1.0 USE AND APPLICATION

1.1 DEFINITIONS

ENGINEERED SAFETY FEATURES (ESF) RESPONSE TIME

~~1.14~~ The ~~ENGINEERED SAFETY FEATURES (ESF)~~ RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF ~~a~~Actuation ~~s~~Setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays where applicable. The response time may be ~~verified~~ measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured ~~verified~~. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.

1-08-A

1-08-A
Q-1.1-4

~~FREQUENCY NOTATION~~

~~1.15 The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.1.~~

1-09-A

~~(NEW) L_a~~

~~The maximum allowable primary containment leakage rate, L_a, shall be 0.10 % of primary containment air weight per day at the calculated peak containment pressure (P_a).~~

~~1-10-A~~
Q-3.6.1-6

~~IDENTIFIED~~ LEAKAGE

1-11-A

LEAKAGE shall be:

~~1.16~~ a. Identified ~~IDENTIFIED~~ Leakage ~~LEAKAGE shall be~~:

1. ~~a.~~ LEAKAGE ~~Leakage~~ ~~(except CONTROLLED LEAKAGE) into closed systems~~, such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), ~~leaks~~ that is ~~are~~ captured and conducted to collection systems or a sump or collecting tank~~;~~. ~~or~~

2. ~~b.~~ LEAKAGE ~~Leakage~~ into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of ~~L~~Leakage ~~d~~Detection ~~s~~Systems or not to be pressure boundary ~~PRESSURE BOUNDARY~~ LEAKAGE~~;~~ or

3. ~~c.~~ Reactor Coolant System (RCS) LEAKAGE ~~leakage~~ through a steam generator (SG) to the Secondary ~~Coolant~~ System~~;~~

1.0 USE AND APPLICATION

1.1 DEFINITIONS

RATED THERMAL POWER (RTP)

~~1.28~~ RTP ~~RATED THERMAL POWER~~ shall be a total reactor core heat transfer rate to the reactor coolant of 3411 Mwt. 1-01-A

REACTOR TRIP SYSTEM (RTS) RESPONSE TIME

~~1.29~~ The RTS ~~REACTOR TRIP SYSTEM~~ RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its RTS t~~T~~rip s~~S~~etpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be ~~verified~~ measured by means of any series of sequential, overlapping, or total steps so that the entire response time is ~~verified~~ measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC. 1-08-A

1-08-A
Q-1.1-4

~~REPORTABLE EVENT~~

~~1.30 A REPORTABLE EVENT shall be any of those conditions specified in 10CFR50.73.~~ 1-19-A

SHUTDOWN MARGIN (SDM)

~~1.31~~ SDM ~~SHUTDOWN MARGIN~~ shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all rod cluster control assemblies (RCCAs) ~~(shutdown and control)~~ are fully inserted except for the single RCCA ~~rod cluster assembly~~ of highest reactivity worth which is assumed to be fully withdrawn. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and 1-20-M

(NEW) In MODES 1 And 2, the fuel and moderator temperatures are changed to the hot zero power temperatures.

~~SITE BOUNDARY~~ 1-24-A

~~1.32 The SITE BOUNDARY shall be that line as shown in Figure 5.1-3.~~

SLAVE RELAY TEST

~~1.33~~ A SLAVE RELAY TEST shall consist of ~~be the~~ energizingation ~~of~~ each required slave relay and verifyingication of the OPERABILITY of each required slave relay. The SLAVE RELAY TEST shall include, ~~as a minimum,~~ a continuity check, ~~as a minimum,~~ of associated required testable actuation devices. The SLAVE RELAY TEST may be performed by means of any series of sequential, overlapping or total steps. 1-01-A

1-30-A
Q-1.1-1

CHANGE NUMBER	NSHC	DESCRIPTION
1-06	LS-1	The current TS definition for Core Alterations would be modified consistent with NUREG-1431, to qualify a core alteration as movement of fuel, sources, or other reactivity control components. This proposed change is less restrictive since the current TS definition defines the movement of any component within the reactor vessel with fuel in the vessel as a Core Alteration. The proposed revision more explicitly defines those operations that have a potential for adding positive reactivity to the core and excluding from the definition the use of "non-core" components (such as cameras, lights, etc.) that would not significantly alter core reactivity. This would allow movement of other components within the reactor vessel (with fuel in the vessel) that would have no effect on core reactivity. The proposed change would continue to maintain the required level of safety while eliminating unnecessary restrictions on the movement of items such as cameras, etc. The proposed change would continue to allow the application of appropriate limits to the movement of components that could affect core reactivity. ~~However,~~ sSince the proposed definition would limit core alterations to those manipulations that could affect core reactivity, the proposed change is acceptable from the standpoint of the health and safety of the public. Q-1.1-3
1-07	A	Not applicable to CPSES. See Conversion Comparison Table (enclosure 3B).
1-08	A	The current TS definitions for Engineered Safety Features Response Time and Reactor Trip System Response Time would be ~~modified to be~~ consistent with NUREG-~~1431~~ Rev 1, as modified by TSTF-111. ~~In addition, the term "measured" would be replaced by "verified" to be consistent with the requirements of improved TS SR 3.3.1.16 and SR 3.3.2.10 to verify response time is within limits.~~ The addition of the statement that response time may be ~~verified~~ measured by means of any series of sequential, overlapping, or total steps so that the entire response time is ~~verified~~ measured, is administrative in nature. This is consistent with the methodology presently described in the current TS Bases for demonstrating total channel response time. Likewise, the addition of the statement that response times for selected components may be verified by other means approved by NRC is also administrative in nature since it allows no response time testing change unless NRC approval has been first obtained. This statement is consistent with Section 6.3.4 of IEEE 338-1977, traveler TSTF-111, and approved topical reports on response time testing verification methodology. Q-1.1-4

CONVERSION COMPARISON TABLE - CURRENT TS 1.0

TECH SPEC CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
1-01 A	These definitions would be reworded to be consistent with NUREG-1431. The proposed rewording included in this category does not involve any changes of a technical nature.	Yes	Yes	Yes	Yes
1-02 A	The CPSES definitions for Analog Channel Operational Test and Digital Channel Operational Test would be combined into a single definition of Channel Operational Test (COT).	No - do not have the Digital Channel Operational test definition.	Yes	No - do not have the Digital Channel Operational test definition.	No - "Digital" is not included in current TS.
1-03 M	The definition of channel calibration is reworded. The revised wording provides additional detail concerning calibration of instrument channels with RTDs or thermocouples.	Yes	Yes	Yes	Yes
1-04 ALG	This definition would no longer be used and the specifications in Section 3.6 would be revised accordingly. The current TS definition for Containment Integrity would be deleted. It has been replaced with the new requirement of Improved TS 3.6.1 for containment to be OPERABLE.	Yes	Yes	Yes	Yes; See also improved TS 5.5.6 and 5.5.16. Q-3.6.1-1
1-05 A	The current TS definition for Controlled Leakage would be deleted.	Yes	Yes	No. See Change Number 1-28-LG.	No. See Change Number 1-28-LG.
1-06 LS-1	The current TS definition for Core Alterations would be modified to qualify a core alteration as movement of fuel, sources, or other reactivity control components.	No - Already in CTS.	Yes	~~Yes~~No - Amendment 109 incorporated STS wording.	Yes Q-1.1-3
1-07 A	The location of the thyroid dose conversion factors used for DOSE EQUIVALENT I-131 have been added.	Yes	No - Already in CTS.	No - Already in CTS.	No - Already in CTS.
1-08 A	The current TS definitions for Engineered Safety Features Response Time and Reactor Trip System Response Time would be modified. ~~In addition, the term "measured" would be replace by "verified" to be consistent with the requirements of improved TS SR 3.3.1.16 and SR 3.3.2.10 to verify response time is within limits.~~	Yes	Yes	Yes	Yes Q-1.1-4

INDUSTRY TRAVELERS APPLICABLE TO SECTION 1.0

TRAVELER #	STATUS	DIFFERENCE #	COMMENTS
TSTF-19, Rev 1	~~Not~~ Incorporated	~~NA~~1.1-12	~~NRC approved. Not approved as of traveler cut-off date.~~ TR-1.0-006
~~TSTF-39, Rev 1~~ TSTF-205	Incorporated	1.1-9 1.1-1	Q-1.1-1
~~TSTF-64~~	~~Incorporated~~	~~1.1-1~~	Q-1.1-2
~~TSTF-88~~	~~Incorporated~~	~~1.1-8~~	Q-1.1-9
~~TSTF-52, Rev 1~~	Incorporated	1.1-13	Incorporated changes per NRC comments ~~Draft Rev.1 per Q3.6.1-6~~ Q-3.6.1-6
TSTF-111, Rev ~~14~~	Incorporated	1.1-5	Q-1.1-4
~~WOG-67, Rev 1~~ TSTF-233	Incorporated	1.1-6	NRC approved. Q-1.1-5
~~WOG-74, Rev 1~~ TSTF-270	Incorporated	1.1-3	Q-1.4-1
~~WOG-90, Rev 1~~ TSTF-267	Incorporated	1.1-11	Q-1.4-1

1.1 Definitions (continued)

AVERAGE DISINTEGRATION ENERGY	shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives > ~~15~~ 10 minutes, making up at least 95% of the total noniodine activity in the coolant.
ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME	The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be ~~measured / verified~~ measured by means of any series of sequential, overlapping, or total steps so that the entire response time is ~~measured / verified~~ measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.
~~L_a~~	~~The maximum allowable primary containment leakage rate, L_a, shall be 0.10 % of primary containment air weight per day at the calculated peak containment pressure (P_a).~~
LEAKAGE	LEAKAGE shall be: a. Identified LEAKAGE 1. LEAKAGE, such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank; 2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary LEAKAGE; or 3. Reactor Coolant System (RCS) LEAKAGE through a steam generator (SG) to the Secondary System;

B-PS

1.1-5

1.1-5
Q-1.1-4

1.1-13
Q-3.6.1-6

(continued)

1.1 Definitions (continued)

PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, ~~the power operated relief valve (PORV) lift settings and the LTOP arming temperature associated with the Low Temperature Overpressurization Protection (LTOP) System~~, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.6. Plant operation within these ~~operating~~ limits is addressed in ~~individual specifications. LCO 3.4.3, "RCS Pressure and Temperature (P/T) Limits," and LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System."~~ LCO 3.4.3, "RCS Pressure and Temperature (P/T) Limits," and LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System."
QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of ~~2893~~ 3411 MWt.
REACTOR TRIP SYSTEM (RTS) RESPONSE TIME	The RTS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be ~~measured~~ ~~verified~~ measured by means of any series of sequential, overlapping, or total steps so that the entire response time is ~~measured~~ ~~verified~~ measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming: a. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the ~~nominal zero power design level~~ hot zero power temperatures.

1.1-6

~~1.1-6~~
Q-1.1-5

B-PS

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1.1-5
Q-1.1-4

B-PS

JUSTIFICATIONS FOR DIFFERENCES FROM NUREG-1431
Section 1.0

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
1.1-1	The NUREG-1431 Rev. 1 definitions of Channel Calibration, Channel Operational Test and Trip Actuating Device Operational Test use language to describe the scope of testing similar to, ~~states, "The CHANNEL CALIBRATION shall encompass~~ "the entire channel, including the required sensor, alarm, interlock, display, and trip functions". The word "required" is ambiguous and subject to misinterpretation as to whether the list is inclusive or representative. This change clarifies what components are included by specifying "all devices in the channel required for channel OPERABILITY". A similar clarification is provided for the Actuation Logic Test. ~~encompasses the entire channel by rewording the definition to state, "The CHANNEL CALIBRATION shall encompass those components, such as sensors, alarms, displays, and trip functions, required to perform the specified safety function(s)." The Channel Operational Test and Trip Actuating Device Operational Test definitions are similarly revised.~~ This change is consistent with TSTF-205. ~~64.~~ Q-1.1-2
1.1-2	Not used.
1.1-3	Adds new example to ITS 1.4 to clarify meaning of SR notes of the type "Only required to be performed in MODE..." This change is consistent with traveler ~~WOG-74, Rev 1~~ TSTF-270. Q-1.4-1
1.1-5	The definitions for ESF Response Time and RTS Response Time ~~are would be~~ revised ~~to substitute the word "verified" in lieu of "measured" consistent with the requirements of NUREG-1431 SR 3.3.1.16 and SR 3.3.2.10. This change would ensure consistency between the definitions for Response Time and the requirements to periodically verify Response Time is within limits. This change is~~ consistent with TSTF-111, ~~Rev 1.~~ The addition of the statement that response times for selected components may be verified by other means approved by NRC is administrative in nature since it allows no response time testing change unless NRC approval has been first obtained. This statement is consistent with Section 6.3.4 of IEEE 338-1977, traveler TSTF-111, and approved topical reports on response time testing verification methodology. Q-1.1-4

DIFFERENCE FROM NUREG-1431		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
1.1-1	This change would clarify ~~what encompasses the entire channel by rewording~~ the definitions ~~of to state, "The~~ CHANNEL CALIBRATION,~~COT and TADOT shall encompass~~ by replacing the existing ambiguous wording with "all devices in the channel required for channel OPERABILITY,"~~those components, such as sensors, alarms, displays, and trip functions, required to perform the specified safety function(s)~~". The Actuation Logic Test, ~~COT and TADOT~~ definitions ~~are~~ is similarly revised	Yes	Yes	Yes	Yes Q-1.1-2
1.1-2	Not used	NA	NA	NA	NA
1.1-3	Adds new example to ITS 1.4 to clarify meaning of SR notes of the type "Only required to be performed in MODE..".	Yes	Yes	Yes	Yes
1.1-4	Not used	N/A	N/A	N/A	N/A
1.1-5	The definitions for ESF Response Time and RTS Response Time would be revised, ~~to substitue the word "verified" in lieu of "measured" consistent with the requirements of NUREG-1431 SR 3.3.1.16 and SR 3.3.2.10.~~	Yes	Yes	Yes	Yes Q-1.1-4
1.1-6	The definition of the Pressure and Temperature Limits Report would be revised to include the maximum allowable PORV lift settings and the arming temperature associated with the system, and to be consistent with the COLR definition.	Yes	Yes	Yes	Yes
1.1-7	The definition of Channel Functional Test in the current TS will be retained in the improved TS. This definition is not in NUREG-1431 Rev 1.	Yes	No - Not part of current TS.	No - Not part of current TS.	No - Not part of current TS.

INDUSTRY TRAVELERS APPLICABLE TO SECTION 3.3

TRAVELER #	STATUS	DIFFERENCE #	COMMENTS
TSTF-19, Rev. 1	~~Not~~ Incorporated	NA	~~Not NRC approved as of cut-off date.~~ Approved by the NRC. Bases changes only. TR-3.3-004
~~TSTF-36, Rev. 2~~	~~Incorporated~~	~~3.3-34~~	Q-3.3-34
TSTF-37, Rev. 1	Not Incorporated	NA	ITS 5.6.8 still addresses PAM reports. Sections after ITS 5.6.7 were not renumbered.
TSTF-51	Not Incorporated	NA	Requires plant-specific reanalysis to establish decay time dependence for fuel handling accident.
~~TSTF-91~~	~~Not Incorporated~~	~~NA~~	~~[ ] Allowable Values for loss of voltage and degraded voltage will remain in the TS.~~ TR-3.3-005
TSTF-111, Rev. ~~14~~	Incorporated	NA	Q-1.1-4
TSTF-135, Rev. 3	~~Partially~~ Incorporated	3.3-41, 3.3-44 3.3-90, 3.3-91, 3.3-93, 3.3-95, 3.3-106, 3.3-122, 3.3-142	~~Traveler is too broad scope in nature; should have been several separate travelers. Portions of the traveler that significantly clarify operability requirements have been incorporated.~~ TR-3.3-006
TSTF-161, Rev. 1	Incorporated	3.3-79	Approved by the NRC Q-3.3-79
TSTF-168	Incorporated	3.3-43	Approved by the NRC Q-3.3-43
TSTF-169	Incorporated	3.3-42	Approved by the NRC. TR-3.3-003
~~WOG-106~~ TSTF-242	Incorporated	3.3-49	Q-3.3-49
~~TSTF-246 Proposed traveler~~	Incorporated	3.3-107	~~WOG Mini-Group Action Item #145.~~ Q-3.3-107

Surveillance. Performance of this test will ensure that the turbine trip Function is OPERABLE prior to taking the reactor critical. This test cannot be performed with the reactor at power and must therefore be performed prior to reactor startup.

SR 3.3.1.16

SR 3.3.1.16 verifies that the required individual channel/train actuation response times are less than or equal to the maximum values assumed in the accident analysis. Response time ~~testing~~ testing ~~verification~~, required channels, and acceptance criteria are included in Technical Requirements Manual, (Ref. 6). Individual component response times are not modeled in the analyses. The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the trip setpoint value at the sensor ~~to the point at which the equipment reaches the required functional state (i.e., control and shutdown rods fully inserted in the reactor core)~~until loss of stationary gripper coil voltage. Q-1.1-4

For channels that include dynamic transfer Functions (e.g., lag, lead/lag, rate/lag, etc.), the response time ~~test may be test may be verification is~~ performed with the transfer Function time constants ~~set to one, with the resulting measured response time compared to the appropriate FSAR response time. Alternately, the response time test can be performed with the time constants set~~ to their nominal values~~, provided the required response time is analytically calculated assuming the time constants are~~ set at their nominal values. ~~The response time may be measured by a series of overlapping tests such that the entire response time is measured.~~

~~Response time may be verified by actual response time tests in any series of sequential, overlapping or total channel measurements such that the entire response time is verified.~~

~~The sensor response times must be verified prior to placing the component in operational service and re-verified following maintenance that may adversely affect response time. In general, electrical repair work does not impact response time provided the parts used for repair are of the same type and value. One example where response time could be affected is replacing the sensing assembly of a transmitter.~~
Response time may be verified by actual response time tests in any series of sequential, overlapping or total channel measurements, or by the summation of allocated sensor, signal processing and actuation logic response times with actual response time tests on the remainder of the channel. Allocations Q-1.1-4

for sensor response times may be obtained from: (1) historical records based on acceptable response time tests (hydraulic, noise, or power interrupt tests), (2) in place, onsite, or offsite (e.g., vendor) test measurements, or (3) utilizing vendor engineering specifications. WCAP-13632-P-A, Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements," provides the basis and methodology for using allocated sensor response times in the overall verification of the channel response time for specific sensors identified in the WCAP. Response time verification for other sensor types must be demonstrated by test.

Q-1.1-4

[WCAP-14036-P, Revision 1, "Elimination of Periodic Protection Channel Response Time Tests," provides the basis and methodology for using allocated signal processing and actuation logic response times in the overall verification of the protection system channel response time.] The allocations for sensor, signal conditioning, and actuation logic response times must be verified prior to placing the component in operational service and re-verified following maintenance that may adversely affect response time. In general, electrical repair work does not impact response time provided the parts used for repair are of the same type and value. Specific components identified in the WCAP may be replaced without verification testing. One example where response time could be affected is replacing the sensing assembly of a transmitter.

BASES

As appropriate, each required channel's response time must be verified every 18 months on a STAGGERED TEST BASIS. Each verification shall include at least one train such that both trains are verified at least once per 36 months. Testing of the final actuation devices is included in the ~~testing~~ ~~verification~~ testing. Response times cannot be determined during unit operation because equipment operation is required to measure response times. Experience has shown that these components usually pass this surveillance when performed at the 18 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint. Q-1.1-4

SR 3.3.1.16 is modified by a Note stating that neutron detectors and N-16 power monitors are excluded from RTS RESPONSE TIME testing. This Note is necessary because of the difficulty in generating an appropriate detector input signal. Excluding the detectors is acceptable because the principles of detector operation ensure a virtually instantaneous response. Response time of the neutron flux or N-16 signal portion of the channel shall be measured from detector output or input to the first electronic component in the channel.

REFERENCES

1. ~~FSAR, Chapter [7].~~ FSAR, Chapter 7.
2. ~~FSAR, Chapter [6].~~ FSAR, Chapter 15.
3. ~~FSAR, Chapter [15].~~ IEEE-279-1971.
4. ~~IEEE-279-1971.~~ 10 CFR 50.49.
5. WCAP-10271-P-A, Supplement 2, Rev. 1, June 1990.
6. ~~RTS/ESFAS Setpoint Methodology Study.~~ Technical Requirements Manual.
7. ~~WCAP-10271-P-A, Supplement 2, Rev. 1, June 1990.~~ Not Used.
8. ~~Technical Requirements Manual, Section 15, "Response Times."~~ NRC Generic letter 85-09, dated may 23, 1985.
8. WCAP-13632-P-A, Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements," January 1996. Q-1.1-4

BASES

SR 3.3.2.10

This SR ensures ~~verifies~~ the required individual channel ESF RESPONSE TIMES are less than or equal to the maximum values assumed in the

Q-1.1-4

accident analysis. Response Time ~~testing verification~~ required channels, and acceptance criteria are included in the Technical Requirements Manual (Ref. 7). When the response time for a function in the TRM is NA, no specific testing need be performed to comply with this SR. Individual component response times are not modeled in the analyses. The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the Trip Setpoint value at the sensor, to the point at which the equipment in both trains reaches the required functional state (e.g., pumps at rated discharge pressure, valves in full open or closed position).

Q-1.1-4

Q-3.3-55

For channels that include dynamic transfer functions (e.g., lag, lead/lag, rate/lag, etc.), the response time testing may be ~~verification is~~ may be performed with the transfer functions set ~~to one with the resulting measured response time compared to the appropriate FSAR response time. Alternately, the response time test can be performed with the time constants set to their nominal value provided the required response time is analytically calculated assuming the time constants are set~~ at their nominal values. The response time may be measured ~~verified~~ by a series of overlapping tests such that the entire response time is measured ~~measured, verified~~.

Q-1.1-4

~~In addition, allocations for other circuit constituent portions of the total response time may be used instead of test measurements if justified in accordance with IEEE 338-1977, Section 6.3.4.~~

Q-3.3-55

Response time may be verified by actual response time tests in any series of sequential, overlapping or total channel measurements, or by the summation of allocated sensor, signal processing and actuation logic response times with actual response time tests on the remainder of the channel. Allocations for sensor response times may be obtained from: (1) historical records based on acceptable response time tests (hydraulic, noise, or power interrupt tests), (2) in place, onsite, or offsite (e.g., vendor) test measurements, or (3) utilizing vendor engineering specifications. WCAP-13632-P-A, Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements," dated January 1996, provides the basis and methodology for using allocated sensor response times in the overall verification of the channel response time for specific sensors identified in the WCAP. Response time verification for other sensor types must be demonstrated by test.

Q-1.1-4

(continued)

BASES

~~[WCAP-14036-P, Revision 1, "Elimination of Periodic Protection Channel Response Time Tests," provides the basis and methodology for using allocated signal processing and actuation logic response times in the overall verification of the protection system channel response time.]~~ The allocations for sensor, signal conditioning, and actuation logic response times must be verified prior to placing the component in operational service and re-verified following maintenance that may adversely affect response time. In general, electrical repair work does not impact response time provided the parts used for repair are of the same type and value. Specific components identified in the WCAP may be replaced without verification testing. One example where response time could be affected is replacing the sensing assembly of a transmitter.

Q-1.1-4

ESF RESPONSE TIME ~~tests are~~ verification is performed on an 18 month STAGGERED TEST BASIS. ~~The testing~~ Each verification shall include at least one train such that both trains are ~~tested~~ verified at least once per 36 months. Testing of the final actuation devices, which make up the bulk of the response time, is included in the ~~testing~~ verification testing of each channel. The final actuation device in one train is tested with each channel. Therefore, staggered testing results in response time verification of these devices every 18 months. The 18 month Frequency is consistent with the typical refueling cycle and is based on unit operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

Q-1.1-4

This SR is modified by a Note that clarifies that the turbine driven AFW pump is tested within 24 hours after reaching ~~1000~~ 532 psig in the SGs.

Q-3.3-G-1

BASES (continued)

5 10 CFR 50.49.

6. WCAP-10271-P-A, Supplement 2, Rev. 1, June 1990.

7. Technical Requirements Manual.

~~8. WCAP-13632, Rev. 1~~

8. WCAP-13632-P-A, Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements," January 1996.

Q-1.1-4

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.4.9-3 **APPLICABILITY:** CP, WC

REQUEST: Difference 3.4.17 (Wolf Creek, Diablo Canyon and Comanche Peak)

> **Comment**: TSTF-93 Rev. 3 was approved with a reviewer's note which says that for non-dedicated safety-related heaters which normally operate the frequency is 18 months and for dedicated safety-related heaters which normally don't operate the frequency is 92 days. Each of the plants is asking for the 18 month frequency but it is unclear from the submittals if they meet the criterion. Please provide information demonstrating consistency with the TSTF.

FLOG RESPONSE (original): DCPP and WCGS have two-groups of non-safety related pressurizer backup heaters. The pressurizer heaters, together with the pressurizer spray valves, are used to control RCS pressure.

For DCPP, the NRC recently approved (6/5/98) changing the CTS SR 4.4.3.2 from 92 day to "Refueling Interval" in L:A 126/124.

For Comanche Peak, the pressurizer heaters used to satisfy the pressure control function are comprised of one proportional control group and three backup groups. The design and operation is consistent with the basis for an 18 month surveillance described in Section 6.6 of NUREG-1366 (which was the basis for TSTF-93). The heater groups are normally connected to the emergency power supplies (two to each Class 1E train of emergency power) and normally operate. CPSES will revise the 3.4.9 BASES to reflect the NUREG-1366 basis for the 18 month frequency.

FLOG RESPONSE (supplement): TSTF-93, Rev. 2, contains the following Reviewer's Note, "The frequency for performing Pressurizer heater capacity testing shall be either 18 months or 92 days, depending on whether or not the oplant has dedicated safety-related heaters. For dedicated safety-related heaters, which do not normally operate, 92 days is applied. for non-dedicated safety-related heaters, which normally operate, 18 months is applied." As used in this note, safety-related heaters means heaters which are powered from a class 1E electrical distribution bus. Normal operation includes operation during power operations, unit start-up and/or unit shutdown. Dedicated heaters are heaters whose only function is the mitigation of a design basis event. This is consistent with Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation," which indicated that the capacity of pressurizer heaters should be tested once each refueling interval for those plants without dedicated safety-related heaters.

In all cases where a FLOG plant has used the 18 month frequency in the ITS for performing pressurizer heater capacity testing, the requirements of the Reviewer's Note identified above have been met.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.6.1-6 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: DOC 2-05 LG
DOC 2-06 A
JFD 3.6-1
CTS 4.6.1.1.c (Wolf Creek)
CTS 4.6.1.1.d (Callaway)
CTS 3/4.6.1.2 (Diablo Canyon and Comanche Peak)
STS SR 3.6.1.1
ITS SR 3.6.1.1 and Associated Bases

CTS 4.6.1.1.c/d and 3/4.6.1.2 require leak rate testing in accordance with the Containment Leakage Rate Testing Program which is based on the requirements of 10 CFR 50 Appendix J, Option B. STS SR 3.6.1.1 requires the visual examination and leakage rate testing be performed in accordance with 10 CFR 50 Appendix J as modified by approved exemptions. ITS SR 3.6.1.1 modifies STS SR 3.6.1.1 to conform to CTS 4.6.1.1.c/d and 3/4.6.1.2 as modified in the CTS markup. The STS is based on Appendix J, Option A while the CTS and ITS are based on Appendix J, Option B. Changes to the STS with regards to Option A versus Option B are covered by a letter from Mr. Christopher I. Grimes to Mr. David J. Modeen, NEI, dated 11/2/95 and TSTF-52. While the ITS SR 3.6.1.1 differences from STS SR 3.6.1.1 are in conformance with the letter and TSTF 52 as modified by staff comments, the changes to the ITS Bases as well as ITS 3.6.2 and ITS 3.6.3 and their associated Bases are not in conformance. See Comment Number 3.6.3-28 for additional concerns with regards to CTS 4.6.1.2.c and 4.6.1.2.d at Comanche Peak. Also see Comment Numbers 3.6.0-2, 3.6.2-5, 3.6.3-27, 3.6.3.28 and 3.6.3-37.

Comment: Licensees should revise their submittals to conform to the 11/2/95 letter and TSTF-52 as modified by the staff. See Comment Numbers 3.6.0-2, 3.6.2-5, 3.6.3-27, 3.6.3.28, and 3.6.3-37.

FLOG RESPONSE: (original) The 11/2/95 letter from C. Grimes (NRC) to D. Modeen (NEI), TSTF-52 proposed Revision 1 (which includes the changes proposed by the staff) were reviewed for incorporation into the ITS. Based on this review, the ITS Bases have been revised to incorporate proposed Revision 1 of TSTF-52. Revision 1 addresses the NRC comments on Revision 0 of this TSTF but has not been approved by the Tech Spec Task Force. The FLOG will continue to evaluate any NRC/industry approved revisions to TSTF-52 and will incorporate applicable changes into the ITS submittal as appropriate.

FLOG RESPONSE: (Supplemental): As discussed at the meeting on October 13-14, 1998 and in a conference call on November 19, 1998, the NRC reviewer provided specific comments that have been incorporated into this supplemental response. The FLOG understands that with these changes the NRC staff approves incorporation of TSTF-52 into the ITS.

For CPSES, the incorporation of TSTF-52 negates changes made under licensee initiated change CP-3.6-005 and thus CP-3.6-005 is withdrawn.

ATTACHED PAGES:

Attachment 4, CTS 1.0 - ITS 1.0, Definitions

Encl 5A	Traveler Status Sheet
Encl 6A	3
Encl 6B	2

Attachment No. 12 - CTS 3/4.6 - ITS 3.6

Encl 5A	Traveler Status Sheet
Encl 5B	B 3.6-1, B 3.6-2, B 3.6-4, B 3.6-5 and B 3.6-7

INDUSTRY TRAVELERS APPLICABLE TO SECTION 1.0

TRAVELER #	STATUS	DIFFERENCE #	COMMENTS
TSTF-19, Rev 1	~~Not~~ Incorporated	~~NA~~1.1-12	~~NRC approved. Not approved as of traveler cut-off date.~~ TR-1.0-006
~~TSTF-39, Rev 1~~ TSTF-205	Incorporated	1.1-9 1.1-1	Q-1.1-1
~~TSTF-64~~	~~Incorporated~~	~~1.1-1~~	Q-1.1-2
~~TSTF-88~~	~~Incorporated~~	~~1.1-8~~	Q-1.1-9
TSTF-52~~, Rev 1~~	Incorporated	1.1-13	Incorporated changes per NRC comments ~~Draft Rev.1 per Q3.6.1-6~~ Q-3.6.1-6
TSTF-111, Rev ~~1~~4	Incorporated	1.1-5	Q-1.1-4
~~WOG-67, Rev 1~~ TSTF-233	Incorporated	1.1-6	NRC approved. Q-1.1-5
~~WOG-74, Rev 1~~ TSTF -270	Incorporated	1.1-3	Q-1.4-1
~~WOG-90, Rev 1~~ TSTF-267	Incorporated	1.1-11	Q-1.4-1

CHANGE NUMBER	JUSTIFICATION
	change the intent of the Specifications. SR 3.0.2 applies if a Surveillance is not performed within the "specified Frequency". Again, the example does not change the intent of the Specifications but only makes clear the application of SR 3.0.2 and 3.0.3 to Surveillances with Frequencies tied to plant conditions. This change will eliminate confusion and misapplication of the ITS and will ensure consistent application of SR 3.0.2 and 3.0.3 to these types of Surveillance Frequencies. This change is consistent with traveler ~~WOG-90.~~ TSTF-207. Q-1.4-1
1.1-12	The definition of CHANNEL CALIBRATION is revised to move details of RTD and thermocouple calibration to the TS 3.3 Bases associated with the components consistent with TSTF-19. TR-1.0-006
1.1-13	Traveler TSTF-52, ~~Draft Revision 1,~~ deletes the definition of L_a. Since L_a is defined in 10CFR50, Appendix J and ITS Section 5.5-16, Containment Leakage Rate Testing Program, it is redundant to include L_a as a definition. As described in NUMARC 93-03, "Writers Guide for the Restructured Technical Specifications," Specification 1.1 is a list of defined terms and corresponding definitions used throughout the Technical Specifications. L_a is not used throughout the Technical specifications and is defined in Section 5.5-16. Q-3.6.1-6

NUMBER	DESCRIPTION	DIABLO CANYON	COMANCH PEAK	WOLF CREEK	CALLAWAY
1.1-8	In a Callaway specific change, Note b is revised to refer to the "Required reactor vessel head closure bolts fully tensioned" and note c is revised to read "Required reactor vessel head closure bolts less than fully tensioned."	~~YesNo~~	~~YesNo~~	~~YesNo~~	Yes Q-1.1-9
1.1-9	The definitions of Channel Operational Test (COT), Master Relay Test, Slave Relay Test, [ ] and Trip Actuating Device Operational Test (TADOT) are expanded to include the details of acceptable performance methodology. Performance of these tests in a series of sequential, overlapping, or total ~~channel~~ steps provides the necessary assurance of appropriate operation of the entire channel, relay or device, respectively.	Yes	Yes	Yes	Yes Q-1.1-1
1.1-10	This change is based on the current TS definition of CONTROLLED LEAKAGE. This change is a clarification only and does not affect the way RCS water inventory balances are performed.	No - Not part of CTS.	No - Not part of CTS.	No - Maintaining ISTS wording.	Yes
1.1-11	Adds new example to ITS Section 1.4 to clarify surveillance frequencies that are contingent on both specified frequency and plant conditions.	Yes	Yes	Yes	Yes
1.1-12	The definition of CHANNEL CALIBRATION is revised to move details of RTD and thermocouple calibration to the TS 3.3 Bases associated with the components consistent with TSTF-19.	Yes	Yes	Yes	Yes TR-1.0-006
1.1-13	Traveler TSTF-52, ~~Draft Revision 1,~~ deletes the definition of L_a. Since L_a is defined in 10CFR50, Appendix J and ITS Section 5.5-16, Containment Leakage Rate Testing Program, it is redundant to include L_a as a definition.	Yes	Yes	Yes	Yes Q-3.6.1-6

INDUSTRY TRAVELERS APPLICABLE TO SECTION 3.6

TRAVELER #	STATUS	DIFFERENCE #	COMMENTS
TSTF-17 Rev. 1	Incorporated	3.6-2	NRC approved.
TSTF-30 Rev. 2 ~~1~~	Incorporated	3.6-4	Not applicable to Wolf Creek and Callaway TR-3.6-002
TSTF-45 Rev. 1	Incorporated	3.6-5	NRC approved.
TSTF-46 Rev. 1	Incorporated	3.6-7	NRC approved.
TSTF-51	Not incorporated	NA	Not NRC approved as of traveler cut-off date.
TSTF-52 ~~Rev. 1~~	Incorporated	3.6-1	Incorporated changes per NRC comments. ~~draft Rev. 1.~~ Q-3.6.1-6
TSTF-145	Not incorporated	NA	Not NRC approved as of traveler cut-off date.
~~WOG-91 TSTF-269~~	Incorporated	3.6-11 ~~3.6-12~~	NRC approved Q-3.6.3-11

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1 Containment ~~(Atmospheric)~~

BASES

BACKGROUND

The containment consists of the concrete reactor building, its steel liner, and the penetrations through this structure. The structure is designed to contain radioactive material that may be released from the reactor core following a ~~Design~~ design ~~Basis~~ basis Loss of Coolant Accident ~~(DBA)~~ (DBA). Additionally, this structure provides shielding from the fission products that may be present in the containment atmosphere following accident conditions.

~~GP-3.6-05~~
Q-3.6.1-06

The containment is a reinforced concrete structure with a cylindrical wall, a flat foundation mat with a reactor cavity pit projection, and a ~~shallow~~ hemispherical dome roof. The inside surface of the containment is lined with a carbon steel liner to ensure a high degree of leak tightness during operating and accident conditions.

~~For containments with ungrouted tendons, the cylinder wall is prestressed with a post tensioning system in the vertical and horizontal directions, and the dome roof is prestressed utilizing a three way post tensioning system.~~

The concrete reactor building is required for structural integrity of the containment under Design Basis Accident (DBA) conditions. The steel liner and its penetrations establish the leakage limiting boundary of the containment. Maintaining the containment OPERABLE limits the leakage of fission product radioactivity from the containment to the environment. SR 3.6.1.1 leakage rate requirements comply with 10 CFR 50, Appendix J, Option B (Ref. 1), as modified by approved exemptions.

~~GP-3.6-05~~
Q-3.6.1-06

Q-3.6.1-06

The isolation devices for the penetrations in the containment boundary are a part of the containment leak tight barrier. To maintain this leak tight barrier:

a. All penetrations required to be closed during accident conditions are either:

   1. capable of being closed by an OPERABLE automatic containment isolation system, or

(continued)

BASES

BACKGROUND (continued)

2. closed by manual valves, blind flanges, or de-activated automatic valves secured in their closed positions, except as provided in LCO 3.6.3, "Containment Isolation Valves"

b. Each air lock is OPERABLE, except as provided in LCO 3.6.2, "Containment Air Locks";

c. All equipment hatches are closed and sealed; and Q-3.6.1-02

d. The ~~pressurized~~ sealing mechanism associated with a penetration (e.g. welds, bellows, or O-rings) is OPERABLE. ~~except as provided in LCO 3.6.[ ]~~.

APPLICABLE SAFETY ANALYSES

The safety design basis for the containment is that the containment must withstand the pressures and temperatures of the limiting DBA without exceeding the design leakage rate.

The DBAs that result in a challenge to containment OPERABILITY from high pressures and temperatures are a loss of coolant accident (LOCA), a steam line break and a rod ejection accident (REA) (Ref. 2 and ~~23~~). In addition, release of significant fission product radioactivity within containment can occur from a LOCA or REA. In the DBA analyses, it is assumed that the containment is OPERABLE such that, for these DBAs involving release of fission product radioactivity, release to the environment is controlled by the rate of containment leakage. The containment was designed with an allowable leakage rate of 0.1% of containment air weight per day (Ref. ~~32~~ and 3). This leakage rate, used to evaluate offsite doses resulting from accidents, is defined in 10 CFR 50, Appendix J, Option B (Ref. 1), as L_a: the maximum allowable containment leakage rate at the calculated peak containment internal pressure (P_a) resulting from the limiting ~~design basis LOCA DBA~~. The allowable leakage rate represented by L_a forms the basis for the acceptance criteria imposed on all containment leakage rate testing. L_a is assumed to be 0.1% of containment air weight per day in the safety analysis at P_a = ~~44.1~~ 48.3 psig. The calculated peak pressure for LOCAs is less than 48.3 psig (Ref. 3).

CP-3.6-06

Q-3.6.0-02
CP-3.6-06
Q-3.6.1-06

Q-3.6.0-2
CP-3.6-08

Satisfactory leakage rate test results are a requirement for the establishment of containment OPERABILITY.

The containment satisfies Criterion 3 of ~~the NRC Policy~~

(continued)

BASES

B.1 and B.2

If containment cannot be restored to OPERABLE status within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.1

Maintaining the containment OPERABLE requires compliance with the visual examinations and leakage rate test requirements of the Containment Leakage Rate Testing Program ~~10 CFR 50, Appendix J (Ref. 1), as modified by approved exemptions~~. Failure to meet air lock and purge valve with resilient seal leakage limits specified in LCO 3.6.2 and LCO 3.6.3 does not invalidate the acceptability of these overall leakage determinations unless their contribution to overall Type A, B, and C leakage causes that to exceed limits. ~~As left leakage prior to the first startup after performing a required 10 CFR 50, Appendix J, leakage test is required to be < 0.6 L_a for combined Type B and C leakage, and < 0.75 L_a for overall Type A leakage. At all other times between required leakage rate tests, the acceptance criteria is based on an overall Type A leakage limit of ≤ 1.0 L_a. At ≤ 1.0 L_a the offsite dose consequences are bounded by the assumptions of the safety analysis.~~ As left leakage prior to the first startup after performing a required Containment Leakage Rate Testing Program leakage test is required to be ≤ 0.6 L_a for combined Type B and C leakage, and ≤ 0.75 L_a for overall Type A leakage. At all other times between required leakage rate tests, the acceptance criteria is based on an overall Type A leakage limit of ≤ 1.0 L_a. At ≤ 1.0 L_a the offsite dose consequences are bounded by the assumptions of the safety analysis. SR Frequencies are as required by ~~Appendix J, as modified by approved exemptions~~ the Containment Leakage Rate Testing Program. ~~Thus, SR 3.0.2 (which allows Frequency extensions) does not apply.~~ These periodic testing requirements verify that the containment leakage rate does not exceed the leakage rate assumed in the safety analysis.

Q-3.6.0-02

Q-3.6.1-06

~~Leakage rate testing is performed in accordance with the Containment Leakage Rate Testing Program. Testing with~~

Q-3.6.3-30

BASES

~~water as an alternative is allowed for specific system configurations. Credit may be taken for a 30 day water seal that will be maintained to prevent containment atmosphere leakage through the penetration to the environment. The following is a list of the containment isolation valves that meet this system configuration and the Maximum Allowed Leakage Rate (MALR) required to maintain the water seal for 30 days:~~

Q-3.6.3-30

Valve No.	MALR (cc/hr)
1-8809A	77
1-8809B	77
2-8809A	75
2-8809B	73
[illegible] 8840	2577
[illegible] 340	2382
[illegible] 142	4734
[illegible] 145	4734
[illegible] 4776	4734
HV 4777	4734

~~SR 3.6.1.2~~

~~For ungrouted, post tensioned tendons, this SR ensures that the structural integrity of the containment will be maintained in accordance with the provisions of the Containment Tendon Surveillance Program. Testing and Frequency are consistent with the recommendations of Regulatory Guide 1.35 (Ref. 4).~~

Q-3.6.0-02

REFERENCES

1. 10 CFR 50, Appendix J, Option B.

Q-3.6.1-06

2. FSAR, Chapter 15.

3. FSAR, Section 6.2.

~~4. Regulatory Guide 1.35, Revision [1].~~

~~4. Regulatory Guide 1.163 (September 1995).~~

CP-3.6-07

BASES

fission products to the environment is controlled by the rate of containment leakage. The containment was designed with an allowable leakage rate of 0.1% of containment air weight per day (Ref. ~~2~~3). This leakage rate is defined in 10 CFR 50, Appendix ~~J, Option B as L_a (Ref. 1), as L_a = 0.1% of containment air weight per day~~ (Ref. 1), as L_a = 0.1% of containment air weight per day, the maximum allowable containment leakage rate at the calculated peak containment internal pressure (P_a = 14.4 psig, ~~P_a = 48.3 psig,~~ following a ~~DBA~~ ~~design basis LOCA~~ DBA. This allowable leakage rate forms the basis for the acceptance criteria imposed on the SRs associated with the air locks.

CP-3.6-09

Q-3.6.1-06

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

LCO

Each containment air lock forms part of the containment pressure boundary. As part of the containment pressure boundary, the air lock safety function is related to control of the containment leakage rate resulting from a DBA. Thus, each air lock's structural integrity and leak tightness are essential to the successful mitigation of such an event.

Each air lock is required to be OPERABLE. For the air lock to be considered OPERABLE, the air lock interlock mechanism must be OPERABLE, the air lock must be in compliance with the Type B air lock leakage test, and both air lock doors must be OPERABLE. The interlock allows only one air lock door of an air lock to be opened at one time. This provision ensures that a gross breach of containment does not exist when containment is required to be OPERABLE. Closure of a single door in each air lock is sufficient to provide a leak tight barrier following postulated events. Nevertheless, both doors are kept closed when the air lock is not being used for normal entry into ~~and~~ or exit from containment.

APPLICABILITY

In MODES 1, 2, 3, and 4, a DBA could cause a release of radioactive material to containment. In MODES 5 and 6, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, the containment air locks are not required in MODE 5 to prevent leakage of radioactive material from containment. The requirements for the containment air locks during MODE 6 are addressed in LCO 3.9.~~3~~4, "Containment Penetrations."

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.6.2-6 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: JFD 3.6-2
STS SR 3.6.2.2
ITS SR 3.6.2.2 and Associated Bases

STS SR 3.6.2.2 requires verifying only one door in the airlock will open at a time at six month intervals. The interval is modified in ITS SR 3.6.2.2 from 6 months to 24 months. This modification is in accordance with TSTF-17; however, the Bases changes are not in accordance with TSTF-17.

Comment: Revise the ITS Bases to be in accordance with TSTF-17 or justify the deviations.

FLOG RESPONSE (original): The ITS Bases for SR 3.6.2.2 has been modified to conform to TSTF-17, Revision 1, and reads, "..used for entry and exit (procedures require strict adherence to single door opening), this test is only required to be performed every 24 months. The 24 month Frequency is based on the need to perform this surveillance under the conditions that apply during a plant outage and the potential for loss of containment OPERABILITY when the Surveillance is performed with the reactor at power. The 24 month Frequency for the interlock is justified based on generic operating experience. The Frequency is based on engineering judgement and is considered adequate given that the interlock is not challenged during the use of the air lock."

FLOG RESPONSE (revised): The ITS 3.6.2 Bases have been revised for the associated surveillance requirements consistent with TSTF-17, Rev. 1.

ATTACHED PAGES:

Attachment No. 12 - CTS 3/4.6 - ITS 3.6

Encl 5B B 3.6-12

BASES (continued)

providing a fission product barrier in the event of a DBA. Note 2 has been added to this SR requiring the results to be evaluated against the acceptance criteria ~~of~~ which is applicable to SR 3.6.1.1. This ensures that air lock leakage is properly accounted for in determining the ~~overall~~ combined Type B and C containment leakage rate.

SR 3.6.2.2

The air lock interlock is designed to prevent simultaneous opening of both doors in a single air lock. Since both the inner and outer doors of an air lock are designed to withstand the maximum expected post accident containment pressure, closure of either door will support containment OPERABILITY. Thus, the door interlock feature supports containment OPERABILITY while the air lock is being used for personnel transit in and out of the containment. Periodic testing of this interlock demonstrates that the interlock will function as designed and that simultaneous opening of the inner and outer doors will not inadvertently occur. Due to the ~~purely mechanical~~ reliable nature of this interlock, and given that the interlock mechanism is ~~only~~ not normally challenged when the containment air lock door is ~~opened~~ used for entry and exit (procedures require strict adherence to single door opening), this test is only required to be performed ~~upon entering or exiting a containment air lock but is not required more frequently than every 184 days~~ every 24 months. The 24 month Frequency is based on ~~reducing~~ the need to perform this surveillance under the conditions that apply during a plant outage and the potential for loss of containment OPERABILITY ~~when~~ if the Surveillance ~~is were~~ performed with the reactor at power. ~~Operating experience has shown these components usually pass the Surveillance when performed. The 184 day~~ The 24 month Frequency for the interlock is justified ~~and~~ based on generic operating experience. The Frequency is based on engineering judgement and is considered adequate ~~in view of other indications of door and interlock mechanism status available to operations personnel~~ given that the interlock is not challenged during use of the airlock.

Q-3.6.2-6

REFERENCES

1. 10 CFR 50, Appendix J, Option B.

Q-3.6.1-06

3 2. FSAR, Section ~~3.8, 6.2, and 15~~.

3. FSAR, Section 15

CP-3.6-09

4. FSAR, Section 3.8

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.6.3-1 **APPLICABILITY:** CP, WC

REQUEST: DOC 1-04 A (CTS 1.0)
DOC 1-01 LG
CTS 1.7.a (1.8.a for Diablo Canyon)
CTS 3/4.6.1.1
CTS 4.6.1.1.b
ITS SR 3.6.3.1, SR 3.6.3.2, SR 3.6.3.3, SR 3.6.3.4, SR 3.6.3.8 and Associated Bases

CTS 1.7 (1.8 in Diablo Canyon) defines CONTAINMENT INTEGRITY. A markup of CTS 1.7/1.8 is provided in the CTS markup of CTS 1.0. DOC 1-04 A (CTS 1.0) states that the definition of CONTAINMENT INTEGRITY is deleted from the CTS/ITS. DOC 1-01 LG in CTS 3.6 states that the definition requirements have been relocated to the Bases for ITS 3.6.1. Both of these justifications are incorrect. CTS 1.7.a (1.8.a in Diablo Canyon) specifies that all penetrations required to be closed during accident conditions are either capable of being closed by an OPERABLE containment automatic isolation valve system or closed by manual valves, blind flanges or deactivated automatic valves secured in their closed positions. This requirement has been relocated to the Bases of ITS 3.6.1, but it is also the basis for ITS SR 3.6.3.1, SR 3.6.3.2, SR 3.6.3.3, SR 3.6.3.4 and SR 3.6.3.8. No justification is provided for this Administrative change in CTS 1.0.

Comment: Revise the CTS markup and provide a discussion and justification for this Administrative change.

FLOG RESPONSE (original): DOC 1-35 A (CTS 1.0) has been added to read; "CTS 1.7.a (1.8.a for Diablo Canyon) specifies that all penetrations required to be closed during accident conditions are either capable of being closed by an OPERABLE containment automatic isolation valve system or closed by manual valves, blind flanges or deactivated automatic valves secured in their closed positions. Consistent with NUREG-1431, this requirement from the definition of CONTAINMENT INTEGRITY would be included in the Bases of ITS 3.6.1 and would be addressed by the combination of surveillance requirements ITS SR 3.6.3.1, SR 3.6.3.2 (not applicable to CPSES), SR 3.6.3.3, SR 3.6.3 4 and SR 3.6.3.8. This change would be classified as Administrative (A) because the requirements of CTS 1.7.a/1.8.a would be retained in the combined surveillance requirements of ITS 3.6.3, "Containment Isolation Valves."

Also, see the FLOG response to Comment 3.6.1-1 regarding the relocation of the CONTAINMENT INTEGRITY definition requirements.

FLOG RESPONSE: (supplement) As discussed at the meeting on October 13-14, 1998, WCGS is providing a revised CTS mark-up to reflect the correct DOC numbers. For CPSES, this Comment will be resolved with the resolution of Comment Number Q 3.6.3-14.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.6.3-4 **APPLICABILITY:** CP, WC, CA

REQUEST: DOC 7-03 A
CTS 4.6.1.7.1
ITS SR 3.6.3.1 and Associated Bases

CTS 4.6.1.7.1 requires the purge valves to be verified locked closed or blank flanged at least once per 31 days. The CTS has been modified to provide an allowance for one purge valve in the flow path to be open to repair excessive leakage while in the ITS Action for an inoperable purge valve due to excessive leakage. This change designated DOC 7-03 A is characterized as an Administrative change. This is incorrect. The CTS does not currently have this allowance and the change cannot be characterized as Administrative because of consistency with another Less Restrictive change. The change is a Less Restrictive change. See Comment Number 3.6.3-5.

Comment: Provide a discussion and justification for this Less Restrictive change.

FLOG RESPONSE: (original) DOC 7-03 A has been revised to be DOC 7-03 LS-26 and the discussion and justification for this Less Restrictive change has been provided.

This Comment is no longer applicable to DCPP based on response to Comment Number Q 3.6.3-5.

FLOG RESPONSE: (supplement) As discussed at the meeting on October 13-14, 1998, the CTS mark-up has been revised to reflect the revision of DOC 7-03-A to DOC 7-03-LS-26.

ATTACHED PAGES:

Attachment No. 12 - CTS 3/4.6 - ITS 3.6

Encl. 2 3/4 6-9

LIMITED CONDITION FOR OPERATION (continued)

(NEW) With one or more penetration flow paths with two isolation valves inoperable for any reason other than leakage, isolate the affected penetration flow path within 1 hour by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange, otherwise be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the next 30 hours.

7-05-A

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 Each 48-inch and 12-inch containment and hydrogen purge supply and exhaust isolation valve shall be verified* to be locked closed at least once per 31 days, except for one purge valve in a penetration flow path while in Action 3.6.1.7c as a result of measured leakage rate in excess of limits.

7-03-~~ALS~~
Q-3.6.3-4

7-10-LS

4.6.1.7.2 # At least once per 184 days and within 92 days of opening the valve ~~on a STAGGERED TEST BASIS~~, the inboard and outboard isolation valves with resilient material seals in each locked closed 48-inch and 12-inch containment and hydrogen purge supply and exhaust penetration shall be demonstrated OPERABLE by verifying ~~that~~ the measured leakage rate. ~~is less than 0.05 L_a when pressurized to P_a.~~

~~7-06-LS~~
7-14-M
7-15-A
Q-3.6.3-19

7-07-LG

4.6.1.7.3 # At least once per 184 days and within 92 days of opening the valve, each 18-inch containment pressure relief discharge isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying ~~that~~ the measured leakage rate ~~is less than 0.06 L_a when pressurized to P_a~~.

7-06-LS
7-16-A
Q-3.6.3-19
Q-3.6.3-20

7-10-LS

Leakage rate testing is not required for containment purge isolation valves with resilient seals when the penetration flow path is isolated by a leak tested blank flange.

7-07-LG

7-10-LS

* Isolation devices in high radiation areas may be verified by administrative means

1-04-LS

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.6.3-11 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: DOC 11-14 A
DOC 1-06 LS-19
DOC 11-07 LG
JFD 3.6-11
JFD 3.6-12
CTS 3.6.1.7 ACTIONS
CTS 3.6.3 ACTIONS
CTS 4.6.3.3
ITS 3.6.3 RA A.2 Note 2, RA C.2 Note 2, RA D.2 Note 2, SR 3.6.3.5 and Associated Bases

CTS 3.6.1.7 ACTIONS, CTS 3.6.3 ACTIONS, ITS 3.6.3 RA A.2, ITS 3.6.3 RA C.2 and ITS 3.6.3 RA D.2 have been modified by a Note that states the following: "Isolation devices that are locked, sealed or otherwise secured may be verified by administrative means". CTS 4.6.3.3 and ITS SR 3.6.3.5 have been modified by the phrase "that is not locked, sealed or otherwise secured in position" to clarify which valves require isolation time testing. These changes are characterized in JFD 3.6-11 and JFD 3.6-12 as a generic change designated WOG-91. The staff has not received this change through the STS generic change process (TSTF) and therefore considers this change to be beyond the scope of review for this conversion. See Comment Number 3.6.3-12.

Comment: Delete this generic change. See Comment Number 3.6.3-12.

FLOG RESPONSE (original): WOG-91 has recently been designated TSTF-269. While we recognize that this is a generic change to the STS, the change was approved by the Westinghouse Owners Group over 18 months ago and was expected to have been approved by this time. We expect the TSTF committee to forward TSTF-269 to the NRC in the very near future. We believe the technical merits of the change, which supports NRC approved TSTF-45, Rev 1 by providing additional clarification, should justify rapid approval by the NRC. This TSTF is of sufficient value in precluding confusion, LERs, and inspection findings that should we be required to remove it from our submittal, an LAR would be submitted upon NRC approval of the TSTF. We believe that it would be cost effective for all concerned to retain this change within the submittal pending NRC review of TSTF-269.

FLOG RESPONSE (supplement): TSTF-269 has been approved by the NRC. The approved version does not contain all the changes proposed by the original WOG-91. The following changes have been made to make the FLOG submittals consistent with the approved traveler: The exclusion which stated that response time testing does not apply to automatic valves that are locked, sealed or otherwise secured in position has been removed from the CTS and ITS markups. As a result DOC 11-14-A and JFD 3.6-12 are no longer used (note that for Callaway, DCPP and WCGS, changes made to SR 4.6.3.2 under DOC 11-14-A have been reassigned DOC 9-04-A). The traveler list in Enclosure 5A has also been updated.

Additionally, this item is related to Comment Number Q 3.6.3-56 for Diablo Canyon and Comanche Peak. No additional response is required for Comment Number Q 3.6.3-56.

ATTACHED PAGES:

Attachment No. 12 - CTS 3/4.6 - ITS 3.6

Encl 2	3/4.6-13
Encl 3A	13
Encl 3B	7 and 10
Encl 5A	Traveler page and 3.6-16
Encl 5B	B 3.6-20, B 3.6-22, B 3.6-24 and B 3.6-27
Encl 6A	3 and 4
Encl 6B	2

~~4.6.3.1 The containment isolation valves shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work isperformed on the valve or its associated actuator, control or power circuit by performance of a cycling test, and verification of isolation time.~~ 11-06-TR

4.6.3.2 Each automatic containment isolation valve that is not locked, sealed or otherwise secured in position shall be demonstrated OPERABLE at least once per 18 months by: 9-04-A

11-07-LG
11-08-TR
11-10-A

a. Verifying that on ~~a Phase "A" Isolation test~~ an actual or simulated actuation signal, each ~~Phase "A" isolation~~ valve actuates to its isolation position*;

~~b. Verifying that on a Phase "B" Isolation test signal, each Phase "B" isolation valve actuates to its isolation position; and~~ 11-07-LG

~~c. Verifying that on a Containment Ventilation Isolation test signal, each pressure relief discharge valve actuates to its isolation position.~~ 11-07-LG

4.6.3.3 The isolation time of ~~each power operated or~~ automatic power operated containment isolation valve ~~that is not locked, sealed, or otherwise secured~~ shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

11-09-A
Q-3.6.3-8

~~11-14-A~~
Q-3.6.3-11

~~* The surveillance test interval is extended to 24 months for testing the closure of valve 2-8160 on a Phase "A" isolation test signal (Train A, Unit 2), to remain in effect until the completion of the second refueling outage for Unit 2.~~ 11-10-A

CHANGE NUMBER	NSHC	DESCRIPTION
11-10	A	Deletes [a note] providing a one time test interval extension that is no longer applicable.
11-11	A	Not applicable to CPSES. See conversion comparison table (enclosure 3B).
11-12	A	The phrase "flow path" is added for clarification and consistency with NUREG-1431. This specification is based on GDCs 55, 56, and 57 which address the proper isolation for each "line" that penetrates containment. It is recognized that multiple lines can share the same penetration. Licensees have always been required to assure that proper protection is provided for each line or flow path that passes through containment even if multiple flow paths share the same penetration. In this specification, the term "penetration" has always meant each flow path that penetrates containment. Adding the words "flow path" to the specification clarifies this meaning.
11-13	LS-22	Not applicable to CPSES. See conversion comparison table (enclosure 3B).
11-14	A	~~Consistent with NUREG-1431, the phrase "that is not locked, sealed, or otherwise secured in position" is added for clarification in regard to which valves require isolation time testing. Valves that are secured in place, are secured in the position required to meet their safety function. The isolation time testing ensures that valves can respond to the position that meets their safety function in the time assumed in the safety analysis. If the valves are secured in the position that meets their safety function, no testing is necessary.~~ Not used Q-3.6.3-11
11-15	A	Not applicable to CPSES. See conversion comparison table (enclosure 3B).
11-16	A	Even though it is not specified in ITS 3.6.3 Required Actions, the Action to restore the inoperable valve stated in CTS 3.6.3.a is understood as always the primary objective and a continuous option to be performed during any Completion Time.
11-17		Not used.
11-18	~~ALG~~	Not applicable to CPSES. See conversion comparison table (enclosure 3B). WC-3.6-007

TECH SPEC CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
8-10 A	ITS Condition [CF] specifies two containment spray trains ~~[or any combination of three or more trains]~~ inoperable to enter 3.0.3. Even though this condition is not specified in the CTS, 3.0.3 would be entered.	Yes	~~No - CPSES has only two Containment spray trains covered by this specification. Loss of both of those trains is outside the CTS and 3.0.3 is automatically invoked.~~ Yes	Yes	Yes Q-3.6.6-1
8-11 LS-2	A "from discovery of failure to meet the LCO" provision has been added to the completion time for one train of containment spray/cooling systems inoperable. This change is considered Less Restrictive in that the 10 days allowed in the ITS not to meet the LCO is greater than the CTS would allow.	Yes	No - CPSES current TS does not have a containment cooler specification.	Yes	Yes
8-12					Q-3.6.3-13
09-01 A	The DCPP units for the spray additive tank volume limits are changed from gallons to percent.	Yes	No	No	No
09-02 LG	The operability of the spray additives eductors is contained within the definition of operability for the spray additive system as described in the Bases.	Yes	Yes	Yes	Yes
09-03 A	This change revises the action statement by replacing the reference to restoring the Spray Additive System to operable status within 48 hours or be in cold shutdown within the following 30 hours, with the requirement to be in cold shutdown within 78 hours.	Yes	Yes	Yes	Yes
09-04 A	This change adds the phrase 'that is not locked, sealed, or otherwise secured in position' with regard to which valves require actuation testing.	~~No - This condition is already in CTS.~~ Yes	Yes	~~No - Current practice per CTS SR 4.6.2.2.~~ Yes	~~No - Current practice per CTS SR 4.6.2.2.~~ Yes Q-3.6.3-11

TECH SPEC CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
11-11 A	A note is added to the containment isolation specification that the LCO is not applicable MSSVs, MSIVs, FIVs, [associated bypass valves] and steam generator relief valves.	Yes	No - already part of current TS.	Yes	Yes
11-12 A	The phrase "flow path" is added for clarification and consistency with NUREG-1431.	Yes	Yes	Yes	Yes
11-13 LS-22	This change revises the DCPP containment Ventilation Isolation valve surveillance frequency from 30 months to every 184 days and from 24 hours to 92 days.	Yes	No	No	No
11-14 A	~~The phrase 'that is not locked, sealed, or otherwise secured in position' is added for clarification in regard to which valves require isolation time testing. Not used~~	~~Yes~~ NA	~~Yes~~ NA	~~Yes~~ NA	~~Yes~~ NA Q-3.6.3-11
11-15 A	A Callaway specific note to 3.6.3 regarding testing is deleted based on ITS LCO 3.0.5.	No	No	No	Yes
11-16 A	Even though it is not specified in ITS 3.6.3 Required Actions, the Action to restore the inoperable valve stated in CTS 3.6.3.a is understood as always the primary objective and a continuous option to be performed during any Completion Time.	Yes	Yes	Yes	Yes
11-17	Not used.	NA	NA	NA	NA
11-18 ~~LGA~~	The words "during the COLD SHUTDOWN" or REFUELING MODE" are ~~moved to the Bases~~ deleted.	No - Not in CTS.	No - Not in CTS.	Yes	Yes WC-3.6-009
12-01 A	Consistent with NUREG-1431, the hydrogen monitoring specification is moved to ITS section 3.3.3 concerning Post Accident Monitoring Instrumentation (PAM).	Yes	Yes	No - CTS Hydrogen monitoring requirements are not in this section.	No - CTS Hydrogen monitoring requirements are not in this section
12-02 M	The MODE of applicability for the hydrogen monitors is extended to MODE 3.	Yes	Yes	No - CTS Hydrogen monitoring requirements are not in this section	No - CTS Hydrogen monitoring requirements are not in this section

INDUSTRY TRAVELERS APPLICABLE TO SECTION 3.6

TRAVELER #	STATUS	DIFFERENCE #	COMMENTS
TSTF-17 Rev. 1	Incorporated	3.6-2	NRC approved.
TSTF-30 Rev. 2 ~~1~~	Incorporated	3.6-4	Not applicable to Wolf Creek and Callaway TR-3.6-002
TSTF-45 Rev. 1	Incorporated	3.6-5	NRC approved.
TSTF-46 Rev. 1	Incorporated	3.6-7	NRC approved.
TSTF-51	Not incorporated	NA	Not NRC approved as of traveler cut-off date.
TSTF-52 ~~Rev. 1~~	Incorporated	3.6-1	Incorporated changes per NRC comments. ~~draft Rev. 1.~~ Q-3.6.1-6
TSTF-145	Not incorporated	NA	Not NRC approved as of traveler cut-off date.
~~WOG-91 TSTF-269~~	Incorporated	3.6-11 ~~3.6-12~~	NRC approved Q-3.6.3-11

PS

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY	
SR 3.6.3.4	----------NOTE---------- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. The blind flange on the fuel transfer canal need not be verified closed except after each drainage of the canal. ---------- Verify each containment isolation manual valve and blind flange that is located inside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.	Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days	3.6-6 3.6-5
SR 3.6.3.5	Verify the isolation time of ~~each power operated and~~ each automatic power operated containment isolation valve ~~that is not locked, sealed, or otherwise secured in position~~ is within limits.	In accordance with the Inservice Testing Program ~~or 92 days~~	3.6-7 ~~3.6-12~~ O-3.6.3-11 B-PS
SR 3.6.3.6	Not Used ~~Cycle each weight or spring loaded check valve testable during operation through one complete cycle of full travel, and verify each check valve remains closed when the differential pressure in the direction of flow is ≤ [1.2] psid and opens when the differential pressure in the direction of flow is ≥ [1.2] psid and < [5.0] psid.~~	~~92 days~~	B-PS

(continued)

BASES (continued)

devices inside containment, the time period specified as "prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days" is based on engineering judgment and is considered reasonable in view of the inaccessibility of the isolation devices and other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

Condition A has been modified by a Note indicating that this Condition is only applicable to those penetration flow paths with two containment isolation valves ~~and those special cases with one containment isolation valve as described on the FSAR [Ref. 2]~~. For penetration flow paths with only one containment isolation valve and a closed system, Condition C provides the appropriate actions.

Q-3.6.3-53

Required Action A.2 is modified by ~~two a~~ Notes. ~~Note 1 that~~ applies to isolation devices located in high radiation areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned. Therefore, the probability of misalignment of these devices once they have been verified to be in the proper position, is small.

Q-3.6.3-11

~~A second Note has been added to Required Action A.2 to provide clarification that the action to periodically verify the affected penetration flow path is isolated may be verified by administrative means for isolation devices that are locked, sealed, or otherwise secured. This is acceptable since these were verified to be in the correct position prior to locking, sealing, or securing.~~

B.1

With two containment isolation valves in one or more penetration flow paths inoperable, the affected penetration flow path must be isolated within 1 hour. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve (this includes power operated valves with power

(continued)

BASES (continued)

verifying that each affected penetration flow path is isolated is appropriate because the valves are operated under administrative controls and the probability of their misalignment is low.

Condition C is modified by a Note indicating that this Condition is only applicable to those penetration flow paths with only one containment isolation valve and a closed system. The closed system inside containment for GDC-57 penetrations meet the requirements of Reference 3. The closed systems outside containment for GDC-55 and GDC-56 penetrations are in accordance with Reference 2. This Note is necessary since this Condition is written to specifically address those penetration flow paths in a closed system.

Q-3.6.3-53

Required Action C.2 is modified by ~~two a~~ Notes. ~~Note 1 that~~ applies to valves and blind flanges located in ~~high radiation~~ areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned. Therefore, the probability of misalignment of these valves, once they have been verified to be in the proper position, is small.

Q-3.6.3-11

~~A second Note has been added to Required Action C.2 to provide clarification that the action to periodically verify the affected penetration flow path is isolated may be performed by administrative means for isolation devices that are locked, sealed, or otherwise secured. This is acceptable since these were verified to be in the correct position prior to locking, sealing, or securing.~~
~~D.1~~

~~With the shield building bypass leakage rate not within limit, the assumptions of the safety analyses are not met. Therefore, the leakage must be restored to within limit within 4 hours. Restoration can be accomplished by isolating the penetration(s) that caused the limit to be exceeded by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. When a penetration is isolated the leakage rate for the isolated penetration is assumed to be the actual pathway leakage through the~~

(continued)

BASES (continued)

that degradation of the resilient seal is detected and confirms that the leakage rate of the containment purge valve does not increase during the time the penetration is isolated. The normal Frequency for SR 3.6.3.7, 184 days, is based on an NRC initiative, ~~Generic Issue B-20~~ Multi-Plant Action No. B-20 (Ref. ~~3~~ 4). Since more reliance is placed on a single valve while in this Condition, it is prudent to perform the SR more often. Therefore, a Frequency of once per 92 days was chosen and has been shown ~~to be~~ acceptable based on operating experience. Required Action [D.2] is modified by two Notes. Note 1 applies to isolation devices located in high radiation areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned.

~~Required Action D.2 is modified by a Note that applies to isolation devices located in high radiation areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of these devices once they have been verified to be in the proper position, is small.~~

~~A second Note has been added to Required Action D.2 to provide clarification that the action to periodically verify the affected penetration flow path is isolated may be performed by administrative means for isolation devices that are locked, sealed, or otherwise secured. This is acceptable since these were verified to be in the correct position prior to locking, sealing, or securing.~~

EF.1 and EF.2

If the Required Actions and associated Completion Times are not met, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Q-3.6.3-56

Q-3.6.0-02

Q-3.6.3-11

(continued)

refuelings is small. Therefore, it is reasonable that it is only required to be verified closed after each drainage of the canal.

SR 3.6.3.5

Verifying that the isolation time of each ~~power operated and~~ automatic power operated containment isolation valve ~~that is not locked sealed or otherwise secured~~ is within limits is required to demonstrate OPERABILITY. An automatic power operated containment isolation valve is a containment isolation valve which is required to be closed by an automatic (i.e., other than operator manual) actuation signal and is powered by other than manual actuation (e.g., by an air or motor operator). The isolation time test ensures the valve will isolate in a time period less than or equal to that assumed in the FSAR [Ref. 2]. ~~safety analyses.~~ The isolation time and Frequency of this SR are in accordance with the Technical Requirements Manual and the Inservice Testing Program. ~~or 92 days.~~ Q-3.6.3-11

SR 3.6.3.6 (Not Used)

~~In subatmospheric containments, the check valves that serve a containment isolation function are weight or spring loaded to provide positive closure in the direction of flow. This ensures that these check valves will remain closed when the inside containment atmosphere returns to subatmospheric conditions following a DBA. SR 3.6.3.6 requires verification of the operation of the check valves that are testable during unit operation. The Frequency of 92 days is consistent with the Inservice Testing Program requirement for valve testing on a 92 day Frequency.~~

SR 3.6.3.7

For Containment Purge, Hydrogen Purge, and Containment Pressure Relief valves with resilient seals, additional leakage rate testing beyond the test requirements of 10 CFR 50, Appendix J, Option B is required to ensure OPERABILITY. Operating experience has demonstrated that this type of seal has the potential to degrade in a shorter time period than do other seal types. Based on this observation and the importance of maintaining this penetration leak tight (due to the direct path between containment and the environment), a Frequency of 184 days was established as part of the NRC resolution of ~~Generic Issue B-20~~ Multi-Plant Action No. B-20, "Containment Leakage Due to Seal Deterioration" (Ref. ~~3~~ 4). Q-3.6.1-06 Q-3.6.0-02

(continued)

CHANGE NUMBER	JUSTIFICATION
3.6-7	This change is in accordance with TSTF-46 and revises SR 3.6.3.5 to delete the reference to verifying the isolation time of "each power operated" containment isolation valve and only require verification of each "automatic power operated containment isolation valve." Valves credited as containment isolation valves which are power operated (i.e. can be remotely operated) that do not receive a containment isolation signal do not have an isolation time as assumed in the accident analyses since they require operator action. Therefore, deleting reference to power operated isolation valve time testing reduces the potential for misinterpreting the requirements of this SR while maintaining the assumptions of the accident analysis. Q-3.6.3-8
3.6-8	Revises the completion time for the restoration of containment pressure from 1 hour to [8] hours. The [8] hour completion time is consistent with the current TS. The [8] hours [is consistent with the completion time to correct temperature problems (ITS 3.6.5, Condition A) and] allows the operation time to take all required actions in a controlled manner.
3.6-9	These portions of the specification do not apply since a containment cooling system is not part of the plant design.
3.6-10	Replaces the Chemical Additive Tank volume limits in gallons with a tank level limits in percent [consistent with the current TS].
3.6-11	A new Note is added to ITS 3.6.3 Condition A.2 [and C.2] in accordance with traveler ~~W0G-91TSTF-269~~. The additional note applies to isolation devices that are locked, sealed or otherwise secured in position and allows these devices to be closed by use of administrative means. It is sufficient to assume that initial establishment of component status (e.g., isolation valves closed) was performed correctly. Subsequently, verification is intended to ensure the component has not been inadvertently repositioned. Given that the function of locking, sealing or securing components is to ensure the same avoidance of inadvertent repositioning, the periodic reverification should only be a verification of the administrative control that ensures that the component remains in the required state. It would be appropriate to remove the lock, seal, or other means of securing the component solely to perform an active verification of the required state. Q-3.6.3-11
3.6-12	~~Consistent with SR 3.6.3.3 which provides that actuation position testing is not required for valves locked, sealed, or otherwise~~ Q-3.6.3-11

CHANGE NUMBER	JUSTIFICATION
	~~secured in their required position under administrative control, this change would provide that isolation time testing is not required for automatic containment isolation valves that are locked, sealed, or otherwise secured in their required position under administrative control.~~ Not used Q-3.6.3-11
3.6-13	A clarifying note is added to SR 3.6.3.7 that would allow that leakage rate testing for containment purge valves with resilient seals is not required when the penetration flow path is isolated by a leak tested blank flange. The blank flange provides the required isolation and additional testing of the valves is unnecessary.
3.6-14	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-15	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-16	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-17	Not applicable. See conversion comparison table (enclosure 6B).
3.6-18	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-19	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-20	Not used.
3.6-21	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-22	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-23	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-24	Based on CTS, new surveillances SR 3.6.3-12 and 3.6.3-13 have been added. Q-3.6.3-30

TECH SPEC CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
3.6-7	This change would revise SR 3.6.3.5 to delete the reference to verifying the isolation time of "each power operated" containment isolation valve and only require verification of each "automatic power operated containment isolation valve." This change is in accordance with TSTF-46.	Yes	Yes	Yes	Yes Q-3.6.3-8
3.6-8	This change would revises the completion time for the restoration of containment pressure from 1 hour to [8] hours. The [8] hour completion time is consistent with the current TS.	Yes	Yes	No - CTS has 1 hour completion time.	No - CTS has 1 hour completion time.
3.6-9	These portions of the specification do not apply since a containment cooling system is not part of the CPSES plant design.	No	Yes	No	No
3.6-10	This change would replace the Chemical Additive Tank volume limits in gallons with tank level limits in percent.	Yes	Yes	No - CTS in gallons	No - Callaway does not have this system.
3.6-11	This change would provide that the Required Action to periodically verify the affected penetration flow path is isolated does not apply to manual valves and blind flanges that are locked, sealed, or otherwise secured since these were verified to be in the correct position prior to locking, sealing, or securing.	Yes	Yes	Yes	Yes
3.6-12	~~Consistent with SR 3.6.3.8, this change would provide that isolation time testing is not required for automatic containment isolation valves that are locked, sealed, or otherwise secured in their required position under administrative control.~~ Not used	~~Yes~~NA	~~Yes~~NA	~~Yes~~NA	~~Yes~~NA Q-3.6.3-11

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q3.6.3-14 **APPLICABILITY:** CP

REQUEST: DOC 7-08 M
CTS 1.7.a
CTS 3.6.1.7.b
CTS 3.6.1.7 ACTION b
CTS 4.6.1.7.3
STS SR 3.6.3.2 and Associated Bases

CPSES CTS 3.6.1.7.b requires the 18 inch containment pressure relief discharge isolation valves be OPERABLE. The CTS does not have a surveillance other than a leakage test (CTS 4.6.1.7.3) that verifies OPERABILITY of these valves. However, the wording of CTS 3.6.1.7 ACTION b and CTS 4.6.1.7.3 implies that these valves are normally closed, but can be opened during operation for specific reasons. Thus, OPERABILITY would verify that the valves are closed. STS SR 3.6.3.2 is not used in the CPSES ITS. Based on CTS 1.7.a, CTS 3.6.1.7.b, CTS 3.6.1.7 ACTION b, and CTS 4.6.1.7.3, the Staff believes that STS SR 3.6.3.2 is applicable to CPSES ITS and that DOC 7-08 M should apply.

> **Comment:** Revise the CTS/ITS markup to include STS SR 3.6.3.2 and associated Bases. Provide the appropriate discussion and justification for this More Restrictive change.

FLOG response (original): The surveillance requirement STS SR 3.6.3.2 would require verification that the containment pressure relief valve is closed except when open for pressure control, ALARA or air quality considerations for personnel entry or for surveillance that requires the valves to be open. This requirement is not contained in the CPSES CTS based on the following justification currently included in CPSES CTS Bases for 3/4.6.1.7 CONTAINMENT VENTILATION SYSTEM:

> "The use of the Containment Ventilation System during operations is restricted to the 18-inch pressure relief discharge isolation valves (with an effective diameter of 3 inches) since, these venting valves are capable of closing during a LOCA or steam line break accident. Therefore, the Exclusion Area dose guideline of 10CFR100 would not be exceeded in the event of an accident during containment venting operation."

The valves are designed and qualified to be open during MODES 1 through 4 in accordance with SRP 6.2.4 (Rev. 2, July 1981) "Containment Isolation System" and BTP CSB 6-4 (Rev. 2, July 1981) "Containment Purging During Normal Plant Operation." A debris screen covered by an orifice plate which restricts the effective opening to ≤ 3 inches is provided to ensure the valves can close in the event of a LOCA and the valves are designed to close within 5 seconds of a containment isolation signal. Hence, the current Licensing basis and the CTS do not require a containment pressure relief valve to be considered inoperable if open for any reason. Therefore, STS SR 3.6.3.2 should not be considered applicable to CPSES and is not a condition for the containment isolation valves to be OPERABLE.

FLOG response (supplement): The 18-inch pressure relief valve was discussed at the meeting on October 13-14, 1998, at which time the NRC Containment Systems technical reviewers noted that several plants had been licensed with unrestricted usage of this valve. For CPSES, the NRC Staff concluded in Supplement No. 23 to NUREG-0797 (CPSES SER) that the design of the 18-inch pressure relief valve met the guidelines of BTP CSB 6-4 and that unrestricted usage of the valve was acceptable.

ATTACHED PAGES:

None

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.6.3-28 **APPLICABILITY:** DC, CP, WC, CA

REQUEST: DOC 1-01 LG
CTS 3.6.1.1 ACTIONS
CTS 4.6.1.1.a
ITS 3.6.3 ACTIONS
ITS SR 3.6.3.3, SR 3.6.3.4 and Associated Bases

CTS 4.6.1.1.a verifies that all penetrations not capable of being closed by OPERABLE automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions. The corresponding ITS SRs for this CTS surveillance are ITS SR 3.6.3.3 for valves outside containment and ITS SR 3.6.3.4 for valves inside containment. IF CTS 4.6.1.1.a cannot be met, the ACTIONS of CTS 3.6.1.1 are entered which require restoration of valve OPERABILITY within 1 hour or shutdown within the following 36 hours. If ITS SR 3.6.3.3 or ITS SR 3.6.3.4 cannot be met, the ACTIONS of ITS 3.6.3 are entered which allows for one valve inoperable between 4 hours and 72 hours depending on the type of penetration to restore valve OPERABILITY before shutdown commences. This Less Restrictive change to the CTS is not justified.

Comment: Revise the CTS markup to show this Less Restrictive change and provide the appropriate discussions and justifications.

FLOG RESPONSE (original): Diablo Canyon, Commanche Peak, Wolf Creek, and Callaway have evaluated this issue and have concluded that no change in requirements occurred, the content of CTS SR 4.6.1.1.a was moved to ITS SR 3.6.3.3 and ITS SR 3.6.3.4 with the required action time being moved to ITS LCO 3.6.3 ACTION B (see DOC 01-02-A). Additionally, some implicit valve OPERABILITY aspects of CTS SR 4.6.1.1.a were combined with CTS LCO 3.6.3 ACTION and are now shown as ITS LCO 3.6.3 ACTION A, B and C for DCPP. CTS SR 4.6.1.1.a was written to provide assurance that "all penetrations not capable of being closed ... are secured." Containment OPERABILITY is associated with penetration flow paths per the CTS Bases 3/4.6.1.1 which states "CONTAINMENT INTEGRITY ensures that releases ... will be restricted to those leakage paths ... assumed in the safety analysis." The flow path (penetration) must be unsecured for the condition of CTS SR 4.6.1.1.a to not be met. Under CTS LCO 3.6.3 - ACTION, one inoperable containment isolation valve (a valve unsecured/out of position for a penetration "not capable of being closed during an accident") would provide 4 hours to restore the valve or secure the flow path. This was not changed under ITS 3.6.3 ACTION A. One "penetration" not meeting the conditions of CTS SR 4.6.1.1.a (two valves unsecured/out of position in the same flow path) would provide one hour to secure one valve closed in order to restore containment OPERABILITY. This was also retained under ITS 3.6.3 ACTIONS B.

DOC 01-02-A will be revised to read "Conditions A, B, and C and Surveillance Requirements (SR) 3.6.3.3 and SR 3.6.3.4."

FLOG RESPONSE (supplement): The original response provided for this comment continues to reflect the position of the FLOG members and is the understanding being used in the implementation of these specifications. The changes are still considered to be administrative. After discussion with the NRC staff and to facilitate the conversion review, an LS DOC and its associated NSHC are being provided.

ATTACHED PAGES:

Attachment No. 12 - CTS 3/4.6 - ITS 3.6

Encl 2	3/4.6-1
Encl 3A	1 and 1a
Encl 3B	1
Encl 4	1, 31a, 31b and 31c

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 ~~PRIMARY~~ CONTAINMENT

CONTAINMENT INTEGRITY

LIMITED CONDITION FOR OPERATION

1-07-A
Q-3.6.0-1

3.6.1.1 ~~Primary CONTAINMENT INTEGRITY~~ Containment shall be maintained OPERABLE.

1-01-A
Q-3.6.1-1

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

ACTION:

~~Without primary CONTAINMENT INTEGRITY,~~ With Containment inoperable, restore ~~CONTAINMENT INTEGRITY~~ Containment to OPERABLE within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

With one or more penetration flow paths (applicable to flow paths with two containment isolation valves) with one containment isolation valve inoperable (except for containment ventilation isolation valves with resilient seals that are inoperable due to leakage not within limits), isolate the affected penetration flow path within 4 hours by use of at least one closed and deactivated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured; or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

1-02-ALS
Q-3.6.3-28

SURVEILLANCE REQUIREMENTS

4.6.1.1 ~~Primary CONTAINMENT INTEGRITY~~ Containment shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that all penetrations* # not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, ~~or~~ deactivated automatic valves secured in their positions, or check valve with flow through the valve secured, except as provided in Table 2.1.1 of the Technical Requirements Manual~~, and~~. Isolation devices in high radiation areas may be verified by use of administrative means.

1-06-LS

1-03-A

1-04-LS

b. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3.

1-05-A

* Except valves, blind flanges, and deactivated automatic valves which are located inside the containment ~~and are locked, sealed or otherwise secured in the closed position~~. These penetrations# shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days. The blind flange on the fuel transfer canal need not be verified closed except after each drainage of the canal.

1-06-LS

Except when closed by manual valves and blind flanges that are locked, sealed, or otherwise secured. If locked, sealed or otherwise secured manual valves, blind flages, and deactivated automatic valves are closed to satisfy an ACTION (e.g., 3.6.3) the position must be verified but may be verified by administrative means.

1-06-LS

DESCRIPTION OF CHANGES TO CURRENT TS SECTION 3/4.6

This enclosure contains a brief description/justification for each marked-up change to the 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. Only technical changes are discussed; administrative changes (i.e., format, presentation, and editorial changes) made to conform to 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
1-01	~~LGA~~	~~CONTAINMENT INTEGRITY is no longer a defined term in NUREG-1431. The requirements for containment operability, including the requirements previously found in the CONTAINMENT INTEGRITY definition, are discussed in the expanded bases of the containment LCO. This change is consistent with NUREG-1431.~~ Consistent with NUREG-1431, Improved TS 3.6.1 would retain requirements currently specified in CTS 3/4.6.1.1, "CONTAINMENT INTEGRITY[." as well as those currently specified in CTS 3/4.6.1.2, "CONTAINMENT LEAKAGE]." The proposed change would no longer address containment leakage in a separate specification. Meeting containment leakage requirements would be made a direct condition of containment OPERABILITY through SR 3.6.1.1. In addition, the term CONTAINMENT INTEGRITY has not been retained as a defined term in the ITS. The requirements for containment OPERABILITY, including the requirements previously found in the CONTAINMENT INTEGRITY definition, would be placed in the Bases for TS 3.6.1. (See the discussion of the deletion of the defined term CONTAINMENT INTEGRITY in change description 1-04 of CTS Section 1.0.) [Testing requirements for the air locks, containment isolation valves with resilient seals and, for CPSES, Safety Injection and Containment Spray Valves, also specified by CTS 3/4.6.1.2, would be retained in Improved TS 3.6.2 and 3.6.3.] These changes would be classified as Administrative (A). Q-3.6.1-1
1-02	ALS-10	Consistent with NUREG-1431, this surveillance requirement to verify the affected penetration flow path is isolated is now addressed by ITS 3.6.3 Containment Isolation Valves, Conditions A, B and C ~~and [D]~~ and Surveillance Requirements SR 3.6.3.3 and SR 3.6.3.4. The CTS action associated with this specification says that without CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or shutdown. The ITS Q-3.6.3-28

CHANGE NUMBER	NSHC	DESCRIPTION
		Required Actions which relate to this specification are 3.6.1, Required Action A.1 (which requires the containment be restored to OPERABLE status within one hour if inoperable), and 3.6.3, Required Action A.1 (which requires isolation of a penetration flow path within 4 hours if one of the two valves in that flow path is inoperable), Required Action B.1 (which requires isolation of a penetration flow path within 1 hour if both of the two isolation valves in that flow path are inoperable), and Required Action C.1 (which requires isolation of a penetration flow path within 72 hours if the isolation valve is inoperable and the path has one isolation valve and a closed system). These ITS Required Actions are also derived, in part, from the Containment Isolation Valves specification in the CTS. The requirements of ITS 3.6.3, Required Action C.1 (the 72 hour completion time) is justified in DOC 11-05-LS and NSHC LS-14. The completion time in ITS 3.6.3 Required Action B.1 and ITS 3.6.1 Required Action A.1 are the same as the CTS. The completion time for ITS 3.6.3, Required Action A.1 (4 hours) is justified in NSHC LS-10. The completion time is considered the same as the CTS and is thus considered to be administrative; however, after discussions with the NRC staff and to facilitate the conversion review, the LS DOC and its associated NSHC are being provided. Q-3.6.3-28
1-03	A	The action statements are revised to incorporate the NUREG-1431 equal alternative isolation method of a "check valve with the flow through the valve secured." This isolation method is provided in NUREG-1431 and is considered an acceptable variation of a de-activated automatic valve.
1-04	LS-1	A note is added to valve and blind flange surveillance requirements consistent with NUREG-1431. The note allows verification of valves, flanges and isolation devices located in high radiation areas to be verified by use of administrative means. This change is less restrictive in that the current TS SR 4.6.1.1 has an exception to valves, blind flanges, and deactivated automatic valves which are located inside containment and are locked, sealed, or otherwise secured in the closed position. These valves shall be verified closed during each COLD SHUTDOWN. However, under the current TS, if an area outside of containment became a high radiation area, entry into the area would still be required to verify the closed positions. The ITS would allow verification of all areas that are high radiation areas or become high radiation areas by administrative means once they had been verified

CONVERSION COMPARISON TABLE - CURRENT TS 3/4.6

TECH SPEC CHANGE		APPLICABILITY			
NUMBER	DESCRIPTION	DIABLO CANYON	COMANCHE PEAK	WOLF CREEK	CALLAWAY
01-01 ~~LGA~~	~~CONTAINMENT INTEGRITY is no longer a defined term in NUREG-1431. The requirements for containment operability, including the requirements previously found in the CONTAINMENT INTEGRITY definition, are discussed in the expanded bases of the containment LCO.~~ Improved TS 3.6.1 would retain requirements currently specified in CTS 3/4.6.1.1, "CONTAINMENT INTEGRITY[," as well as those currently specified in CTS 3/4.6.1.2, "CONTAINMENT LEAKAGE]." The proposed change would no longer address containment leakage in a separate specification.	Yes	Yes	Yes	Yes Q-3.6.1-1
01-02 ~~ALS-10~~	This requirement to verify the penetration flow path is isolated is addressed by ITS 3.6.3 Containment Isolation Valves	Yes	Yes	Yes	Yes Q-3.6.3-28
01-03 A	An equal alternative isolation method of a "check valve with the flow through the valve secured" is added to the action statements.	Yes	Yes	Yes	Yes
01-04 LS-1	A note is added allowing valves, flanges and isolation devices located in high radiation areas to be verified by use of administrative means.	Yes	Yes	Yes	Yes
01-05 A	This requirement is addressed by ITS 3.6.2 Containment Air Locks Required Actions.	Yes	Yes	Yes	Yes
01-06 LS-19	Only containment isolation valves that are not locked, sealed, or otherwise secured are required to be verified closed.	Yes	Yes	Yes	Yes
01-07 A	All reformating, renumbering, and editorial wording is in accordance with the Westinghouse Standard Technical Specifications, NUREG-1431.	Yes	Yes	Yes	Yes Q-3.6.0-1
02-01 A	The Containment Leakage LCO is now addressed by ITS 3.6.1 Containment LCO.	Yes	Yes	Yes	Yes

NO SIGNIFICANT HAZARDS CONSIDERATIONS (NSHC)
CONTENTS

Q-3.6.3-28

Q-3.6.3-4

IV. SPECIFIC NO SIGNIFICANT HAZARDS CONSIDERATIONS

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

Q-3.6.3-28

Consistent with NUREG-1431, the Containment Integrity surveillance requirement to verify the status of penetration isolation is addressed by ITS specification 3.6.3 Containment Isolation Valves, Conditions A, B and C and Surveillance Requirements SR 3.6.3.3 and SR 3.6.3.4. The CTS action associated with the Containment Integrity specification says that without CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or shutdown. The ITS Required Actions which relate to this specification are 3.6.1, Required Action A.1 (which requires the containment be restored to OPERABLE status within one hour if inoperable), and 3.6.3, Required Action A.1 (which requires isolation of a penetration flow path within 4 hours if one of the two valves in that flow path is inoperable), Required Action B.1 (which requires isolation of a penetration flow path within 1 hour if both of the two isolation valves in that flow path are inoperable), and Required Action C.1 - DCPP and CPSES only - (which requires isolation of a penetration flow path within 72 hours if the isolation valve is inoperable and the path has one isolation valve and a closed system). These ITS Required Actions are also derived, in part, from the Containment Isolation Valves specification in the CTS. The requirements of ITS 3.6.3, Required Action C.1 (the 72 hour completion time), where applied, is justified in DOC 11-05-LS and NSHC LS-14. The completion time in ITS 3.6.3 Required Action B.1 and ITS 3.6.1 Required Action A.1 are the same as the CTS.

ITS 3.6.3 Required Action A.1 must be completed within 4 hours. The 4 hour Completion Time is reasonable, considering the time required to isolate the penetration and the relative importance of supporting containment OPERABILITY during MODES 1, 2, 3, and 4. This completion time is consistent with the CTS allowed outage time in the Containment Isolation Valves specification, CTS 3.6.3, for each penetration with one containment isolation valve inoperable and at least one isolation valve OPERABLE. If a penetration has no functioning isolation device, the one hour allowed outage time is appropriate because the capability to isolate that penetration flow path, without operator action, is lost. In the case where one valve is inoperable and one valve is operable, redundancy is lost but the function is not lost. Based on the low probability of an accident in combination with a non-detectable failure that would prevent the OPERABLE isolation valve from functioning, 4 hours is an acceptable completion time to either restore the inoperable valve to OPERABLE or to isolate the penetration.

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:

NSHC LS-10
(continued)

Q-3.6.3-28

"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?

   ITS specification 3.6.3 Required Action A.1 requires isolation of a penetration flow path within 4 hours if one of the two valves in that flow path is inoperable. In the case where one valve is inoperable and one valve is operable, redundancy is lost but the function is not lost. Based on the low probability of an accident in combination with a non-detectable failure that would prevent the OPERABLE isolation valve from functioning, 4 hours is an acceptable completion time to either restore the inoperable valve to OPERABLE or to isolate the penetration. 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, and does not impose any new safety analyses limits. 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 establishes the ITS completion time for a Required Actions in the Containment Isolation Valves specification to be consistent with the Westinghouse Standard ITS (NUREG-1431) and does not involve a significant

IV. SPECIFIC NO SIGNIFICANT HAZARDS CONSIDERATIONS

NSHC LS-10
(continued)

reduction in a margin of safety. The proposed change has been developed considering the importance of the containment isolation valves in limiting the consequence of a design basis event and the reasonable time to perform repairs on a failed containment isolation valve when the other isolation valve in the flow path remains operable. Considering the probability of an event that would challenge the containment boundary and the reliability of the OPERABLE valve, the proposed change is acceptable and any reduction in the margin of safety would be insignificant and offset by the benefit gained through avoiding an unnecessary plant transient.

Q-3.6.3-28

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.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q3.6.3-30 **APPLICABILITY:** CP

REQUEST: DOC 2-05 LG
JFD 3.6-1
CTS 4.6.1.2.c
CTS 4.6.1.2.d
STS SR 3.6.1.3.11 and Associated Bases (NUREG 1434)
STS SR 3.6.1.3.14 and Associated Bases (NUREG 1433)
ITS B3.6.1 Bases - SR 3.6.1.1

CPSES CTS 4.6.1.2.c requires a leak test with gas at not less than P_a or a hydrostatic test at not less than $1.1P_a$ for certain Safety Injection valves. CPSES CTS 4.6.1.2.d requires a hydrostatic test at not less than $1.1P_a$ for certain containment spray valves. Amendment 51 for Unit 1 and Amendment 37 for Unit 2 converts the CTS from 10 CFR 50 Appendix J Option A to 10 CFR 50 Appendix J Option B. CTS 4.6.1.2.c and 4.6.1.2.d were retained during that conversion. The CTS markup shows these surveillances as being relocated to the Containment Leakage Rate Testing Program and the Bases for ITS SR 3.6.1.1. DOC 2-05 LG justifies the relocation based on the level of detail in the TS not being consistent with NUREG-1431. Consistency with NUREG-1431 is not an acceptable justification for relocating material from the CTS to a licensee controlled document. In the development of NUREG-1431 a specific SR with regards to hydrostatically testing containment isolation valves for leakage was not included because the WOG stated that most units did not have any valves that were hydrostatically tested. This was not the case for the BWRs (NUREGs 1433 and 1434) which had hydrostatically tested valves. In that case, STS SR 3.6.1.3.11 (NUREG-1434) and STS SR 3.6.1.3.14 (NUREG-1433) were included in the NUREGs. Changes to the STS with regards to Option A versus Option B are covered by a letter from Mr. Christopher I. Grimes to Mr. David J. Modeen, NEI dated 11/2/95 and TSTF-52 as modified by the staff. Neither document deleted or relocated those BWR SRs, but retained the SRs in a modified form. In addition, the SE associated with Amendments 51 and 31 states that the changes are in accordance with the 11/2/95 staff letter. Thus, the Staff requires that CTS 4.6.1.2.c and 4.6.1.2.d be retained.

Comment: Revise the CTS/ITS markups to show CTS 4.6.1.2.c and 4.6.1.2.d as being retained as SRs in ITS 3.6.3. Provide additional discussions and justifications as necessary for this change.

FLOG response: (original) Current CPSES surveillance requirements CTS 4.6.1.2.c and 4.6.1.2.d are retained and have been added to the markup of ITS 3.6.3, "Containment Isolation Valve," as new surveillance requirements SR 3.6.3.12 and SR 3.6.3.13, respectively. CTS Bases information supporting these surveillances has similarly been retained by adding it to the ITS Bases for SR 3.6.3.12 and SR 3.6.3.13.

Further, DOC 2-05 A has been revised to read;

"CPSES surveillance requirement CTS 4.6.1.2.c for leak testing of specified safety injection valves is renumbered and retained as new ITS SR 3.6.3.12. This change would not change the existing requirement but simply renumbers and

"CPSES surveillance requirement CTS 4.6.1.2.c for leak testing of specified safety injection valves is renumbered and retained as new ITS SR 3.6.3.12. This change would not change the existing requirement but simply renumbers and modifies the format to be consistent with the ITS. This change would be classified as Administrative (A)."

Also, DOC 2-07 A has been added to read;

"CPSES surveillance requirement CTS 4.6.1.2.d for leak testing of specified containment spray valves is renumbered and retained as new ITS SR 3.6.3.13. This change would not change the existing requirement but simply renumbers and modifies the format to be consistent with the ITS. This change would be classified as Administrative (A)."

Also, see the FLOG responses to Comments 3.6.1-1 and 3.6.3-2 regarding the relocation of the CONTAINMENT INTEGRITY definition requirements.

FLOG RESPONSE: (supplement) SR 3.6.3-12 and SR 3.6.3-13 have been revised to add the words "to be within limits" in reference to the surveillance leakage limits which are specified in the Bases. The revision makes the surveillance wording consistent with standard STS surveillance terminology.

Also, JFD 3.6-24 has been revised to be JFD 3.6-25 since JFD 3.6-24 had previously been used by another FLOG member for a separate change.

ATTACHED PAGES:

Attachment No. 12 - CTS 3/4.6 - ITS 3.6

Encl 5A 3.6-17 and 3.6-18
Encl 6A 4

PS

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY	
SR 3.6.3.7	----------NOTE---------- This surveillance is not required when the penetration flow path is isolated by a leak tested blank flange. ----------		3.6-13
	Perform leakage rate testing for containment purge, hydrogen purge and containment pressure relief valves with resilient seals.	184 days AND Within 92 days after opening the valve	B-PS
SR 3.6.3.8	Verify each automatic containment isolation valve that is not locked, sealed or otherwise secured in position, actuates to the isolation position on an actual or simulated actuation signal.	18 months	B
SR 3.6.3.9 ~~SR 3.6.3.9~~	Not used ~~Cycle each weight or spring loaded check valve not testable during operation through one complete cycle of full travel, and verify each check valve remains closed when the differential pressure in the direction of flow is ≤ [1.2] psid and opens when the differential pressure in the direction of flow is ≥ [1.2] psid and ≤ [5.0] psid.~~	~~18 months~~	3.6-2425 Q-3.6.3-30 B-PS
SR 3.6.3.10 ~~SR 3.6.3.10~~	Not used ~~Verify each [ ] inch containment purge valve is blocked to restrict the valve from opening > [50]%.~~	~~[18] months~~	3.6-2425 Q-3.6.3-30 B-PS

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.3.11 ~~SR 3.6.3.11~~	Not used ~~Verify the combined leakage rate for all shield building bypass leakage paths is $\leq$ [L_a] when pressurized to $\geq$ [psig].~~	~~NOTE~~ ~~SR 3.0.2 is not applicable~~ ~~In accordance with 10 CFR 50, Appendix J, as modified by approved exemptions~~ 3.6-2425 Q-3.6.3-30 B-PS
SR 3.6.3.12	Safety injection valves 8809A, 8809B, and 8840 shall be leak tested to be within limits with a gas at a pressure not less than P_a, 48.3 psig, or with water at a pressure not less than 1.1 P_a.	In accordance with the Containment Leakage Rate Testing Program 3.6-2425 Q-3.6.3-30
SR 3.6.3.13	Containment spray valves HV-4776, HV-4777, CT-142, and CT-145 shall be leak tested to be within limits with water at a pressure not less than 1.1 P_a.	In accordance with the Containment Leakage Rate Testing Program 3.6-2425 Q-3.6.3-30

CHANGE NUMBER	JUSTIFICATION
	~~secured in their required position under administrative control, this change would provide that isolation time testing is not required for automatic containment isolation valves that are locked, sealed, or otherwise secured in their required position under administrative control.~~ Not used Q-3.6.3-11
3.6-13	A clarifying note is added to SR 3.6.3.7 that would allow that leakage rate testing for containment purge valves with resilient seals is not required when the penetration flow path is isolated by a leak tested blank flange. The blank flange provides the required isolation and additional testing of the valves is unnecessary.
3.6-14	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-15	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-16	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-17	Not applicable. See conversion comparison table (enclosure 6B).
3.6-18	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-19	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-20	Not used.
3.6-21	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-22	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
3.6-23	Not applicable to CPSES. See conversion comparison table (enclosure 6B).
~~3.6-24~~	~~Not applicable to CPSES. See conversion comparison table (enclosure 6B).~~ Q-3.6.6-9
~~3.6-25~~	~~Based on CTS, new surveillances SR 3.6.3-12 and 3.6.3-13 have been added.~~ Q-3.6.3-30

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q 3.6.3-56 **APPLICABILITY:** DC, CP

REQUEST: B3.6.3 Bases - E.1, E.2, and E.3
ITS B3.6.3 Bases - D.1, D.2, and D.3

STS B3.6.3 Bases - E.1, E.2 and E.3 does not provide a description of the Note associated with RA E.2. ITS B3.6.3 Bases - D.1, D.2, and D.3 also does not provide a description of the Note associated with RA D.2. The Callaway and WCGS ITS markups provide this description.

Comment: Revise the ITS markup to provide this description.

FLOG RESPONSE (original): A description of Notes 1 and 2 for Required Action D.2 has been added to the appropriate Bases section.

FLOG RESPONSE (supplement): See FLOG RESPONSE supplement to Comment Item Q 3.6.3-11.

ATTACHED PAGES:

None.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q3.6.7-12 **APPLICABILITY:** CP

REQUEST: STS B3.6.7 Bases - BACKGROUND
ITS B3.6.7 Bases - BACKGROUND

The last paragraph in STS B3.6.7 Bases - BACKGROUND has been deleted from CPSES ITS B3.6.7 Bases - BACKGROUND. Since ITS changes to the STS Bases were made based on changes to the STS on plant specific system design, or on current licencing basis as specified in the CTS, the deletion does not seem to fall into any of these categories. The paragraph provides a description of how the Spray Additive System operates when activated, and is applicable to CPSES.

Comment: Revise the ITS markup to include this paragraph modified to specify plant specific parameters or provide a discussion and justification for its deletion based on system design, operational constraints or current licensing basis.

FLOG response: **(original)** The change to the B3.6.7 Bases - BACKGROUND is based on plant specific system design and licensing basis. However, a plant specific description of the eductor design is provided in place of the deleted sentence to provide comparable details for CPSES.The spray additive system, including the eductors, is designed to ensure the contents of the Chemical Additive Tank is injected into containment given any single active failure. Consequently, in the short term, the pH of a train of spray can vary from acidic to strong basic. The low spray pH can only occur during injection prior to switchover to recirculation. The equilibrium sump solution pH is above 7 and adequate spray pH for long term iodine retention is achieved with the onset of the spray recirculation mode. The high spray pH can only occur after switchover to recirculation from the sump when spray additive is added to recirculated sump water. The high pH condition transient is bounded by the hydrogen generation analysis.

FLOG RESPONSE: (revised) The Background discussion of the Spray Additive System has been revised to restore the deleted paragraph as modified to be specific to CPSES.

ATTACHED PAGES:

Attachment No. 12 - CTS 3/4.6 - ITS 3.6

Encl 5B B 3.6-50

BASES

BACKGROUND (continued)

~~Gravity Feed Systems Only~~

~~The Spray Additive System consists of one spray additive tank, two parallel redundant motor operated valves in the line between the additive tank and the refueling water storage tank (RWST), instrumentation, and recirculation pumps. The NaOH solution is added to the spray water by a balanced gravity feed from the additive tank through the connecting piping into a weir within the RWST. There, it mixes with the borated water flowing to the spray pump suction. Because of the hydrostatic balance between the two tanks, the flow rate of the NaOH is controlled by the volume per foot of height ratio of the two tanks. This ensures a spray mixture pH that is $\geq$ 8.5 and $\leq$ 11.0.~~

~~The Containment Spray System actuation signal opens the valves from the spray additive tank to the spray pump suctions or the containment spray pump start signal opens the valves from the spray additive tank after a 5 minute delay. The 28% to 31% NaOH solution is drawn into the spray pump suctions. The spray additive tank capacity provides for the addition of NaOH solution to all of the water sprayed from the RWST into containment. The percent solution and volume of solution sprayed into containment ensures a long term containment sump pH of $\geq$ 9.0 and $\leq$ 9.5. This ensures the continued iodine retention effectiveness of the sump water during the recirculation phase of spray operation and also minimizes the occurrence of chloride induced stress corrosion cracking of the stainless steel recirculation piping.~~

Q-3.6.7-12

The Containment Spray System actuation signal opens the valves from the spray additive tank to the spray pump suctions. The 28% to 30% NaOH solution is drawn into the spray pump suctions. The spray additive tank capacity provides for the addition of NaOH solution to the water sprayed from the RWST into containment. The percent solution and volume of solution sprayed into containment ensures the appropriate long term containment sump pH. This ensures the continued iodine retention effectiveness of the sump water during the recirculation phase of spray operation and also minimizes the occurrence of chloride induced stress corrosion cracking of the stainless steel recirculation piping.

APPLICABLE SAFETY ANALYSES

The Spray Additive System is essential to the removal of airborne iodine within containment following a DBA.

Following the assumed release of radioactive materials into containment, the containment is assumed to leak at its design value volume following the accident. The analysis assumes that ~~100%~~ 56.3% of the containment free volume is covered by the spray (Ref. 1).

(continued)

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: Q3.6.7-16 **APPLICABILITY:** CP

REQUEST: ITS B3.6.7 Bases- SR 3.6.7.5

CPSES ITS B3.6.7 Bases SR 3.6.7.5 adds the following sentences: "Flow of between 50 and 100 gpm through the eductor test loops (supplied from the RWST) simulates flow from the Chemical Additive Tank. The flow rate through the eductors is not critical because the entire Chemical Additive Tank contents is injected prior to isolation." The latter sentence is confusing. In one sense it implies that the SR is not needed - "flow rate...not critical." In another sense it implies that even if the flow rate is substantially less than 50 gpm, the contents of the tank will be injected before the system isolates. See Comment Number 3.6.7-17 for a related concern.

Comment: Provide a discussion and justification for this change based on system design, operation constraints or current licensing basis. See Comment Number 3.6.7-17.

FLOG response: **(original)** The CTS require that RWST test water flow rates of between 50 gpm and 100 gpm through the eductor test loop of each train of the spray additive system be verified at least once per 5 years. The CTS BASES only describe the long term pH requirements for the spray additive system. The specified flow rates of 50 and 100 gpm are arbitrary and were not used in any safety analysis. The long term sump pH is not affected by the specific eductor flow rates since the design ensures the entire contents of the Chemical Additive Tank (CAT) are injected prior to isolation. Only short term spray pH is affected by the eductor flow rates. As described in the response to 3.6.7-12, above, the short term pH range is not significant. In fact, lower eductor flow rates are better for the short term since that would minimize the maximum spray pH. High eductor flow rates from the CAT were established by pre-operational testing and used for the bounding pH transient analyses. Flow testing through the RWST test loop is neither precise nor required to verify critical parameters. This surveillance is only required to ensure the eductors are not blocked and are capable of educting. The ITS BASES do not require additional changes.

FLOG response: (revised) The CTS require that RWST test water flow rates of between 50 gpm and 100 gpm through the eductor test loop of each train of the spray additive system be verified at least once per 5 years. The CTS BASES only describe the long term pH requirements for the spray additive system. The specified flow rates of 50 and 100 gpm are not used in any safety analysis. The long term sump pH is not affected by the specific eductor flow rates since the design ensures the entire contents of the Chemical Additive Tank (CAT) are injected prior to isolation. Only short term spray pH is affected by the eductor flow rates. As described in the response to 3.6.7-12, above, the short term pH range is not significant. In fact, lower eductor flow rates are better for the short term since that would minimize the maximum spray pH. This surveillance is only required to ensure the eductors are not blocked and are capable of educting.

ATTACHED PAGES:

Attachment No. 12 - CTS 3/4.6 - ITS 3.6

Encl 5B B 3.6-54

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.7.5

To ensure ~~that the~~ correct operation of the Spray Additive System, ~~pH level is established in the borated water solution provided by the Containment Spray System, the~~ flow ~~rate in~~ through the Spray Additive System eductors is verified once every 5 years. Flow of between 50 and 100 gpm through the eductor test loops (supplied from the RWST) simulates flow from the Chemical Additive Tank. ~~The flow rate through the eductors is not critical because the entire Chemical Additive Tank contents is injected prior to isolation. This SR provides assurance that the correct amount of NaOH will be metered into the flow path upon Containment Spray System initiation.~~ Due to the passive nature of the spray additive flow controls, the 5 year Frequency is sufficient to identify component degradation that may affect flow ~~rate~~.

Q-3.6.7-16

REFERENCES

1. FSAR, Chapter 6.5.

ADDITIONAL INFORMATION COVER SHEET

ADDITIONAL INFORMATION NO: CP-3.6-006 **APPLICABILITY:** CP

REQUEST: (original) Corrected two references in the 3.6.1 Applicable Safety Analyses section.

REQUEST: (revised) Based on NRC reviewer comments, the applicable references have been revised to include both references in both affected locations.

ATTACHED PAGES:

Attachment No. 12 - CTS 3/4.6 - ITS 3.6

Encl 5B B 3.6-2

BASES

BACKGROUND (continued)

2. closed by manual valves, blind flanges, or de-activated automatic valves secured in their closed positions, except as provided in LCO 3.6.3, "Containment Isolation Valves"

b. Each air lock is OPERABLE, except as provided in LCO 3.6.2, "Containment Air Locks";

c. All equipment hatches are closed and sealed; and Q-3.6.1-02

d. The ~~pressurized~~ sealing mechanism associated with a penetration (e.g. welds, bellows, or O-rings) is OPERABLE. ~~except as provided in LCO 3.6.[ ]~~.

APPLICABLE SAFETY ANALYSES

The safety design basis for the containment is that the containment must withstand the pressures and temperatures of the limiting DBA without exceeding the design leakage rate.

The DBAs that result in a challenge to containment OPERABILITY from high pressures and temperatures are a loss of coolant accident (LOCA), a steam line break and a rod ejection accident (REA) (Ref. 2 and 23). In addition, release of significant fission product radioactivity within containment can occur from a LOCA or REA. In the DBA analyses, it is assumed that the containment is OPERABLE such that, for these DBAs involving release of fission product radioactivity, release to the environment is controlled by the rate of containment leakage. The containment was designed with an allowable leakage rate of 0.1% of containment air weight per day (Ref. ~~32~~ and 3). This leakage rate, used to evaluate offsite doses resulting from accidents, is defined in 10 CFR 50, Appendix J, Option B (Ref. 1), as L_a: the maximum allowable containment leakage rate at the calculated peak containment internal pressure (P_a) resulting from the limiting DBA. The allowable leakage rate represented by L_a forms the basis for the acceptance criteria imposed on all containment leakage rate testing. L_a is assumed to be 0.1% of containment air weight per day in the safety anal[illegible]is at P_a = ~~44.1~~ 48.3 psig. The calculated peak pressure fo[illegible] LOCAs is less than 48.3 psig (Ref. 3).

CP-3.6-06

Q-3.6.0-02

CP-3.6-06

Q-3.6.1-06

Q-3.6.0-2

CP-3.6-08

Satisfactory leakage rate test results are a requirement for the establishment of containment OPERABILITY.

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

(continued)