPERABLE CREFS train in emergency recirculation mode.	Immediately	B B-PS 3.7-57 Q-3.7.10-14
	OR		PS
	~~C~~D.2.1 Suspend CORE ALTERATIONS.	Immediately	B
	AND		B
	~~C~~D.2.2 Suspend movement of irradiated fuel assemblies.	Immediately	
~~E. Required Action and associated Completion Time of Condition D not met in MODE 1, 2, 3, or 4.~~	~~E.1 Be in MODE 3.~~	~~6 hours~~	3.7-57 Q-3.7.10-14
	~~AND~~		
	~~E.2 Be in MODE 5.~~	~~36 hours~~	

CONDITION	REQUIRED ACTION	COMPLETION TIME
EF. Required Action and associated Completion Time of Condition ~~D~~B not met in MODE 5 or 6, or during movement of irradiated fuel assemblies.	~~F.1 Suspend CORE ALTERATIONS.~~ ~~AND~~ ~~F.2 Suspend movement of irradiated fuel assemblies.~~	~~Immediately~~ ~~Immediately~~
OR		
~~D~~G. Two CREFS trains inoperable ~~for reasons other than Condition D,~~ in MODE 5 or 6, or during movement of irradiated fuel assemblies~~, or during CORE ALTERATIONS~~ for reasons other than Condition B.	E~~D~~G.1 Suspend CORE ALTERATIONS. AND E~~D~~G.2 Suspend movement of irradiated fuel assemblies.	Immediately Immediately
F~~E~~H. Two CREFS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	F~~E~~H.1 Enter LCO 3.0.3.	Immediately

3.7-57
Q-3.7.10-14

B-PS

3.7-57
Q-3.7.10-14

APPLICABILITY

In MODES 1, 2, 3, 4, 5, 6, and during movement of irradiated fuel assemblies ~~and during CORE ALTERATIONS.~~ CREFS must be OPERABLE to control operator exposure during and following a DBA.

~~In MODE 5 or 6, the CREFS is required to cope with the release from the rupture of an outside waste gas tank.~~ CP-3.7-13

During movement of irradiated fuel assemblies ~~and CORE ALTERATIONS,~~ the CREFS must be OPERABLE to cope with the release from a fuel handling accident.

ACTIONS

A.1

When one CREFS train is inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and ability of the remaining train to provide the required capability.

BD.1

If the Control Room Pressure is inoperable such that the CREFS trains can not establish or maintain the required pressure ~~not capable of being maintained greater than or equal to 0.125 inches water gauge~~, action must be taken to restore ~~capability to pressurize the~~ an OPERABLE control room boundary within 24-hours. The 24 hour completion time is reasonable based on the low probability of a DBA occurring during this time period, and the availability of CREFs to provide a filtered environment (albiet with potential control room inleakage). ~~filter the air and provide pressure inside the control room. The 24 hours also allows reasonable time to facilitate repairs.~~ Q-3.7.10-14

BC.1 and BC.2

In MODE 1, 2, 3, or 4, if the inoperable CREFS train or control room boundary cannot be restored to OPERABLE status within the required Completion Time, the unit must be placed in a MODE that minimizes accident risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

DC.1, DC.2.1, and DC.2.2

Q-3.7.10-14

In MODE 5 or 6, or during movement of irradiated fuel assemblies, ~~or during CORE ALTERATIONS~~ if the inoperable CREFS train cannot be restored to OPERABLE status within the required Completion Time, action must be taken to immediately place the OPERABLE CREFS train in the emergency mode. This action ensures that the remaining train is OPERABLE, that no failures preventing automatic actuation will occur, and that any active failure would be readily detected.

An alternative to Required Action DC.1 is to immediately suspend activities that could result in a release of radioactivity that might require isolation of the control room. This places the unit in a condition that minimizes risk. This does not preclude the movement of fuel to a safe position.

~~Required Action C.1 is modified by a Note indicating to place the system in the toxic gas protection mode if automatic transfer to toxic gas protection mode is inoperable.~~

~~E.1 and E.2~~

Q-3.7.10-14

~~When in MODE 1, 2, 3, or 4, if the Control Room pressure cannot be restored to greater than or equal to 0.125 inches water gauge within the required Completion Time, the unit must be placed In a MODE that minimizes accident risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and MODE 5 within 36 hours. The allowed Completion times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.~~

~~F.1, F.2 and F.23~~

~~When in MODE 5 or 6, or during movement of irradiated fuel assemblies, or during CORE ALTERATIONS if the Control Rom pressure cannot be restored to greater than or equal to 0.125 inches water gauge within the required Completion Time, the unit must be placed in a condition that minimizes accident risk. To achieve this status, any OPERABLE CREFS train should be placed in operation and CORE ALTERATION and movement of irradiated fuel assemblies must be suspended immediately. This does not preclude the movement of fuel to a safe position.~~

EDG.1 and EDG.2 Q-3.7.10-14

In MODE 5 or 6, or during movement of irradiated fuel assemblies, ~~and during CORE ALTERATIONS.~~ with two CREFS trains inoperable for reasons other than inoperable control room boundary (i.e., Condition B), or with an inoperable boundary not restored in the Completion Time allowed by Condition B, action must be taken immediately to suspend activities that could result in a release of radioactivity that might enter the control room. This places the unit in a condition that minimizes accident risk. This does not preclude the movement of fuel to a safe position.

FEH.1

If both CREFS trains are inoperable in MODE 1, 2, 3, or 4, for reasons other than an inoperable control room boundary (i.e., Condition B), the CREFS may not be capable of performing the intended function and the unit is in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be entered immediately

Q-3.7.10-14

SURVEILLANCE REQUIREMENTS

SR 3.7.10.1

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not too severe, each train once every month provides an adequate check of this system. Monthly heater operations dry out any moisture accumulated in the charcoal from humidity in the ambient air. ~~Systems~~ Filtration units with heaters must be operated for ≥ 10 continuous hours with the heaters energized. ~~Systems~~ Filtration units without heaters need only be operated for ≥ 15 minutes to demonstrate the function of the system. The 31 day Frequency is based on the reliability of the equipment and the two train redundancy availability.

SR 3.7.10.2

This SR verifies that the required CREFS testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The CREFS filter tests are in accordance with Regulatory Guide 1.52 (Ref. 3). The VFTP includes testing the performance of the HEPA filter, charcoal adsorber efficiency, minimum flow rate, and the physical properties of the activated charcoal. Specific test Frequencies and additional information are discussed in detail in the VFTP.

The VFTP filtration testing requirements of Sections 5.5.11a, b, and c are not required for an Emergency Pressurization Unit when being testing (1) during a periodic test (e.g., 18 months or after 720 hours of operation), (2) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (3) following painting, fire, or chemical release for the corresponding CREFS train to be OPERABLE.

CP-3.7-014

CHANGE NUMBER	JUSTIFICATION	
3.7-49	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-50	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-51	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-52	Not ~~used.~~ Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	DC-ALL-002
3.7-53	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-54	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-55	Not Applicable to CPSES. See Conversion Comparison Table (enclosure 6B).	
3.7-56	This change creates a new SR for the MSIVs [and feedwater isolation valves] to distinguish between the IST and the automatic actuation testing of these isolation valves. The surveillance allows credit for an actual actuation, if one occurs, to satisfy the surveillance requirements. These changes are consistent with TSTF-289 ~~WOG-98~~. [Although SR 3.7.2.2 is a new SR, it may be performed in conjuction with SR 3.7.2.1. Therefore, the note allowing testing to be performed in MODE 3 is also used for this SR.]	DC-ALL-002 Q-3.7.2-3
3.7-57	This change establishes appropriate Required Actions and Completion Times for ventilation system pressure envelope degradation. These changes are consistent with TSTF-287 ~~WOG-86~~.	Q-3.7.~~10~~-14

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.10-19 **APPLICABILITY:** CP, WC, CA

REQUEST: CTS 3/4.7.6; [CTS 3/4.7.7]
ITS 3.7.10 Action D.1 [C.1]
JFD 3.7-bb
JFD B-PS

STS 3.7.10 has a note to Required Action C.1 which states "Place in toxic gas protection mode if automatic transfer to toxic gas protection mode is inoperable." ITS 3.7.10 has not adopted this STS requirement.

Comment: There is no JFD for not retaining this STS requirement. The categorization of "B-PS" does not provide the detailed explanation to enable a reviewer to reach the same determination. Provide a detailed JFD for not adopting the STS text or provide an alternate note.

FLOG RESPONSE: The categorization of "B-PS" per the FLOG mark-up methodology means "Bracketed - Plant Specific". The ITS Required Action C.1 Note is bracketed in the STS and per the STS conversion methodology would not be required to be adopted unless a comparable requirement already existed in the CTS. Callaway, CPSES and WCGS do not have such a requirement in their CTS.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.11-1 **APPLICABILITY:** CP

REQUEST: CTS 3.7.7.2 Actions for two trains inoperable
ITS 3.7.11 Action D and E
JFD 3.7-36

When two CRACS trains are inoperable, CTS 3.7.7.2 Actions permit verification of 100% heat removal capability of a single Operable train to exist for continued operation instead of the shutdown or suspension of fuel movement activities. ITS 3.7.11 Action D and E retain these CTS requirements.

Comments: This JFD correctly adds the current licensing basis. However, the Bases for the ITS Actions do not provide adequate explanation of how or what assortment of equipment is made available to ensure this capability exists for the control room. The replacement train must consist of safety-related components with assured sources of cooling water and vital bus power. Provide a description of why the Completion Times are appropriate especially when the SR to determine heat removal capability consists of testing and calculations. How long does it take to make this determination? Why isn't the suspension of fuel movement activities or entry into a lower mode more acceptable than the risk of continued operation while waiting for this SR to be completed? Is this a shared system for the Control Room(s)?

FLOG RESPONSE: The ITS BASES Background has been revised to reflect the two 50% safety related cooling units per train and the cooling capability required for operability. Testing and calculations are not required when Actions 3.7.11 D and E are entered. The operability of one 50% cooling unit per train must be verified by administrative means immediately (i.e., pursued without delay and in a controlled manner). Neither suspension of fuel movement activities nor the entry into a lower mode of operation would be safer than maintaining stable plant conditions although these are alternate required actions if 100% of the required heat removal capability is known not to be available. Once immediate actions have been completed an evaluation which may include testing and calculations may be performed to exit the condition. If one 50% safety related cooling unit in each train is inoperable, the trains may still be operable if an evaluation of the conditions (e.g. weather, UHS temperature, etc.) show that one 50% unit is capable of performing the function for thirty days or that the inoperable unit(s) can be restored prior to conditions that would require two 50% units. If two units are required per train and one is inoperable, the train is inoperable; however, if one 50% safety related cooling unit in each train is operable with required cooling water and power, 100% of the heat removal capability is still available.

ATTACHED PAGES:

Encl 5B B 3.7-61

B 3.7 PLANT SYSTEMS

B 3.7.11 Control Room ~~Emergency Air Temperature Control~~ Air Conditioning System (~~CREATCS~~ CRACS)

BASES

BACKGROUND

The control room for CPSES is common to both units and the CRACS is a shared system common to both units. Q 3.7.11-1

The ~~CREATCS~~ CRACS provides temperature control for the control room during normal and emergency operation ~~and following isolation of the control room~~.

The ~~CREATCS~~ CRACS consists of two ~~independent and~~ redundant trains that provide cooling and heating of recirculated control room air. Each CRACS train includes two heating and cooling units ~~consists of heating coils, cooling coils~~, instrumentation, and controls to provide for control room temperature control. Each cooling unit provides 50% of the maximum heat removal capability for its respective Train. The ~~CREATCS~~ CRACS is a subsystem providing air temperature control for the control room.

The ~~CREATCS~~ CRACS is an emergency system, parts of which may also operate during normal unit operations. A single train will provide the required temperature control to maintain the control room between 70°F and ~~85~~ 80°F. Each CPSES Unit has two CRACS trains for a total of four cooling units available to cool the common control room. The ~~CREATCS~~ CRACS operation in maintaining the control room temperature is discussed in the FSAR, Sections 6.4 (Ref. 1) and 9.4.1 (Ref.2). Q-3.7.G-1

If one 50% safety related cooling unit in each train is inoperable, the trains may still be operable if an evaluation of the conditions (e.g. weather, UHS temperature, etc.) show that one 50% unit is capable of performing the function for thirty days or that the inoperable unit(s) can be restored prior to conditions that would require two 50% units. If two units are required per train and one is inoperable, the train is inoperable; however, if one 50% safety related cooling unit in each train is operable with required cooling water and power, 100% of the heat removal capability is still available. Q 3.7.11-1

APPLICABLE SAFETY ANALYSES

The design basis of the ~~CREATCS~~ CRACS is to maintain the control room temperature for 30 days of continuous occupancy.

The ~~CREATCS~~ CRACS components are arranged in redundant, safety related trains. During normal and emergency operation, the ~~CREATCS~~ CRACS maintains the temperature between 70°F and ~~85~~ 80°F.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.12.1-1 **APPLICABILITY:** CP

REQUEST: CTS 3/4.7.8, Applicability
ITS 3.7.12, Applicability
DOC 12-xx-LSx

CTS 3/4.7.8 has an Applicability of Modes 1, 2, 3 and 4 which is retained in ITS 3.7.12.

Comment: CTS 3.7.8 Actions b and c, and the ITS 3.7.12 Bases Background discussion , first paragraph, first sentence, states "PPVS serves all areas housing ESF equipment as well as the radwaste areas and the fuel handling and storage areas." The fuel handling and storage areas must consider a fuel handling accident and operations which are independent of the reactor modes. The CTS requirement apparently does not consider these situations. Likewise, CPSES has not adopted STS 3.7.13 for the comparable fuel [handling] building air cleanup systems. CPSES must assure the PPVS Operability during "Modes 5 and 6" and "During the movement of irradiated fuel assemblies" based upon the stated function of PPVS. Provide a new DOC, revised CTS markup and the appropriate technical justifications for these CTS changes.

FLOG RESPONSE: The CTS do not apply in MODES 5 and 6 or during the movement of irradiated fuel assemblies because the current licensing basis does not require the PPVS for mitigation of fuel handling accidents. See CPSES FSAR Section 15.7.4 and Section 15.4.8 of NUREG-0797 Supplement 2 and 22. Therefore, STS 3.7.13 is not applicable to the CPSES current licensing basis. The ITS 3.7.8 BASES Applicability has been revised to reflect the current licensing basis.

ATTACHED PAGES:

Encl 5B B 3.7-67

~~Either type of failure may result in a lower efficiency of removal for any gaseous and particulate activity released to the ECCS pump rooms following a LOCA.~~

The ~~ECCS PREACS~~ PPVS satisfies Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

Two independent and redundant trains of the ~~ECCS PREACS~~ PPVS are required to be OPERABLE to ensure that at least one is available, assuming that a single failure disables the other train coincident with loss of offsite power. Total system failure could result in the atmospheric release from the ~~ECCS pump room~~ ESF equipment leakage exceeding ~~10 CFR 100~~ regulatory limits in the event of a Design Basis Accident (DBA).

~~ECCS PREACS~~ PPVS is considered OPERABLE when the individual components necessary to maintain the ~~ECCS pump room~~ ESF filtration are OPERABLE in both trains.

A PPVS Train is considered OPERABLE when it's individual components necessary to maintain the ESF filtration are operable such that the required negative pressure can be maintained in the Auxiliary and Safeguards buildings. Note: If one of the two ESF filtration units in a train can maintain the required negative pressure alone, it would satisfy the operability requirement.

~~An ECCS PREACS train~~ A PPVS ESF Filtration Unit is considered OPERABLE when its associated:

a. Fan is OPERABLE;

b. HEPA filter and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions; and

c. Heater, demister, ductwork, valves, and dampers are OPERABLE and air ~~circulation~~ flow can be maintained.

APPLICABILITY

In MODES 1, 2, 3, and 4, the ~~ECCS PREACS~~ PPVS is required to be OPERABLE consistent with the OPERABILITY requirements of the ECCS.

In MODE 5 or 6, the ~~ECCS PREACS~~ PPVS is not required to be OPERABLE since the ECCS is not required to be OPERABLE.

Q 3.7.12.1-1

In MODE 5 or 6 or during movement of irradiated fuel assemblies, the PPVS is not required to be operable since it is not required for mitigation of fuel handling accidents. [Ref. 3]

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.12.1-2 **APPLICABILITY:** CP

REQUEST: CTS 3/4.7.8, LCO
ITS 3.7.12, LCO
DOC 12-yy-LSy

CTS 3/4.7.8 and ITS 3.7.12 LCOs outwardly appear to govern each PPVS system as comprised of two trains separated from each unit. The ITS 3.7.12 Bases Background discussion (third paragraph, last sentence) and the Bases discussion for the ITS Action disclose the shared system operational use.

Comment: The CTS and ITS must be modified to account for the on-going shared system functioning of this LCO. Though not reflected in the CTS, each of the four ESF filter trains are required Operable to meet the various design assumptions and configurations permitted for ensuring the PPVS has the required negative pressure maintained in the envelop comprised of three buildings. Revise the ITS to add the Action Note that states "Actions apply simultaneously for both units."

FLOG RESPONSE: It is not necessary to deviate from the STS applicability. Either unit in MODES 1-4 with ITS 3.7.12 as proposed is equivalent to the CTS 3/4.7.8.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.12.1-3 **APPLICABILITY:** CP

REQUEST: CTS 3/4.7.8
ITS 3.7.12 Actions A, B, C
DOC 12-xx-A

The ITS 3.7.12 Actions A, B, and C reproduce respectively the CTS 3.7.8 Action a, b, and c.

Comment: **Issue #1** - The formatting and arrangement of the ITS Actions does not follow STS guidelines. Action C should be first, followed by Action A and B. **Issue #2** - Accordingly, the current ITS Action A Condition does not need to restate the exception but merely only state "... for any reason except Condition(s)...". **Issue #3** - Bases Discussion for A.1 contains a second paragraph which appears to be directly related to Action B rather than Action A. This is because Action A inoperability is for reasons other than loss of negative pressure requirements. Move this paragraph to Action B where it belongs. **Issue #4** - Condition B as justified in the Bases (see relocated paragraph of A.1) assumes that there is a minimum flow rate which is never verified as being in existence. Required Action B.1 should become B.2 and the new B.1.1 should state "Verify supply/exhaust flow rate differential is ≥ 15,000 cfm" with a Completion Time of 4 hours AND Once per 12 hours thereafter". Also, the justification for the 7 day Completion Time is marginal. It is compared to the 72 hours allowed for ECCS when that Condition has at least one redundant Operable train to mitigate any accident. There can be up to four ESF filtration trains inoperable which is a Loss of Function that is permitted longer than any other STS comparable requirement. What does the SE for this CTS amendment state? Provide a more in-depth justification for this Action. **Issue #5** - Condition C as justified in the Bases (see first paragraph, second sentence) assumes that there is a minimum negative pressure maintained which is never verified as being in existence. Required Action C.1 should become C.2 and the new C.1.1 should state "Verify a negative pressure of 0.01 water gauge is maintained" with a Completion Time of 4 hours AND Once per 12 hours thereafter". Revise the CTS markup and provide the necessary JFDs as appropriate for these changes to the submittal.

FLOG RESPONSE: Issue #1- Conditions have been reordered by reversing A and C which is consistent with the STS format.

Issue #2- Condition A (now Condition C) has been revised as suggested.

Issue #3- The subject paragraph explains why Action A.1 (now C.1) does not apply upon failure to maintain negative pressure. The paragraph has not been moved.

Issue #4- Each ESF filtration unit will be demonstrated operable in accordance with the Ventilation Filter Testing Program (VFTP, ITS 5.5.11). 15,000 cfm is the nominal flow rate for performing the testing. The LCOs for CTS 3/4.7.8 and ITS 3.7.12 do not directly depend on the flow rate of each ESF filtration unit. Two units are provided per train. If one unit in each train meets the VFTP requirements and can maintain a negative pressure of greater than or equal to 0.05 inch water gauge, the LCO is satisfied. If both units in each train are required to maintain a negative pressure of greater than or equal to 0.05 inch water gauge, the LCO is still satisfied. Condition B is based on CTS and is sufficient as proposed.

Issue #5- Neither the CLB nor the CTS require the continuous maintenance of a specific negative pressure. The ability to reach and maintain a negative pressure of greater than or equal to 0.05 inches water gauge is required to be periodically demonstrated (CTS 4.7.8d.4)/ITS 3.7.12.4).

The negative pressure boundary is administratively controlled between surveillances to ensure the capability to reach and maintain the specified negative pressure in the event of a LOCA. For example, the negative pressure boundary includes exterior doors which must be opened for personnel and equipment ingress and egress during normal operation and outages. The capability to restore the negative pressure boundary (e.g. closing doors, replacing hatches, and other suitable methods of closing negative pressure boundary penetrations is adequate to restore negative pressure prior to significant ESF leakage after a LOCA.). For example, the design of the ECCS ensures that reactor coolant from a LOCA cannot be recirculated outside containment for at least 10 minutes after a LOCA. In addition, even though the accident analysis makes a conservative assumption that fuel failure occurs instantaneously for the purposes of offsite dose analysis, the revised (NUREG-1465) source terms show that significant fuel failure could not occur for more than two hours after a worst case LOCA.

Penetrations which are not open under administrative control would not be expected to significantly degrade over a 30 day period. If the negative pressure boundary surveillance failed to show the specified pressure(s), either 30 days or 7 days would be the maximum time before the next surveillance would be required to exit the applicable action statements. If the negative pressure failed to meet the 0.01 requirement, a re-test would be required within 7 days. If a re-test on the 7th day met the 0.01 requirement but not the 0.05 requirement, a re-test would be required within 23 days (30-7) to completely exit the conditions.

Therefore, it is not necessary to prescribe additional intermediate surveillances.

ATTACHED PAGES:

Encl 5A	3.7-28
Encl 5B	B 3.7-68 and B 3.7-69

3.7 PLANT SYSTEMS

3.7.12 ~~Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS)~~ Primary Plant Ventilation System (PPVS) - ESF Filtration Trains PS

LCO 3.7.12 Two ~~ECCS PREACS~~ PPVS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
~~C.~~ A. With one or more PPVS trains unable to maintain a negative pressure envelope in the Auxiliary, Safeguards, and Fuel Buildings ≥0.05 inch water gauge.	~~C.1~~ A.1 Restore PPVS trains to OPERABLE status.	30 days
B. With one or more PPVS trains unable to maintain a negative pressure envelope in the Auxiliary, Safeguards, and Fuel Buildings ≥0.01 inch water gauge.	B.1 Restore ability of PPVS trains to maintain a negative pressure envelope of ≥0.01 inch water gauge pressure.	7 days
~~A.~~ C. One PPVS ~~ECCS PREACS~~ train inoperable for any reason except ~~failure to maintain a negative pressure envelope in the Auxiliary, Safeguards, and Fuel Buildings ≥0.05 inch water gauge.~~ Conditions A or B.	~~A.1~~ C.1 Restore PPVS ~~ECCS PREACS~~ train to OPERABLE status.	7 days

PS
Q-3.7.12.1-3
3.7-37
3.7-37
Q-3.7.12.1-3
3.7-37

Q-3.7.12.1-3

ACTIONS

~~C.1~~A.1

With one or more ESF Filtration trains unable to maintain a negative pressure envelope in the Auxiliary, Safeguards, and Fuel buildings ≥0.05 inch water gauge, action must be taken to restore OPERABLE status within 30 days. During this time the ESF Filtration trains must maintain ≥ 0.01 inch water gauge. This negative pressure will still ensure that unfiltered air does not escape the pressure envelope.

The 30 day Completion Time is appropriate because an adequate negative pressure envelope is still maintained.

B.1

With one or more ESF Filtration trains unable to maintain a negative pressure envelope in the Auxiliary, Safeguards, and Fuel Buildings ≥0.01 inch water gauge, action must be taken to restore OPERABLE status within 7 days.

The 7 day Completion Time is appropriate because the risk contribution is less than that for the ECCS (72 hour Completion Time), and this system is not a direct support system for the ECCS. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period and the design of the buildings included within the negative pressure envelope. The buildings are designed such that the rooms with sources of potential ECCS leakage are below grade or internal to the structure of these buildings thus providing a buffer zone to external leakage.

Q-3.7.12.1-3

~~A.1~~C.1

With one ~~ECCS PREACS~~ PPVS train inoperable, for any reason except failure to maintain a negative pressure envelope in the Auxiliary, Safeguards, and Fuel Buildings ≥0.05 inch water gauge, action must be taken to restore OPERABLE status within 7 days. During this time, the remaining OPERABLE train is adequate to perform the ~~ECCS PREACS~~ PPVS function.

Due to the layout of the ESF equipment interior to the Auxiliary and Safeguard buildings and the design of the PPVS supply and exhaust, failure to maintain the required negative pressure does not constitute a loss of the safety function and action A.1 would not apply. As long as air flow is achievable, essentially all ESF leakage would be filtered and exhausted by the PPV.

The 7 day Completion Time is appropriate because the risk contribution is less than that for the ECCS (72 hour Completion Time), and this system is not a direct support system for the ECCS. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and ability of the remaining train to provide the required capability.

Q-3.7.12.1-3

Concurrent failure of two ~~ECCS PREACS~~ PPVS trains would result in the loss of functional capability; therefore, LCO 3.0.3 must be entered immediately.

~~B.1 and B.2~~ D.1 and D.2

If the ~~ECCS PREACS~~ PPVS train or negative pressure envelope cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.12.1

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not severe, testing each train once a month provides an adequate check on this system. Monthly heater operations dry out any moisture that may have accumulated in the charcoal from humidity in the ambient air. Systems with heaters must be operated ≥ 10 continuous hours with the heaters energized with flow through the HEPA filters and charcoal adsorbers. Operation is to be initiated from the Control Room. ~~Systems without heaters need only be operated for ≥ 15 minutes to demonstrate the function of the system.]~~ The 31 day Frequency is based on the known reliability of equipment and the two train redundancy available.

SR 3.7.12.2

This SR verifies that the required ~~ECCS PREACS~~ PPVS testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The ECCS PREACS filter tests are in accordance with Reference 4. The VFTP includes testing HEPA filter performance, charcoal adsorbers efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test Frequencies and additional information are discussed in detail in the VFTP.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.12.1-4 **APPLICABILITY:** CP

REQUEST: CTS 4.7.8.a
ITS SR 3.7.12.1
DOC 12-05-LS32

CTS 4.7.8.a verifies at least once per 31 days on a Staggered Test Basis that each PPVS train operates and each heater/components operate for its specified length of time. ITS SR 3.7.12.1 requires these similar verifications every 31 days but not on a Staggered Test Basis.

Comment: Issue #1 - This ITS proposed change is acceptable; however there is no technical justification provided in this DOC. Also, the contents of the NSHC contain a justification only for Vogtle which is not applicable. Provide a technical justification that is applicable to CPSES.
Issue #2 - The CTS markup shows this DOC is an "A" change which is incorrect. Revise the CTS markup.

FLOG RESPONSE: (Issue #1) The technical justification for this change is found in NSHC LS-32. This NSHC, while it does reference the NRC's SER for Vogtle's TS conversion, is totally applicable to CPSES. The reference to Vogtle in the NSHC was included only to indicate the NRC's acceptance of this change on another docket.

(Issue #2) The CTS markup has been revised to indicate 12-05-LS.

ATTACHED PAGES:

Encl 2 3/4.7-24

1-13-A
Q-3.7.1-1

3/4.7.8 PRIMARY PLANT VENTILATION SYSTEM - ESF FILTRATION UNITS

LIMITING CONDITION FOR OPERATION

3.7.8 Two independent ESF Filtration Trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With one ESF Filtration Train inoperable, restore the inoperable ESF Filtration Train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With the inability to reach and maintain a negative pressure in the negative pressure envelope of the Auxiliary, Safeguards, and Fuel Buildings greater than or equal to 0.05 inch water gauge, restore the PRIMARY PLANT VENTILATION SYSTEM to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With the inability to reach and maintain a negative pressure in the negative pressure envelope of the Auxiliary, Safeguards, and Fuel Buildings greater than or equal to 0.01 inch water gauge, restore the PRIMARY PLANT VENTILATION SYSTEM'S ability to maintain a negative pressure of greater than or equal to 0.01 inch water gauge within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.8 Each ESF Filtration Train shall be demonstrated OPERABLE:

12-05 LS ~~LG~~
Q-3.7.12.1-4

a. 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 each ESF Filtration Train operates for at least 10 continuous hours with the heaters operating; 12-06-LG

b. By performing required ESF Filtration Unit filter testing in accordance with the Ventilation Filter Testing Program (VFTP). At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by: 10-08-A

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.12.1-5 **APPLICABILITY:** CP

REQUEST: CTS 4.7.8.d.1
ITS 3.7.12.4?
DOC 12-ww-LSw
JFD 3.7-38

CTS 4.7.8.d.1 requires that the ESF filter train pressure drop be verified at a flow rate of 15,000 cfm ± 10%. This CTS requirement is not retained in ITS SR 3.7.12.4.

Comment: JFD 3.7-38 states that the "CTS permits testing at whatever flow rate is necessary to achieve the required negative pressure". The JFD contradicts CTS 4.7.8.d.1 which can be rectified by adopting the STS requirement for flowrate in ITS SR 3.7.12.4. These requirements are important to preserve the integrity of the HEPA filter and ensure that the air flow is at the correct flow rate and has filter capability while in ITS Action B, as proposed. Provide the new CTS DOC, a revise CTS markup and a new or revised JFD as appropriate for these CTS changes.

FLOG RESPONSE: The details of the plant ventilation systems were moved to either the "Ventilation Filter Testing Program (VFTP)" as described in ITS 5.5.11 or the corresponding ITS Section 3.7 SRs and/or the Bases. See the response to NRC comment Q 5.5-8 which explains where the specific CTS ventilation system requirements were moved. The CTS 4.7.8.d.1 requirement that the ESF filter train pressure drop be verified at a flow rate of 15,000 cfm ± 10% is now included in ITS 5.5.11d. The CTS counterpart for ITS SR 3.7.12.4 is CTS 4.7.8.d.4. There is no specific flow requirement in CTS 4.7.8.d.4. JFD 3.7-38 deleted the flow requirement from ITS SR 3.7.4.12 per CTS.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.12.1-6 **APPLICABILITY:** CP

REQUEST: No CTS 3/4.7.8 requirement
ITS SR 3.7.12.6
DOC 12-07-M
JFD 3.7-39

The CTS 3/4.7.8 has been modified by ITS SR 3.7.12.6 which adds a new requirement to "verify that each non-ESF fan stops on an actual or simulated ESF fan actuation signal".

Comment: This CTS change as proposed is acceptable; however the accompanying Bases lack the detail required of the STS format. There is no justification for the selected Frequency. Also, the discussion provided in JFD 3.7-39 should be included in the Bases to clearly explain the purpose of this SR. Revise the ITS SR 3.7.12.6 Bases, as necessary, to meet the STS content standards for this new requirement.

FLOG RESPONSE: The ITS BASES SR 3.7.12.6 has been revised as suggested.

ATTACHED PAGES:

Encl 5B B 3.7-70

BASES

SR 3.7.12.3

CP-3.7-005

This SR verifies that each ~~ECCS PREACS~~ PPVS train starts and operates on an actual or simulated Safety Injection actuation signal. The 18 month Frequency is consistent with that specified in Reference 4.

SR 3.7.12.4

This SR verifies the integrity of the ~~ECCS pump room enclosure~~ negative pressure envelope. The ability of the ~~ECCS pump room~~ Auxiliary and Safeguards buildings to maintain a negative pressure, with respect to potentially uncontaminated adjacent areas, is periodically tested to verify proper functioning of the ~~ECCS PREACS~~ PPVS. During the [post accident] mode of operation, the ~~ECCS PREACS~~ PPVS is designed to maintain a slight negative pressure in the ~~ECCS pump room~~ Auxiliary, Fuel and Safeguards buildings, with respect to adjacent areas, to prevent unfiltered LEAKAGE. ~~The ECCS PREACS is designed to maintain a ≤[-0.125] inches water gauge relative to atmospheric pressure at a flow rate of [3000] cfm from the ECCS pump room.~~ The acceptance criteria of ≤ -0.05 inches water gauge relative to atmospheric pressure was selected as a reasonable measure of the integrity of the negative pressure boundary. The Frequency of 18 months is consistent with the guidance provided in NUREG-0800, Section 6.5.1 (Ref. 6).

This test is conducted with the tests for filter penetration; thus, an 18 month Frequency on a STAGGERED TEST BASIS is consistent with that specified in Reference 4.

SR 3.7.12.5

Not used.

SR 3.7.12.6

Q-3.7-12.1-6

This SR is required to verify the shutdown of the non-ESF fans to prevent bypass of the ESF Filtration units. The plant design does not include bypass dampers, however, bypass of the filter units will occur if the non-ESF fans are still running when the ESF fans start. Therefore, to prevent bypass, the non-ESF fans must be stopped. The SR demonstrates that the non-ESF fans stop on an actual or simulated ESF actuation signal (safety injection signal). ~~Operating the ECCS PREACS bypass damper~~ Verification of the tripping of each non-ESF fan on an SI signal is necessary to ensure that the system functions properly. ~~The OPERABILITY of the ECCS PREACS bypass damper is verified if it can be specified in Reference 4.~~ A frequency of 18 months is consistent with SR 3.7.12.3.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.15-1 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: CTS 3.9.10[11], Applicability
ITS 3.7.15 Applicability and Licensee Controlled Documents
DOC (3.9) 11-01-LG

CTS 3.9.10[11] is Applicable whenever irradiated fuel assemblies are in the [spent] fuel pool. ITS 3.7.15 is Applicable during movement of irradiated fuel assemblies in the [spent] fuel pool.

Comment: The CTS change appears to be acceptable as proposed in the ITS 3.7.15 markup; however, there is no explanation pertaining to what is actually relocated to the Licensee Controlled Documents. This appears to be a "LS" category change rather than an "LG" change. Revise the DOC, or provide a new DOC and revise the CTS markup, as necessary, for the appropriate change category and technical justification required for this CTS change.

FLOG RESPONSE: DOC 11-01-LG was revised during the Section 3.9 review in response to Comment Number Q 3.9-21.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.15-3 **APPLICABILITY:** CP

REQUEST: CTS 3.9.10, Applicability
ITS 3.7.15 Applicability; Licensee Controlled Documents
DOC (3.9) 11-01-LG
JFD 3.7-45

CTS 3.9.10 Applicability states "Whenever irradiated fuel assemblies are in the fuel storage racks". ITS 3.7.15 Applicability states "During movement of irradiated fuel assemblies in the fuel storage areas".

Comment: JFD 3.7-45 indicates that this LCO also applies to fuel storage areas in other locations of the plant which were never apparent in CTS 3/4.9.10. Provide a DOC which describes in more detail how this CTS change applies to all fuel storage areas including the in-containment storage area(s). There is no Bases Background or Applicability discussion which adequately describes the full intended application of this ITS LCO. Provide these new Bases. Revise the DOC, JFD or provide new justifications, and revise the CTS markup, as necessary, for the appropriate change category and technical justifications required for this CTS change.

FLOG RESPONSE: The reference to "fuel storage areas" in the CPSES ITS markup refers to the in-containment fuel storage racks and the two shared spent fuel pools. CPSES CTS 3/4.9.10 has always been applicable to the in-containment fuel storage racks as well as the spent fuel pools. The design is such that requiring water 23 feet over the top of the storage racks also ensures a nominal depth of 23 feet above the top of structures in the transfer canal and wet cask pit during fuel movement. Therefore, no DOC or markup of the CTS is necessary. The ITS Bases has been revised to include a description of the in-containment storage fuel racks.

ATTACHED PAGES:

Encl 5B B 3.7-74

B 3.7 PLANT SYSTEMS

B 3.7.15 Fuel Storage ~~Pool~~ Area Water Level

BASES

BACKGROUND

The minimum water level in ~~the~~ a fuel storage ~~pool~~ area meets the assumptions of iodine decontamination factors following a fuel handling accident. The specified water level shields and minimizes the general area dose when the storage racks are filled to their maximum capacity. The water also provides shielding during the movement of spent fuel.

The minimum water depth for design for fuel handling ensures that a nominal 23 feet of water is maintained above the top of a damaged fuel assembly laying atop the fuel storage racks and that 10 feet of water shielding is maintained above fuel assemblies being moved.

The fuel storage areas in the Fuel Building include the two spent fuel pools (Spent Fuel Pool No. 1 and Spent Fuel Pool No. 2). In addition, the fuel storage areas include a portion of the Refueling Cavity in each Containment Building. Permanent spent fuel storage racks are located in each spent fuel pool and in the upender area of the Refueling Cavity in each containment. Maintaining 23 feet of water over these storage racks also ensures a nominal depth of 23 feet above the top of structures in the transfer canal and wet cask pit during fuel movement. A general description of the fuel storage pool design is given in the FSAR, Section 9.1.2 (Ref. 1). The in-containment fuel storage area is described in FSAR Section 9.1.2 (Ref. 1). A description of the Spent Fuel Pool Cooling and Cleanup System is given in the FSAR, Section 9.1.3 (Ref. 2). The assumptions of the fuel handling accident are given in the FSAR, Section 15.7.4 (Ref. 3).

Q-3.7.15-3

Q-3.7.G-1

APPLICABLE SAFETY ANALYSES

The minimum water level in ~~the~~ a fuel storage ~~pool~~ area meets the pool decontamination factor of 100 assumptions of the fuel handling accident described in Regulatory Guide 1.25 (Ref. 4). The resultant 2 hour thyroid dose per person at the exclusion area boundary is ~~a small fraction of~~ well within the 10 CFR 100 (Ref. 5) limits [Reference 6 and 7].

According to Reference 4, there ~~is~~ should be a nominal 23 ft of water between the top of the damaged fuel bundle and the fuel pool surface during a fuel handling accident. With 23 ft of water, the

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.16-3 **APPLICABILITY:** CP, WC, CA

REQUEST: CTS 3.9.12. Action b (for Callaway and WCGS)
STS 3.7.16
JFD 3.7-dd

STS 3.7.16, Fuel Storage Pool Boron Concentration, was not adopted.

Comment: There is no detailed explanation for why this STS LCO was not adopted. Also, see Comment 3.7.17.1-2 of ITS 3.7.17.

FLOG RESPONSE: ITS 3.7.16 is a bracketed specification in the STS and per the STS conversion methodology would not be required to be adopted unless it already existed in the CTS (as was the case for DCPP). Callaway, CPSES and WCGS do not have this specification in their CTS.

For CPSES, the NRC SER for the high density rack License Amendment (LA 46/32) concluded that normal plant procedures were sufficient to assure boron concentration in the spent fuel pool.

Callaway and WCGS are further evaluating STS 3.7.16, Fuel Storage Pool Boron Concentration and CTS 3.9.12, Action b, in conjunction with CTS license amendment request for re-racking of the Spent Fuel Pool. An additional response to Comment Numbers Q 3.7.16-3 and Q 3.7.17.1-2 will be provided by November 6, 1998.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.17.1-2 **APPLICABILITY:** CP, WC, CA

REQUEST: CTS 3.9.12, Action a
ITS 3.7.17
DOC (3.9) 14-04-LS13

With the fuel assembly storage requirements not met, CTS 3.9.12 Action a requires the "boron concentration of the spent fuel pool to be verified $\geq$ 2000 ppm at least once per 8 hours". This CTS action is not retained in ITS 3.7.17.

Comment: The DOC states this action is consistent with the STS which is incorrect. The STS has an LCO for spent fuel pool boron concentration requirements which has not been adopted. The STS 3.7.16 serves the same purpose as this CTS Action a requirement which is to ensure the double contingency principle is maintain for the fuel storage requirements. These requirements are clearly stated in the STS Bases for both STS 3.7.16 and ITS 3.7.17 which are dependent upon one another. This CTS requirement shall be retained by adopting the STS 3.7.16. (For CPSES, recently approved LAR 94-22, TXX-94325 provides a current licensing basis for spent fuel storage and spent fuel boron concentration. However, CPSES should still adopt STS 3.7.16.) Revise the DOC, or provide a new DOC and revise the CTS markup, as necessary, for the appropriate change category and technical justification required to retain this CTS requirement. (Also, see Comment 3.7.16-3 of ITS 3.7.16)

FLOG RESPONSE: For CPSES, Callaway and WCGS, see response to Comment 3.7.16-3.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.17.1-7 **APPLICABILITY:** CP

REQUEST: CTS 5.6.1.1.e and f
ITS 3.7.17
DOC (5.0) 06-04-A

CTS 5.6.1.1.e and f contain the requirements for spent fuel storage racks. The CTS current licensing basis for spent fuel storage was approved in LAR 94-22, TXX-94325.

Comment: **Issue #1** - The Region 1 and Region 2 designations are not used in the LCO but the high density storage racks are defined as the Applicable basis for this LCO. Figure 3.7.17-1 refers to Region 2 which is inconsistent. **Issue #2** - STS 3.7.16 should be added to the ITS. (See the above Comment 3.7.17.1-2 of this LCO.)

FLOG RESPONSE: (Issue #1)The Title for Figure 3.7.17-1 will be revised to read "Fuel Assembly Burnup Limits in High Density Racks."

(Issue #2) See response to Comment 3.7.16-3.

ATTACHED PAGES:

Encl 5A 3.7-35 (Figure 3.7.17-1)

B-PS

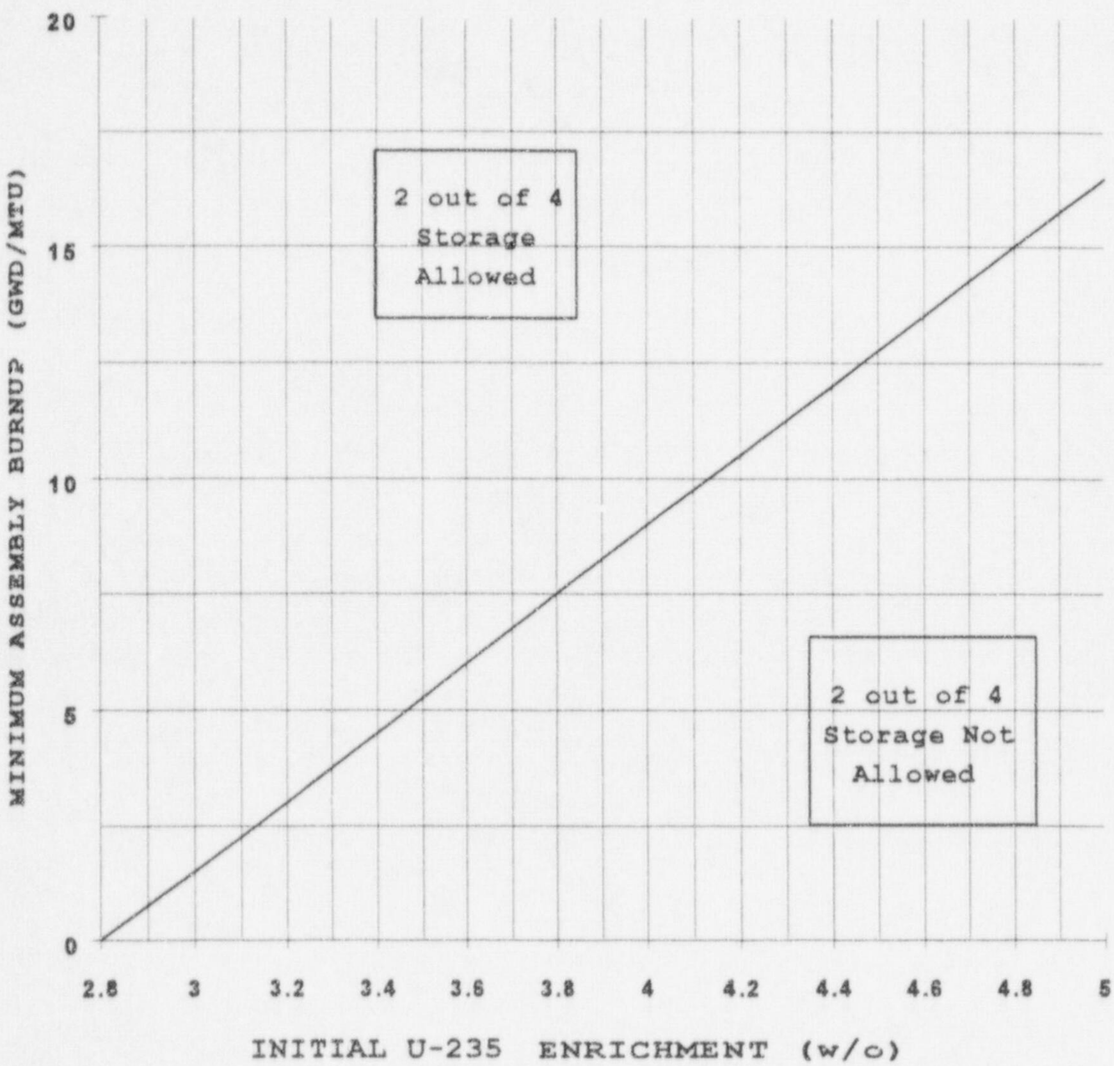


FIGURE 3.7.17-1 (page 1 of 1)

Fuel Assembly Burnup Limits in ~~Region 2~~ High Density Racks

Q-3.7.17.1-7

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.18-1 **APPLICABILITY:** CP

REQUEST: CTS 3/4.7.1.4
ITS 3.7.18
DOC 04-01-M
DOC 04-02-LS8

CTS 3/4.7.1.4 iimits the secondary specific activity and it is converted to ITS 3.7.18, Secondary Specific Activity.

Comment: The CTS markup is not sufficiently completed for CTS 3/4.1.7.4 to show how the CTS changes are identified per the DOCs prepared for this ITS conversion. Provide a completed CTS markup for this CTS LCO.

FLOG RESPONSE: The CTS markup and the ITS are technically equivalent. See justification provided in response to Comment 3.7.1-1.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.19-1 **APPLICABILITY:** CP

REQUEST: CTS 3.7.12 LCO
ITS 3.7.19 Bases
DOC 18-xx-LG

CTS 3.7.12 states that "At least two independent safety chilled water trains shall be Operable". ITS 3.7.19 states "Two safety chilled water trains shall be Operable".

Comment: The word "independent" on the CTS markup is not shown moved to the Bases of the ITS. The Bases ITS 3.7.19 contains descriptive detail of LCO Operability in the Bases Background discussion, second paragraph. Provide a DOC for this CTS change in a revision to the submittal.

FLOG RESPONSE: New DOC 18-04-LG has been created to move the word "independent" to the Bases.

ATTACHED PAGES:

Encl 2	3/4.7-32
Encl 3A	16
Encl 3B	16

PLANT SYSTEMS

1-13-A
Q-3.7.1-1

3/4.7.12 SAFETY CHILLED WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.12 At least two ~~independent~~ safety chilled water trains shall be OPERABLE.

18-04-LG
Q-3.7.19-1

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one safety chilled water train OPERABLE, restore at least two trains to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.12 The safety chilled water trains shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety-related equipment that is not locked, sealed or otherwise secured in position, is in its correct position.** 18-01-A

b. At least once per 18 months* by demonstrating that each safety chilled water train pump and chiller ~~and electrical switchgear area emergency fan coil~~ units start on a simulated or actual actuation ~~Safety Injection test~~ signal. 2-17-A 18-02-LG 18-03-TR

~~* The surveillance test interval is extended to 24 months for Train A, Unit 2, to remain in effect until the completion of the second refueling outage for Unit 2.~~ 2-17-A

** Isolation of safety chilled water flow to individual components does not render the safety chilled water system inoperable. 18-01-A

CHANGE NUMBER	NSHC	DESCRIPTION	
18-01	A	A clarifying footnote is added concerning isolation of safety chilled water flow to individual components. While isolation of safety chilled water flow to individual components may render those components inoperable, it does not affect the operability of the safety chill water system. The inoperability of affected TS components would be governed by their individual specifications. NUREG-1431 does not have a corresponding specification for safety chilled water. The conversion of this specification to the ITS format is modeled after the ITS CCW specification (which is a similar specification). The ITS CCW specification has this note and thus the addition of the note maintains consistency between these similar specifications.	Q-3.7.19-4
18-02	LG	The surveillance of the CPSES electrical switchgear area emergency fan coil units is moved to a licensee controlled document. The electrical switchgear area emergency fan coil units are support systems associated with the electrical distribution system. Requirements associated with support systems, while important, are not required to be maintained in the TS unless they meet one or more of the criteria of 10CFR50.36(c)(2)(ii). The change is acceptable because it removes detail no longer required in the TS to protect the health and safety of the public while retaining the basis limiting condition for operation.	Q-3.7.19-3
18-03	TR-1	The safety chilled water system actuation surveillance is revised to allow the use of an actual signal to verify actuation. The identification of initiating signals is moved to the Bases.	
18-04	LG	Consistent with NUREG-1431, the word "independent" in the LCO is considered to be descriptive detail and has been moved to the Bases of ITS 3.7.19. The change is acceptable because it removes detail no longer required in the TS to protect the health and safety of the public while retaining the basis limiting condition for operation.	Q-3.7.19-1

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
16-01 R	The CPSES specific Snubbers TS is relocated to a licensee-controlled document.	NO	YES; relocated to the TRM.	NO	NO
17-01 R	The CPSES specific Area Temperature Monitoring TS is relocated to a licensee-controlled document.	NO	YES; relocated to the TRM.	NO	NO
18-01 A	A clarifying CPSES specific note is added concerning isolation of the Safety Chilled Water flow to individual components to mimic the CCW TS which is similar to this TS.	NO	YES	NO	NO
18-02 LG	The CPSES specific surveillance for the electrical switch gear area emergency fan coil units is moved to a licensee-controlled document.	NO	YES; moved to the TRM.	NO	NO
18-03 TR-1	The CPSES specific SR is revised to allow credit for an actual actuation and moves signal specifics to the Bases.	NO	YES	NO	NO
18-04 LG	In this CPSES specification, the word "independent" in the LCO is considered to be descriptive detail and has been moved to the Bases of ITS 3.7.19.	NO	YES	NO	NO Q-3.7.19-1
19-01 R	The CPSES specific Main Feedwater Pressure/Temperature limit TS is relocated to a licensee-controlled document.	NO	YES; relocated to the TRM.	NO	NO
20-01 LG	Moves what constitutes an operable CPSES specific UPS train to the Bases.	NO	YES	NO	NO
20-02 TR-1	The CPSES specific UPS activation surveillance is revised to allow credit for an actual actuation and moves signal specifics to the Bases.	NO	YES	NO	NO

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.19-2 **APPLICABILITY:** CP

REQUEST: CTS 4.7.12.a
ITS SR 3.7.19.1 and ITS Bases
DOC 18-yy-LSy

CTS 4.7.12.a verifies that each "manual, power operated or automatic" valve is in its correct position. ITS SR 3.7.19.1 requires the same verification.

Comment: The Bases Background, third paragraph, third sentence states that there are no automatic valves in this water system. Also, ITS SR Bases states this SR applies to manual valves only. The Bases contradict the CTS and ITS requirements. Revise the submittal to remove these contradictions and provide the missing JFD or DOC technical justifications for these changes.

FLOG RESPONSE: While the current CPSES design does not include automatic valves, it is not inconceivable that automatic valves could be added at some future date. Since the valve types in the SR are included within a parenthetical phrase, it is understood that only the valve types that apply need be surveilled. The Bases discussion of the SR provides sufficient detail to indicate which are the applicable valves and we do not consider the Bases discussion and the surveillance to be contradictory. In cases like this, especially when the ITS is the same as the CTS, it has been our general philosophy not to change the ITS (or the CTS).

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.19-3 **APPLICABILITY:** CP

REQUEST: CTS 4.7.12.b
Bases ITS 3.7.4, LCO discussion
DOC 18-02-LG

CTS 4.7.12.b requires demonstration that each electrical switchgear area emergency fan coil units start" on a test signal. This requirement is not retained in the ITS SR 3.7.19.2.

Comment: This CTS requirement is proposed to be moved to a Licensee Controlled Document; however, there is no technical basis provided to justify the relocation. The generic "LG" NSHC is inadequate. Revise the submittal to provide this information.

FLOG RESPONSE: The electrical switchgear area emergency fan coil units are support systems associated with the electrical distribution system. Requirements associated with support systems, while important, are not required to be maintained in the TS unless they meet one or more of the criteria of 10CFR50.36(c)(2)(ii). DOC 18-02-LG is revised to provide additional justification for moving this requirement out of the TS. Also see response to NRC Comment 3.7.4-7 which provides justification for the relocation of other support system requirements.

ATTACHED PAGES:

Encl 3A 16

CHANGE NUMBER	NSHC	DESCRIPTION
18-01	A	A clarifying footnote is added concerning isolation of safety chilled water flow to individual components. While isolation of safety chilled water flow to individual components may render those components inoperable, it does not affect the operability of the safety chill water system. The inoperability of affected TS components would be governed by their individual specifications. NUREG-1431 does not have a corresponding specification for safety chilled water. The conversion of this specification to the ITS format is modeled after the ITS CCW specification (which is a similar specification). The ITS CCW specification has this note and thus the addition of the note maintains consistency between these similar specifications. Q-3.7.19-4
18-02	LG	The surveillance of the CPSES electrical switchgear area emergency fan coil units is moved to a licensee controlled document. The electrical switchgear area emergency fan coil units are support systems associated with the electrical distribution system. Requirements associated with support systems, while important, are not required to be maintained in the TS unless they meet one or more of the criteria of 10CFR50.36(c)(2)(ii). The change is acceptable because it removes detail no longer required in the TS to protect the health and safety of the public while retaining the basis limiting condition for operation. Q-3.7.19-3
18-03	TR-1	The safety chilled water system actuation surveillance is revised to allow the use of an actual signal to verify actuation. The identification of initiating signals is moved to the Bases.
18-04	LG	Consistent with NUREG-1431, the word "independent" in the LCO is considered to be descriptive detail and has been moved to the Bases of ITS 3.7.19. The change is acceptable because it removes detail no longer required in the TS to protect the health and safety of the public while retaining the basis limiting condition for operation. Q-3.7.19-1

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.19-4 **APPLICABILITY:** CP

REQUEST: CTS 4.7.12.a
ITS SR 3.7.19.1, Note
DOC 18-01-A

CTS 4.7.12.a has been modified by the addition of a note to ITS 3.7.19.1 stating that the "isolation of safety chilled water flow to individual components does not render the safety chilled water system inoperable".

Comment: The DOC does not describe and provide a technical justification regarding why this note is appropriate here. Also, the ITS SR 3.7.19.1 Bases do not discuss the inclusion or justification for this note. Revise the submittal.

FLOG RESPONSE: The Bases for the safety chilled water system has been revised to include a discussion of the note to ITS 3.7.19.1 stating that the "isolation of safety chilled water flow to individual components does not render the safety chilled water system inoperable". DOC 18-01-A has been revised to include additional justification for the inclusion of the note in the CTS markup.

ATTACHED PAGES:

Encl 3A 16
Encl 5B B 3.7-86

CHANGE NUMBER	NSHC	DESCRIPTION	
18-01	A	A clarifying footnote is added concerning isolation of safety chilled water flow to individual components. While isolation of safety chilled water flow to individual components may render those components inoperable, it does not affect the operability of the safety chill water system. The inoperability of affected TS components would be governed by their individual specifications. NUREG-1431 does not have a corresponding specification for safety chilled water. The conversion of this specification to the ITS format is modeled after the ITS CCW specification (which is a similar specification). The ITS CCW specification has this note and thus the addition of the note maintains consistency between these similar specifications.	Q-3.7.19-4
18-02	LG	The surveillance of the CPSES electrical switchgear area emergency fan coil units is moved to a licensee controlled document. The electrical switchgear area emergency fan coil units are support systems associated with the electrical distribution system. Requirements associated with support systems, while important, are not required to be maintained in the TS unless they meet one or more of the criteria of 10CFR50.36(c)(2)(ii). The change is acceptable because it removes detail no longer required in the TS to protect the health and safety of the public while retaining the basis limiting condition for operation.	Q-3.7.19-3
18-03	TR-1	The safety chilled water system actuation surveillance is revised to allow the use of an actual signal to verify actuation. The identification of initiating signals is moved to the Bases.	
18-04	LG	Consistent with NUREG-1431, the word "independent" in the LCO is considered to be descriptive detail and has been moved to the Bases of ITS 3.7.19. The change is acceptable because it removes detail no longer required in the TS to protect the health and safety of the public while retaining the basis limiting condition for operation.	Q-3.7.19-1

BASES (Continued)

result in loss of the Safety Chilled Water System function. The 72 hour Completion Time is based on the redundant capabilities afforded by the OPERABLE train, and the low probability of a DBA occurring during this time.

B.1 and B.2

If the Safety Chilled Water System train cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours and MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.19.1

Q-3.7.19-4

This SR is modified by a Note indicating that the isolation of safety chilled water flow to individual components may render these components inoperable but does not affect the OPERABILITY of safety chilled water system.

Verifying the correct alignment for manual valves servicing safety-related equipment provides assurance that the proper flow paths exist for Safety Chilled Water System operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since they are verified to be in the correct position prior to being locked, sealed, or secured. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

The 31 day Frequency is based on engineering judgement, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

SR 3.7.19.2

Q-3.7.19-5

This SR verifies proper operation of the Safety Chilled Water System fans and pumps on an actual or simulated Safety Injection actuation signal. Operating experience has shown that these components usually pass the surveillance when performed at the 18 month Frequency. Therefore, the 18 month frequency is acceptable from a reliability standpoint.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.19-5 **APPLICABILITY:** CP

REQUEST: CTS 4.7.12.b
ITS SRs 3.7.19.2
DOC 18-03-TR1

CTS 4.7.12.b verifies at least once per 18 months that each safety chilled water train pump chiller starts as designed upon receipt of a Safety Injection test signal. ITS SR 3.7.19.2 verifies the safety chilled water train pump and chiller starts on an actual signal or a simulated signal.

Comment: The DOC states that the specific identity of the simulated signal, is no longer retained in the SR but is to be moved to the Bases. A review of the ITS SR 3.7.19.2 Bases discussion shows this is not identified there. Revise the Bases accordingly per the DOC.

FLOG RESPONSE: ITS SR 3.7.19.2 Bases been revised to include the Safety Injection signal in the discussion actuation signals.

ATTACHED PAGES:

Encl 5B B 3.7-86

BASES (Continued)

result in loss of the Safety Chilled Water System function. The 72 hour Completion Time is based on the redundant capabilities afforded by the OPERABLE train, and the low probability of a DBA occurring during this time.

B.1 and B.2

If the Safety Chilled Water System train cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours and MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.19.1

Q-3.7.19-4

This SR is modified by a Note indicating that the isolation of safety chilled water flow to individual components may render these components inoperable but does not affect the OPERABILITY of safety chilled water system.

Verifying the correct alignment for manual valves servicing safety-related equipment provides assurance that the proper flow paths exist for Safety Chilled Water System operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since they are verified to be in the correct position prior to being locked, sealed, or secured. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

The 31 day Frequency is based on engineering judgement, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

SR 3.7.19.2

Q-3.7.19-5

This SR verifies proper operation of the Safety Chilled Water System fans and pumps on an actual or simulated Safety Injection actuation signal. Operating experience has shown that these components usually pass the surveillance when performed at the 18 month Frequency. Therefore, the 18 month frequency is acceptable from a reliability standpoint.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.20-1 **APPLICABILITY:** CP

REQUEST: CTS 3.7.11P LCO, item a and b
Bases ITS 3.7.20P, Background
DOC 20-01-LG
JFD 3.7-48

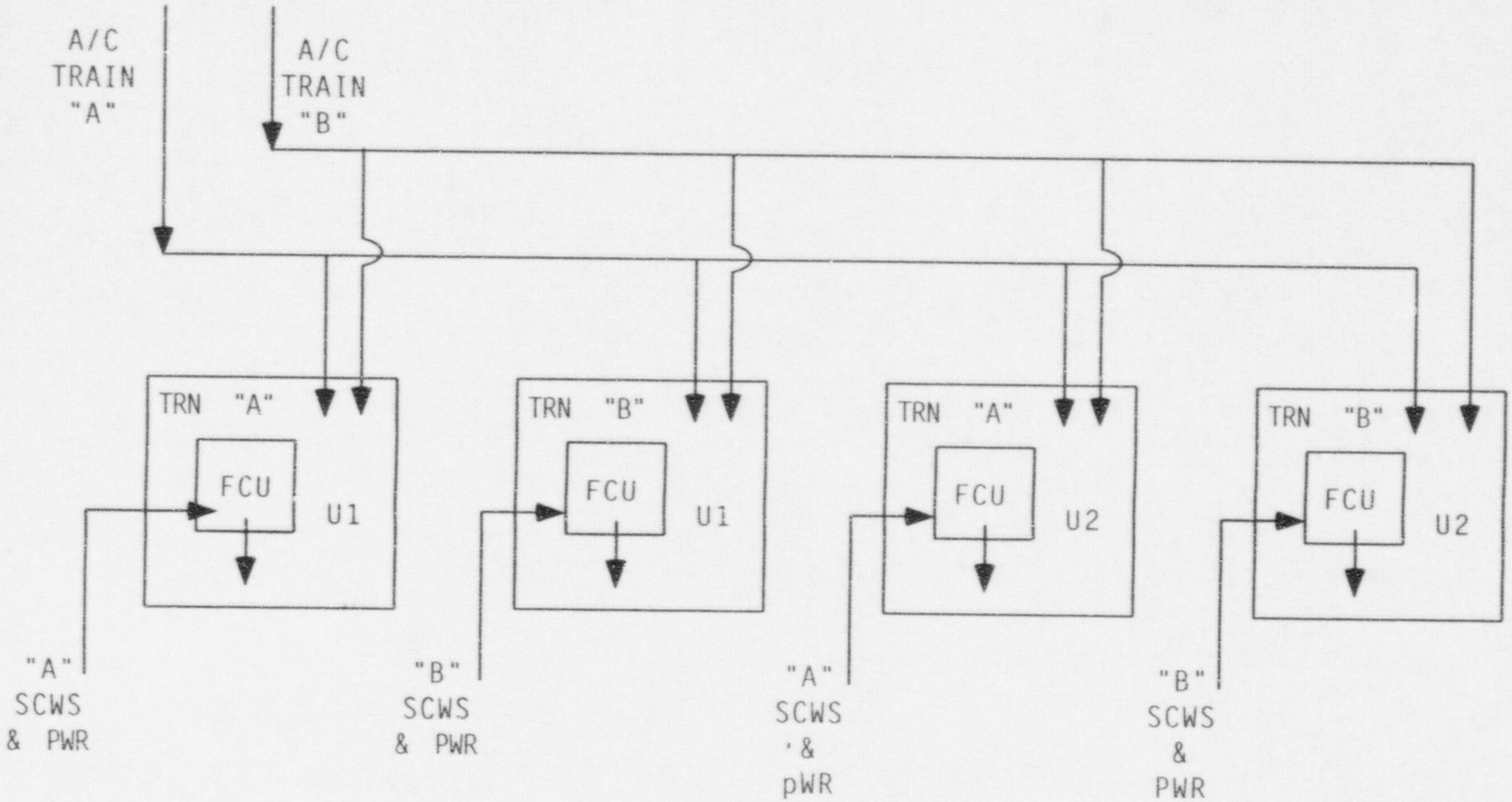
CTS 3.7.11P LCO, items a and b described the details of what constitutes an Operable UPS. These details are moved to the Bases of ITS 3.7.20P, Background discussion.

Comment: The Bases discussion produces verbal description which has been transformed into the sketch included with the ITS 3.7.20P Bases. There are also comments on the Bases which pertain to the completeness of the LCO Operability description. CPSES should verify the attached sketch and respond by correction and/or modification of the Bases.

FLOG RESPONSE: CPSES has reviewed the sketch provided and we have revised it to reflect the actual plant configuration. The Bases LCO Operability description has been revised to provide additional detail.

ATTACHED PAGES:

Revised sketch
Encl 5B B 3.7-92



UPS HVAC SYSTEM CONFIGURATION

BASES (Continued)

APPLICABLE SAFETY ANALYSES

The design basis of the UPS HVAC System is to maintain the UPS & Distribution room temperatures.

The UPS Room s are dedicated to the UPS Unit and Train they support. The UPS A/C Train components are arranged in redundant, safety related trains. During emergency operation, the UPS HVAC System maintains the temperature below 122°F. A single active failure of a component of the UPS HVAC, with a loss of offsite power, does not impair the ability of the system to perform its design function. Redundant controls are provided for UPS room temperature control. The UPS HVAC is designed in accordance with Seismic Category I requirements. The UPS HVAC is capable of removing sensible and latent heat loads from the UPS inverter rooms, which include consideration of equipment heat load requirements to ensure equipment OPERABILITY.

The UPS HVAC satisfies Criterion 4 of 10CFR50.36(c)(2)(ii).

LCO

Two UPS HVAC System trains are required to be OPERABLE to provide the required redundancy to ensure that the system functions to remove heat from the UPS rooms during a DBA. A UPS HVAC System train is considered OPERABLE when its associated: Q-3.7.20-1

a. UPS Emergency Fan Coil Unit is OPERABLE, or CP-3.7-013

b. 1) Air Conditioner and fans are OPERABLE, and

2) Ductwork and dampers are OPERABLE, and air circulation can be maintained.

APPLICABILITY

In MODE 1, 2, 3, or 4, the UPS HVAC System is required to be OPERABLE to ensure the UPS & Distribution room temperatures will not exceed equipment operational requirements.

In MODE 5 or 6, the OPERABILITY requirements of the UPS HVAC System are determined by the systems it supports. CP-3.7-013

ACTIONS

A.1 and A.2

With one UPS HVAC System train (i.e. EFCU and A/C Train of the same electrical train) inoperable, action must be taken immediately to verify the A/C Train of the opposite electrical train is operable and to restore OPERABLE status within 30 days. During this period, the remaining OPERABLE train is adequate to perform the UPS HVAC System function. The 30 day Completion Time

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.20-2 **APPLICABILITY:** CP

REQUEST: CTS 3.7.11P Applicability and Action
ITS 3.7.20P Applicability and Action Note
DOC 20-xx-LSx

CTS 3.7.11 Applicability and Action is for Mode 1, 2, 3, and 4 and the Actions are for "Units 1 and 2". CTS 3.7.11P Applicability is for Modes 1, 2, 3 and 4. ITS 3.7.20P Applicability is for Mode 1, 2, 3, and 4.

Comment: This apparent shared unit operation showed by the CTS Action is not retained in the ITS. The ITS Applicability should be similar to ITS 3.7.10 and ITS 3.7.11 for room air conditioning and temperature control. It should be either "At all times"; or "Modes 1, 2, 3, 4, 5, and 6"; or "When any unit is in Mode 1, 2, 3 or 4". The equipment in the UPS Rooms will dictate the appropriate mode of Applicability. Also, the Actions should be preceded by a Note stating "Actions shall apply simultaneously to both Units."

FLOG RESPONSE: The mode applicability for the control room ventilation tech specs 3.7.10 and 3.7.11 is not based on it being a shared system. Note that the BASES for ITS 3.7.10 notes the basis for MODE 5 and 6 applicability is a waste gas decay tank rupture. The same modes would apply for non-shared control rooms. The mode applicability in the ITS 3.7.10, 3.7.11 and 3.7.20P apply to each unit independently. ITS 3.7.20 without LAR 96-004 reflects a UPS HVAC System comprised of a two train shared A/C system serving unit specific UPS rooms. The recently completed modification to improve the UPS reliability (which was the basis of the pending LAR 96-004 which generated the "P" version of CTS 3.7.11) added one unit/train specific fan coil unit (FCU) to each of the UPS rooms. The shared UPS Train A and B A/C units, which also supply cooling to these rooms, were retained. Both the systems (FCUs and A/C units) can be used independent of each other to supply cooling to UPS rooms. The shared portion of the UPS HVAC System is adequately described in the Bases definition of what is an operable UPS HVAC train. Since the UPS HVAC System is comprised of both unit specific cooling and shared unit cooling, Actions do not necessarily apply simultaneously to both units. For example, if both A/C trains and 1 FCU were inoperable, one unit would have two operable UPS HVAC trains and the other unit would be in Conditions A and B. It is not necessary to deviate from the STS applicability. The definition of what constitutes an operable UPS HVAC train will dictate the applicable units that may be affected. The ITS applicability properly reflects the CTS.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.20-3 **APPLICABILITY:** CP

REQUEST: CTS 3.7.11P Action a
ITS 3.7.20P Action A
DOC 20-ww-A

CTS 3.7.11P Action a states "With one or more UPS & Distribution Room supported only by an Operable UPS A/C train" that is further qualified as "which is not the same train as the UPS in that room". This additional phrase is not retained in the ITS 3.7.20P Action A.

Comment: **Issue #1** - The deletion of the phrase "which is not the same as the UPS in that room" is not technically justified with a DOC. Explain the CTS requirement and provide this justification in a new DOC. **Issue #2** - The Condition statement of Action A needs to be limited to apply if any unit is in the Mode of Applicability to differentiate it from the conditions for Action C.

FLOG RESPONSE: (Issue #1) Refer to updated sketch provided in response to Comment Number Q 3.7.20-1. The CTS and ITS LCOs are technically equivalent. The phrase "which is not the same as the UPS in that room" is moved to the Bases per DOC 20-01-LG and is implicit in the Bases definition of an operable train of UPS HVAC :

"An UPS HVAC System train is considered OPERABLE when its associated:

a. UPS Fan Coil Unit is OPERABLE, or

b. 1) Air Conditioner and fans are OPERABLE, and

   2) Ductwork and dampers are OPERABLE, and air circulation can be maintained."

For example, by the above definition, for a train "A" UPS room to be without an operable cooling system, the train "A" FCU and the train "A" A/C unit would have to be inoperable. In this scenario, the only train of air conditioning that could still be operating is the opposite train and therefore the statement "which is not the same train as the UPS in that room" is not necessary.

(Issue 2) - It is not necessary to deviate from the STS applicability. The definition of what constitutes an operable UPS HVAC train will dictate the applicable units that may be affected.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.20-4 **APPLICABILITY:** CP

REQUEST: CTS 3.7.11P Action b
ITS 3.7.20P Action B and Bases
DOC 20-yy-LSy

CTS 3.7.11P Action b is for one or more rooms not supported by an Operable UPS fan coil or A/C train but with a UPS A/C train circulating air only. ITS 3.7.20P Action B is entered when two UPS System HVAC trains are inoperable.

Comment: Issue #1 - The addition of the new Required Actions B.1 and B.2 is not justified with a DOC. Provide these justifications in new DOCs. Also, the Action B condition logical connector phrase must be removed because there is no difference between Required Actions A.1 and B.1 which are determined concurrently. **Issue #2** - The maximum temperature for these rooms must be under normal operating conditions which is 104°F and should be explicitly stated here. The Bases state the maximum temperature is placed in the TRM which is unacceptable. The maximum room operating temperature cannot be permitted to exist at the abnormal operating temperature limit of 113°F while in this degraded mode because this could result in the temperature safety limits being exceeded. **Issue #3** - The Condition statement of Action B needs to be limited to apply if any unit is in the Mode of Applicability to differentiate it from the conditions for Action C. **Issue #4** - The Required Action B.3 Completion Time of 72 hours is not adequately justified in the Bases because the Basis provided is the same as for the 30 day Completion Time.

FLOG RESPONSE: (Issue #1) - Although the format is different, ITS Required Actions B.1 and B.2 are technically equivalent to Action B of CTS 3.7.11P. DOC 1-13-A addresses changes to format. No additional DOC is necessary.

Issue #2- CTS 3/4.7.11 does not include maximum normal operating temperature limits. It only requires the additional requirement to comply with CTS 3/4.7.10 during the 72 hours action. This ensures that continued operability of the affected equipment is evaluated while the supporting HVAC system is degraded. Relocation of the 3/4.7.10 specification to a licensee controlled document is consistent with STS and justified in 17-01-R.

Issue #3- It is not necessary to deviate from the STS standard applicability. Either unit in MODES 1-4 with ITS 3.7.20P as proposed is equivalent to the CTS 3/4.7.11P.

Issue #4- The justification is not the same for the 30 day and 72 hour completion times. The 30 day completion time is applicable when the function of one Fan Coil Unit (FCU)and its associated A/C train is being maintained by a 100% capacity A/C train of the opposite electrical train. The 72 hour completion time is applicable when the function of one FCU and its associated A/C train is being maintained by an A/C fans circulating air from other FCUs.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.20-5 **APPLICABILITY:** CP

REQUEST: CTS 3.7.11P Action a, b and c
ITS 3.7.20P Action C
DOC 20-zz-LSz

If the CTS 3.7.11 actions cannot be achieved, then the unit is placed in Mode 3 in 6 hours and in Mode 5 in 36 hours. CTS 3.7.11P Action c and ITS 3.7.20 Action C.1 permit an extra one hour to "Restore the required support" before entering an orderly shutdown.

Comment: The proposed ITS is not technically justified by a DOC, a JFD or by a technical justification in the Bases. Remove this requirement from the new CTS 3.7.11P and ITS. Also, the Condition C statement should be "Required Action and associated Completion Time of Condition A or B not met in Modes 1, 2, 3 or 4." See Comments 3.7.20-3 and 3.7.20-4 above.

FLOG RESPONSE: CTS 4.7.11P is CTS 4.7.11as modified by CPSES LAR 96-04. The "P" version is expected to be approved by the NRC prior to the approval of the ITS conversion. As such the wording of the specification (including the additional one hour for restoration) will be in our CTS. Since there is no STS counterpart to this specification, JFD 3.7-48 was used to add this CPSES specific specification to the ITS. Since there are no changes proposed for the CTS no DOCs are necessary. Condition C has been split into Condition C and D to match the CTS.

ATTACHED PAGES:

Encl 5A 3.7-39 and 3.7-40
Encl 5B B 3.7-93

3.7 PLANT SYSTEMS

3.7.20P UPS HVAC System [With LAR 96-004]

3.7-48

LCO 3.7.20P Two UPS HVAC System Trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One UPS HVAC System train inoperable.	A.1 Verify the affected UPS & Distribution Room is supported by an OPERABLE UPS A/C Train. AND A.2 Restore the inoperable UPS HVAC train to OPERABLE status.	Immediately 30 days
B. Two UPS HVAC System trains inoperable OR Required Action A.1 and associated Completion Time not met.	B.1 Verify air circulation is maintained by at least one UPS A/C Train. AND B.2 Verify the air temperature in the affected UPS & Distribution Room(s) does not exceed the maximum temperature limit for the room(s). AND B.3 Restore UPS HVAC System train to OPERABLE status	Immediately 12 hours AND Once per 12 hours thereafter 72 hours
C. Required Action B.1 and associated Completion Time not met.	C.1 Restore the required support	1 hour

Q-3.7.20-5

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
~~C~~D. Required Action and associated Completion Time of Required Action A.2, B.2, B.3 or C.1 ~~or Condition B~~ not met.	~~C.1 Restore the required support.~~ ~~OR~~ ~~C~~D.~~2.~~1 Be in MODE 3. AND ~~C~~D.2.~~2~~ Be in MODE 5.	~~1 hour~~ Q-3.7.20-5 6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.20P.1	Verify each required UPS & Distribution Room Fan Coil Unit operates ≥ 1 continuous hour.	31 days
SR 3.7.20P.2	Verify each required UPS A/C train operates for ≥ 1 continuous hour.	31 days
SR 3.7.20P.3	Verify each required UPS A/C train actuates on an actual or simulated actuation signal.	18 months

ACTIONS

B.1, B.2 and B.3

With one or more EFCUs and both UPS A/C trains inoperable, action must be taken immediately to verify air circulation is being maintained and that the temperatures are being maintained within equipment design limits. The maximum temperature limit for these rooms is provided in the TRM. The 12 hour completion time for reverification of temperatures is considered reasonable based on slow rates of changes during steady state conditions. The 72 hour Completion Time is based on the risk from an event occurring requiring the inoperable UPS HVAC Train, and the remaining UPS Room EFCUs and A/C Train fans providing the required protection.

CP-3.7-013

C.1

When one or more UPS and Distribution Rooms are not supported by either forced cooling or circulating air, one hour is allowed to restore support to the affected room(s). The one hour minimizes the time without required support while allowing quick repairs or restoration of equipment.

~~C~~D.1, ~~C~~D.2 and ~~C~~D.3

Q-3.7.20-5

In MODE 1, 2, 3, or 4, if the required support to meet the LCO or to meet Required Actions in Condition A or B cannot be restored within the required Completion Time ~~(1 hour)~~, the unit must be placed in a MODE that minimizes the risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.20P.1

Verifying each require EFCU operates for ≥ 1 continuous hour ensures that they are operable.

SR 3.7.20P.2

Verifying each UPS A/C train operates for ≥ 1 hour ensures that they are OPERABLE and that all associated controls are functioning properly.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7.20-6 **APPLICABILITY:** CP

REQUEST: CTS 4.7.11P.1
ITS SRs 3.7.20P.3
DOC 20-02-TR1

CTS 4.7.11P.1 verifies at least once per 18 months that each UPS A/C train actuates as designed upon receipt of a Safety Injection signal. ITS SR 3.7.20P.3 verifies the same UPS A/C train actuates on an actual signal or a simulated signal.

Comment: Issue #1 - The DOC states that the specific identity of the simulated signal, is no longer retained in the SR but is to be moved to the Bases. A review of the ITS Bases discussion for these SRs show they do not contain these testing details. Revise the Bases in accordance with the DOC. **Issue #2** - The DOC 20-02-TR1 is not shown on the CTS markup. **Issue #3** - How are the UPS & Distribution Room Fan coil units actuated and how is this verified? Since CTS 4.7.12.b is retained as ITS SR 3.7.19.2, then there should be a similar SR for the UPS & Distribution Room Fan coil units actuating each 18 months. Provide the appropriate technical explanation and justification.

FLOG RESPONSE: (Issue #1) ITS Bases SR 3.7.20.2 and SR 3.7.20P.3 has been revised to identify the specific actuation signal.

(Issue # 2) DOC 20-02-TR-1 was included in the markup of CTS 4.7.11 but not on CTS 4.7.11P. That is because CTS 4.7.11P is a modified version of 4.7.11 (per LAR 96-04) which did not include a specific actuation signal in the CTS and therefore a DOC is not required to move that information to the Bases. This version is expected to be approved by the NRC prior to the approval of the ITS conversion. As noted in response to issue #1 above, the Bases will include information as to specific actuation signal.

(Issue # 3) The control circuit design of the UPS Room Fan Coil Units (FCUs) does not include an "auto" start or "standby" feature. When all FCUs are operating, the existing UPS A/C Trains are normally maintained in standby. Each UPS Room Fan Coil Unit is controlled from a local control panel integral to the unit. There is no remote instrumentation or control room status indication; so, verification of status is local. The control panel contains a maintained two position hand switch (run/off). Each unit is directly wired to its associated safeguards bus and therefore, load shed if the bus is de-energized upon a Blackout signal ("BOS") or a Safety Injection ("S") signal. The units automatically restart upon re-energizing of the associated safeguards bus.

The following paragraph will be inserted into the BASES 3.7.20P BACKGROUND:

> "The control circuit design of the FCUs does not include an "auto" start or "standby" feature. Each UPS Room Fan Coil Unit is controlled from a local control panel integral to the unit. The control panel contains a maintained two position hand switch (run/off). Each unit is directly wired to its associated safeguards bus and therefore, load shed if the bus is de-energized upon a Blackout signal ("BOS") or a Safety Injection ("S") signal. The units automatically restart upon re-energizing of the associated safeguards bus. A FCU must be operating to be operable."

CTS 4.7.12.b is the applicable surveillance for the chilled water supply to the UPS & Distribution

Room FCUs; however, CTS 3.7.12 does not contain a surveillance applicable to the FCUs it supplies with the exception of the electrical switchgear area FCUs which are started by BOS and S signals. The pump room FCUs are interlocked to start with their respective pump and are surveilled as support equipment. The UPS & Distribution Room FCUs do not auto-start. Therefore, no auto-start survellance is required.

ATTACHED PAGES:

Encl 5B B 3.7-90, B 3.7-91 and B 3.7-93a

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.20.2

This SR verifies that the each UPS A/C train starts and operates on an actual or simulated Safety Injection actuation signal. The 18 month frequency is consistent with the typical refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

Q-3.7.20-6

REFERENCES

1. FSAR, Section 9.4C.8.

B 3.7 PLANT SYSTEMS

B 3.7.20P UPS HVAC System-Operating [With LAR 96-004]

BASES

BACKGROUND

The UPS HVAC System provides temperature control for the safety related UPS & Distribution rooms during all normal and accident conditions.

The UPS HVAC System consists of:

a. A dedicated UPS Room Emergency Fan Coil Unit (EFCU) in each safety-related UPS & Distribution Room, and

b. Two electrically independent and redundant A/C trains either of which can support all four safety related UPS & Distribution rooms. Each train consists of an air conditioning unit. Ductwork, dampers, and instrumentation also form part of the system.

The UPS HVAC System is a normally operating system. Each EFCU normally provides the required temperature control to maintain its respective room below 104°F during normal plant conditions. A single A/C train will also provide the required temperature control to maintain the UPS & Distribution rooms between 40°F and 104°F during normal plant conditions. Upon receipt of an actuating signal, a standby train would start.

The UPS HVAC System is also an emergency system. Each EFCU would provide the required temperature control to maintain its respective room below 122°F during emergency conditions. A single A/C Train will also provide the required temperature control to maintain the UPS rooms below 122°F during emergency plant conditions. CP-3.7-013

The control circuit design of the EFCUs does not include an "auto" start or "standby" feature. Each UPS Room Emergency Fan Coil Unit is controlled from a local control panel integral to the unit. The control panel contains a maintained two position hand switch (run/off). Each unit is directly wired to its associated safeguards bus and therefore, load shed if the bus is de-energized upon a Blackout signal ("BOS") or a Safety Injection ("S") signal. The units automatically restart upon re-energizing of the associated safeguards bus. An EFCU must be operating to be operable. Q-3.7.20-6

In the event an EFCU is inoperable and the respective A/C Train is also inoperable, 100 % cooling can be provided by the opposite train's A/C Train.

SR 3.7.20P.3

This SR verifies that the each UPS A/C train starts and operates on an actual or simulated Safety Injection actuation signal. The 18 month frequency is consistent with the typical refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

Q-3.7.20-6

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.7 R DOCs **APPLICABILITY:** CA, CP, DC, WC

REQUEST: CTS Section 3.7 LCOs normally relocated in accordance with the Split Report:

For all plants:

1: 14-01-R	CTS 3/4.7.2, SG Pressure/Temperature Limits
15-01-R	CTS 3/4.7.6, Flood Protection
16-01-R	CTS 3/4.7.9, Snubbers
17-01-R	CTS 3/4.7.10, Area Temperature Monitoring
19-01-R	CTS 3/4.7.13, Main Feedwater Pressure/Temperature Limits

The above CTS LCOs are proposed to be relocated to Licensee Controlled Documents.

Comment: For CPSES - There is no technical justification provided for the relocation of these CTS LCOs. Revise the DOCs to provide the missing technical justification. For the others - Where are the normal CTS LCOs which are apparently not part of the respective current licensing basis for these plants? If these CTS LCOs still exist, provide the same technical justifications as required for CPSES.

FLOG Response:

For CPSES, DOCs 14-01-R - CTS 3/4.7.2, SG Pressure/Temperature Limits,
15-01-R - CTS 3/4.7.6, Flood Protection,
16-01-R - CTS 3/4.7.9, Snubbers,
17-01-R - CTS 3/4.7.10, Area Temperature Monitoring, and
19-01-R - CTS 3/4.7.13, Main Feedwater Pressure/Temperature Limits,
have been revised to provide additional justification for the changes. Also screening sheets have been provided to verify that the relocated specification does not meet any of the 4 criteria in 10CFR50.36(c)(2)(ii) governing components, systems and structures that must be included in the TS. The location of the relocated specifications is provided in Enclosure 3B.

For the other plants, the equivalent specifications (where applicable) were moved out of the CTS into Licensee Controlled Documents in previous license amendments.

ATTACHED PAGES:

Encl 3A 15b, 15c, 15d, 15e, and 16c

Attachment 21 25, 26, 29 thru 36

CHANGE NUMBER	NSHC	DESCRIPTION
14-01	R	The Steam Generator Pressure/Temperature Limitation TS is relocated to a licensee controlled document. Pressure and temperature (P/T) limits are placed on the steam generators (SG) to prevent a non-ductile failure of either the RCPB or the secondary side pressure boundary. The specification places limits on the SG P/T to ensure that the pressure induced stresses are within the maximum allowable fracture toughness stress limits. The P/T limits are based on a steam generator RT_{NDT} of 60° F and are sufficient to prevent brittle fracture. This proposed TS revision relocates requirements, which do not meet the TS criteria in 10CFR50.36(c)(2)(ii), to documents with established control programs. This regulation addresses the scope and purpose of TS. In doing so, it sets forth a specific set of objective criteria for determining which regulatory requirements and operating restrictions should be included in the TS. Relocation of these requirements allows the TS to be reserved only for those conditions or limitations upon reactor operation which are necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety thereby focusing the scope of the TS. An evaluation of the applicability of these criteria to this specification is provided in attachment 21. To ensure an appropriate level of control, these requirements will be relocated to 1) documents that are subject to the provisions of 10 CFR 50.59, 2) other licensee documents which have similar regulatory controls (e.g., the Quality Assurance Plan, as described in the FSAR, which is controlled by 10CFR50.54a), or 3) to programs that are controlled via the Administrative Controls section of the improved TS. The identification of the specific licensee controlled document containing this requirement is provided in Enclosure 3B of the conversion submittal. Compliance with the relocated requirements will not be affected by this proposed change to the current Technical Specifications. The required periodic surveillances will continue to be performed to ensure that limits on parameters are maintained. Therefore, relocation of these requirements will have no impact on system operability or the maintenance of controlled parameters within limits. This change is consistent with NUREG-1431 since this specification is not included in the ISTS.

Q-3.7 R DOCs

CHANGE NUMBER	NSHC	DESCRIPTION
15-01	R	The Flood Protection TS is relocated to a licensee controlled document. The Bases for this limiting condition for operation (LCO) state that the purpose is to ensure that facility protective actions will be taken in the event of flood conditions. The only credible flood condition that endangers safety related equipment is from water entry into the turbine building via the circulating water system from Squaw Creek Reservoir and then only if the level is above 778 feet Mean Sea Level. This corresponds to the elevation at which water could enter the electrical and control building endangering the safety chilled water system. The surveillance requirements are designed to implement level monitoring of Squaw Creek Reservoir should it reach an abnormally high level above 776 feet. The Limiting Condition for Operation is designed to implement flood protection, by ensuring no open flow path via the Circulating Water System exists, prior to reaching the postulated flood level.

Q-3.7 R DOCs

This proposed TS revision relocates requirements, which do not meet the TS criteria in 10CFR50.36(c)(2)(ii), to documents with established control programs. This regulation addresses the scope and purpose of TS. In doing so, it sets forth a specific set of objective criteria for determining which regulatory requirements and operating restrictions should be included in the TS. Relocation of these requirements allows the TS to be reserved only for those conditions or limitations upon reactor operation which are necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety thereby focusing the scope of the TS. An evaluation of the applicability of these criteria to this specification is provided in attachment 21.

To ensure an appropriate level of control, these requirements will be relocated to 1) documents that are subject to the provisions of 10 CFR 50.59, 2) other licensee documents which have similar regulatory controls (e.g., the Quality Assurance Plan, as described in the FSAR, which is controlled by 10CFR50.54a), or 3) to programs that are controlled via the Administrative Controls section of the improved TS. The identification of the specific licensee controlled document containing this requirement is provided in Enclosure 3B of the conversion submittal.

Compliance with the relocated requirements will not be affected by this proposed change to the current Technical Specifications. The required periodic surveillances will continue to be performed to ensure that limits on parameters are maintained. Therefore, relocation of these requirements will have no impact on system operability or the maintenance of controlled parameters within limits. This change is consistent with NUREG-1431 since this specification is not included in the ISTS.

CHANGE NUMBER	NSHC	DESCRIPTION
16-01	R	The Snubbers TS is relocated to a licensee controlled document. The snubbers are required to be operable to ensure that the structural integrity of the RCS and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads. The restraining action of the snubbers ensures that the initiating event failure does not propagate to other parts of the failed system or to other safety systems. Snubbers also allow normal thermal expansion of piping and nozzles to eliminate excessive thermal stresses during heatup or cooldown. Snubber surveillance is conducted under the requirements of the snubber surveillance program.

Q-3.7 R DOCs

This proposed TS revision relocates requirements, which do not meet the TS criteria in 10CFR50.36(c)(2)(ii), to documents with established control programs. This regulation addresses the scope and purpose of TS. In doing so, it sets forth a specific set of objective criteria for determining which regulatory requirements and operating restrictions should be included in the TS. Relocation of these requirements allows the TS to be reserved only for those conditions or limitations upon reactor operation which are necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety thereby focusing the scope of the TS. An evaluation of the applicability of these criteria to this specification is provided in attachment 21.

To ensure an appropriate level of control, these requirements will be relocated to 1) documents that are subject to the provisions of 10 CFR 50.59, 2) other licensee documents which have similar regulatory controls (e.g., the Quality Assurance Plan, as described in the FSAR, which is controlled by 10CFR50.54a), or 3) to programs that are controlled via the Administrative Controls section of the improved TS. The identification of the specific licensee controlled document containing this requirement is provided in Enclosure 3B of the conversion submittal.

Compliance with the relocated requirements will not be affected by this proposed change to the current Technical Specifications. The required periodic surveillance will continue to be performed to ensure that limits on parameters are maintained. Therefore, relocation of these requirements will have no impact on system operability or the maintenance of controlled parameters within limits. This change is consistent with NUREG-1431 since this specification is not included in the ISTS.

CHANGE NUMBER	NSHC	DESCRIPTION
17-01	R	The Area Temperature Monitoring TS is relocated to a licensee controlled document. This specification places a limit on the temperature of the areas of the plant which contain safety-related equipment. This is required to ensure that the temperature of the equipment does not exceed its environmental qualification temperature during normal operation. Exposure to excessively high temperatures may degrade the equipment and cause a loss of its operability.

Q-3.7 R DOCs

This proposed TS revision relocates requirements, which do not meet the TS criteria in 10CFR50.36(c)(2)(ii), to documents with established control programs. This regulation addresses the scope and purpose of TS. In doing so, it sets forth a specific set of objective criteria for determining which regulatory requirements and operating restrictions should be included in the TS. Relocation of these requirements allows the TS to be reserved only for those conditions or limitations upon reactor operation which are necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety thereby focusing the scope of the TS. An evaluation of the applicability of these criteria to this specification is provided in attachment 21.

To ensure an appropriate level of control, these requirements will be relocated to 1) documents that are subject to the provisions of 10 CFR 50.59, 2) other licensee documents which have similar regulatory controls (e.g., the Quality Assurance Plan, as described in the FSAR, which is controlled by 10CFR50.54a), or 3) to programs that are controlled via the Administrative Controls section of the improved TS. The identification of the specific licensee controlled document containing this requirement is provided in Enclosure 3B of the conversion submittal.

Compliance with the relocated requirements will not be affected by this proposed change to the current Technical Specifications. The required periodic surveillances will continue to be performed to ensure that limits on parameters are maintained. Therefore, relocation of these requirements will have no impact on system operability or the maintenance of controlled parameters within limits. This change is consistent with NUREG-1431 since this specification is not included in the ISTS.

CHANGE NUMBER	NSHC	DESCRIPTION
19-01	R	The Main Feed Water Pressure/Temperature Limit TS is relocated to a licensee controlled document. All pressure-retaining ferritic materials in the Containment pressure boundary except the feedwater isolation valves are impact-resistance tested in accordance with NC 2300 and NB 2300 of the ASME B&PV Code, Section III, mentioned in Section 5.2.4. Supplemental impact testing and fracture analysis, in conjunction with external heating of the feedwater isolation valves, are utilized to demonstrate the acceptability of the originally purchased feedwater isolation valves in lieu of impact resistance testing in accordance with the ASME B&PV Code, Division 1, Section III, Subsection NC-2300. Replacement feedwater isolation valves or their pressure retaining components, such as the valve bonnet, will be impact tested in accordance with the ASME B&PV Code, Division 1, Section III, Subsection NC.

Q-3.7 R DOCs

This proposed TS revision relocates requirements, which do not meet the TS criteria in 10CFR50.36(c)(2)(ii), to documents with established control programs. This regulation addresses the scope and purpose of TS. In doing so, it sets forth a specific set of objective criteria for determining which regulatory requirements and operating restrictions should be included in the TS. Relocation of these requirements allows the TS to be reserved only for those conditions or limitations upon reactor operation which are necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety thereby focusing the scope of the TS. An evaluation of the applicability of these criteria to this specification is provided in attachment 21.

To ensure an appropriate level of control, these requirements will be relocated to 1) documents that are subject to the provisions of 10 CFR 50.59, 2) other licensee documents which have similar regulatory controls (e.g., the Quality Assurance Plan, as described in the FSAR, which is controlled by 10CFR50.54a), or 3) to programs that are controlled via the Administrative Controls section of the improved TS. The identification of the specific licensee controlled document containing this requirement is provided in Enclosure 3B of the conversion submittal.

Compliance with the relocated requirements will not be affected by this proposed change to the current Technical Specifications. The required periodic surveillances will continue to be performed to ensure that limits on parameters are maintained. Therefore, relocation of these requirements will have no impact on system operability or the maintenance of controlled parameters within limits. This change is consistent with NUREG-1431 since this specification is not included in the ISTS.

TECHNICAL SPECIFICATION SCREENING FORM

(1) TECHNICAL SPECIFICATION 3.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

Applicable MODES: At all times.

(2) EVALUATION OF POLICY STATEMENT CRITERIA

Is the Technical Specification applicable to:

YES	NO		
__	X	(1)	Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
__	X	(2)	A process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident (DBA) or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
__	X	(3)	A structure, system, or component (SSC) that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
__	X	(4)	An SSC which operating experience or probabilistic safety assessment (PSA) has shown to be significant to public health and safety.

If the answer to any one of the above questions is "YES", then the Technical Specification (TS) shall be retained in the TS.

If the answer to all four of the above questions is "NO", the TS may be relocated to a controlled document.

(3) DISCUSSION

Pressure and temperature (P/T) limits are placed on the steam generators (SG) to prevent a non-ductile failure of either the RCPB or the secondary side pressure boundary. The specification places limits on the SG P/T to ensure that the pressure induced stresses are within the maximum allowable fracture toughness stress limits. The P/T limits are based on a steam generator RT_{NDT} of 60^0 F and are sufficient to prevent brittle fracture.

The SG P/T limits are not applicable to installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the RCPB. Therefore, the SG P/T limits do not satisfy criterion 1.

The P/T limits are not applicable to a process variable, design feature, or operating restriction that is an initial condition of DBA or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. While the TS imposes an operating restriction, it is not employed to prevent unanalyzed accidents and transients. Under the conditions when this TS could be required, an unanalyzed event of any significance from a safety function standpoint (decay heat removal, accident mitigation, and reactor shutdown) is unlikely to result. Therefore, this TS does not satisfy criterion 2.

The P/T limits are associated with an SSC that is part of the primary success path which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. For example, the SG must maintain its structural integrity following a MSLB or SBLOCA to maintain RCS circulation and cooling capability. However, the TS limitations apply only to shutdown conditions when RCS temperature is unusually low (less than 70^0 F). Under these conditions, the SG is not required to function to mitigate any DBAs or transients. Therefore, this TS does not satisfy criterion 3.

The steam generator temperature and pressure limitations have not been shown to be significant to public health and safety by either operating experience or PRA. This technical specification is intended to prevent brittle fracture of a SG when at low pressures and temperatures, something which is not likely during plant operation, which is the analyzed condition for the IPE study. This condition, then, is not modeled in the IPE. Therefore, the TS does not satisfy criterion 4.

(4) CONCLUSION

__ This Technical Specification is retained.

X The Technical Specification may be relocated to a licensee controlled document.

TECHNICAL SPECIFICATION SCREENING FORM

(1) **TECHNICAL SPECIFICATION** 3.7.6 FLOOD PROTECTION

Applicable MODES: At all times.

(2) **EVALUATION OF POLICY STATEMENT CRITERIA**

Is the Technical Specification applicable to:

YES	NO		
__	X	(1)	Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
__	X	(2)	A process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident (DBA) or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
__	X	(3)	A structure, system, or component (SSC) that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
__	X	(4)	An SSC which operating experience or probabilistic safety assessment (PSA) has shown to be significant to public health and safety.

If the answer to any one of the above questions is "YES", then the Technical Specification (TS) shall be retained in the TS.

If the answer to all four of the above questions is "NO", the TS may be relocated to a controlled document.

(3) **DISCUSSION**

The Bases for this limiting condition for operation (LCO) state that the purpose is to ensure that facility protective actions will be taken in the event of flood conditions. The only credible flood condition that endangers safety related equipment is from water entry into the turbine building via the circulating water system from Squaw Creek Reservoir and then only if the level is above 778 feet Mean Sea Level. This corresponds to the elevation at which water could enter the electrical and control building endangering the safety chilled water system. The surveillance requirements are designed to implement level monitoring of Squaw Creek Reservoir should it reach an abnormally high level above 776 feet. The Limiting Condition for Operation is designed to implement flood protection, by ensuring no open flow path via the Circulating Water System exists, prior to reaching the postulated flood level.

The TS requirements for flooding are not applicable to installed instrumentation used to detect a significant abnormal degradation of the RCPB; therefore, this TS does not satisfy criterion 1.

The flooding TS is not associated with a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Thus, this TS does not satisfy criterion 2.

Flood protection is not an SSC that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Therefore, the flooding requirements do not satisfy criterion 3.

The flood protection has not been shown to be significant to public health and safety by either operating experience or PRA. Thus, this TS does not satisfy criterion 4.

(4) CONCLUSION

__ This Technical Specification is retained.

X The Technical Specification may be relocated to a licensee controlled document.

(1) TECHNICAL SPECIFICATION 3.7.9 SNUBBERS

Applicable MODES: MODES 1, 2, 3, and 4. MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES.

(2) EVALUATION OF POLICY STATEMENT CRITERIA

Is the Technical Specification applicable to:

YES	NO		
__	X	(1)	Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
__	X	(2)	A process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident (DBA) or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
__	X	(3)	A structure, system, or component (SSC) that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
__	X	(4)	An SSC which operating experience or probabilistic safety assessment (PSA) has shown to be significant to public health and safety.

If the answer to any one of the above questions is "YES", then the Technical Specification (TS) shall be retained in the TS.

If the answer to all four of the above questions is "NO", the TS may be relocated to a controlled document.

(3) DISCUSSION

The snubbers are required to be operable to ensure that the structural integrity of the RCS and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads. The restraining action of the snubbers ensures that the initiating event failure does not propagate to other parts of the failed system or to other safety systems. Snubbers also allow normal thermal expansion of piping and nozzles to eliminate excessive thermal stresses during heatup or cooldown. Snubber surveillance is conducted under the requirements of the snubber surveillance program.

The TS requirements for snubbers are not applicable to installed instrumentation used to detect a significant abnormal degradation of the RCPB; therefore, this TS does not satisfy criterion 1.

The snubber TS is associated with a design feature or operating restriction that is an initial condition of a DBA or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. However, the snubber requirements are not explicitly considered in the accident analysis. The availability of the snubbers is assumed based on the performance of a program of periodic augmented inspection and testing. Snubber operability is not required to be monitored and controlled during plant operation. Some snubbers (inaccessible) can only be inspected during plant outages. Thus, this TS does not satisfy criterion 2.

Those snubbers that are required to function during DBAs or transients to prevent the initiating event from propagating to other systems or components that are part of the primary success path may be considered components that are part of the primary success path and which function or actuate to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. However, snubbers are not explicitly considered in DBA or transient analyses but are a structural/design feature whose operability is assured aby an inspection program. Therefore, this TS does not satisfy criterion 3.

The snubbers have not been shown to be significant to public health and safety by either operating experience or PRA. Thus, this TS does not satisfy criterion 4.

(4) CONCLUSION

__ This Technical Specification is retained.

X The Technical Specification may be relocated to a licensee controlled document.

TECHNICAL SPECIFICATION SCREENING FORM

(1) TECHNICAL SPECIFICATION 3.7.10 AREA TEMPERATURE MONITORING

Applicable MODES: Whenever the equipment in an affected area is required to be OPERABLE.

(2) EVALUATION OF POLICY STATEMENT CRITERIA

Is the Technical Specification applicable to:

YES	NO		
__	X	(1)	Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
__	X	(2)	A process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident (DBA) or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
__	X	(3)	A structure, system, or component (SSC) that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
__	X	(4)	An SSC which operating experience or probabilistic safety assessment (PSA) has shown to be significant to public health and safety.

If the answer to any one of the above questions is "YES", then the Technical Specification (TS) shall be retained in the TS.

If the answer to all four of the above questions is "NO", the TS may be relocated to a controlled document.

(3) DISCUSSION

This specification places a limit on the temperature of the areas of the plant which contain safety-related equipment. This is required to ensure that the temperature of the equipment does not exceed its environmental qualification temperature during normal operation. Exposure to excessively high temperatures may degrade the equipment and cause a loss of its operability.

The TS requirements for area temperature monitoring are not applicable to installed instrumentation used to detect a significant abnormal degradation of the RCPB; therefore, this TS does not satisfy criterion 1.

The area temperature monitoring TS is associated with the variable of room temperature which is not a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient analysis that either assumes the failure of or presents challenge to the integrity of a fission product barrier. Thus, this TS does not satisfy criterion 2.

The TS for area temperature monitoring does apply to the operability of SSCs that are part of the primary success path which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. However, the TS is only indirectly applicable to the operability of these systems and components. Therefore, this TS does not satisfy criterion 3.

Area temperature monitoring has not been shown to be significant to public health and safety by either operating experience or PRA. The area temperature monitors have not been included in the CPSES IPE. Therefore, this TS does not satisfy criterion 4.

(4) CONCLUSION

__ This Technical Specification is retained.

X The Technical Specification may be relocated to a licensee controlled document.

TECHNICAL SPECIFICATION SCREENING FORM

(1) TECHNICAL SPECIFICATION 3.7.13 MAIN FEEDWATER ISOLATION VALVE PRESSURE/TEMPERATURE LIMIT

Applicable MODES: MODES 1, 2, 3 and during pressure testing of the steam generator or main feedwater line.

(2) EVALUATION OF POLICY STATEMENT CRITERIA

Is the Technical Specification applicable to:

YES	NO		
___	X	(1)	Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
___	X	(2)	A process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident (DBA) or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
___	X	(3)	A structure, system, or component (SSC) that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
___	X	(4)	An SSC which operating experience or probabilistic safety assessment (PSA) has shown to be significant to public health and safety.

If the answer to any one of the above questions is "YES", then the Technical Specification (TS) shall be retained in the TS.

If the answer to all four of the above questions is "NO", the TS may be relocated to a controlled document.

(3) DISCUSSION

All pressure-retaining ferritic materials in the Containment pressure boundary except the feedwater isolation valves are impact-resistance tested in accordance with NC 2300 and NB 2300 of the ASME B&PV Code, Section III, mentioned in Section 5.2.4. Supplemental impact testing and fracture analysis, in conjunction with external heating of the feedwater isolation valves, are utilized to demonstrate the acceptability of the originally purchased feedwater isolation valves in lieu of impact resistance testing in accordance with the ASME B&PV Code, Division 1, Section III, Subsection NC-2300. Replacement feedwater isolation valves or their pressure retaining components, such as the valve bonnet, will be impact tested in accordance with the ASME B&PV Code, Division 1, Section III, Subsection NC.

The fracture toughness requirements are satisfied with a metal temperature of 90^0 F for the main feedwater isolation valve body and neck, therefore, these portions will be maintained at or above this temperature prior to pressurization of these valves above 675 psig. Minimum temperature limitations are imposed on the valve body and neck of main feedwater isolation valves HV-2134, HV-2135, HV-2136 and HV-2137. These valves do not need to be verified at or above 90^0 F when in MODES 4, 5, or 6 (except during special pressure testing) since Tavg < 350^0 F which corresponds to a pressure at the valves of 140-150 psig or less. The maximum pressurization during cold conditions (valve temperature < 90 F) should be limited to no more than 20% of the valve hydrostatic test pressure (3375 psig X 20% = 675 psig).

The TS requirements for the main feedwater isolation valve pressure/temperature limit are not applicable to installed instrumentation used to detect a significant abnormal degradation of the RCPB; therefore, this TS does not satisfy criterion 1.

The main feedwater isolation valve pressure/temperature limit TS is not associated with a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Thus, this requirement does not meet criterion 2.

The TS for the main feedwater isolation valve pressure/temperature limit is not an SSC that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Therefore, the requirements do not satisfy criterion 3.

The main feedwater isolation valve pressure and temperature limits have not been shown to be significant to public health and safety by either operating experience or PRA. Therefore, the requirements do not satisfy criterion 4.

(4) CONCLUSION

__ This Technical Specification is retained.

X The Technical Specification may be relocated to a licensee controlled document.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: TR 3.7-001 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: Incorporate TSTF-173, Rev. 0 to revise ITS 3.7.18 Bases, Background, to delete the statement regarding I-131 equilibrium. The August 18, 1998 industry TSTF status reports indicates the status of TSTF-173, Rev. 0 as NRC approved.

ATTACHED PAGES:

Encl 5A	Traveler Status Page
Encl 5B	B 3.7-81

INDUSTRY TRAVELERS APPLICABLE TO SECTION 3.7

TRAVELER NUMBER	STATUS	JUSTIFICATION NUMBER	COMMENTS
TSTF-36, Rev 2	Incorporated	3.7-42	Only applicable to DCPP
TSTF-51	Not Incorporated	Not Applicable	Requires plant-specific reanalysis to establish decay time dependence for fuel handling accident.
TSTF-70, Rev 1	Not Incorporated	Not Applicable.	NRC approved TSTF not adopted since change was not applicable. TR-3.7-005
TSTF-100	Incorporated	3.7-05 and 3.7-19	NRC approved.
TSTF-101	Incorporated	3.7-29	NRC approved.
TSTF-139, Rev 1	Incorporated	~~3.7-29~~ Not Applicable - Bases change	NRC approved TR-3.7-005
TSTF-140, Rev 1	Not incorporated	NA	Not NRC approved as of traveler cutoff date.
TSTF-173	Incorporated		NRC approved. TR-3.7-001
TSTF-174	Incorporated		NRC approved. TR-3.7-002
~~WOG-64~~	~~Incorporated~~	~~3.7-34~~	Q-3.7.2-1
~~WOG-83~~ TSTF-235	~~Partially~~ Incorporated	3.7-01	~~Retained CTS except for the extension to 72 hours for trip reset.~~ Q-3.7.1-4
~~WOG-86~~TSTF-287	Incorporated	3.7-57	Not applicable to DCPP Q-3.7.10-14 TR-3.7-005
~~WOG-98~~TSTF-289	Incorporated	3.7-56	Q-3.7.2-3

B 3.7 PLANT SYSTEMS

B 3.7.18 Secondary Specific Activity

BASES

BACKGROUND

Activity in the secondary coolant results from steam generator tube outleakage from the Reactor Coolant System (RCS). Under steady state conditions, the activity is primarily iodines with relatively short half lives and, thus, indicates current conditions. During transients, I-131 spikes have been observed as well as increased releases of some noble gases. Other fission product isotopes, as well as activated corrosion products in lesser amounts, may also be found in the secondary coolant.

A limit on secondary coolant specific activity during power operation minimizes releases to the environment because of normal operation, anticipated operational occurrences, and accidents.

This limit is lower than the activity value that might be expected from a 1 gpm tube leak (LCO 3.4.13, "RCS Operational LEAKAGE") of primary coolant at the limit of 1.0 μCi/gm (LCO 3.4.16, "RCS Specific Activity"). The steam line failure is assumed to result in the release of the noble gas and iodine activity contained in the steam generator inventory, the feedwater, and the reactor coolant LEAKAGE. Most of the iodine isotopes have short half lives, (i.e., < 20 hours). ~~I-131, with a half life of 8.04 days, concentrates faster than it decays, but does not reach equilibrium because of blowdown and other losses.~~ Q-3.7.G-1 TR-3.7-001

~~With the specified activity limit, the resultant 2 hour thyroid dose to a person at the exclusion area boundary (EAB) would be about 0.58 rem if the main steam safety valves (MSSVs) open for 2 hours following a trip from full power.~~

~~Operating a unit at the allowable limits could result in a 2 hour EAB exposure of a small fraction of the 10 CFR 100 (Ref. 1) limits, or the limits established as the NRC staff approved licensing basis.~~

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: TR 3.7-002 **APPLICABILITY:** CP, WC, CA

REQUEST: Incorporate TSTF-174, Rev.0 to revise ITS 3.7.6 Bases for Actions A.1 and A.2 to add a discussion of the Completion Time of "Once per 12 hours thereafter" for verifying by administrative means the operability of backup water supply. The August 18, 1998 industry TSTF status reports indicates the status of TSTF-174, Rev. 0 as NRC approved.

ATTACHED PAGES:

Encl 5A Traveler Status page
Encl 5B B 3.7-37

INDUSTRY TRAVELERS APPLICABLE TO SECTION 3.7

TRAVELER NUMBER	STATUS	JUSTIFICATION NUMBER	COMMENTS
TSTF-36, Rev 2	Incorporated	3.7-42	Only applicable to DCPP
TSTF-51	Not Incorporated	Not Applicable	Requires plant-specific reanalysis to establish decay time dependence for fuel handling accident.
TSTF-70, Rev 1	Not Incorporated	Not Applicable.	NRC approved TSTF not adopted since change was not applicable. TR-3.7-005
TSTF-100	Incorporated	3.7-05 and 3.7-19	NRC approved.
TSTF-101	Incorporated	3.7-29	NRC approved.
TSTF-139, Rev 1	Incorporated	~~3.7-29~~ Not Applicable - Bases change	NRC approved TR-3.7-005
TSTF-140, Rev 1	Not incorporated	NA	Not NRC approved as of traveler cutoff date.
TSTF-173	Incorporated		NRC approved. TR-3.7-001
TSTF-174	Incorporated		NRC approved. TR-3.7-002
~~WOG-64~~	~~Incorporated~~	~~3.7-34~~	Q-3.7.2-1
~~WOG-83~~ TSTF-235	~~Partially~~ Incorporated	3.7-01	~~Retained CTS except for the extension to 72 hours for trip reset.~~ Q-3.7.1-4
~~WOG-86~~TSTF-287	Incorporated	3.7-57	Not applicable to DCPP Q-3.7-10-14 TR-3.7-005
~~WOG-98~~TSTF-289	Incorporated	3.7-56	Q-3.7.2-3

BASES

LCO (Continued)

MODE 3 for 4 hours, followed by a cooldown to RHR entry conditions at 50°F/hour for 5 hours. This basis is established in Reference ~~4~~ 5 and exceeds the volume required by the accident analysis.

The OPERABILITY of the CST is determined by maintaining the tank level at or above the minimum required level.

APPLICABILITY

In MODES 1, 2, and 3, ~~and in MODE 4, when steam generator is being relied upon for heat removal,~~ the CST is required to be OPERABLE.

In MODE 4, 5 or 6, the CST is not required because the AFW System is not required.

ACTIONS

A.1 and A.2

If the CST level is not within limits, the OPERABILITY of the backup supply should be verified by administrative means within 4 hours and once every 12 hours thereafter. OPERABILITY of the backup feedwater supply must include verification that the flow paths from the backup water supply to the AFW pumps are OPERABLE, and that the ~~backup supply has the required volume of water available~~ SSWS is Operable. In addition, each motor operated valve between the SSWS and each Operable AFW pump must be OPERABLE. The CST must be restored to OPERABLE status within 7 days, because the backup supply is not condensate grade water. ~~may be performing this function in addition to its normal functions.~~ The 4 hour Completion Time is reasonable, based on operating experience, to verify the OPERABILITY of the backup water supply. Additionally, verifying the backup water supply every 12 hours is adequate to ensure the backup water supply continues to be available. The 7 day Completion Time is reasonable, based on an OPERABLE backup water supply being available, and the low probability of an event occurring during this time period requiring the CST. TR-3.7-002

B.1 and B.2

If the CST cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4~~, without reliance on the steam generator for heat removal~~, within ~~18~~ 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. Q-3.7.6-5

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: TR 3.7-005 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: Revise Traveler Status page to reflect NRC approval and latest revision number of the following travelers:

- TSTF-139 Revision 1 - NRC Approved
- TSTF-70, Revision 1 - NRC Approved
- WOG 86 became TSTF-287

There are no changes involved to any CTS mark-ups, ITS mark-ups, DOCs, or JFDs.

ATTACHED PAGES:

Encl 5A	Traveler Status page
Encl 5B	B 3.7-74a

INDUSTRY TRAVELERS APPLICABLE TO SECTION 3.7

TRAVELER NUMBER	STATUS	JUSTIFICATION NUMBER	COMMENTS
TSTF-36, Rev 2	Incorporated	3.7-42	Only applicable to DCPP
TSTF-51	Not Incorporated	Not Applicable	Requires plant-specific reanalysis to establish decay time dependence for fuel handling accident.
TSTF-70, Rev 1	Not Incorporated	Not Applicable.	NRC approved TSTF not adopted since change was not applicable. TR-3.7-005
TSTF-100	Incorporated	3.7-05 and 3.7-19	NRC approved.
TSTF-101	Incorporated	3.7-29	NRC approved.
TSTF-139, Rev 1	Incorporated	~~3.7-29~~ Not Applicable - Bases change	NRC approved TR-3.7-005
TSTF-140, Rev 1	Not incorporated	NA	Not NRC approved as of traveler cutoff date.
TSTF-173	Incorporated		NRC approved. TR-3.7-001
TSTF-174	Incorporated		NRC approved. TR-3.7-002
~~WOG-64~~	~~Incorporated~~	~~3.7-34~~	Q-3.7.2-1
~~WOG-83~~ TSTF-235	~~Partially~~ Incorporated	3.7-01	~~Retained CTS except for the extension to 72 hours for trip reset.~~ Q-3.7.1-4
~~WOG-86~~TSTF-287	Incorporated	3.7-57	Not applicable to DCPP Q-3.7-10-14 TR-3.7-005
~~WOG-98~~TSTF-289	Incorporated	3.7-56	Q-3.7.2-3

BASES (continued)

According to Reference 4, there ~~is~~ should be a nominal 23 ft of water between the top of the damaged fuel bundle and the fuel pool surface during a fuel handling accident. With 23 ft of water, the assumptions of Reference 4 can be used directly. In practice, this LCO preserves this assumption for the bulk of the fuel in the storage racks. In the case of a single bundle dropped and lying horizontally on top of the spent fuel racks, however, there
may be < 23 ft of water above the top of the fuel bundle and the surface, indicated by the width of the bundle. To offset this small nonconservatism, the analysis assumes that all fuel rods fail, although analysis shows that only the first few rows fail from a hypothetical maximum drop. The fuel storage pool water level satisfies ~~Criterion~~ Criteria 2 and 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

TR-3.7-005

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: CP 3.7-ED **APPLICABILITY:** CP

REQUEST: Various changes that do not impact the technical content of the submittal or other FLOG members.

Changes are noted with CP 3.7-ED in the margin and noted below:

ATTACHED PAGES:

Encl 5B	B 3.7-11	STS "7" days was inadvertantly changed to "31" days and is now restored to "7" days.
	B 3.7-29	Deleted extraneous reference to "LCO".

made with the unit hot. The ~~8~~ ~~72~~ 8 hour Completion Time is reasonable, considering the low probability of an accident occurring during this time period that would require a closure of the MSIVs. Q-3.7.2-1

The ~~8~~ ~~72~~ 8 hour Completion Time is ~~greater than~~ greater than ~~consistent with~~ that normally allowed for GDC-55 and GDC-56 containment isolation valves ~~because the MSIVs are valves~~ because the MSIVs are GDC-57 valves that isolate a closed system penetrating containment. ~~These valves differ from other containment isolation valves in that the closed system~~ ~~This time is reasonable due to the relative stability of the closed system which~~ These valves differ from ~~other~~ GDC-55 and GDC-56 containment isolation valves in that the closed system provides an additional ~~passive~~ means for containment isolation. CP-3.7-13

B.1

If the MSIV cannot be restored to OPERABLE status within ~~8~~ ~~72~~ 8 hours, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in MODE 2 within 6 hours and Condition C would be entered. The Completion Times are reasonable, based on operating experience, to reach MODE 2 and to close the MSIVs in an orderly manner and without challenging unit systems.

Q-3.7.2-1

C.1 and ~~and~~ C.2~~, D.1 and D.2~~

Condition C ~~D~~ ~~C~~ is modified by a Note indicating that~~, when two or more MSIVs are inoperable,~~ separate Condition entry is allowed for each MSIV. Since the MSIVs are required to be OPERABLE in MODES 2 and 3, the inoperable MSIVs may either be restored to OPERABLE status or closed. When closed, the MSIVs are already in the position required by the assumptions in the safety analysis.

The ~~8~~ ~~72~~ 8 hour Completion Time ~~of Required Action C.1~~ is consistent with that allowed in Condition A.~~, for one MISV inoperable. For two or more MSIVs inoperable, a more restrictive Completion Time of 8 hours is imposed by Required Action D.1~~. Q-3.7.2-1

For inoperable MSIVs that cannot be restored to OPERABLE status within the specified Completion Time, but are closed but not deactivated, the inoperable MSIVs must be verified on a periodic basis to be closed. This is necessary to ensure that the assumptions in the safety analysis remain valid. The ~~7~~ ~~31~~ 7 day Completion Time is reasonable, based on engineering judgment, in view of MSIV status indications CP-3.7-13 CP-3.7.ED pressure boundary. Three independent AFW pumps in three ~~LCO~~ diverse trains are required to be OPERABLE to ensure the availability of decay heat removal ~~RHR~~ capability for all events accompanied by a loss of offsite power and a single failure. This is accomplished by powering two of the pumps from independent emergency buses. The third AFW pump is powered by a different means, a steam driven turbine supplied with steam from a source that is not isolated by closure of the MSIVs. CP-3.7-ED

The AFW System is configured into three trains. The AFW System is considered OPERABLE when the components and flow paths required to provide redundant AFW flow to the steam generators are OPERABLE. This requires that the two motor driven AFW pumps be OPERABLE in two diverse paths, each supplying AFW to separate steam generators. The turbine driven AFW pump is required to be OPERABLE with redundant steam supplies from each of two main steam lines upstream of the MSIVs, and shall be capable of supplying AFW to any of the steam generators. The piping, valves, instrumentation, and controls in the required flow paths also are required to be OPERABLE.

~~The LCO is modified by a Note indicating that one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4. This is because of the reduced heat removal requirements and short period of time in MODE 4 during which the AFW is required and the insufficient steam available in MODE 4 to power the turbine driven AFW pump.~~

APPLICABILITY

In MODES 1, 2, and 3, the AFW System is required to be OPERABLE in the event that it is called upon to function when the MFW is lost. In addition, the AFW System is required to supply enough makeup water to replace the steam generator secondary inventory~~,~~ lost as the unit cools to MODE 4 conditions.

In MODE 4, the AFW System may be used for heat removal via the steam generators. See the BASES for 3.4.7.

In MODE 5 or 6, the steam generators are not normally used for heat removal, and the AFW System is not required.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: CP 3.7-004 **APPLICABILITY:** CP

REQUEST: CN 10-10-TR for CTS Section 3/4.7 indicated that the specific actuation signals would be moved to the ITS Bases. The Bases description of these signals was inadvertently omitted in the submittal and is being added to the SR 3.7.10.3 Bases description.

ATTACHED PAGES:

Encl 5B B 3.7-59a

SR 3.7.10.3

This SR verifies that each CREFS train starts and operates on an actual or simulated Safety Injection, Loss-of-Offsite Power, or Intake Vent-High Radiation actuation signal. The Frequency of 18 months is specified in Regulatory Guide 1.52 (Ref. 3). Each actuation signal must be verified (overlapping testing is acceptable). CP-3.7-004

SR 3.7.10.4

This SR verifies the integrity of the control room enclosure, and the assumed inleakage rates of the potentially contaminated air. The control room positive pressure, with respect to potentially

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: CP 3.7-005 **APPLICABILITY:** CP

REQUEST: CN 12-04-TR for CTS Section 3/4.7 indicated that the specific actuation signal would be moved to the ITS Bases. The Bases description of this signal was inadvertently omitted in the submittal and is being added to the SR 3.7.12.3 Bases description.

ATTACHED PAGES:

Encl 5B B 3.7-70

SR 3.7.12.3

This SR verifies that each ~~ECCS PREACS~~ PPVS train starts and operates on an actual or simulated Safety Injection actuation signal. The 18 month Frequency is consistent with that specified in Reference 4. CP-3.7-005

SR 3.7.12.4

This SR verifies the integrity of the ~~ECCS pump room enclosure~~ negative pressure envelope. The ability of the ~~ECCS pump room~~ Auxiliary and Safeguards buildings to maintain a negative pressure, with respect to potentially uncontaminated adjacent areas, is periodically tested to verify proper functioning of the ~~ECCS PREACS~~ PPVS. During the [post accident] mode of operation, the ~~ECCS PREACS~~ PPVS is designed to maintain a slight negative pressure in the ~~ECCS pump room~~ Auxiliary, Fuel and Safeguards buildings, with respect to adjacent areas, to prevent unfiltered LEAKAGE. ~~The ECCS PREACS is designed to maintain a ≤[-0.125] inches water gauge relative to atmospheric pressure at a flow rate of [3000] cfm from the ECCS pump room.~~ The acceptance criteria of ≤ -0.05 inches water gauge relative to atmospheric pressure was selected as a reasonable measure of the integrity of the negative pressure boundary. The Frequency of 18 months is consistent with the guidance provided in NUREG-0800, Section 6.5.1 (Ref. 6).

This test is conducted with the tests for filter penetration; thus, an 18 month Frequency on a STAGGERED TEST BASIS is consistent with that specified in Reference 4.

SR 3.7.12.5

Not used.

SR 3.7.12.6

This SR is required to verify the shutdown of the non-ESF fans to prevent bypass of the ESF Filtration units. The plant design does not include bypass dampers, however, bypass of the filter units will occur if the non-ESF fans are still running when the ESF fans start. Therefore, to prevent bypass, the non-ESF fans must be stopped. The SR demonstrates that the non-ESF fans stop on an actual or simulated ESF actuation signal (safety injection signal). ~~Operating the ECCS PREACS bypass damper~~ Verification of the tripping of each non-ESF fan on an SI signal is necessary to ensure that the system functions properly. ~~The OPERABILITY of the ECCS PREACS bypass damper is verified if it can be specified in Reference 4.~~ A frequency of 18 months is consistent with SR 3.7.12.3. Q-3.7-12.1-6

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: CP 3.7-008 **APPLICABILITY:** CP, WC

REQUEST: The Bases discussion of SR 3.7.2.1 is revised to delete statement that not full stroke testing the MSIVs at power is an exception to ASME Section XI. The 1989 edition permits partial stroke testing if practicable in lieu of full stroke testing without requiring an exemption.

ATTACHED PAGES:

Encl 5B B 3.7-12

available in the control room, and other administrative controls, to ensure that these valves are in the closed position.

~~ED.1 and ED.2~~ D.1 and D.2

Q-3.7.2-1

If the MSIVs cannot be restored to OPERABLE status or are not closed within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed at least in MODE 3 within 6 hours, and in MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from MODE 2 conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.2.1

Q-3.7.2-3

This SR verifies that MSIV closure time is ≤ ~~[4.6]~~ 5 seconds. ~~on an actual or simulated actuation signal.~~ The hand switch may be used as the actuation signal to perform this surveillance. The MSIV ~~closure~~ isolation time is assumed in the accident and containment analyses. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. ~~The MSIVs should not be tested at power, since even a part stroke exercise increases the risk of a valve closure when the unit is generating power. As the MSIVs are not full stroke tested at power, they are exempt from the ASME Code, Section XI (Ref. 5), requirements during operation in MODE 1 or 2.~~

CP-3.7-008

Q-3.7.2-3

The Frequency is in accordance with the Inservice Testing (IST) Program. ~~or 18 months. The [18] month Frequency for valve closure time is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month frequency specified by the IST program. Therefore, the Frequency is acceptable from a reliability standpoint.~~

This test is allowed to be conducted in MODE 3 with the unit at operating temperature and pressure~~, as discussed in Reference 5 exercising requirements~~. This SR is modified by a Note that allows entry into and operation in MODE 3 prior to performing the SR. This allows a delay of testing until MODE 3, to establish

(Continued)

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: CP 3.7-009 **APPLICABILITY:** CP, WC

REQUEST: The Bases discussions for SR 3.7.3.1 and SR 3.7.3.2 are revised to delete the statement that these valves should not be tested at power. The 1989 edition permits partial stroke testing if practicable in lieu of full stroke testing.

ATTACHED PAGES:

Encl 5B B 3.7-20 and B 3.7-21

BASES

unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.3.1

This SR verifies that the closure time of each ~~MFIV~~ FIV ~~,~~ ~~MFRV,~~ and associated bypass valves is ≤ ~~7~~ 5 seconds. ~~on an actual or simulated actuation signal.~~ The ~~MFIV~~ FIV ~~and MFRV~~ isolation ~~closure~~ times are assumed in the accident and containment analyses. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. ~~These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~ This is consistent with ~~the ASME Code, Section XI (Ref. 2), quarterly stroke requirements during operation in MODES 1 and 2.~~ RG 1.22. (Ref. 4)

Q-3.7.2-3

CP-3.7-009

The Frequency for this SR is in accordance with the Inservice Testing Program. ~~or 18 months The IST 18 month Frequency for valve closure is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the IST 18 month Frequency~~.

Q-3.7.2-3

~~SR 3.7.3.2~~

Q-3.7.3-2

~~This SR verifies that the closure time of each FCV and associated bypass valve which is being used to complete a required action is ≤ 7 5 seconds. Packing adustments on the FCV will not invalidate this SR because if the valve responds to normal control commands its closure time will not be affected. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~

~~The 18 month Frequency for valve closure is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency.~~

BASES

~~SR 3.7.3.3~~2

This SR verifies that each FIV and associated bypass valve can closes on an actual or simulated actuation signal. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. ~~These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~ CP-3.7-009

The frequency of this surveillance is every 18 months. The 18 month Frequency for ~~valve closure~~ testing is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, this Frequency is acceptable from a reliabilty standpoint. Q-3.7.2-3

~~SR 3.7.3.4~~ Q-3.7.3-2

~~This SR verifies that each FCV and bypass valve which is being used to complete a required action closes on an actual or simulated actuation signal. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. These valves should not be tested at power since even a part stroke exercise increases the risk of a valve closure with the unit generating power.~~

~~The 18 month Frequency for valve closure is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency.~~

REFERENCES

1. FSAR, ~~10.4.7~~ Chapters 6, 7, 10 and 15.
2. ~~ASME, Boiler and Pressure Vessel Code, Section XI.~~ Not used CP-3.7-009
3. NUREG-0138, "Staff Discussion of Fifteen Technical Issues Listed in Attachment to November 3, 1076 Memorandum from Director, NRR to NRR Staff," November 1976.
4. RG 1.22, "Periodic Testing of Protection System Actuation Functions, (2/17/72).

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: CP 3.7-012 **APPLICABILITY:** CP

REQUEST: CTS 3.7.5, LCO "a" was inaccurately transferred to ITS SR 3.7.9.2. The ITS SR and the Bases are revised to reflect the CTS. Since SR 3.7.9.2 is bracketed in the STS, a JFD is not required to incorporate the plant specific wording.

ATTACHED PAGES:

Encl 5A	3.7-22
Encl 5B	B 3.7-51 and B 3.7-53

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY	
SR 3.7.9.1	Verify water level of ~~UHS~~ SSI is ≥ ~~562~~ 770 ft mean sea level.	24 hours	PS B-PS B
SR 3.7.9.2	Verify ~~average~~ station service water intake temperature ~~of UHS~~SSI is ≤ ~~90~~ 102°F.	24 hours	PS CP-3.7-012 B-PS
~~SR 3.7.9.3~~	~~Operate each cooling tower fan for ≥ [15] minutes.~~	~~31 days~~	B-PS
~~SR 3.7.9.4~~	~~Verify each cooling tower fan starts automatically on an actual or simulated actuation signal.~~	~~[18] months~~	B-PS

BASES

~~(e.g., single failure considerations), and multiple makeup water sources may be required.~~

Additional information on the design and operation of the ~~system, along with a list of components served,~~ SSI can be found in Reference 1. CP-3.7-13

APPLICABLE SAFETY ANALYSES

The ~~UHS~~ SSI is the sink for heat removed from the reactor core following all accidents and anticipated operational occurrences in which the unit is cooled down and placed on residual heat removal (RHR) operation. ~~For units that use UHS as the normal heat sink for condenser cooling via the Circulating Water System, unit operation at full power is its maximum heat load.~~ Its maximum post accident heat load occurs approximately 20 minutes after a design basis loss of coolant accident (LOCA). Near this time, the unit switches from injection to recirculation and the containment cooling systems and RHR are required to remove the core decay heat.

The operating limits are based on conservative heat transfer analyses for the worst case LOCA. Reference 1 provides the details of the assumptions used in the analysis, which include worst expected meteorological conditions, conservative uncertainties when calculating decay heat, and worst case single ~~active~~ failure (e.g., ~~single~~ failure of ~~a manmade structure~~ the main cooling reservoir dam). The thermal-hydraulic analysis assumes an initial elevation of 770 feet mean sea level which drops to 769'-6" coincident with the Design Basis Event. The ~~UHS~~ SSI is designed in accordance with Regulatory Guide 1.27 (Ref. 2), which requires a 30 day supply of cooling water in the ~~UHS~~ SSI.

The ~~UHS~~ SSI satisfies Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

The ~~UHS~~ SSI is required to be OPERABLE and is considered OPERABLE if it contains a sufficient volume of water at or below the maximum temperature that would allow the SSWS to operate for at least 30 days following the design basis LOCA without the loss of net positive suction head (NPSH), and without exceeding the maximum design temperature of the equipment served by the SSWS. To meet this condition, the ~~UHS~~ ~~SSI~~ Station Service Water System intake ~~temperature~~ should not exceed ~~90~~ 102°F and the ~~level should~~ not fall below 770 ~~562~~ ft mean sea level during normal unit operation. CP-3.7-012

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.9.1

This SR verifies that adequate long term (30 day) cooling can be maintained. The specified level also ensures that sufficient NPSH is available to operate the SSWS pumps. The [illegible] hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES. This SR verifies that the ~~UHS~~ SSI water level is ≥ ~~562~~ 770 ft mean sea level.

SR 3.7.9.2

This SR verifies that the SSWS is available to cool the CCW System to at least its maximum design temperature with the maximum accident or normal design heat loads for 30 days following a Design Basis Accident. The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES. This SR verifies that the ~~average~~ water temperature of the ~~UHS SSI~~ Station Service Water System intake is ≤~~90~~ 102°F.

CP-3.7-012

~~SR 3.7.9.3~~

~~Operating each cooling tower fan for ≥ [15] minutes ensures that all fans are OPERABLE and that all associated controls are functioning properly. It also ensures that fan or motor failure, or excessive vibration, can be detected for corrective action. The 31 day Frequency is based on operating experience, the known reliability of the fan units, the redundancy available, and the low probability of significant degradation of the UHS cooling tower fans occurring between surveillances.~~

~~SR 3.7.9.4~~

~~This SR verifies that each cooling tower fan starts and operates on an actual or simulated actuation signal. The [18] month Frequency is consistent with the typical refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.~~

REFERENCES

1. FSAR, Sections 2.3, 2.4 and 9.2.5.
2. Regulatory Guide 1.27.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: CP 3.7-013 **APPLICABILITY:** CP

REQUEST: The BASES changes provided in this item are changes which incorporate current CPSES licensing or design basis information, clarify the STS BASES or provide additional information to more precisely describe the BASES and, as such, cannot be considered changes that could create an unreviewed safety question.

ATTACHED PAGES:

Encl 5B	B 3.7-5a	Reference correction (3 locations)
	B 3.7-8	Reference addition
	B 3.7-9	Clarification
	B 3.7-10	Reference and text correction
	B 3.7-11	(1) clarification to distinguish between GDC A 56 and 57 valve (2) Clarification for "closed" consistent with the ITS spec
	B 3.7-13	(1) Expanded description of surveillance (2) Deleted unused reference
	B 3.7-23	Updates/clarifies licensing basis of the ARVs and block valves
	B 3.7-27	Adds description of AFW system start on AMSAC
	B 3.7-33	Adds description of valves which actuate on AFW signal
	B 3.7-35	Corrects CST operability description
	B 3.7-39	Expands discussion of ESF actuation signal
	B 3.7-40	Clarifies basis of time to cooldown
	B 3.7-44	Reference correction
	B 3.7-45	Clarifies basis of time to cooldown
	B 3.7-46	Completed incomplete sentence
	B 3.7-51	Corrects discussion of what is included in Ref. 1
	B 3.7-57	Provides licensing basis of CREFS in Modes 5 and 6
	B 3.7-76	Corrects reference to the SR that verifies fuel storage pool level
	B 3.7-82	Corrects the licensing basis of the MSLB radiological evaluation
	B 3.7-84	Adds UPS rooms as being supplied by Safety Chilled Water System
	B 3.7-89	Clarifies Mode 5 and 6 requirements of UPS HVAC
	B 3.7-91	Revises "Fan Coil Unit (FCU)" to be "Emergency Fan Coil Unit (EFCU)'
	B 3.7-92	(1) Revises "Fan Coil Unit (FCU)" to be "Emergency Fan Coil Unit (EFCU)' (2) Clarifies Mode 5 and 6 requirements of UPS HVAC
	B 3.7-93	Revises "Fan Coil Unit (FCU)" to be "Emergency Fan Coil Unit (EFCU)"

BASES

Coefficient is positive the reactor power may increase as a result of an RCS heatup event such that flow capacity of the remaining OPERABLE MSSVs is insufficient. Therefore, in addition to Required Action B.1, which specifies an appropriate reduction in reactor power within 4 hours, Required Action B.2 specifies that the Power Range Neutron Flux-High reactor trip setpoint be reduced within 72 hours.

The maximum THERMAL POWER corresponding to the heat removal capacity of the remaining OPERABLE MSSVs is determined with an appropriate allowance for Nuclear Instrumentation System trip channel uncertainties.

Required Acton B.2 is modified by a Note, indicating that the Power Range Neutron Flux-High reactor trip setpoint reduction is only required in MODE 1. In MODES 2 and 3 the reactor protection system trips specified in LCO 3.3.1, "Reactor Trip System Instrumentation," provide sufficient protection.

The allowed Completion Times are reasonable based on operating experience to accomplish the Required Actions in an orderly manner without challenging unit systems.

CB.1 and CB.2

If the Required Actions are not completed ~~MSSVs cannot be restored to OPERABLE status~~ within the associated Completion Time, or if one or more steam generators have ≥ 4 inoperable ~~less than two~~ MSSVs ~~OPERABLE~~, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. CP-3.7-15 Q-3.7.1-4

SURVEILLANCE REQUIREMENTS

SR 3.7.1.1

This SR verifies the OPERABILITY of the MSSVs by the verification of each MSSV lift setpoint in accordance with the Inservice Testing Program. The ASME Code, Section XI (Ref. ~~4~~ ~~5~~ 4) requires that safety and relief valve tests be performed in accordance with ANSI/ASME OM-1-1987 (Ref. ~~5~~ ~~6~~ 5). According to Reference ~~5~~ ~~6~~ 5, the following tests are required: CP-3.7-13

a. Visual examination;

~~affected by the accident analysis of the SLB events presented in the FSAR, Section [15.1.5] (Ref. 3).~~ The design of the secondary system precludes the uncontrolled blowdown of more than one steam generator, assuming a single active component failure (e.g., the failure of one MSIV to close on demand). In addition, the MSIVs are credited in the analyses of the steam generator tube rupture accidents (Ref. 3). CP-3.7-13

~~The limiting case for the containment analysis is the SLB inside containment, with a loss of offsite power following turbine trip, and failure of the MSIV on the affected steam generator to close. At lower powers, the steam generator inventory and temperature are at their maximum, maximizing the analyzed mass and energy release to the containment. Due to reverse flow and failure of the MSIV to close, the additional mass and energy in the steam headers downstream from the other MSIV contribute to the total release. With the most reactive rod cluster control assembly assumed stuck in the fully withdrawn position, there is an increased possibility that the core will become critical and return to power. The core is ultimately shut down by the boric acid injection delivered by the Emergency Core Cooling System.~~

~~The accident analysis compares several different SLB events against different acceptance criteria. The large SLB outside containment upstream of the MSIV is limiting for offsite dose, although a break in this short section of main steam header has a very low probability. The large SLB inside containment at hot zero power is the limiting case for a post trip return to power. The analysis includes scenarios with offsite power available, and with a loss of offsite power following turbine trip. With offsite power available, the reactor coolant pumps continue to circulate coolant through the steam generators, maximizing the Reactor Coolant System cooldown. With a loss of offsite power, the response of mitigating systems is delayed. Significant single failures considered include failure of an MSIV to close.~~

In the safety analyses, several different SLB events are compared against different event acceptance limits. A double-ended guillotine SLB at hot zero power is the limiting case with respect to core response. The double-ended guillotine SLB outside containment is limiting for offsite dose consequences. A spectrum of non-mechanistic break upstream of the MSIVs in the steam tunnels from at power conditions are limiting with respect to environmental qualification in the steam tunnels, although a break in this short section of piping has a very low probability and is postulated for

(Continued)

environmental qualification purposes only. A large SLB at higher power levels is limiting with respect to containment temperature used for equipment qualification. In the analysis of feedwater line break and steam generator tube rupture accidents, the MSIVs are credited for steam generator isolation. A significant failure conservatively considered for all cases is the failure of a MSIV to close. CP-3.7-13

The MSIVs ~~serve only a safety function and~~ remain open during power operation and their safety function is to close on demand. These valves are assumed to operate under the following situations:

a. An HELB (SLB or FLB) inside containment. In order to maximize the mass and energy release into containment, the analysis assumes that the MSIV in the affected steam generator fails to close. For this ~~accident~~ scenario, steam is discharged into containment from all steam generators until the remaining MSIVs close. After MSIV closure, steam is discharged into containment only from the affected steam generator and from the residual steam in the main steam header downstream of the closed MSIVs in the unaffected loops. Closure of the MSIVs isolates the break from the unaffected steam generators.

b. A break outside of containment and upstream from the MSIVs is not ~~a containment pressurization concern. The uncontrolled blowdown of more than one steam generator must be prevented to limit the potential for uncontrolled RCS cooldown and positive reactivity addition. Closure of the MSIVs isolates the break and limits the blowdown to a single steam generator.~~ postulated due to the break exclusion design of the piping. [NOTE: Although a break in this area is not assumed for accident analyses, a non-mechanistic pipe crack is postulated for equipment qualification.]

c. A break downstream of the MSIVs ~~will be isolated by the closure of the MSIVs~~ is not a containment pressurization concern. The uncontrolled blowdown of more than one steam generator must be prevented to limit the potential for uncontrolled RCS cooldown and positive reactivity addition. Closure of the MSIVs isolates the break and limits the blowdown to a single steam generator.

d. Following a steam generator tube rupture, closure of the MSIVs isolates the ruptured steam generator from the intact steam generators to minimize radiological releases. In addition to minimizing radiological releases, this enables

(Continued)

the operator to maintain the pressure of the steam generator with the ruptured tube at the MSSV setpoints, a necessary step toward isolating the flow through the rupture.

e. The MSIVs are also utilized during other events such as a feedwater line break and LOCA (for containment isolation). ~~This event is~~ These events are less limiting so far as MSIV OPERABILITY is concerned.

The MSIVs satisfy Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

This LCO requires that four MSIVs in the steam lines be OPERABLE. The MSIVs are considered OPERABLE when the isolation times are within limits, and they close on an isolation actuation signal.

This LCO provides assurance that the MSIVs will perform their design safety function to mitigate the consequences of accidents that could result in offsite exposures comparable to the 10 CFR 100 (Ref. ~~1~~ 4) limits ~~or~~ and the NRC staff approved licensing basis.

CP-3.7-13

APPLICABILITY

The MSIVs must be OPERABLE in MODE 1, and in MODES 2 and 3, except when closed and de-activated, when there is significant mass and energy in the RCS and steam generators. When the MSIVs are closed, they are already performing the safety function.

In MODE 4, normally most of the MSIVs are closed, and the steam generator energy is low.

In MODE 5 or 6, the steam generators do not contain much energy because their temperature is below the boiling point of water; therefore, the MSIVs are not required for isolation of potential high energy secondary system pipe breaks in these MODES.

ACTIONS

Q-3.7.2-1

A.1

With one MSIV inoperable in MODE 1, action must be taken to restore OPERABLE status within ~~8~~ ~~72~~ 8 hours. Some repairs to the MSIV can be

(Continued)

made with the unit hot. The ~~8 72~~ 8 hour Completion Time is reasonable, considering the low probability of an accident occurring during this time period that would require a closure of the MSIVs. Q-3.7.2-1

The ~~8 72~~ 8 hour Completion Time is ~~greater than~~ greater than ~~consistent with~~ that normally allowed for GDC-55 and GDC-56 containment isolation valves ~~because the MSIVs are valves~~ because the MSIVs are GDC-57 valves that isolate a closed system penetrating containment. ~~These valves differ from other containment isolation valves in that the closed system~~ ~~This time is reasonable due to the relative stability of the closed system which~~ These valves differ from ~~other~~ GDC-55 and GDC-56 containment isolation valves in that the closed system provides an additional ~~passive~~ means for containment isolation. CP-3.7-13

B.1

If the MSIV cannot be restored to OPERABLE status within ~~8 72~~ 8 hours, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in MODE 2 within 6 hours and Condition C would be entered. The Completion Times are reasonable, based on operating experience, to reach MODE 2 and to close the MSIVs in an orderly manner and without challenging unit systems.

Q-3.7.2-1

C.1 and ~~and~~ C.2~~, D.1 and D.2~~

Condition C ~~D C~~ is modified by a Note indicating that~~, when two or more MSIVs are inoperable,~~ separate Condition entry is allowed for each MSIV. Since the MSIVs are required to be OPERABLE in MODES 2 and 3, the inoperable MSIVs may either be restored to OPERABLE status or closed. When closed, the MSIVs are already in the position required by the assumptions in the safety analysis.

The ~~8 72~~ 8 hour Completion Time ~~of Required Action C.1~~ is consistent with that allowed in Condition A.~~, for one MISV inoperable. For two or more MSIVs inoperable, a more restrictive Completion Time of 8 hours is imposed by Required Action D.1.~~ Q-3.7.2-1

For inoperable MSIVs that cannot be restored to OPERABLE status within the specified Completion Time, but are closed but not deactivated, the inoperable MSIVs must be verified on a periodic basis to be closed. This is necessary to ensure that the assumptions in the safety analysis remain valid. The ~~7 31~~ 7 day Completion Time is reasonable, based on engineering judgment, in view of MSIV status indications CP-3.7-13 CP-3.7.ED conditions consistent with those under which the acceptance criterion was generated.

SR 3.7.2.2

This ~~surveillance~~ SR verifies that each MSIV can ~~closure~~ close on an actual or simulated main steam line isolation actuation signal. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. The frequency of MSIV testing is every 18 months. The 18 month Frequency for testing is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, this Frequency is acceptable from a reliability standpoint.

Q-3.7.2-3

This test is allowed to be conducted in MODE 3 with the unit at operating temperature and pressure. This SR is modified by a Note that allows entry into and operation in MODE 3 prior to performing the SR. This allows a delay of testing until MODE 3, to establish conditions consistent with those under which the acceptance criterion was generated.

CP-3.7-13

REFERENCES
1. FSAR, Section 10.3.
2. FSAR, Section 6.2.
3. FSAR, ~~Section 15.1.5~~ Chapter 15.
4. 10 CFR 100.11.
5. ~~ASME, Boiler and Pressure Vessel Code, Section XI.~~

CP-3.7-13

APPLICABLE SAFETY ANALYSES

The design basis of the ~~ADVs~~ ARVs for the minimum relief capacity is established by the capability to cool the unit to RHR entry conditions and the capability to mitigate a SGTR. The design basis for the maximum relief capacity is established by the 10CFR100 limits for SGTR and the capacity of the MSSVs assumed in the accident analyses. The design rate of ~~75~~ 50°F per hour is applicable for a natural circulation cooldown using two steam generators, each with one ~~ADV~~ ARV. ~~This rate is adequate to cool~~ The unit can be cooled to RHR entry conditions with only one steam generator and one ARV~~ADV~~, utilizing the cooling water supply available in the CST. CP-3.7-13

In the ~~accident~~ safety analysis presented in References 1 and 2, the ~~ADVs~~ ARVs are assumed to be used by the operator to cool down the unit to RHR entry conditions for events ~~accidents~~ accompanied by a loss of offsite power. Prior to operator actions to cool down the unit, the ~~ADVs and~~ main steam safety valves (MSSVs) are assumed to operate automatically to relieve steam and maintain the steam generator pressure below the design value. For the recovery from a steam generator tube rupture (SGTR) event, the operator is also required to perform a limited cooldown to establish adequate subcooling as a necessary step to terminate the primary to secondary break flow into the ruptured steam generator. The time required to terminate the primary to secondary break flow for an SGTR is more critical than the time required to cool down to RHR conditions for this event and also for other accidents. Thus, the SGTR is the limiting event for the ~~ADVs~~ ARVs. Four ~~The number of ADVs~~ ARVs are required to be OPERABLE to satisfy the SGTR accident analysis requirements based ~~depends upon the number of unit loops and~~ on consideration of ~~any~~ single failure assumptions regarding the failure of one or two ~~ADV~~ ARVs to open on demand. CP-3.7-13

The ~~ADVs~~ ARVs are equipped with block valves in the event an ~~ADV~~ ARV spuriously ~~fails to opens or~~ fails to close during an STGR event ~~use~~.

The ~~ADVs~~ ARVs and block valves satisfy Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

Four ~~Three ADV~~ ARV lines are required to be OPERABLE. One ~~ADV~~ ARV line is required from each of four steam generators to ensure that at least one ~~ADV~~ ARV line is available to conduct a timely unit cooldown following an SGTR, in which one steam generator becomes unavailable, accompanied by a single, ~~active~~ failure ~~of~~ affecting both other ~~second ADV~~ ARV lines on ~~an~~ unaffected steam generator(s). The block valves must be OPERABLE to isolate a failed open ~~ADV~~ ARV line. A closed block valve ~~does not~~ renders ~~it or~~ its ~~ADV~~ ARV line CP-3.7-13

BASES

BACKGROUND (continued)

The turbine driven AFW pump supplies a common header capable of feeding all steam generators with normally open, DC powered, air operated control valves ~~actuated to the appropriate steam generator by the Engineered Safety Feature Actuation System (ESFAS)~~. One pump at full flow is sufficient to remove decay heat and cool the unit to residual heat removal (RHR) entry conditions. Thus, the requirement for diversity in motive power sources for the AFW System is met.

The AFW System is designed to supply sufficient water to the steam generator(s) to remove decay heat with steam generator pressure at the lowest ~~setpoint~~ set pressure of the MSSVs plus accumulation. Subsequently, the AFW System supplies sufficient water to cool the unit to RHR entry conditions, with steam released through the ~~ADVs~~ ARVs.

The AFW System actuates automatically on steam generator water level — low-low by the ESFAS (LCO 3.3.2). The system also actuates on loss of offsite power, and on an ATWS Mitigation System Actuation Circuitry (AMSAC) signal, however, AMSAC start of the AFW pumps is not required for AFW system operability. The motor driven pumps also start on safety injection, and trip of all MFW pumps. During normal plant operations, the AFW system, under manual control, is used to maintain SG water level. CP-3.7-13 Q-3.7.G-1

The AFW System is discussed in the FSAR~~, Section 10.4.9~~ (Ref. 1).

APPLICABLE SAFETY ANALYSES

The AFW System mitigates the consequences of any event with loss of normal feedwater.

The design basis of the AFW System is to supply water to the steam generator to remove decay heat and other residual heat by delivering at least the minimum required flow rate to the steam generators at pressures corresponding to the lowest steam generator safety valve set pressure plus 3% accumulation.

In addition, the AFW System must supply enough makeup water to replace steam generator secondary inventory lost as the unit cools to MODE 4 conditions. Sufficient AFW flow must also be available to account for flow losses such as pump recirculation and MFW line breaks.

The limiting Design Basis Accidents (DBAs) and transients for the AFW System are as follows:

a. Feedwater Line Break (FLB ~~FWLB~~); and

b. Loss of MFW.

This SR is modified by a Note indicating that the SR should be deferred until suitable test conditions are established. This deferral is required because there is insufficient steam pressure to perform the test.

SR 3.7.5.3

This SR verifies that AFW can be delivered to the appropriate steam generator in the event of any accident or transient that generates an ESFAS, by demonstrating that each automatic valve in the flow path actuates to its correct position on an actual or simulated actuation generated by an auxiliary feedwater actuation signal. The Steam Generator Blowdown, Steam Generator Blowdown Sample, and Feedwater Split Flow Bypass valves close on an auxiliary feedwater actuation to ensure auxiliary feedwater is delivered to the steam generator upper nozzles and is retained in the steam generator for decay heat removal. The AFW flow control valves trip to auto (open) on an auxiliary feedwater actuation to ensure full flow is delivered to each steam generator flow path. The steam admission valves open to supply the turbine driven auxiliary feedwater pump. This Surveillance is ~~not~~ required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. The 18 month Frequency is acceptable based on operating experience and the design reliability of the equipment. Q-3.7.5-8 CP-3.7-13

~~This SR is modified by a Note that states the SR is not required in MODE 4. In MODE 4, the required AFW train is already aligned and operating.~~

SR 3.7.5.4

This SR verifies that the AFW pumps will start in the event of any accident or transient that generates an ESFAS by demonstrating that each AFW pump starts automatically on an actual or simulated actuation generated by an auxiliary feedwater actuation signal in MODES 1, 2, and 3. In MODE 4, the required pump is already operating and the autostart function is not required. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Q-3.7.5-8 Q-3.7.G-1

B 3.7 PLANT SYSTEMS

B 3.7.6 Condensate Storage Tank (CST)

BASES

BACKGROUND

The CST provides a safety grade source of water to the steam generators for removing decay and sensible heat from the Reactor Coolant System (RCS). The CST provides a passive flow of water, by gravity, to the Auxiliary Feedwater (AFW) System (LCO 3.7.5). The steam produced is released to the atmosphere by the main steam safety valves or the atmospheric ~~dump~~ relief valves. The AFW pumps operate with ~~continuous~~ miniflow recirculation to the CST as required.

When the main steam isolation valves are open, the preferred means of heat removal is to discharge steam to the condenser by the nonsafety grade path of the steam ~~bypass~~ dump valves. The condensed steam is returned to the CST by the condensate transfer pump. This has the advantage of conserving condensate while minimizing releases to the environment.

Because the CST is a principal component in removing residual heat from the RCS, it is designed to withstand earthquakes and other natural phenomena, including missiles that might be generated by natural phenomena. The CST is designed to Seismic Category I to ensure availability of the feedwater supply. Feedwater is also available from alternate sources. The safety-related back-up supply is provided by manual switchover of AFW pump suctions to the Station Service Water System. ~~Isolation of the condensate makeup/reject line from the CST is also required for operability.~~ CP-3.7-13

A description of the CST is found in the FSAR, ~~Section 9.2.6~~ (Refs. 1, 3 & 5).

APPLICABLE SAFETY ANALYSES

The CST provides cooling water to remove decay heat and to cool down the unit following all events in the accident analysis as discussed in the FSAR, Chapter ~~6 and~~ 15 (Refs.~~2 and~~ 3). Q-3.7.G-1
For anticipated operational occurrences and accidents that do not affect the OPERABILITY of the steam generators, the bounding analysis assumption is ~~generally 30 minutes~~ 4 hours at MODE 3, steaming through the MSSVs, followed by a cooldown to residual heat removal (RHR) entry conditions at the design cooldown rate of 50°F/hour (Refs. 4 and 5). This assumption does not include reactor coolant pump heat.

APPLICABLE

~~The limiting event for the condensate volume is the~~

B 3.7 PLANT SYSTEMS

B 3.7.7 Component Cooling Water (CCW) System

BASES

BACKGROUND

The CCW System provides a heat sink for the removal of process and operating heat from safety related components during a Design Basis Accident (DBA) or transient. During normal operation, the CCW System also provides this function for various nonessential components, as well as the spent fuel storage pool. The CCW System serves as a barrier to the release of radioactive byproducts between potentially radioactive systems and the Service Water System, and thus to the environment.

The ~~A typical~~ CCW System is arranged as two independent, full capacity cooling loops (safeguards loops), and has isolatable nonsafety related components. A common non-safeguards loop is provided for non-essential cooling loads as well as spent fuel pool cooling. Each safeguards loop ~~safety related~~ train includes a full capacity pump, ~~surge tank,~~ heat exchanger, piping, valves, and instrumentation. Each safety related train is powered from a separate bus. An open surge tank in the system provides ~~pump trip~~ protective functions to ensure that sufficient net positive suction head is available. In the event an accident, various system valves are repositioned by an ESF actuation signal (i.e., a Safety Injection Actuation Signal and/or a Containment Spray Actuation Signal) as described in the FSAR (Ref. 1). The pump in each train is automatically started on receipt of a safety injection signal, and the non-safeguards loop is ~~all nonessential components are~~ isolated on receipt of a Containment Spray Actuation Signal. CP-3.7-13

Additional information on the design and operation of the system, along with a list of the components served, is presented in the FSAR, Section 9.2.2 (Ref. 1). The principal safety related function of the CCW System is the removal of decay heat from the reactor via the Residual Heat Removal (RHR) System. This may be during a normal or post accident cooldown and shutdown. Q-3.7.G-1

APPLICABLE SAFETY ANALYSES

The design basis of the CCW System is for one CCW train to remove the post loss of coolant accident (LOCA) heat load from the containment sump during the recirculation phase, with a maximum CCW temperature of ~~120~~ 135°F (Ref. 2). The Emergency Core Cooling System (ECCS) LOCA and containment OPERABILITY LOCA each model the maximum and minimum performance of the CCW System, respectively. ~~The normal temperature of the CCW is 80-115°F, and, during unit cooldown to MODE 5 (T_{cold} < 200°F), a maximum~~

BASES

APPLICABLE SAFETY ANALYSES (Continued)

~~temperature of 122°F is assumed.~~ This prevents the containment sump fluid from increasing in temperature during the recirculation phase following a LOCA, and provides a gradual reduction in the temperature of this fluid as it is supplied to the Reactor Coolant System (RCS) by the ECCS pumps.

The CCW System is designed to perform its function with a single failure of any active component, assuming a loss of offsite power.

The normal temperature of the CCW is less than 108°F, and, during unit cooldown to MODE 5 (T_{cold} < 200°F), a maximum temperature of 122°F is maintained.

The CCW System also functions to cool the unit from RHR entry conditions (T_{avg}< 350°F), to MODE 5 (T_{avg} < 200°F), during normal and post accident operations. The time required to cool from 350°F to 200°F is a function of the time after shutdown and the number of CCW and RHR trains operating. ~~One CCW train~~ is sufficient to remove decay heat during subsequent operations with T_{avg} < 200°F. This assumes a maximum service water temperature of ~~95~~ 102°F occurring simultaneously with the maximum RHR heat loads on the system.

CP-3.7-13

The CCW System satisfies Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

The CCW trains are independent of each other to the degree that each has separate controls and power supplies and the operation of one does not depend on the other. In the event of a DBA, one CCW train is required to provide the minimum heat removal capability assumed in the safety analysis for the systems to which it supplies cooling water. To ensure this requirement is met, two trains of CCW must be OPERABLE. At least one CCW train will operate assuming the worst case single active failure occurs coincident with a loss of offsite power.

A CCW train is considered OPERABLE when:

a. The pump and associated portion of the surge tank are OPERABLE; and

b. The associated piping, valves, heat exchanger, and instrumentation and controls required to perform the safety related function are OPERABLE.

The isolation of CCW from other components or systems not required for safety may render those components or systems

B 3.7 PLANT SYSTEMS

B 3.7.8 Station Service Water System (SSWS)

BASES

BACKGROUND

The SSWS provides a heat sink for the removal of process and operating heat from safety related components during a Design Basis Accident (DBA) or transient. During normal operation, and a normal shutdown, the SSWS also provides this function for various safety related ~~and nonsafety related components~~. The safety related functions are ~~is~~ covered by this LCO. Q-3.7.8-4

The SSWS consists of two separate, 100% capacity, safety related, cooling water trains. Each train consists of two 100% capacity pumps, ~~one component cooling water (CCW) heat exchanger,~~ piping, valving, and instrumentation~~, and two cyclone separators~~. The pumps and valves are remote and manually aligned~~, except~~ to be operable in the unlikely event of a loss of coolant accident (LOCA). The pumps aligned to ~~the critical~~ their respective loops are automatically started upon receipt of a safety injection signal~~, and all essential valves are aligned to their post accident positions~~. An automatic valve in the discharge of each pump is interlocked to open on a pump start. An automatic valve in the SSWS cooling water flow path for each emergency diesel generator automatically opens on a diesel generator start. All other valves are manual valves operated locally. The SSWS also ~~provides emergency makeup to the spent fuel pool and CCW System and~~ is the backup water supply to the Auxiliary Feedwater System. Q-3.7.8-4 Q-3.7.G-1

Cross-connections are provided between trains and between units such that any pump can supply any other pump's required flow.

Train isolation by two normally closed valves in series or one locked closed valve is provided to satisfy GDC-44. Unit isolation by one locked closed valve is provided to satisfy GDC-5. (Ref. 5)

In the event of a total Loss of Station Service Water (LOSSW) event in one unit at Comanche Peak, backup cooling capability is available via a cross-connect between the two units (References 1, 4 and 4 6). An OPERABLE pump is manually realigned and flow balanced to provide cooling to essential heat loads to one or both units as required. The OPERABILITY of the unit cross-connect along with a Station Service Water pump in the shutdown unit ensures the availability of sufficient redundant cooling capacity for the operating unit. The Limiting Condition of Operation will ensure a significant risk reduction as indicated by the analyses of a Loss of Station Service Water System event. The surveillance requirements ensure the short and long-term OPERABILITY of the Station Service Water System and cross-connect between the two units. CP-3.7-13

BASES

BACKGROUND (Continued)

The Station Service Water System cross-connect between the two units consists of appropriate piping and cross-connect valves connecting the discharge of the Station Service Water pumps of the two units. By aligning the cross-connect flow paths, additional redundant cooling capacity from one unit is available to the Station Service Water System of the other unit.

Additional information about the design and operation of the SSWS, along with a list of the components served, is presented in the FSAR, Section 9.2.1 (Ref. 1). The principal safety related function of the SSWS is the removal of decay heat from the reactor via the CCW System.

Q-3.7.G-1

APPLICABLE SAFETY ANALYSES

The design basis of the SSWS is for one SSWS train, in conjunction with the CCW System and a 100% capacity containment cooling system, to remove core decay heat following a design basis LOCA as discussed in the FSAR, Section 6.2 (Ref. 2). This prevents the containment sump fluid from increasing in temperature during the recirculation phase following a LOCA and provides for a gradual reduction in the temperature of this fluid as it is supplied to the Reactor Coolant System by the ECCS pumps. The SSWS is designed to perform its function with a single failure of any active component, assuming the loss of offsite power.

The SSWS, in conjunction with the CCW System, also cools the unit from residual heat removal (RHR), as discussed in the FSAR, Section 5.4.7, (Ref. 3) entry conditions to MODE 5 during normal and post accident operations. ~~The time required for this evolution is a function of the~~ time after shutdown and ~~number of CCW and RHR System trains that are operating.~~ One SSWS train is sufficient to remove decay heat during subsequent operations in MODES 5 and 6. This assumes a maximum SSWS temperature of ~~95~~ 102°F occurring simultaneously with maximum heat loads on the system. CP-3.7-13

The SSWS satisfies Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii). The requirement for cross connections and opposite unit pumps satisfy Criterion 4 of 10CFR50.36(c)(2)(ii). Q-3.7.8-4

LCO

Two SSWS trains are required to be OPERABLE to provide the required redundancy to ensure that the system functions to remove post accident heat loads, assuming that the worst case single active failure occurs coincident with the loss of offsite power.

LCO (Continued)

An SSWS train is considered OPERABLE during MODES 1, 2, 3, and 4 when:

a. The pump is OPERABLE; and

b. The associated piping, valves, ~~heat exchanger,~~ and instrumentation and controls required to perform the safety related function are OPERABLE.

A SSW Pump on the opposite unit is OPERABLE as back-up in the event of a LOSSW if it is capable of providing required flow rates. An emergency diesel generator power source is not required because loss of offsite power is not assumed coincident with a LOSSW event.

A cross-connect valve is OPERABLE if it can be cycled or is locked open. A valve that cannot be demonstrated OPERABLE by cycling is considered inoperable until the valve is surveilled in the locked open position. However, at least one cross-connect valve between units is required to be maintained closed in accordance with GDC-5 unless required for flushing or due to total loss of Station Service Water pumps for either unit.

APPLICABILITY

In MODES 1, 2, 3, and 4, the SSWS is a normally operating system that is required to support the OPERABILITY of the equipment serviced by the SSWS and required to be OPERABLE in these MODES.

In MODES 5 and 6, the OPERABILITY requirements of the SSWS are determined by the systems it supports.

ACTIONS

AB.1 and A.2 ~~and B.2~~

If no SSW pump on the opposite unit or its associated cross-connects are operable, the overall reliability is degraded since a back-up in the event of a Loss of Station Service Water System (LOSSWS) event may not be capable of performing the function. The 7 day completion time is based on the low probability of a LOSSWS during this time period.

CP-3.7-13

Q-3.7.8-3

BA.1

If one SSWS train is inoperable, action must be taken to restore OPERABLE status within 72 hours. In this Condition, the

BASES

~~(e.g., single failure considerations), and multiple makeup water sources may be required.~~

Additional information on the design and operation of the ~~System, along with a list of components served,~~ SSI can be found in Reference 1. CP-3.7-13

APPLICABLE SAFETY ANALYSES

The ~~UHS~~ SSI is the sink for heat removed from the reactor core following all accidents and anticipated operational occurrences in which the unit is cooled down and placed on residual heat removal (RHR) operation. ~~For units that use UHS as the normal heat sink for condenser cooling via the Circulating Water System, unit operation at full power is its maximum heat load.~~ Its maximum post accident heat load occurs approximately 20 minutes after a design basis loss of coolant accident (LOCA). Near this time, the unit switches from injection to recirculation and the containment cooling systems and RHR are required to remove the core decay heat.

The operating limits are based on conservative heat transfer analyses for the worst case LOCA. Reference 1 provides the details of the assumptions used in the analysis, which include worst expected meteorological conditions, conservative uncertainties when calculating decay heat, and worst case single ~~active~~ failure (e.g., ~~single~~ failure of ~~a manmade structure~~ the main cooling reservoir dam). The thermal-hydraulic analysis assumes an initial elevation of 770 feet mean sea level which drops to 769'-6" coincident with the Design Basis Event. The ~~UHS~~ SSI is designed in accordance with Regulatory Guide 1.27 (Ref. 2), which requires a 30 day supply of cooling water in the ~~UHS~~ SSI.

The ~~UHS~~ SSI satisfies Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

The ~~UHS~~ SSI is required to be OPERABLE and is considered OPERABLE if it contains a sufficient volume of water at or below the maximum temperature that would allow the SSWS to operate for at least 30 days following the design basis LOCA without the loss of net positive suction head (NPSH), and without exceeding the maximum design temperature of the equipment served by the SSWS. To meet this condition, the ~~UHS SSI~~ Station Service Water System intake temperature should not exceed ~~90~~ 102°F and the level should not fall below 770 ~~562~~ ft mean sea level during normal unit operation. CP-3.7-012

APPLICABILITY

In MODES 1, 2, 3, 4, 5, 6, and during movement of irradiated fuel assemblies ~~and during CORE ALTERATIONS.~~ CREFS must be OPERABLE to control operator exposure during and following a DBA.

~~In MODE 5 or 6, the CREFS is required to cope with the release from the rupture of an outside waste gas tank.~~ CP-3.7-13

During movement of irradiated fuel assemblies ~~and CORE ALTERATIONS,~~ the CREFS must be OPERABLE to cope with the release from a fuel handling accident.

ACTIONS

A.1

When one CREFS train is inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and ability of the remaining train to provide the required capability.

BD.1

If the Control Room Pressure is inoperable such that the CREFS trains can not establish or maintain the required pressure not ~~capable of being maintained greater than or equal to 0.125 inches water gauge~~, action must be taken to restore ~~capability to pressurize the~~ an OPERABLE control room boundary within 24-hours. The 24 hour completion time is reasonable based on the low probability of a DBA occurring during this time period, and the availability of CREFs to provide a filtered environment (albiet with potential control room inleakage). ~~filter the air and provide pressure inside the control room. The 24 hours also allows reasonable time to facilitate repairs.~~ Q-3.7.10-14

BC.1 and BC.2

In MODE 1, 2, 3, or 4, if the inoperable CREFS train or control room boundary cannot be restored to OPERABLE status within the required Completion Time, the unit must be placed in a MODE that minimizes accident risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The

BASES

~~refueling canal~~ is ~~checked daily~~ in accordance with SR 3.9.~~6~~7.1 ~~or SR 3.9.8.1 as applicable~~. CP-3.7-013

REFERENCES

1. FSAR, Section 9.1.2.
2. FSAR, Section 9.1.3.
3. FSAR, Section 15.7.~~4.~~
4. Regulatory Guide 1.25, Rev. 0.
5. 10 CFR 100.11.
6. WCAP-7518-L, Radiological consequences of a Fuel Handling Accident, June 1970.
7. NUREG-0800, Section 15.7.4.

BASES (continued)

APPLICABLE SAFETY ANALYSES

The accident analysis of the main steam line break (MSLB), as discussed in the FSAR, Chapter 15 (Ref. 2) assumes the initial secondary coolant specific activity to have a radioactive isotope concentration of 0.10 μCi/gm DOSE EQUIVALENT I-131. This assumption is used in the analysis for determining the radiological consequences of the postulated accident. The accident analysis, based on this and other assumptions, shows that the radiological consequences of an MSLB do not exceed a small fraction of the unit EAB limits (Ref. 1) for whole body and thyroid dose rates. Q-3.7.G-1

With the loss of offsite power, the remaining steam generators are available for core decay heat dissipation by venting steam to the atmosphere through the MSSVs ~~and steam generator atmospheric relief dump valves (ARVs)~~. The Auxiliary Feedwater System supplies the necessary makeup to the steam generators. ~~Venting continues until the reactor coolant temperature and pressure have decreased sufficiently for the Residual Heat Removal System to complete the cooldown.~~ CP-3.7-013

In the evaluation of the radiological consequences of this accident, the activity released from the steam generator connected to the failed steam line is assumed to be released directly to the environment. ~~The unaffected steam generators are is assumed to discharge steam and any entrained activity through the MSSVs and ARVs during the event.~~ Since no credit is taken in the analysis for activity plateout or retention, the resultant radiological consequences represent a conservative estimate of the potential integrated dose due to the postulated steam line failure.

Secondary specific activity limits satisfy Criterion 2 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

As indicated in the Applicable Safety Analyses, the specific activity of the secondary coolant is required to be ≤ 0.10 μCi/gm DOSE EQUIVALENT I-131 to limit the radiological consequences of a Design Basis Accident (DBA) to a small fraction of the required limit (Ref. 1).

Monitoring the specific activity of the secondary coolant ensuresthat when secondary specific activity limits are exceeded, appropriate actions are taken in a timely manner to place the unit in an operational MODE that would minimize the radiological consequences of a DBA.

B 3.7 PLANT SYSTEMS

B 3.7.19 Safety Chilled Water System

BASES

BACKGROUND

The Safety Chilled Water System provides essential chilled water to the emergency fan coil units (EFCUs) during normal and accident conditions. EFCUs are provided in motor-driven ESF pump rooms (i.e., Centrifugal Charging Pump rooms, Safety Injection Pump rooms, Residual Heat Removal (RHR) Pump rooms, Containment Spray Pump rooms, and the motor-driven Auxiliary Feedwater (AFW) Pump rooms), in the Spent Fuel Pool Cooling Pump rooms, in the Component Cooling Water (CCW) Pump rooms, in the UPS Rooms, and in the Class 1E electrical switchgear rooms. The system is designed to provide chilled water to maintain the ambient air temperature within the design limits of the essential equipment served by the system. CP-3.7-013

The safety related equipment and respective EFCUs are of the same safety train as the associated chilled water train. Thus, a power failure or other single failure to one cooling system train will not prevent the cooling of redundant equipment in the other train.

The Safety Chilled Water System for each unit consists of two separate and completely redundant safety trains. Each train consists of one packaged centrifugal chiller, one centrifugal chilled water recirculation pump, interconnecting piping, valves, controls and instrumentation. There are no automatic valves in the system. Additionally, the two trains share a common chilled water surge (expansion) tank, partitioned in the middle into two separate compartments to provide complete separation of the two trains, that function to ensure sufficient net positive suction head is available.

In addition to manual start capability, automatic start of the Safety Chill Water System is provided on a Safety Injection (SI) signal or a station blackout.

The Safety Chilled Water System is seismic Category I and remains operational during and after a safe shutdown earthquake. The associated instrumentation is described in greater detail in FSAR Sections, 7.3 and 9.4, References 1 and 2 respectively.

APPLICABLE SAFETY

The design basis of the Safety Chilled Water System is to support EFCUs that maintain air temperatures as required in

BASES

LCO

A UPS HVAC System train is considered OPERABLE when its associated:

a. Air Conditioner and fans are OPERABLE, and

b. Ductwork and dampers are OPERABLE, and air circulation can be maintained.

APPLICABILITY

In MODE 1, 2, 3, or 4, the UPS HVAC System is required to be OPERABLE to ensure the UPS & Distribution room temperatures will not exceed equipment operational requirements.

In MODE 5 or 6, the OPERABILITY requirements of the UPS HVAC System are determined by the systems it supports. CP-3.7-013

ACTIONS

A.1

With one UPS HVAC System train inoperable, restore the inoperable train to OPERABLE status within 7 days.

During this period, the remaining OPERABLE train is adequate to perform the UPS HVAC System function. The 7 day Completion Time is based on the risk from an event occurring requiring the inoperable UPS HVAC Train.

B.1, and B.2

In MODE 1, 2, 3, or 4, if the required support to meet the LCO or to meet Required Actions in Condition A cannot be established, the unit must be placed in a MODE that minimizes the risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.20.1

Verifying each UPS A/C train operates for ≥ 1 hour ensures that they are OPERABLE and that all associated controls are functioning properly.

(continued)

B 3.7 PLANT SYSTEMS

B 3.7.20P UPS HVAC System-Operating [With LAR 96-004]

BASES

BACKGROUND

The UPS HVAC System provides temperature control for the safety related UPS & Distribution rooms during all normal and accident conditions.

The UPS HVAC System consists of:

a. A dedicated UPS Room Emergency Fan Coil Unit (EFCU) in each safety-related UPS & Distribution Room, and

b. Two electrically independent and redundant A/C trains either of which can support all four safety related UPS & Distribution rooms. Each train consists of an air conditioning unit. Ductwork, dampers, and instrumentation also form part of the system.

The UPS HVAC System is a normally operating system. Each EFCU normally provides the required temperature control to maintain its respective room below 104°F during normal plant conditions. A single A/C train will also provide the required temperature control to maintain the UPS & Distribution rooms between 40°F and 104°F during normal plant conditions. Upon receipt of an actuating signal, a standby train would start.

The UPS HVAC System is also an emergency system. Each EFCU would provide the required temperature control to maintain its respective room below 122°F during emergency conditions. A single A/C Train will also provide the required temperature control to maintain the UPS rooms below 122°F during emergency plant conditions.

CP-3.7-013

The control circuit design of the EFCUs does not include an "auto" start or "standby" feature. Each UPS Room Emergency Fan Coil Unit is controlled from a local control panel integral to the unit. The control panel contains a maintained two position hand switch (run/off). Each unit is directly wired to its associated safeguards bus and therefore, load shed if the bus is de-energized upon a Blackout signal ("BOS") or a Safety Injection ("S") signal. The units automatically restart upon re-energizing of the associated safeguards bus. An EFCU must be operating to be operable.

Q-3.7.20-6

In the event an EFCU is inoperable and the respective A/C Train is also inoperable, 100 % cooling can be provided by the opposite train's A/C Train.

APPLICABLE SAFETY ANALYSES

The design basis of the UPS HVAC System is to maintain the UPS & Distribution room temperatures.

The UPS Room s are dedicated to the UPS Unit and Train they support. The UPS A/C Train components are arranged in redundant, safety related trains. During emergency operation, the UPS HVAC System maintains the temperature below 122°F. A single active failure of a component of the UPS HVAC, with a loss of offsite power, does not impair the ability of the system to perform its design function. Redundant controls are provided for UPS room temperature control. The UPS HVAC is designed in accordance with Seismic Category I requirements. The UPS HVAC is capable of removing sensible and latent heat loads from the UPS inverter rooms, which include consideration of equipment heat load requirements to ensure equipment OPERABILITY.

The UPS HVAC satisfies Criterion 4 of 10CFR50.36(c)(2)(ii).

LCO

Two UPS HVAC System trains are required to be OPERABLE to provide the required redundancy to ensure that the system functions to remove heat from the UPS rooms during a DBA. A UPS HVAC System train is considered OPERABLE when its associated: Q-3.7.20-1

a. UPS Emergency Fan Coil Unit is OPERABLE, or CP-3.7-013

b. 1) Air Conditioner and fans are OPERABLE, and

2) Ductwork and dampers are OPERABLE, and air circulation can be maintained.

APPLICABILITY

In MODE 1, 2, 3, or 4, the UPS HVAC System is required to be OPERABLE to ensure the UPS & Distribution room temperatures will not exceed equipment operational requirements.

In MODE 5 or 6, the OPERABILITY requirements of the UPS HVAC System are determined by the systems it supports. CP-3.7-013

ACTIONS

A.1 and A.2

With one UPS HVAC System train (i.e. EFCU and A/C Train of the same electrical train) inoperable, action must be taken immediately to verify the A/C Train of the opposite electrical train is operable and to restore OPERABLE status within 30 days. During this period, the remaining OPERABLE train is adequate to perform the UPS HVAC System function. The 30 day Completion Time

ACTIONS

B.1, B.2 and B.3

With one or more EFCUs and both UPS A/C trains inoperable, action must be taken immediately to verify air circulation is being maintained and that the temperatures are being maintained within equipment design limits. The maximum temperature limit for these rooms is provided in the TRM. The 12 hour completion time for reverification of temperatures is considered reasonable based on slow rates of changes during steady state conditions. The 72 hour Completion Time is based on the risk from an event occurring requiring the inoperable UPS HVAC Train, and the remaining UPS Room EFCUs and A/C Train fans providing the required protection.

CP-3.7-013

C.1

When one or more UPS and Distribution Rooms are not supported by either forced cooling or circulating air, one hour is allowed to restore support to the affected room(s). The one hour minimizes the time without required support while allowing quick repairs or restoration of equipment.

~~C~~D.1, ~~C~~D.2 and ~~C~~D.3

Q-3.7.20-5

In MODE 1, 2, 3, or 4, if the required support to meet the LCO or to meet Required Actions in Condition A or B cannot be restored within the required Completion Time ~~(1 hour)~~, the unit must be placed in a MODE that minimizes the risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.20P.1

Verifying each required EFCU operates for ≥ 1 continuous hour ensures that they are operable.

SR 3.7.20P.2

Verifying each UPS A/C train operates for ≥ 1 hour ensures that they are OPERABLE and that all associated controls are functioning properly.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: CP 3.7-014 **APPLICABILITY:** CP

REQUEST: This item provides a new DOC (10-32-LG) and changes to the BASES for 3.7.10. The item moves a CPSES specific aspect of the Current Technical Specification (CTS) requirements of surveillance 4.7.7.1b and c from the specification to the BASES. In the CTS, these surveillances do not need to be met by an Emergency Pressurization Unit for the corresponding Control Room Emergency Filtration/Pressurization System (CREFS) train to be operable. ITS SR 3.7.10.2 states that the " . . . required VFTP . . . " testing must be performed and the 3.7.10 bases explains what "required" means. The bases explanation of "required" is revised to incorporate the plant specific item described above and a DOC is added to identify the movement of this information to the ITS Bases.

ATTACHED PAGES:

Encl 2	3/4.7-20
Encl 3A	13a
Encl 3B	13a
Encl 5B	B 3.7-56, B 3.7-56a and B 3.7-59

SURVEILLANCE REQUIREMENTS (Continued)

4.7.7.1 Each Control Room Emergency Filtration/Pressurization System train shall be demonstrated OPERABLE:

a. At least once per 31 days by operating each Control Room Emergency Filtration/Pressurization System train Emergency Pressurization Unit for ≥ 10 continuous hours with the heaters operating and the Emergency Filtration Unit for ≥ 15 minutes. 10-03-LS

b. Perform required Control Room Emergency Filtration/Pressurization System testing in accordance with the Ventilation Filter Testing Program (VFTP). At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by : 10-08-A 10-32-LG CP-3.7-014

(1) Verifying that the filtration unit satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% by using the test procedure guidance in Regulatory Position C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978*, and the emergency filtration unit flow rate is 8000 cfm ± 10%, and the emergency pressurization unit flow rate is 800 cfm ± 10%;

(2) Verifying ~~within 31 days after removal~~, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978*, meets the laboratory testing criteria of Regulatory Position C.6.a Regulatory Guide 1.52, Revision 2, March 1978*, for a methal iodide penetration of less than 0.2% when tested in accordance with ASTM D3303-1979 at a temperature of ≤ 30°C and greater than or equal to 70% relative humidity; and 10-23-LS 10-08-A

(3) Verifying an emergency filtration unit flow rate of 8000 cfm ± 10% and an emergency pressurization unit flow rate of 800 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980. 10-17-A

c. After every 720 hours of charcoal adsorber operation, by verifying, ~~within 31 days after removal,~~ that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978*, meets the laboratory teting criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978* for a methyl iodide penetration of less than 0.2%; 10-23-LS 10-32-LG CP-3.7-014

* ANSI N510-1980 and ANSI N509-1980 shall be used in place of ANSI N510-1975 and ANSI N509-1976, respectively.

CHANGE NUMBER	NSHC	DESCRIPTION	
10-29		Not used	
10-30	A	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).	Q-3.7.10-2
10-31	M	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).	Q-3.7.10-13
10-32	LG	In the CTS, surveillances 4.7.7.1b and c apply to the Control Room Emergency Filtration/Pressurization System trains rather than the individual ventilation filter units. Each train has two ventilation filter units, an emergency filtration unit and an emergency pressurization unit. When performing an ESF function, the two filter units are operating in series and only one filter unit is required to perform the required function. As a result, both filter units do not need to comply with surveillances 4.7.7.1b and c for the train to be OPERABLE. The equivalent surveillance in the ITS, SR 3.7.10.2, states that " . . . required CREFS testing . . ." be performed " . . . in accordance with the Ventilation Filter Testing Program (VFTP)." The CTS requirements regarding which filter units are needed have been moved to the BASES for ITS 3.7.10 in the Applicable Safety Analyses, LCO and SR 3.7.10.2 sections.	CP-3.7-014
11-01	M	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).	
11-02	LS-28	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).	

TECHNICAL SPECIFICATION CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
10-31 M	Another requirement is added to ITS 3.7.10 Action D to "suspend CORE ALTERATIONS and suspend movement of irradiated fuel assemblies" as an alternative to placing an OPERABLE CRVS train in the recirculation mode when the other train is inoperable.	NO	NO	NO	YES Q-3.7.10-13
10-32 LG	In the CPSES CTS, surveillances 4.7.7.1b and c apply to the Control Room Emergency Filtration/Pressurization System trains rather than the individual ventilation filter units. Each train has two ventilation filter units, an emergency filtration unit and an emergency pressurization unit. When performing an ESF function, the two filter units are operating in series and only one filter unit is required to perform the required function. As a result, both filter units do not need to comply with surveillances 4.7.7.1b and c for the train to be OPERABLE.	NO	YES	YES	YES CP-3.7-014
11-01 M	A new specification for CR heat removal is added to ensure that the CR equipment functions following a DBA.	NO; not part of CTS.	NO; part of CTS.	YES	YES

APPLICABLE SAFETY ANALYSES

The CREFS components are arranged in redundant, safety related ventilation trains. The location of components and ducting within the control room envelope ensures an adequate supply of filtered air to all areas requiring access. The CREFS provides airborne radiological protection for the control room operators, as demonstrated by the control room accident dose analyses for the most limiting design basis loss of coolant accident, fission product release presented in the FSAR, Chapter 15 (Ref. 2). Q-3.7.G-1

CP-3.7-014

The Control Room post accident mode of operation is the emergency recirculation mode. In the emergency recirculation mode, both the Emergency Filtration and Emergency Pressurization Units are functioning and they operate in series. In other words, all air which passes through the Emergency Pressurization Unit in each train will pass through the corresponding Emergency Filtration Unit before it is released into the Control Room. The safety analysis which confirmed the CREFS design took credit for no more than 99% filter efficiency of the Emergency Filtration Units only. If the Emergency Pressurization Units do not meet the surveillance requirement criteria for filtration the safety analyses and the associated acceptance criteria continue to be met by the Emergency Filtration Units. Thus, the operators will continue to be provided the protection identified in the licensing bases for CPSES.

The analysis of toxic gas releases demonstrates that the toxicity limits are not exceeded in the control room following a toxic chemical release, as presented in Reference 1. Isolation of the control room is not automatic for a toxic chemical release event.

The worst case single active failure of a component of the CREFS, assuming a loss of offsite power, does not impair the ability of the system to perform its design function.

The CREFS satisfies Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii).

LCO

Two independent and redundant CREFS trains are required to be OPERABLE to ensure that at least one is available assuming a single failure disables the other train. Total system failure could result in exceeding a dose of 5 rem to the control room operator in the event of a large radioactive release.

The CREFS is considered OPERABLE when the individual components necessary to limit operator exposure are OPERABLE in both trains.

A CREFS train is OPERABLE when both filtration units (i.e., the emergency pressurization unit (EPU) and emergency filtration unit (EFU)) are OPERABLE. A filtration unit is OPERABLE when the associated:

a. Fan is OPERABLE;

b. HEPA filters and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions (the EFU must meet Ventilation Filter Testing Program (VFTP) requirements; the EPU must meet VFTP requirements, except for filtration requirements); ~~and~~ CP-3.7-014

c. Heater (EPU only), demister (EPU only), ductwork, valves, and dampers are OPERABLE, and air circulation can be maintained.

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, ductwork, and access doors.

minimizes accident risk. This does not preclude the movement of fuel to a safe position.

~~F~~EH.1

If both CREFS trains are inoperable in MODE 1, 2, 3, or 4, for reasons other than an inoperable control room boundary (i.e., Condition B), the CREFS may not be capable of performing the intended function and the unit is in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be entered immediately Q-3.7.10-14

SURVEILLANCE REQUIREMENTS

SR 3.7.10.1

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not too severe, each train once every month provides an adequate check of this system. Monthly heater operations dry out any moisture accumulated in the charcoal from humidity in the ambient air. ~~Systems~~ Filtration units with heaters must be operated for ≥ 10 continuous hours with the heaters energized. ~~Systems~~ Filtration units without heaters need only be operated for ≥ 15 minutes to demonstrate the function of the system. The 31 day Frequency is based on the reliability of the equipment and the two train redundancy availability.

SR 3.7.10.2

This SR verifies that the required CREFS testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The CREFS filter tests are in accordance with Regulatory Guide 1.52 (Ref. 3). The VFTP includes testing the performance of the HEPA filter, charcoal adsorber efficiency, minimum flow rate, and the physical properties of the activated charcoal. Specific test Frequencies and additional information are discussed in detail in the VFTP.

The VFTP filtration testing requirements of Sections 5.5.11a, b, and c are not required for an Emergency Pressurization Unit when being testing (1) during a periodic test (e.g., 18 months or after 720 hours of operation), (2) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (3) following painting, fire, or chemical release for the corresponding CREFS train to be OPERABLE. CP-3.7-014

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: CP 3.7-015 **APPLICABILITY:** CP

REQUEST: TSTF-235 modified STS 3.7.1 to incorporate changes recommended by NSAL 94-001 with regard to inoperable MSSVs. The FLOG position on this TSTF was provided in response to Comment Number Q 3.7.1-4. The response indicates that CPSES incorporated TSTF-235. CP 3.7-015 is being added to indicate that in some locations CPSES revised the Bases from that which was provided with the TSTF to make it plant specific to CPSES. The non-applicable wording from the TSTF was not shown.

ATTACHED PAGES:

Encl 5B B 3.7-2, B 3.7-2a, B 3.7-3, B 3.7-5a and B 3.7-6

BASES

presented in the FSAR, Section 15.2 (Ref. 3). Of these, the full power turbine trip without steam dump is typically the limiting AOO. This event also terminates normal feedwater flow to the steam generators.

The safety analysis demonstrates that the transient response for turbine trip occurring from full power without a direct reactor trip presents no hazard to the integrity of the RCS or the Main Steam System. ~~If a minimum reactivity feedback is assumed, the reactor is tripped on high pressurizer pressure. In this case, the pressurizer safety valves open, and RCS pressure remains below 110% of the design value. The MSSVs also open to limit the secondary steam pressure.~~ Q-3.7.1-4 CP-3.7-15

~~If maximum reactivity feedback is assumed, the reactor is tripped on overtemperature ΔT N-16 or steam generator water level - low-low. The departure from nucleate boiling ratio increases throughout the transient, and never drops below its initial value. Pressurizer relief valves and MSSVs are activated and prevent overpressurization in the primary and secondary systems.~~ The turbine trip is performed assuming no primary system pressure control, but crediting reactor trip on high pressurizer pressure and operation of the pressurizer safety valves. This analysis demonstrates that RCS integrity is maintained by showing that the maximum RCS pressure does not exceed 110% of the design pressure. All cases analyzed demonstrate that the MSSVs maintain Main Steam System integrity by limiting the maximum steam pressure to less than 110% of the steam generator design pressure.

In addition to the decreased heat removal events, reactivity insertion events may also challenge the relieving capacity of the MSSVs. The uncontrolled rod cluster control assembly (RCCA) bank withdrawal at power event is characterized by an increase in core power and steam generation rate until reactor trip occurs when either the Overtemperature N-16 or Power Range Neutron Flux-High setpoint is reached. Steam flow to the turbine will not increase from its initial value for this event The increased heat transfer to the secondary side causes an increase in steam pressure and may result in opening of the MSSVs prior to reactor trip, assuming no credit for operation of the atmospheric or condenser steam dump valves . The FSAR safety analysis of the RCCA bank withdrawal at power event for a range of initial core power levels demonstrates that the MSSVs are capable of preventing secondary side overpressurization for this AOO. Q-3.7.1-4

(Continued)

BASES

The FSAR safety analyses discussed above assume that all of the MSSVs for each steam generator are OPERABLE. It there are inoperable MSSV(s), it is necessary to limit the primary system power during steady state operation and AOOs to a value that does not result in exceeding the combined steam flow capacity of the turbine (if available) and the remaining OPERABLE MSSVs. The required limitation on primary system power necessary to prevent secondary system overpressurization may be determined by system transient analyses. In some circumstances it is necessary to limit the primary side heat generation that can be achieved during an AOO by reducing the setpoint of the Power Range Neutron Flux-High reactor trip function. For example, if more than one MSSV on a single steam generator is inoperable, an uncontrolled RCCA bank withdrawal at power event occurring from a partial power level may result in an increase in reactor power that exceeds the combined steam flow capacity of the turbine and the remaining OPERABLE MSSVs. Thus, for multiple inoperable MSSVs on the same steam generator it is necessary to prevent exceeding this power by lowering the Power Range Neutron Flux-High setpoint to an appropriate value. When the Moderator Temperature Coefficient (MTC) is positive, the reactor power may increase above the initial value during an RCS heatup event (e.g., turbine trip). Thus, for any number of inoperable MSSVs it is necessary to reduce the trip setpoint if a positive MTC may exist at partial power conditions, unless it is demonstrated by analysis that a specified reactor power reduction alone is sufficient to prevent overpressurization of the steam system. The MSSVs are assumed to have ~~two~~ one active ~~and one passive~~ failure mode~~s~~. The active failure mode~~s~~ ~~are spurious~~ is an inadvertent opening and failure to reclose once opened. ~~The passive failure mode is~~ Failure to open upon demand is not assumed (Ref. 3). Q-3.7.1-4 CP-3.7-15

The MSSVs satisfy Criterion 3 of ~~the NRC Policy Statement.~~ 10CFR50.36(c)(2)(ii)..

LCO

The accident analysis requires ~~four~~ that five MSSVs per steam generator be OPERABLE to provide overpressure protection for design basis transients occurring at 102% RTP. ~~An MSSV will be considered inoperable if it fails to open on demand when the process pressure is within the lift set pressure tolerance.~~ The LCO requires that five MSSVs per steam generator be OPERABLE in compliance with Reference 2, ~~even though this is not a requirement of~~ and the DBA analysis. Q-3.7.1-4

(Continued)

BASES

OPERABILITY of the MSSVs is determined by periodic surveillance testing in accordance with the Inservice Testing Program.

~~The lift settings, according to Table 3.7.1-2 in the accompanying LCO, correspond to ambient conditions of the valve at nominal operating temperature and pressure.~~ Q-3.7.1-4

This LCO provides assurance that the MSSVs will perform their designed safety functions to mitigate the consequences of accidents that could result in a challenge to the RCPB or Main Steam System integrity.

APPLICABILITY

In ~~MODE 1 above 40% RTP, the number of MSSVs per steam generator required to be OPERABLE must be according to Table 3.7.1-1 in the accompanying LCO. Below 40% RTP in~~ MODES 1, 2, and 3, ~~only two~~ five MSSVs per steam generator are required to be OPERABLE to prevent Main Steam System overpressurization. Q-3.7.1-4

In MODES 4 and 5, there are no credible transients requiring the MSSVs. The steam generators are not normally used for heat removal in MODES 5 and 6, and thus cannot be overpressurized; there is no requirement for the MSSVs to be OPERABLE in these MODES.

ACTIONS

The ACTIONS table is modified by a Note indicating that separate Condition entry is allowed for each MSSV.

~~A.1~~

With one or more MSSVs inoperable, action must be taken ~~reduce power~~ so that the available MSSV relieving capacity meets the ~~Reference 2~~ overpressure protection requirements. ~~for the applicable THERMAL POWER as specified in Table 3.7.1-1.~~ Q-3.7.1-4 CP-3.7-15

Operation with less than all five MSSVs OPERABLE for each steam generator is permissible, if THERMAL POWER is proportionally limited to the relief capacity of the remaining MSSVs. This is accomplished by restricting THERMAL POWER so that the energy transfer to the most limiting steam generator is not greater than the available relief capacity in that steam generator. ~~For example, if one MSSV is inoperable in one steam generator, the relief capacity of that steam generator is reduced by~~

BASES

Coefficient is positive the reactor power may increase as a result of an RCS heatup event such that flow capacity of the remaining OPERABLE MSSVs is insufficient. Therefore, in addition to Required Action B.1, which specifies an appropriate reduction in reactor power within 4 hours, Required Action B.2 specifies that the Power Range Neutron Flux-High reactor trip setpoint be reduced within 72 hours.

The maximum THERMAL POWER corresponding to the heat removal capacity of the remaining OPERABLE MSSVs is determined with an appropriate allowance for Nuclear Instrumentation System trip channel uncertainties.

Required Acton B.2 is modified by a Note, indicating that the Power Range Neutron Flux-High reactor trip setpoint reduction is only required in MODE 1. In MODES 2 and 3 the reactor protection system trips specified in LCO 3.3.1, "Reactor Trip System Instrumentation," provide sufficient protection.

The allowed Completion Times are reasonable based on operating experience to accomplish the Required Actions in an orderly manner without challenging unit systems.

CB.1 and CB.2

If the Required Actions are not completed ~~MSSVs cannot be restored to OPERABLE status~~ within the associated Completion Time, or if one or more steam generators have ≥ 4 inoperable ~~less than two~~ MSSVs ~~OPERABLE~~, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. CP-3.7-15 Q-3.7.1-4

SURVEILLANCE REQUIREMENTS

SR 3.7.1.1

This SR verifies the OPERABILITY of the MSSVs by the verification of each MSSV lift setpoint in accordance with the Inservice Testing Program. The ASME Code, Section XI (Ref. ~~4~~ ~~5~~ 4), requires that safety and relief valve tests be performed in accordance with ANSI/ASME OM-1-1987 (Ref. ~~5~~ ~~6~~ 5). According to Reference ~~5~~ ~~6~~ 5, the following tests are required: CP-3.7-13

a. Visual examination;

e. Verification of the balancing device integrity on balanced valves.

The ANSI/ASME Standard requires that all valves be tested every 5 years, and a minimum of 20% of the valves be tested every 24 months. The ASME Code specifies the activities and frequencies necessary to satisfy the requirements. Table 3.7.1-2 allows a ± 3% setpoint tolerance for OPERABILITY; however, the valves are reset to ± 1% during the Surveillance to allow for drift. The lift settings, according to Table 3.7.1-2 correspond to ambient conditions of the valve at nominal operating temperature and pressure. Q-3.7.1-4

This SR is modified by a Note that allows entry into and operation in MODE 3 prior to performing the SR. The MSSVs may be either bench tested or tested in situ at hot conditions using an assist device to simulate lift pressure. If the MSSVs are not tested at hot conditions, the lift setting pressure shall be corrected to ambient conditions of the valve at operating temperature and pressure.

REFERENCES

1. FSAR, Section 10.3.1 and 10.3.2. Q-3.7.1-4

2. ASME, Boiler and Pressure Vessel Code, Section III, Article NC-7000, Class 2 Components. CP-3.7-015

3. FSAR, ~~Section~~ Chapter 15.

4. ASME, Boiler and Pressure Vessel Code, Section XI.

5. ANSI/ASME OM-1-1987.

(Continued)