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

October 29, 1993

Docket Nos. 50-275
and 50-323

Mr. Gregory M. Rueger
Nuclear Power Generation, B14A
Pacific Gas and Electric Company
77 Beale Street, Room 1451
P.O. Box 770000
San Francisco, California 94177

Dear Mr. Rueger:

SUBJECT: CORRECTED COPIES OF ISSUED AMENDMENTS FOR DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M84580) AND UNIT NO. 2 (TAC NO. M84581)

The Commission issued on October 7, 1993, Amendment Nos. 84 and 83 to Facility Operating License Nos. DPR-80 and DPR-82, for the Diablo Canyon Nuclear Power Plant, Unit Nos. 1 and 2, respectively.

These amendments incorporate both the Eagle 21 reactor protection system upgrade and resistance temperature detector (RTD) bypass manifold elimination. The changes include revisions to Definitions, Action Statements, Allowable Values, Bases, Functional Units, Notes, and Response Times. In addition, the licensee added trip time delays (SG low-low water level), revised steam line break logic, and a new steam generator (SG) high-high level turbine trip setpoint.

We have found that there were errors made in these amendments. Page 3/4 3-21 of Table 3.3.3, note ## should have the words "is automatically" in place of "may be manually" to be consistent with the same notation in Table 4.3.3. In

DF01

addition, some clarifications to safety evaluation pages 20, 22-24, and 30-33 are enclosed. Please replace TS page 3/4 3-21, the appropriate overleaf TS page and the safety evaluations pages with the attached corrected pages.

We are sorry if this error has inconvenienced you in any way.

Sincerely,

Sheri R. Peterson

Sheri R. Peterson, Project Manager
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
Page 3/4 3-21 and 3-22 to
Amendment Nos. 84 and 83
Pages 20, 22-24 and 30-33 to
SE dated October 7, 1993

cc w/enclosures:
See next page

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Original signed by:

Sheri R. Peterson, Project Manager
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
Page 3/4 3-21 and 3-22 to
Amendment Nos. 84 and 83
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TABLE 3.3-3 (Continued)

TABLE NOTATIONS

#Trip function may be blocked in this MODE below the P-11 (Pressurizer Pressure Interlock) Setpoint.

##Trip function automatically blocked above P-11 (Pressurizer Pressure Interlock) Setpoint is automatically blocked below P-11 when Safety Injection on Steam Line Pressure-Low is not blocked.

ACTION STATEMENTS

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.

ACTION 15 - Deleted

ACTION 16 - With the number of OPERABLE Channels one less than the Total Number of Channels, declare the affected Emergency Diesel Generator(s) inoperable and comply with the ACTION statements of Specification 3.8.1.1; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

ACTION 17 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition and the Minimum Channels OPERABLE requirement is met. One additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.

ACTION 18 - With less than the Minimum Channels OPERABLE requirement, operation may continue provided the containment purge supply and exhaust valves (RCV-11, 12, FCV 660, 661, 662, 663, 664) are maintained closed.

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TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 19 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 20 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel or one additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.

ACTION 21 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 22 - With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 23 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 24 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated pump or valve inoperable and take the ACTION required by Specification 3.7.1.5 or 3.7.1.2 as applicable.

ACTION 25 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 29 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided that within 6 hours, for the affected protection set, the Trip Time Delay threshold power level for zero seconds time is adjusted to 0% RTP.

ACTION 35 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the trip condition within 6 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.

new thermowell-mounted RTDs, instrumentation uncertainties associated with the new RTDs and the signal processing performed by the new Eagle 21 RPS. As a result, the T-average and delta-T signal inputs to the RPS and other nonsafety-related control systems are also modified.

The modified system hot leg temperature measurement for each loop will be obtained using three fast-response, narrow-range, dual-element RTDs mounted in thermowells spaced at approximately 120 degrees around the reactor coolant pipe to compensate for the temperature streaming in the hot leg. The readings are electronically-averaged to provide T-hot and include a bias for hot leg temperature streaming. This modified RTD arrangement will perform the same sampling/temperature averaging function as the original bypass manifold system. The removal of the bypass manifold piping will not effect the single wide-range RTD installed at each steam generator. This RTD will continue to be used to monitor hot leg temperature during startup, shutdown and post accident conditions.

The cold leg temperature measurement will be obtained by the average of one narrow-range dual-element RTD located at the discharge of the reactor coolant pump. Because of the mixing effects of the reactor coolant pump, only one RTD has been considered necessary for cold leg temperature measurement. However, for the Diablo Canyon installation, the licensee has included a bias in their analysis to account for expected temperature streaming in the cold leg. The streaming data taken at plants similar to Diablo Canyon indicates that cold leg streaming should be included in the analysis. The new dual-element RTD replaces the cold leg RTDs previously mounted in the bypass manifold. The existing bypass manifold return line nozzles will be capped. The licensee stated that the RTD bypass manifold removal will not effect the single wide range RTD installed at the reactor coolant pump. This RTD will also continue to be used to monitor cold leg temperatures during plant startup, shutdown and post-accident conditions.

The replacement RTDs are provided by Weed Instrument Company, Inc., and as stated previously, are dual element RTDs mounted in thermowells. The spare element of each RTD will be terminated such that the spare element can be switched oneline in the event of a RTD failure.

The new thermowell-mounted RTDs have a response time essentially equal to the allowed time for the old bypass piping transport and thermal lag of the direct immersion RTDs (about four seconds). The four-second response time noted for the new thermowell mounted RTDs is supported by industry experience. The two-second electronics delay specified by the licensee is increased over that referenced for the original bypass manifold system to account for the added delay of the Eagle 21 system. The licensee also increased the Chapter 15 accident analyses response time assumption value from 6 to 7 seconds to provide additional margin. The licensee will verify the response time of the new RTDs using loop current step response (LCSR) methodology following RTD installation in the plant. The LCSR methodology has been evaluated previously and is an industry-recognized onsite method for confirming RTD response times.

The RTD input signals are averaged by the Eagle 21 system. The outputs from the reactor coolant loop RTDs provide the signals needed to calculate the

The licensee stated that following the initial thermowell RTD cross calibration, the calibration reference will consist of the average of the RTD temperatures. The staff has expressed concern in the past that the use of an average RTD value as a reference for cross calibration instead of a calibrated reference may lead to a net drift of the average temperature value indicated by the RTDs over time should the installed RTDs drift systematically. Studies have indicated that the installed RTD drift is random. Therefore, without a reference, the cross calibration will not detect common mode (systematic) drift and will provide information on the consistency and not the accuracy of the installed RTDs. In response to the staffs concern, the licensee provided justification for RTD calibration without a reference based on acceptable operational experience, but is continuing to evaluate cross calibration techniques on a generic basis. The staff finds the proposed RTD calibration means acceptable.

4.1 RTD Bypass System Removal

4.1.1 Current Method

The current method of measuring the hot and cold leg reactor coolant temperatures uses a RTD bypass system. The hot and cold leg temperature readings from each coolant loop are used for protection and control system inputs. The RTD bypass system was designed to address temperature streaming in the hot legs and, by use of shutoff valves, to allow replacement of the direct immersion narrow-range RTDs without draindown of the Reactor Coolant System (RCS). For increased accuracy in measuring the hot leg temperatures, sampling scoops were placed in each hot leg at three locations of a hot leg cross-section 120 degrees apart. Each scoop has five orifices which sample the hot leg flow along the leading edge of the scoop. The flow from the scoops is piped to a manifold where a direct immersion RTD measures the average temperature of the flow from the scoops. This bypass flow is routed back to downstream of the steam generator. The cold leg temperature is measured in a similar manner except that no scoops are used, as temperature streaming is not a problem due to the mixing action of the RCS pump.

4.1.2 New Method

The modification in the new method proposed for measuring the hot and cold leg temperatures removes the hot and cold leg manifolds and all associated piping and valves. The new method uses narrow-range, dual element, fast response RTDs manufactured by the Weed Instrument Company. Three hot leg dual element RTDs are installed in thermowells at new penetration locations that are at a nominal insertion depth of 4 inches. One of the RTD elements is active and the other is an installed spare. The RTDs are in a single plane, 120 degrees apart. For each loop, the three temperatures are electronically averaged by the Eagle 21 process protection system to produce an average hot leg temperature (Thot) that accounts for the temperature streaming effects. The cold leg measurement on each loop is measured by a dual element RTD installed in a thermowell mounted in a new penetration nozzle at the discharge of the reactor coolant pump. The Eagle 21 process protection system averages the cold leg dual element inputs to represent the cold leg temperature (Tcold).

4.1.3 Analysis

The licensee presented information (Ref. 1) regarding the accuracy of the new method for measuring the hot leg temperature and also information regarding the response time of the new RTD measurement system. The response time and accuracy affect the accident analyses.

4.1.4 RTD Response Time

As shown in the tabulation below, the response time for overtemperature delta-T for the proposed system has some gains and losses compared to the existing RTD bypass system. The total response time of the proposed system is increased over the existing system, 7.0 seconds vs. 6.0 seconds, to provide margin.

RESPONSE TIME BREAKDOWN FOR RCS TEMPERATURE MEASUREMENT

	Current RTD Bypass	Fast Response Thermowell RTD
RTD Bypass and Thermal Lag (sec)	2.0	N/A
RTD Response Time (sec)	2.5	4.0
RTD Filter Time Constant (sec)	0.0	0.0
Electronics Delay (sec)	1.5	2.0
Margin (sec)	-	1.0
Total Response Time (sec)	6.0	7.0

The licensee reported that the RTD response times will be checked as part of the reactor trip system instrumentation (Technical Specification Item 7, Table 3.3-2). The surveillance requirements state that response time checks are required at each refueling cycle. NUREG-0809 (Ref. 4) and NUREG/CR-5560 (Ref. 5) have pointed out that RTD response times have been known to degrade and that the Loop Current Step Response (LCSR) methodology is the recommended on-site method for checking RTD response times. In NUREG/CR-5560 it is noted that the LCSR method provides results that are within 10 percent accuracy. The licensee plans to use the LCSR method for checking the RTD response time at each refueling cycle and stated that their survellance test requires use of 110% of the measured response time to account for the inaccuracy of the LCSR method.

Based on the above information the staff finds that the RTD response time has been addressed in an acceptable manner.

4.1.5 RTD Uncertainty

The new method of measuring each hot leg temperature with three thermowell RTDs has been evaluated to at least as accurate as the existing bypass system with three scoops in each hot leg and one RTD measurement.

Since the new method uses three RTDs for each hot leg temperature measurement, it is a statistically more accurate temperature measurement than the former method which used only one RTD for each hot leg temperature measurement.

Regarding the uncertainties associated with RCS flow for Diablo Canyon with the RTD bypass elimination and Eagle 21 equipment, the licencee stated (Ref. 3) that Westinghouse has performed calculations that include the instrument uncertainties associated with the precision flow calorimetric. These uncertainties include those for steam line pressure, pressurizer pressure, Thot and Tcold and the use of the Eagle 21 Man-Machine Interface to read these parameters. With the use of the RCS flow calorimetric to normalize the cold leg elbow tap measurement, the flow measurement uncertainty, including the elbow tap, has been found to be plus or minus 2.1%, for indicated flow. The total flow measurement uncertainty (FMU), including the required feedwater fouling allowance of 0.1%, is 2.2% . The licensee plans to use the current Diablo Canyon TS RCS FMU of 2.4% which is conservative with respect to that of the calculated FMU for Diablo Canyon of 2.2% (including the 0.1% feedwater fouling factor) with the RTD bypass elimination and Eagle 21 equipment. We therefore find this to be accepatabe.

Regarding the effect of the increased streaming from low leakage loading on the hot leg Tave value, the licensee reports that data taken at Diablo Canyon before and after introduction of low leakage loading patterns shows approximately a 2% drop in RCS flow taken via RCS flow calorimetric, with no drop in flow taken via the elbow taps. Thus, the hot leg streaming bias resulting from the low leakage loading pattern results in a measured hot leg Tave higher than the true hot leg Tavg. Therefore, the bias due to low leakage loading is conservative with respect to the safety analyses. PG&E presented the RCS flow measurement values (Ref. 3) for Diablo Canyon Units 1 and 2 taken at the beginning of cycle 6. These were about 2% over the TS limits for Unit 1 and about 1% over the TS limits for Unit 2.

Based on data taken at plants similar to Diablo Canyon, it has been assumed for the purpose of the uncertainty analysis that Diablo Canyon will experience cold leg streaming. Based on cold leg streaming data, the RTD bypass elimination implementation has been designed to ensure conservative RCS calorimeteric flow measurement. Also, a 1 °F Tavg penalty has been included in the Protection System Setpoint Study for conservatism in the safety analysis to account for cold leg streaming.

The licensee uses the Westinghouse recommended RTD cross-calibration method to calibrate the RTDs at each refueling prior to startup. For small deviations found by their in-situ cross calibration method, the calibration of the affected RTD(s) will be compensated in the electronics by use of polynomial curves to account for the RTD shift. The platinum resistance temperature detectors (RTDs) are believed to be very stable and to have relatively small calibration drifts. However, according to several sources (Refs. 6, 7) RTDs have been known to shift in calibration which could possibly be in one direction. Therefore, PG&E will periodically compare the average temperature

There was a clarification regarding response time due the RTD bypass removal. Also, there was an explanation regarding the loop Delta-T measurements.

TABLE 2.2-1 - Reactor Trip System Instrumentation Trip Setpoints

Functional Unit 7, Overtemperature Delta-T, Note 1 was changed due to the implementation of Eagle 21 and the RTD bypass system removal. Functional Unit 8, Overpower Delta-T, Notes 3 and 4 were changed due to implementation of Eagle 21 and the RTD bypass system removal.

TABLE 3.3-2 - Reactor Trip System Instrumentation Response Times

The response times were changed to equal or less than 7 seconds based on accident analysis. This applies to: Functional Unit 7, Overtemperature Delta-T and Functional Unit 8, Overpower Delta-T.

TABLE 4.3-1 - Reactor Trip System Instrumentation Surveillance Requirements

The note 11 indicating that channel calibration shall include the RTD bypass loops flow rate was removed for Functional Unit 7, Overtemperature Delta-T as it does not pertain after the RTD bypass loops are removed.

The above changes are acceptable as they are in accordance with the condition for RTD bypass system removal as found acceptable in the Section 3.1 above.

2. The following Low-Low Steam Generator Water Level entries in the Technical Specifications reflect incorporation of the Trip Time Delay (TTD) feature.

Bases Page B 2-7 - Steam Generator Water Level

There was text added regarding implementation of the TTD feature.

TABLE 2.2-1 - Reactor Trip System Instrumentation Trip Setpoints

Functional Unit 13, Steam Generator Water Level-Low-Low, was revised to reflect incorporation of the Trip Time Delay (TTD) feature. This included entries for trip setpoint and allowable values for: RCS Loop delta-T Equivalent to Power (1) equal or less than 50% RTP, with variable time delay, and (2) greater than 50% RTP, with no time delay. This allows for variable delays, the magnitude of the delays decreases with increasing primary side power level up to 50% RTP.

TABLE 3.3-1 - Reactor Trip System Instrumentation

Functional Unit 13, Steam Generator Water Level-Low-Low, was revised to reflect incorporation of the TTD feature. This required the addition of the RCS Delta-T instrumentation needed for the TTD feature.

TABLE 3.3-2 - Reactor Trip System Instrumentation Response Times

Functional Unit 13, Steam Generator Water Level-Low-Low, was revised with footnote 2 to indicate that the response time listed of equal or less than 2.0 seconds does not include Trip Time Delays. Response times include the transmitters, Eagle-21 PPS cabinets, Solid State Protection cabinets and actuation devices only. This reflects the response times necessary for Thermal Power in excess of 50% RTP.

TABLE 4.3-1 - Reactor Trip System Instrumentation Surveillance Requirements

Functional Unit 13, Steam Generator Water Level-Low-Low, was revised with a row added for RCS Loop Delta-T requirements.

TABLE 3.3-3 - Engineered Safety Features Actuation System Instrumentation

For Functional Unit 6, Auxiliary Feedwater, item c, Steam Generator Water Level-Low-Low, item 1)b and item 2)b were added to include requirements for RCS Loop Delta-T for the Start of Motor-Driven and Turbine-Driven Pumps.

TABLE 3.3-4 - Engineered Safety Features Actuation System Instrumentation Trip Setpoints

For Functional Unit 6, Auxialiary Feedwater, item c, Steam Generator Water Level-Low-Low, requirements were added for RCS Loop Delta-T for 1) power equal or less than 50% RTP and 2) power greater than 50% RTP. Included was a Note 2 related to TTD.

TABLE 3.3-5 - Engineered Safety Features Response Times

Functional Unit 9, Steam Generator Water Level-Low-Low, was revised to add a footnote to the response time for the Motor-Driven and Turbine-Driven Auxiliary Feedwater Pumps which state "Does not include Trip Time Delays. Response times include the transmitters, Eagle-21 Process Protection cabinets, Solid State Protection System cabinets and actuation devices only." This reflects the response times necessary for Thermal Power in excess of 50% power.

TABLE 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements

Functional Unit 6c, Steam Generator Water Level-Low-Low, was revised to include requirements for RCS Loop Delta-T.

The above changes are acceptable as they are in accordance with the incorporation of the trip time delay (TTD) feature as found acceptable in the Section 3.2 above.

3. The following Technical Specification changes reflect incorporation of a new Steam Line Break (SLB) protection logic.

This new logic results in deletion of the Safety Injection (SI) and Steam Line Isolation on High Steam Line Flow coincident with P-12 Low-Low Tavg and High Steam Line Flow coincident with Low Steam Line Pressure. SI on High Differential Pressure Between Steam Lines is also deleted. SI and Steam Line Isolation on Low Steam Line Pressure and Steam Line Isolation on High Negative Steam Line Pressure Rate coincident with P-11 Pressurizer Pressure is added as part of Eagle 21 upgrade in place of the deleted functions.

TABLE 3.3-3 - Engineered Safety Features Actuation System Instrumentation

For Functional Unit 1, Safety Injection, item 1e, Differential Pressure Between Steam Lines-High, was eliminated. Item 1f, Steam Flow in Two Steam Lines-High and coincident with either Tavg-Low-Low or Steam Line Pressure-Low, was eliminated except for the part on Steam Line Pressure-Low which was modified. For Functional Unit 4, Steam Line Isolation, item 4d, Steam Flow in Two Steam Lines-High and Coincident with Either Tavg-Low-Low or Steam Line Pressure-Low, was eliminated except for the part on Steam Line Pressure-Low, which was modified. Item 4e, Negative Steam Line Pressure Rate-High was added. Functional Unit 8, Engineered Safety Features Actuation System Interlocks, item b, Low-Low Tavg, P-12 was deleted as it is not used in the new SLB logic.

TABLE 3.3-3 NOTATIONS

The original ## notation using P-12 (Low-Low Tavg) is deleted and replaced by "Trip function automatically blocked above P-11 (Pressurizer Pressure Interlock) setpoint and is automatically blocked below P-11 when Safety Injection on Steam Line Pressure-Low is not blocked."

TABLE 3.3-4 - Engineered Safety Features Actuation System Instrumentation Trip Setpoints

For Functional Unit 1, Safety Injection, item 1e, Differential Pressure Between Steam Lines-High, was eliminated. Item 1f, Steam Flow in Two Steam Lines-High and coincident with either Tavg-Low-Low or Steam Line Pressure-Low, was eliminated except for the part on Steam Line Pressure-Low which was modified. For Functional Unit 4, Steam Line Isolation, item 4d, Steam Flow in Two Steam Lines-High and coincident with either Tavg-Low-Low or Steam Line Pressure-Low, was eliminated except for the part on Steam Line Pressure-Low, which was modified. Item 4e, Negative Steam Line Pressure Rate-High was added. Note 1 was added for time constants utilized in the lead/lag function added as part of the new SLB logic for Functional Units 1 and 4. For Functional Unit 8, Engineered

Safety Features Actuation system Interlocks, item b, Low-Low Tavg P-12 was deleted as it is not used in the new SLB logic.

TABLE 3.3-5 - Engineered Safety Features Response Times

The Initiating Signal and Function 4, "Differential Pressure Between Steam Lines-High", was deleted and replaced by "Negative Steam Line Pressure Rate-High". The Item 4a, "Safety Injection (ECCS)" together with its listing of 8 items was eliminated and replaced by Steam Line Isolation for which the Response Time was given as equal or less than 8 seconds.

The Initiating Signal and Function 5, "Steam Flow in Two Steam Lines - High coincident with Tavg-Low-Low was deleted.

The title for Initiating Signal and Function 6, "Steam Flow in Two Steam Lines-High Coincident with Steam Line Pressure-Low" was changed to "Steam Line Pressure-Low."

TABLE 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements

For Functional Unit 1, Safety Injection, item 1e, Differential Pressure Between Steam Lines-High, was eliminated. Item 1f, Steam Flow in Two Steam Lines-High and coincident with either Tavg-Low-Low or Steam Line Pressure-Low, was eliminated except for the part on Steam Line Pressure-Low. For Functional Unit 4, Steam Line Isolation, item 4d, Steam Flow in Two Steam Lines-High and coincident with either Tavg-Low-Low or Steam Line Pressure-Low, was eliminated except for the part on Steam Line Pressure-Low. Item 4e, Negative Steam Line Pressure Rate-High was added with a footnote 3 to reflect that the trip function is automatically blocked above P-11 (Pressurizer Pressure Interlock) setpoint and is automatically blocked below P-11 when Safety Injection on Steam Line Pressure-Low is not blocked.

The above changes are acceptable as they are in accordance with the incorporation of the new Steam Line Break protection logic as found acceptable in the Section 3.2 above.

4. The following Technical Specification changes reflect incorporation of a Steam Generator Water Level High-High Turbine trip setpoint.

TABLE 3.3-4 - Engineered Safety Features Actuation System Instrumentation Trip Setpoints

Functional Unit 5, Turbine Trip and Feedwater Isolation, was modified to change the trip setpoint and allowable value for 5b, Steam Generator Water Level-High-High. The trip set point was changed from less than or equal to 67% to less than or equal to 75% of the narrow range instrument span each steam generator. The allowable value was changed from less than or equal to 68% to less than or equal to 75.5% of narrow range instrument span for each steam generator.