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JSP-063-93

February 17, 1993

U-602078

L47-93(02-17)LP

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10CFR50.90

Docket No. 50-461

Document Control Desk
Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Clinton Power Station Revision to Previously Submitted
Proposed Amendment of Facility Operating License No. NPF-62

Dear Sir:

By letter dated September 20, 1991 (reference U-601871), Illinois Power (IP) applied for amendment of Facility Operating License No. NPF-62, Appendix A - Technical Specifications, for Clinton Power Station (CPS). That request consisted of proposed changes to the CPS Technical Specifications to incorporate reliability-based improvements to instrumentation Action Statements and surveillance test intervals based on Topical Reports which were previously submitted to the NRC by the Boiling Water Reactor Owners' Group (BWROG). However, as a result of questions/comments received from the NRC during their review of IP's request, additional clarifications/revisions became necessary. Those additional clarifications/revisions were submitted to the NRC via IP letter U-602025 dated August 17, 1992.

During a meeting with the NRC Staff on November 24, 1992, IP received additional comments from the NRC regarding the September 20, 1991 amendment request. These comments involve additional justification for the proposed repair time limit for inoperable main steam line isolation instruments, resolution of a conflict with a previously submitted Technical Specification change to simplify control rod block instrumentation surveillance triggers, and resolution of "loss-of-function" issues to be consistent with the Improved Standard Technical Specifications (NUREG-1434). In order to resolve these comments, further clarifications/revisions to IP's September 20, 1991 amendment request are required.

Attachment 2 to this letter contains the requested additional justification for the September 20, 1991 amendment request as well as a description and justification for the additional changes proposed by this supplement. Attachment 3 to this letter contains replacement pages for the affected marked-up pages for Technical Specification (TS) 3/4.3.3, "Emergency Core Cooling System Actuation Instrumentation," TS

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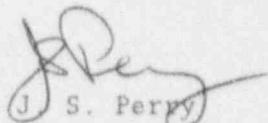
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ADD 1

3/4.3.5, "Reactor Core Isolation Cooling System Actuation Instrumentation," and TS 3/4.3.6, "Control Rod Block Instrumentation," contained in IP's September 20, 1991 request (i.e., pages 15, 16, 27, 30, 31, and 32 of Attachment 3 to U-601871). The additional changes being proposed by this supplement are identified by double change bars. Further, an affidavit supporting the facts set forth in this letter and its attachments is provided in Attachment 1.

IP has reviewed the Basis for No Significant Hazards Consideration contained in IP's September 20, 1991 amendment request and has concluded that the additional changes contained in this supplement do not alter the bases or conclusions provided in those assessments. Additionally, the changes contained in this supplement do not alter IP's determination that the proposed changes meet the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.

Sincerely yours,



J. S. Perry
Senior Vice President

DAS/mfm

Attachments

cc: NRC Clinton Licensing Project Manager
NRC Resident Office, V-690
Regional Administrator, Region III, USNRC
Illinois Department of Nuclear Safety

STATE OF ILLINOIS
COUNTY OF DEWITT

J. Stephen Perry, being first duly sworn, deposes and says: That he is Senior Vice President of Illinois Power Company; that the application for amendment of Facility Operating License NPF 62 has been prepared under his supervision and direction; that he knows the contents thereof; and that to the best of his knowledge and belief said application and the facts contained therein are true and correct.

DATE: This 17 day of February, 1993.

Signed: _____

J. Stephen Perry
J. Stephen Perry

Subscribed and sworn to before me this 17th day of February, 1993.

Linda S. French
Notary Public



Background

By letter dated September 20, 1991 (reference U-601871), Illinois Power (IP) requested amendment of the Technical Specifications (TS) for Clinton Power Station (CPS). Specifically, the September 20, 1991 letter was written to request changes to the allowable-outage-time (AOT) limits for repairs and surveillances and changes to the frequency for performing Channel Functional Tests (CFTs) and analog trip module (ATM) calibration checks for various instruments contained in the CPS TS. The affected TS include TS 3/4.3.1, "Reactor Protection System Instrumentation"; TS 3/4.3.2, "Containment and Reactor Vessel Isolation Control System"; TS 3/4.3.3, "Emergency Core Cooling System Actuation Instrumentation"; TS 3/4.3.4.1, "ATWS Recirculation Pump Trip System Instrumentation"; TS 3/4.3.4.2, "End-of-Cycle Recirculation Pump Trip System Instrumentation"; TS 3/4.3.5, "Reactor Core Isolation Cooling System Actuation Instrumentation"; TS 3/4.3.6, "Control Rod Block Instrumentation"; TS 3/4.3.9, "Plant Systems Actuation Instrumentation"; TS 3/4.4.2.1, "Safety/Relief Valves"; and TS 3/4.4.2.2, "Safety/Relief Valves Low-Low Set Function". In general, the repair AOTs for these instruments will be increased from one hour to six hours for the Reactor Protection System and to 24 hours for other instrumentation; the surveillance AOTs will be increased from two hours to six hours; and the CFT and ATM calibration check surveillance frequencies will be increased from monthly to quarterly. These proposed changes are supported by Topical Reports prepared by the Boiling Water Reactor Owner's Group (BWROG) which have been approved by the NRC for individual plant use.

As a result of comments received during the NRC's review of IP's September 20, 1991 amendment request, IP provided a supplement to that request (reference IP letter U-602025 dated August 17, 1992). That supplement proposed additional changes to TS 3/4.3.7.1, "Radiation Monitoring Instrumentation," and TS 3/4.3.9, "Plant Systems Actuation Instrumentation." Further, the August 17, 1992 supplement provided additional justification/clarification for the changes to TS 3/4.3.5, "Reactor Core Isolation Cooling System Actuation Instrumentation," and TS 3/4.3.6, "Control Rod Block Instrumentation," contained in the September 20, 1991 request.

During a meeting with the NRC on November 24, 1992, IP received additional comments from the NRC which necessitate the submittal of this additional supplement. The NRC comments relate to three general areas: (1) to provide additional justification for the proposed repair AOT change from one hour to six hours applicable when two of the four Containment and Reactor Vessel Isolation Control System (CRVICS) Main Steam Line Isolation Trip Function channels are inoperable (TS 3/4.3.2, Action b.2); (2) to resolve the conflict between TS Table 4.3.6-1, "Control Rod Block Instrumentation Surveillance Requirements," footnote (d) and the proposed change to the Channel Functional Test frequency for the associated Trip Function; and (3) to provide revisions to the proposed repair AOT limits to address "loss-of-function" issues as recently resolved during NRC review of the Improved Standard Technical Specifications (NUREG-1434). Each of these areas is discussed separately as follows.

CRVICS Main Steam Line Isolation Repair AOT

TS 3/4.3.2 provides operability and surveillance requirements for CRVICS instrumentation, including those instruments which initiate isolation of the main steam lines and main steam drain lines. The instrumentation logic for isolation of the main steam lines and drains is arranged in a two-out-of-four configuration. The Action Statements for the main steam line isolation instruments are currently consistent with those for the Reactor Protection System (RPS) contained in TS 3/4.3.1 since the RPS logic is also arranged in a two-out-of-four configuration. IP's September 20, 1991 amendment request proposed, in part, to change the repair AOT for two inoperable RPS channels from one hour to six hours. Those proposed changes to the RPS repair AOT are specifically evaluated and addressed in BWROG Topical Report NEDC-30851P, "Technical Specification Improvement Analyses for BWR Reactor Protection System."

IP's September 20, 1991 amendment request also proposed, in part, similar changes to the CRVICS main steam line isolation instrumentation repair AOT limits. Although mark-ups for the proposed repair AOT changes for CPS were not specifically provided in the BWROG Topical Report applicable to main steam line isolation Trip Functions (NEDC-30851P, Supplement 2, "Technical Specification Improvement Analysis for BWR Isolation Instrumentation Common to RPS and ECCS Instrumentation"), their qualitative evaluation is documented in the Topical Report. Section 3.1 of NEDC-30851P, Supplement 2 documents the evaluation of changes to the surveillance test intervals for main steam line isolation Trip Functions common to RPS for the BWK-6 solid-state plant (i.e., CPS). Section 3.5 documents the generic evaluation of AOT changes for all product lines. NEDC-30851P, Supplement 2 concluded that, for a bounding case, an AOT of 24 hours for tests and repairs has less than 2% effect on the probability of failure of the isolation function given a demand. Since the frequency of demand is very low, the Topical Report concluded that an AOT of 24 hours was justified. However, the NRC Safety Evaluation of NEDC-30851P, Supplement 2 concluded that the repair AOTs for instruments common to RPS should be limited to the times allowed for the RPS instruments, rather than 24 hours.

Because TS 3/4.3.2, Action Statement b.2 only addresses two inoperable channels for a main steam line isolation Trip Function, the capability to isolate the main steam lines in response to each of the associated Trip Function parameters would not be lost while in this configuration due to the two-out-of-four logic configuration. In addition, the proposed repair AOT of six hours is less than 24 hours (as evaluated in NEDC-30851P, Supplement 2), and the proposed repair AOT is equal to the time allowed for RPS instruments (consistent with the NRC's Safety Evaluation of NEDC-30851P, Supplement 2). Further, the proposed repair AOT is not longer than allowed by the proposed surveillance AOT. Notwithstanding, as stated in NEDC-30851P, Supplement 2, individual valve failure probabilities dominate overall isolation failure probabilities. As a result, IP has concluded that the proposed six-hour repair AOT for TS 3/4.3.2, Action Statement b.2 does not significantly increase the isolation failure probabilities associated with these instruments and, therefore, is acceptable.

Control Rod Block Footnote (d)

As its name implies, CPS TS Table 4.3.6-1, "Control Rod Block Instrumentation Surveillance Requirements," provides the surveillance testing requirements for the control rod block instrumentation. IP's September 20, 1991 letter requested, in part, increasing the Channel Functional Test (CFT) frequency for the instruments associated with the Rod Pattern Control System (RPCS) low power setpoint and Rod Withdrawal Limiter (RWL) high power setpoint (Items 1.a and 1.b) from monthly (M) to quarterly (Q). The monthly frequency notation for each of these two Trip Functions on Table 4.3.6-1 has two footnotes attached to it, footnote (d) and footnote (e). Footnote (e) identifies that the CFT must include the reactor manual control multiplexing system input and footnote (d) identifies that the CFT must be performed at least once per 31 days while operation continues within a given power range above the RPCS low power setpoint. IP's September 20, 1991 amendment request noted (see page 12 of Attachment 2 to U-601871) that IP had previously proposed to delete footnote (d) per an earlier request. At the time, it was anticipated that NRC review of the earlier amendment request would be completed prior to review of the September 20, 1991 request. However, the earlier request is still under review by the NRC. As a result, approval of IP's September 20, 1991 amendment request at this time will result in a conflict with footnote (d).

IP is now requesting that footnote (d) be deleted as part of this request in order to resolve the conflict between the frequency proposed in the CFT column of Table 4.3.6-1 (quarterly) and the frequency contained in footnote (d) (at least once per 31 days). Deletion of footnote (d) is reflected in Attachment 3 (as denoted by double change bars) and the justification is provided below.

IP proposes to delete footnote (d) primarily for the purpose of simplifying the surveillance requirements. Without footnote (d) attached to the frequency notation, the CFT is required to be performed at least once during the required test interval while the plant is in the specified modes. The plant modes specified for these Trip Functions encompass the more specific conditions of "operation... within a given power range of the RPCS low power setpoint" identified in footnote (d). Although deleting the footnote could require the CFTs to be performed more often than required with the footnote attached (if the plant, for example, was in operation for an extended period of time in Mode 1 or 2 but at a power level below that corresponding to the low power setpoint), Operations personnel feel that simplifying the CFT requirements is more important. The possibility of additional CFTs being required as a result of removing footnote (d) would be even more remote after the CFT frequency is reduced to quarterly. It should also be noted that footnote (d) has already been removed from the Technical Specifications for the other three BWR-6 plants.

Resolution of "Loss-of-Function" Issues

The changes to repair AOTs as provided in the BWROG Topical Reports (and as generically approved by the NRC) would allow, with certain instrument channels inoperable, a plant configuration which does not have the capability to automatically actuate the respective system/valve(s) to exist for up to 24 hours. During review of proposed changes to individual plants' TS to

implement the BWROG Topical Reports, the NRC identified the potential for a loss of scram capability for certain events to exist for up to 12 hours based on the changes proposed to the Action Statements for RPS by the BWROG. The NRC concluded that permitting such a "loss-of-function" condition to exist for such a period of time was unacceptable and that this issue must be resolved prior to further approval of proposed changes to RPS repair AOTs on individual plants' dockets. As identified in IP's September 20, 1991 amendment request (reference page 4 of Attachment 2 to U-601871), this RPS loss-of-function issue is not applicable to CPS since the RPS logic at CPS is arranged in a two-out-of-four configuration and the Action Statements do not allow continued operation when any parameter is unable to provide a reactor scram (i.e., more than two channels inoperable).

As noted previously, IP submitted a supplement to the September 20, 1991 amendment request (IP letter U-602025) on August 17, 1992. That supplement was written, in part, to eliminate a loss-of-function concern in the proposed Action Statements for TS 3/4.3.9, "Plant Systems Actuation Instrumentation." However, those changes were necessary to conform with the limitations provided in BWROG Topical Report GENE-770-06-1, "Bases for Changes to Surveillance Test Intervals and Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications." The allowance provided in GENE-770-06-1 to change repair AOTs for the instruments listed in TS 3/4.3.9 only applies in those cases where "taking out the channel does not cause loss of the trip function." The changes to TS 3/4.3.9 provided in IP's August 17, 1992 supplement conform to this limitation and preclude a loss-of-function condition existing for these instruments for greater than one hour.

During the development of the Improved Standard Technical Specifications (ITS) (NUREG-1434), loss-of-function and support system operability were issues that were specifically addressed. As a result, the Action Statements in NUREG-1434 for instrumentation that provides an automatic actuation function contain checks to ensure that a loss-of-function condition does not exist. NUREG-1434 was issued by the NRC for implementation by utilities on September 29, 1992.

During a meeting with IP on November 24, 1992, the NRC stated that the repair AOT changes proposed by IP are not acceptable because the associated Action Statements do not contain checks (as contained in NUREG-1434) to ensure that a loss-of-function condition does not exist for more than one hour. As a result, IP has completed a review of each of the repair AOT changes proposed in IP's September 20, 1991 amendment request to identify and eliminate where loss-of-function conditions may be permitted to exist for more than one hour. The results of that review and the necessary changes to IP's September 20, 1991 amendment request are described below.

Resolution of the loss-of-function issue requires no further changes to the Action Statements previously proposed for much of the instrumentation addressed by the CPS TS. As noted previously, no further changes are required for TS 3/4.3.1, "Reactor Protection System Instrumentation," because the RPS logic is arranged in a two-out-of-four configuration and the Action Statements do not allow continued operation when any parameter is unable to provide a reactor scram. Because identical logic and Action Statements are provided for the end-of-cycle recirculation pump trip actuation instrumentation (TS 3/4.3.4.2) and main steam line isolation Trip Functions of CRVICS (TS

3/4.3.2), no further changes to these TS are likewise required. The proposed changes to the remainder of the Action Statements of TS 3/4.3.2 apply only to one trip system and preclude continued operation if the ability to isolate a containment penetration has been lost. As a result, no further changes to TS 3/4.3.2 are required. No further changes are required to TS 3/4.3.4.1, "ATWS-Recirculation Pump Trip System Instrumentation," TS 3/4.4.2.1, "Safety/Relief Valves," or TS 3/4.4.2.2, "Safety/Relief Valves Low-Low Set Function," because IP did not propose any changes to the repair AOTs for the instruments addressed by these TS. No further changes to TS 3/4.3.9, "Plant Systems Actuation Instrumentation," are required because, as stated above, IP's August 17, 1992 supplement provided changes to this TS to eliminate loss-of-function conditions. Finally, no further changes to TS 3/4.3.7.1, "Radiation Monitoring Instrumentation," are required since the affected Action Statement addresses having only one channel inoperable. This configuration would not create a loss-of-function condition since the associated logic is arranged in a one-out-of-two twice configuration.

IP has determined that additional changes are required to the Action Statements for TS 3/4.3.3, "Emergency Core Cooling System Actuation Instrumentation"; TS 3/4.3.5, "Reactor Core Isolation Cooling System Actuation Instrumentation"; and TS 3/4.3.6, "Control Rod Block Instrumentation." The necessary changes are reflected in Attachment 3 (as denoted by double change bars). The Action Statements for each of these TS are discussed below.

TS 3/4.3.3, "Emergency Core Cooling System Actuation Instrumentation"

The Action Statements provided for ECCS Actuation Instrumentation in NUREG-1434 (LCO 3.3.5.1) consist of the following general requirements:

For the Division I and Division II ECCS [i.e., low pressure core spray (LPCS) and low pressure coolant injection (LPCI) loops A, B, and C], a check is required to ensure that automatic initiation capability has not been lost for both divisions of ECCS when an automatic initiation instrument becomes inoperable. [This applies to the reactor water level-low low low level 1, drywell pressure-high, pump start time delay, injection valve permissive reactor vessel pressure-low (Modes 1, 2, and 3 only) and pump discharge flow-low Trip Functions.] If a loss-of-function condition does not exist, then at least 24 hours is allowed to restore the channel to operable status or place it in the tripped condition. NUREG-1434 does not require a loss-of-function check to be performed for the injection valve permissive reactor vessel pressure-low Trip Functions while the reactor is in Mode 4 or 5 or for the low pressure ECCS manual initiation Trip Functions.

For the Division III ECCS [high pressure core spray (HPCS) system], a check is required to ensure that automatic initiation capability has not been lost for the HPCS system when an automatic initiation instrument becomes inoperable. (This applies to the reactor water level-low low level 2, drywell pressure-high, RCIC storage tank level-low, and suppression pool-high Trip Functions.) If a loss-of-function condition does not exist, then at least 24 hours is allowed to restore the channel to operable status or place it in the tripped condition. NUREG-1434 does not require a loss-of-function check to be performed for the HPCS

manual initiation, HPCS pump flow, HPCS pump pressure, or reactor water level-high level 8 Trip Functions.

For the automatic depressurization system (ADS), a check is required to ensure that automatic initiation capability has not been lost for both ADS Trip Systems when an automatic initiation instrument becomes inoperable. (This applies to the reactor water level-low low level 1, drywell pressure-high, reactor water level-low level 3 permissive, ADS timer, low pressure ECCS pump pressure permissive, and drywell pressure bypass timer Trip Functions.) If a loss-of-function condition does not exist, then at least four days are allowed to restore the channel to operable status or place the channel in the tripped condition. NUREG-1434 does not require a loss-of-function check to be performed for the ADS manual initiation Trip Function.

In light of the above, IP is proposing the following changes to the Action Statements of TS Table 3.3.3-1 to be consistent with NUREG-1434:

Action 30 currently applies to the low pressure ECCS and ADS reactor water level-low low low level 1 and drywell pressure-high Trip Functions (Items A.1.a, A.1.b, A.2.a, A.2.b, B.1.a, B.1.b, B.2.a, and B.2.b) and the ADS drywell pressure bypass timer Trip Functions (Items A.2.g and B.2.f). This Action Statement has been revised to require, within one hour, a verification that a sufficient number of channels remain operable or are in the tripped condition to maintain automatic actuation capability of either Division I or Division II ECCS and either ADS Trip System 1 or Trip System 2. This will ensure that a loss-of-function condition does not exist. The revised Action 30 will require the inoperable channel(s) to be placed in the tripped condition within 24 hours. If a loss-of-function condition exists or it is not desirable to place the inoperable channel(s) in the tripped condition, the associated system(s) must be declared inoperable.

It should be noted that it is not appropriate to place the ADS drywell pressure bypass timer (Items A.2.g and B.2.f) in the tripped condition. This would result in starting the ADS timer immediately on a low reactor water level (level 1) condition. Currently, a concurrent high drywell pressure signal is required to start the ADS timer within the first six minutes of obtaining a low reactor water level signal. As a result, the reference Action for this Trip Function is being changed to Action 32. (See the following discussion regarding Action 32.) Revised Action 32 will require the timer to be restored to operable status within 24 hours or the associated ADS trip system to be declared inoperable.

With further respect to Action 32, the ADS reactor water level-low level 3 permissive Trip Functions (Items A.2.d and B.2.d) currently reference this Action. Action 32, however, does not provide the option of placing the inoperable channel in the tripped condition. This should be an acceptable alternative to declaring the associated ADS trip system inoperable. The level 3 signal is provided only as a confirmatory signal to ensure that a low reactor water level condition actually exists. Placing the inoperable channel in the tripped condition would still require receipt of a level 1 signal to initiate ADS, and placing

the channel in the tripped condition is allowed by NUREG-1434. As a result, the reference Action for the reactor water level-low level 3 Trip Function(s) is being changed from Action 32 to Action 30.

Action 32 currently applies to the low pressure ECCS injection valve permissive reactor vessel pressure-low (during Modes 1, 2, and 3 only) and LPCI 'A' and LPCI 'B' pump start time delay Trip Functions (Items A.1.c, A.1.d, B.1.c, and B.1.d); ADS timer, reactor vessel water level-low level 3 permissive, and low pressure ECCS pump pressure permissive Trip Functions (Items A.2.c, A.2.d, A.2.e, A.2.f, B.2.c, B.2.d, and B.2.e); and the HPCS reactor vessel water level-high level 8 Trip Function (Item C.1.c). This Action Statement has been revised to require, within one hour, a verification that a sufficient number of channels remain operable or are in a tripped condition to maintain automatic trip capability of either Division I or Division II ECCS and either ADS Trip System 1 or Trip System 2. This will ensure that a loss of function condition does not exist. The revised Action 32 will require the inoperable channel(s) to be restored to operable status within 24 hours. If a loss-of-function condition exists or the inoperable channel(s) cannot be restored to operable status, the associated system(s) must be declared inoperable.

As identified above, Action 32 currently applies to the HPCS reactor water level-high level 8 Trip Function (Item C.1.c). However, NUREG-1434 does not require a loss-of-function check to be performed for this Trip Function. As a result, the reference Action for this Trip Function is being changed to revised Action 35 which is consistent with Action 32 with the exception that it does not require a loss-of-function check. (Action 35 is further discussed below.)

Action 33 currently applies to the low pressure ECCS injection valve permissive reactor vessel pressure-low Trip Functions during Modes 4 and 5 (Items A.1.c and B.1.c). Since NUREG-1434 does not require a loss-of-function check to be performed when this Trip Function becomes inoperable, the revision to Action 33 proposed in IP's September 20, 1991 amendment request requires no changes.

Action 35 currently applies to the low pressure ECCS manual initiation Trip Functions (Items A.1.g and B.1.g); ADS manual inhibit switch and ADS manual initiation Trip Functions (Items A.2.h, A.2.i, B.2.g, and B.2.h); and HPCS manual initiation Trip Function (Item C.1.h). Since NUREG-1434 does not require a loss-of-function check to be performed when these Trip Functions become inoperable, the revision to Action 35 proposed in IP's September 20, 1991 amendment request requires no changes. In addition, as noted above, NUREG-1434 does not require a loss-of-function check to be performed when the HPCS reactor water level-high level 8 Trip Function (Item C.1.c) becomes inoperable. As a result, the reference Action for this Trip Function has been changed from Action 32 to Action 35. Action 35 will require the inoperable channel(s) to be restored to operable status within 24 hours or the HPCS system declared inoperable. Therefore, this change is acceptable.

Action 36 currently applies to the HPCS reactor water level-low low level 2 and drywell pressure-high Trip Functions (Items C.1.a and C.1.b). This Action Statement has been revised to require, within one hour, a verification that a sufficient number of channels remain operable or are in the tripped condition to maintain automatic HPCS actuation capability. This will ensure that a loss-of-function condition does not exist. The revised Action 36 will require the inoperable channel(s) to be placed in the tripped condition within 24 hours. If a loss-of-function condition exists or it is not desirable to place the inoperable channel(s) in the tripped condition, the HPCS system must be declared inoperable.

Action 37 currently applies to the RCIC storage tank level-low and suppression pool water level-high Trip Functions for HPCS (Items C.1.d and C.1.e). This Action Statement has been revised to require, within one hour, a verification that the HPCS pump suction is either aligned or capable of automatically realigning to the suppression pool. This will ensure that a loss-of-function condition does not exist. The revised Action 37 will require at least one inoperable channel to be placed in the tripped condition (which will automatically realign the HPCS pump suction to the suppression pool) within 24 hours. If a loss-of-function condition exists or it is not desirable to place an inoperable channel in the tripped condition (or realign the HPCS pump suction to the suppression pool), the HPCS system must be declared inoperable.

Action 40 currently applies to low pressure ECCS pump discharge flow Trip Functions (Items A.1.e, A.1.f, B.1.e, and B.1.f) and HPCS pump discharge pressure and system flow rate Trip Functions (Items C.1.f and C.1.g). This Action Statement has been revised to require, within one hour, a verification that a sufficient number of channels remain operable or are in the tripped condition to maintain automatic actuation capability of either Division I or Division II ECCS. This will ensure that a loss-of-function condition does not exist. The revised Action 40 will require the inoperable channel(s) to be restored to operable status within seven days (the current time limit). If a loss-of-function condition exists or the inoperable channel(s) cannot be restored to operable status, the associated system must be declared inoperable. However, NUREG-1434 does not require a loss-of-function check to be performed for the HPCS pump discharge pressure and system flow rate Trip Functions (Items C.1.f. and C.1.g). As a result, a new Action is being applied to these Trip Functions. New Action 41, as described below, is consistent with Action 40 with the exception that it does not require a loss-of-function check.

As described above, new Action Statement 41 is being proposed to apply to the HPCS pump discharge pressure and system flow rate Trip Functions (Items C.1.f and C.1.g). This new Action Statement requires the inoperable channel(s) to be restored to operable status within seven days (the current time limit). If the inoperable channel(s) cannot be restored to operable status, the HPCS must be declared inoperable. (As noted above, NUREG-1434 does not require a loss-of-function check for these Trip Functions.)

In addition to the proposed changes to the above Action Statements, two additional changes of an editorial nature are being proposed. First, footnotes (e) and (f) to Table 3.3.3-1 are being deleted. These footnotes clarify the trip system boundary for the four reactor water level (Item C.1.a) and high drywell pressure (Item C.1.b) inputs to the HPCS actuation logic. These footnotes were added to the CPS TS via Amendment No. 48. As stated in the NRC's Safety Evaluation accompanying Amendment No. 48 (dated September 25, 1990), these footnotes were added to ensure that the corresponding Action Statements are implemented properly when one or more channels are declared inoperable. These footnotes were necessary because the corresponding Action Statement (Action 36) currently prescribes the action to be taken based on the number of trip systems affected. However, the revised Action 36 proposed in this supplement eliminates the dependence of the action to be taken on the number of trip systems affected. As a result, footnotes (e) and (f) are no longer necessary and therefore, IP proposes to delete them.

Secondly, the changes to the Action Statements proposed in this supplement involve the addition of a new requirement to verify that a sufficient number of channels remain operable or are in the tripped condition to maintain automatic actuation capability of the associated ECCS systems. However, consistent with NUREG-1434, this verification is not required for a number of ECCS Trip Functions. Therefore, a new footnote (e) is being added to identify those Trip Functions which are subject to loss-of-function checks. This will provide the clarification needed to ensure that these new requirements are implemented as intended. New footnote (e) would be applied under the Minimum Operable Channels per Trip Function column of Table 3.3.3-1 and would be applicable to Items A.1.a, A.1.b, A.1.c (during Modes 1, 2, and 3 only), A.1.d, A.1.e, A.1.f, A.2.a, A.2.b, A.2.c, A.2.d, A.2.e, A.2.f, A.2.g, B.1.a, B.1.b, B.1.c (during Modes 1, 2, and 3 only), B.1.d, B.1.e, B.1.f, B.2.a, B.2.b, B.2.c, B.2.d, B.2.e, B.2.f, C.1.a, and C.1.b. The remaining Trip Functions listed on Table 3.3.3-1 are not subject to loss-of-function checks.

TS 3/4.3.5. "Reactor Core Isolation Cooling System Actuation Instrumentation"

The Action Statements provided for RCIC Actuation Instrumentation in NUREG-1434 (LCO 3.3.5.2) require a loss-of-function check to be performed when a RCIC automatic initiation instrument becomes inoperable. (This applies to the reactor water level-low level 2, RCIC storage tank level-low, and suppression pool level-high Trip Functions.) If a loss-of-function condition does not exist, then 24 hours is allowed to restore the channel to operable status or place it in the tripped condition. NUREG-1434 does not require a loss-of-function check to be performed for RCIC manual initiation or reactor water level-high level 8 Trip Functions.

IP is proposing the following changes to the Action Statements of TS Table 3.3.5-1 to be consistent with NUREG-1434:

Action 50 currently applies to the reactor water level-low level 2 Trip Function (Item a). This Action Statement has been revised to require, within one hour, a verification that a sufficient number of low reactor vessel water level channels remain operable or are in the tripped condition to maintain automatic RCIC actuation capability. This will ensure that a loss-of-function condition does not exist. The revised Action 50 will require the inoperable channel(s) to be placed in the tripped condition within 24 hours. If a loss-of-function condition exists or it is not desirable to place the inoperable channel(s) in the tripped condition, the RCIC system must be declared inoperable.

Action 51 currently applies to the reactor water level-high Trip Function (item b). Since NUREG-1434 does not require a loss-of-function check to be performed when this Trip Function becomes inoperable, the revision to Action 51 proposed in IP's September 20, 1991 amendment request requires no changes.

Action 52 currently applies to the RCIC storage tank level-low and the suppression pool level-high Trip Functions (Items c and d). This Action Statement has been revised to require, within one hour, a verification that the RCIC pump suction is either aligned or capable of automatically realigning to the suppression pool. This will ensure that a loss-of-function condition does not exist. The revised Action 52 will require at least one inoperable channel to be placed in the tripped condition (which will automatically realign the RCIC pump suction to the suppression pool) within 24 hours. If a loss-of-function condition exists or it is not desirable to place an inoperable channel in the tripped condition (or realign the RCIC pump suction to the suppression pool), the RCIC system must be declared inoperable.

Action 53 currently applies to the RCIC manual initiation Trip Function (Item e). Since NUREG-1434 does not require a loss-of-function check to be performed when this Trip Function becomes inoperable, the revision to Action 53 proposed in IP's September 20, 1991 amendment request requires changes.

TS 3/4.3.6 "Control Rod Block Instrumentation"

NUREG-1434 does not provide any specific Action Statements for the individual inputs to the Rod Withdrawal Limiter. The only Action Statement of TS 3/4.3.6 which was impacted by IP's September 20, 1991 amendment request was the addition of a new Action Statement (Action 64) for the scram discharge volume water level-high and reactor coolant system recirculation flow-upscale Trip Functions. Proposed Action Statement 64 has been revised to require, within one hour, a verification that a sufficient number of channels remain operable to initiate a rod block by the associated Trip Function. This will ensure that a loss-of-function condition does not exist. The revised Action 64 will require at least one inoperable channel to be placed in the tripped condition within 24 hours. If a loss-of-function condition exists or it is not desirable to place an inoperable channel in the tripped condition, a rod block must be initiated.

Summary

In summary, IP has reviewed the changes proposed in the September 20, 1991 amendment request, as modified by letter dated August 17, 1992. For each of those Action Statements which could apply to a loss-of-function configuration, IP has modified the Action Statement to include a loss-of-function check consistent with NUREG-1434. As a result, IP has concluded that this submittal adequately addresses the loss-of-function concerns for instruments at CPS within the scope of the BWROG reliability-based instrumentation analyses.

Basis for No Significant Hazards Consideration

IP has reviewed the Basis for No Significant Hazards Consideration provided in IP's September 20, 1991 amendment request and has concluded that the additional changes contained in this supplement do not alter the bases or conclusions provided in those assessments. As a result, IP has concluded that these proposed changes do not involve a significant hazards consideration.