# Attachment 2

The following package comprises Attachment 2.

LS-87-039

Description of Proposed Changes

In accordance with 10CFR50.90, the following proposed changes to Clinton Power Station (CPS) Technical Specifications 3/4.3.1, "Reactor Protection System Instrumentation"; 3/4.3.6, "Control Rod Block Instrumentation"; and 3/4.3.7.6, "Source Range Monitors," are being proposed:

1) Illinois Power (IP) proposes to add a new Surveillance Requirement, 4.3.1.4, to the Reactor Protection System (RPS) instrumentation Technical Specifications. The proposed requirement would state that the provisions of Technical Specification 4.0.4 are not applicable to the Intermediate Range Monitor (IRM) surveillance requirements for entry into Operational Condition 2 or 3 from Operational Condition 1, provided the surveillances are performed within 12 hours after entering Operational Condition 2 or 3. This provision is necessary since the IRM detectors are withdrawn from the core and the IRM Channel Functional Test cannot be performed while in Operational Condition 1 because the IRM trip functions are bypassed with the reactor mode switch in the Run position. (The IRM functions are not required to be operable in Operational Condition 1.) Consequently, extended plant operation in Operational Condition 1 results in the IRM Channel Functional Test surveillance not being maintained current as the plant enters Operational Condition 2 or 3 (the Operational Conditions for which the IRM surveillances are required) during a plant shutdown or due to a reactor scram. As a result, these IRM functions would technically have to be declared inoperable and the appropriate Action Statements (or Technical Specification 3.0.3) entered. This proposed change will allow adequate time to perform these surveillances after the applicable Operational Condition has been entered without resulting in a technical violation of Technical Specification 4.0.4 or unnecessarily having to perform these surveillances under the provisions of an Action Statement during a planned shutdown or reactor scram recovery.

2) IP proposes to delete note (c) of Technical Specification Table 4.3.1.1-1, "Reactor Protection System Instrumentation Surveillance Requirements." This note is associated with the IRM and Average Power Range Monitor (APRM) Channel Functional Test requirements. The note currently states that the Channel Functional Test must be performed within 24 hours prior to startup, if not performed within the previous seven days. This proposed change (to delete the note) is similar to the change to note (b) of Technical Specification Table 4.3.6-1, "Control Rod Block Instrumentation Surveillance Requirements," proposed in IP's amendment request dated October 30, 1987 (reference Package Number 23 of IP letter U-601048). As stated in that request, IP feels that the existing wording is potentially confusing and requires anticipating the exact time of startup, which is not always possible. The current Channel Functional Test requirements (with a frequency of at least once per seven days) are adequate to ensure operability of the associated RPS function.

As a result of the proposed deletion of note (c), the associated "S/U" Channel Functional Test surveillance frequency is no longer

required since the surveillance must have been performed within seven days prior to plant startup due to the specified frequency of at least once per seven days ("W") and Technical Specification 4.0.4. Therefore, IP also proposes to delete "S/U(c)" from the IRM Neutron Flux-High; Average Power Range Monitor (APRM) Neutron Flux-High, Setdown; APRM Flow-Biased Simulated Thermal Power-High; and APRM Neutron Flux-High Channel Functional Test surveillance frequency requirements of Technical Specification Table 4.3.1.1-1.

3) IP proposes to add a new footnote (footnote "*") associated with note (d) of Technical Specification Table 4.3.1.1-1. Note (d) applies to the once-per-seven-days Channel Calibration requirement for the RPS APRM Flow-Biased Simulated Thermal Power-High and Neutron Flux-High RPS functions. This note requires adjustment of the APRM channel gains such that the APRMs conform to the reactor power values calculated by a heat balance during Operational Condition 1 when THERMAL POWER $\geq$ 25% of RATED THERMAL POWER, if the absolute difference is greater than 2% of RATED THERMAL POWER. These APRM functions are required to be operable in Operational Condition 1. The proposed footnote "*" will provide an exception to the provisions of Technical Specification 4.0.4 to allow entry into Operational Condition 1 and allow 12 hours to perform this surveillance after exceeding 25% of RATED THERMAL POWER. This proposed change will thus clarify that it is acceptable to enter Operational Condition 1 and further, to establish the plant conditions necessary to provide accurate results from a heat balance calculation prior to performing this surveillance.

4) Note (e) to Technical Specification Table 4.3.1.1-1 is a special calibration requirement that currently requires the RPS APRM Flow-Biased Simulated Thermal Power-High and Neutron Flux-High setpoints to be verified at least once per seven days. IP proposes to delete the applicability of this note to the APRM Neutron Flux-High function. Instead, this setpoint verification would be performed at least once per six months during the routine Channel Calibration as already required for this APRM function. (The requirement as it applies to the APRM Flow-Biased Simulated Thermal Power-High function would remain unchanged.) This proposed change is consistent with the Standard Technical Specifications and the Technical Specifications of the other BWR/6 plants.

5) IP proposes to renumber the current Control Rod Block Instrumentation Surveillance Requirement 4.3.6 as 4.3.6.1 and add a new Surveillance Requirement 4.3.6.2. Similar to proposed change 1 of this submittal, Surveillance Requirement 4.3.6.2 will state that the provisions of Technical Specification 4.0.4 are not applicable to the IRM and Source Range Monitor (SRM) surveillance requirements for entry into Operational Condition 2 from Operational Condition 1, provided the surveillances are performed within 12 hours after entering Operational Condition 2. This provision is also necessary for the reasons stated in proposed change 1 above; specifically, it addresses IRM and SRM surveillances that become applicable during plant shutdowns following extended operation in Operational Condition 1.

6) IP proposes to add a new footnote (footnote "#") to be associated with Applicable Operational Condition 2 for the SRM functions specified on Technical Specification Table 3.3.6-1, "Control Rod Block Instrumentation." The proposed footnote, "Operational Condition 2 with IRMs on Range 2 or below," modifies the Applicability of the operability requirements for the SRMs in this Technical Specification to be consistent with that of Technical Specification 3.3.7.6, "Source Range Monitors." Additionally, this proposed change provides additional time during shutdowns to perform SRM surveillances which cannot be maintained current during extended operation in Operational Condition 1. Similarly, IP proposes to add a second footnote with identical wording (footnote "**") to modify the Operational Condition 2 Applicability specified for the SRM surveillance requirements on Technical Specification Table 4.3.6-1, "Control Rod Block Instrumentation Surveillance Requirements."

7) As stated in item 2 above, IP previously proposed to revise note (b) of Technical Specification Table 4.3.6-1 in its amendment request dated October 30, 1987. Similar to item 2 above, IP proposes to delete the "S/U" Channel Functional Test frequency associated with note (b) for those SRM and IRM control rod block Channel Functional Test requirements which are required to be performed at least once per seven days. As stated above, these surveillances are already required to be performed within seven days prior to startup due to the specified frequency of at least once per seven days ("W") and Technical Specification 4.0.4. Therefore, the "S/U(b)" frequency is no longer required to be stated on Technical Specification Table 4.3.6-1, and is proposed to be deleted.

8) IP proposes to change the Channel Calibration frequency for the SRM and IRM control rod block functions specified on Technical Specification Table 4.3.6-1 from at least once per 184 days ("SA") to at least once per 18 months ("R"). These proposed changes are consistent with Technical Specification 3/4.3.1 for the RPS Instrumentation and Technical Specification 3/4.3.7.6 for the SRM Instrumentation. There is no specific design basis which requires these control rod block functions to be calibrated more often than the corresponding RPS or SRM functions. Notwithstanding, the Channel Functional Test procedures at CPS (performed at least once per seven days) include verification of proper setpoints for these functions. It should be noted that this proposed change has previously been approved for the IRM control rod block functions on the Perry plant docket.

9) IP proposes to revise Technical Specification Surveillance Requirements 4.3.7.6.a.1.a) and b) by inserting the word "OPERATIONAL" in front of the word "CONDITION". This proposed change is editorial only and is consistent with the defined term "OPERATIONAL CONDITION" as provided in Definition 1.28 of the CPS Technical Specifications.

10) IP proposes to simplify Surveillance Requirement 4.3.7.6.b.1 in a similar manner as proposed for note (c) of Technical Specification Table 4.3.1.1-1 discussed in item 2 above. This surveillance currently requires that the SRMs be demonstrated operable by the performance of a Channel Functional Test within 24 hours prior to moving the reactor mode switch from the Shutdown position if not performed within the previous seven days. The proposed frequency states "within seven days prior to moving the reactor mode switch from the Shutdown position." As described in item 2 above, the current wording is potentially confusing and requires anticipating the exact time of moving the reactor mode switch from the Shutdown position, which is not always possible. The proposed change will still provide adequate assurance that the SRM is operable.

11) IP proposes to incorporate additional wording into Surveillance Requirements 4.3.7.6.a for SRM Channel Checks and Channel Calibrations and 4.3.7.6.b for SRM Channel Functional Tests. The proposed wording states that the provisions of Technical Specification 4.0.4 are not applicable for entry into Operational Condition 2* or 3 from Operational Condition 1, provided the surveillances are performed within 12 hours after entering Operational Condition 2* or 3. These proposed changes are similar to items 1 and 5 above and are also necessary to address SRM surveillances which become applicable during plant shutdowns following extended operation in Operational Condition 1.

Justification for Proposed Changes

These proposed changes can be grouped into one of six general categories: (1) incorporate statements of exception to Technical Specification 4.0.4 (items 1, 3, 5, and 11), (2) clarify startup surveillance requirements (items 2, 7, and 10), (3) delete APRM Neutron Flux-High RPS setpoint verification (item 4), (4) revise SRM control rod block Applicability (item 6), (5) revise IRM and SRM control rod block Channel Calibration frequency (item 8), and (6) incorporate an editorial change (item 9). These general categories are discussed separately below.

Incorporate Statements of Exception to Technical Specification 4.0.4 (items 1, 3, 5, and 11)

As identified above, IP proposes to incorporate statements of exception to the provisions of Technical Specification 4.0.4 for the IRM functions of the RPS (Technical Specification 3/4.3.1), the IRM and SRM functions of the Control Rod Block Instrumentation (Technical Specification 3/4.3.6), and the Source Range Monitors (Technical Specification 3/4.3.7.6). These proposed exceptions to Technical Specification 4.0.4 will only be applicable during plant shutdowns following extended operation in Operational Condition 1. Additionally, IP proposes to add an exception to the provisions of Technical Specification 4.0.4 for the APRM Flow-Biased Simulated Thermal Power-High and Neutron Flux-High functions of the RPS [Technical Specification Table 4.3.1.1-1, note (d)]. This proposed exception will be applicable to the APRM gain adjustment only during plant startups.

Per Technical Specification 3/4.3.1, the APRM Flow-Biased Simulated Thermal Power-High and Neutron Flux-High RPS functions are only required to be operable in Operational Condition 1. One of the surveillances required to demonstrate operability of these APRM functions is the adjustment of the APRM gains such that the APRMs conform to the reactor power values calculated by a heat balance during Operational Condition 1 when reactor power is $\geq$ 25% of RATED THERMAL POWER. At low reactor power levels, heat balance calculations are susceptible to inaccuracies due to low values of feedwater flow and various feedwater heater configurations. As a result, the current Technical Specifications provide an allowance to delay the APRM gain adjustments until reactor power is $\geq$ 25% of RATED THERMAL POWER. However, since Technical Specification 4.0.4 prohibits mode changes unless all surveillance requirements have been performed within the applicable surveillance intervals, IP believes that this surveillance should clearly state that Operational Condition 1 may be entered prior to performing this surveillance. Therefore, IP proposes to incorporate a statement of exception to Technical Specification 4.0.4 to formally provide the allowance to enter Operational Condition 1, provided the APRM gains are adjusted within 12 hours after exceeding 25% of RATED THERMAL POWER.

As stated in CPS Updated Safety Analysis Report (USAR) Section 7.6.1.5.4, the IRM system consists of eight detectors, two in each of the four RPS channels. The IRM is a five-decade, ten-range instrument, and the trip setpoint of 120 divisions of scale is active in each of the ten ranges. Thus, as the IRM is "ranged up" to accommodate increases in reactor power, the trip setpoint is also ranged up.

The IRMs also provide neutron monitoring overlap with both the APRM and SRM systems. After the IRMs have been verified to overlap the APRMs by at least one decade during reactor startups, the IRMs are withdrawn from the reactor core in order to prolong their life. When the reactor mode switch has been placed in the Run position (Operational Condition 1), the IRM scram and control rod block functions are automatically bypassed since adequate protection and monitoring is provided by the APRM functions.

Per Technical Specification 3/4.3.1, the IRM Neutron Flux-High and Inoperative RPS functions are required to be operable in Operational Conditions 2, 3, 4, and 5. Per Technical Specification 3/4.3.6, the IRM Detector-not-full-in, Upscale, Inoperative, and Downscale control rod block functions are currently required to be operable in Operational Conditions 2 and 5. During plant operation in Operational Condition 1 (with the reactor mode switch in the Run position), a Channel Check does not provide meaningful results since the detectors are fully withdrawn from the core. Additionally, a Channel Functional Test cannot be performed since the IRM trips are automatically bypassed with the reactor mode switch in the Run position. Further, a Channel Calibration requires the performance of a Channel Functional Test. As a result, the IRM surveillances cannot be maintained current during extended operation in Operational Condition 1.

Technical Specification 4.0.4 prohibits entry into an Operational Condition unless the surveillance requirement(s) associated with the Technical Specification has been performed within the applicable surveillance interval. As a result, the reactor mode switch cannot be placed in the Startup/Hot Standby (Operational Condition 2) or Shutdown (Operational Condition 3) position after extended operation in Operational Condition 1 until the IRM surveillances have been performed. As previously stated however, these surveillances cannot be performed until after the reactor mode switch is taken out of the Run position. Therefore, IP proposes that an exception to the provisions of Technical Specification 4.0.4 be added for the IRMs to allow entry into the plant conditions required to complete this testing. Additionally, IP proposes that a limit be placed on this exception to require these surveillances to be performed within 12 hours after entering the applicable Operational Condition (2 or 3).

This proposed change is justified on the basis that, since the reactor will already be in a shutdown condition (as a result of a scram) or be in the process of a controlled shutdown, and since the APRM scram functions would continue to be operable, adequate scram protection is available during the short period of time needed to perform the IRM surveillances. Additionally, the IRMs provide no direct input to the Rod Pattern Control system for control rod block initiation below the low power setpoint. The IRM control rod block functions are provided only to ensure that adequate neutron monitoring is available during control rod movements. Again, the APRMs are adequate to perform this monitoring function during the short period of time needed to perform the IRM surveillances in Operational Condition 2. During Operational Condition 3, the control rods would already be inserted and the Reactor Mode Switch-Shutdown Mode function provides a control rod block to prevent control rod withdrawal.

As described in USAR Section 7.7.1.22, the SRM system consists of four detectors, one in each quadrant of the reactor core. The SRMs provide neutron flux monitoring capability during reactor startup and low flux level operations. Per Technical Specification 3/4.3.7.6, the SRMs are required to be operable in Operational Conditions 3 and 4 and in Operational Condition 2 with the IRMs on range 2 or below. Per Technical Specification 3/4.3.6, the SRM Detector-not-full-in, Upscale, Inoperative and Downscale control rod block functions are currently required to be operable in Operational Condition 2.

As identified by note (a) of Technical Specification Table 3.3.6-1, the SRM Detector-not-full-in control rod block function is automatically bypassed if the detector count rate is greater than 100 counts per second (cps) or the IRM channels are on range 3 or higher. As identified by note (b) of Table 3.3.6-1, the SRM Upscale and Inoperative control rod block functions are automatically bypassed when the IRM channels are on range 8 or higher. As identified by note (c) of Table 3.3.6-1, the SRM Downscale control rod block function is automatically bypassed when the IRM channels are on range 3 or higher.

Similar to the IRM control rod block functions discussed above, these automatic SRM bypasses (and the fact that the detectors are fully withdrawn to prolong their life) prevent the surveillances for the SRMs from being maintained current during extended operation in Operational Condition 1. Therefore, IP also proposes to add a statement of exception to the provisions of Technical Specification 4.0.4 for the SRMs to formally allow the reactor mode switch to be placed in the Startup/Hot Standby (Operational Condition 2) or Shutdown (Operational Condition 3) position without the applicable SRM surveillances being current due to extended operation in Operational Condition 1. Additionally, IP proposes that a limit be placed on this exception to require these surveillances to be performed within 12 hours after entering the applicable Operational Condition (2 or 3).

The proposed exception to Specification 4.0.4, together with the proposed time limit, will provide adequate time for reactor power to be reduced sufficiently to allow the SRMs to be fully inserted and the surveillances completed. Similar to the IRM control rod block functions discussed above, the SRM control rod block functions are provided only to ensure that adequate neutron monitoring capability exists during control rod movements. The APRMs and IRMs are adequate to perform this monitoring function in Operational Condition 2. During Operational Condition 3, the control rods would already be fully inserted and the Reactor Mode Switch-Shutdown Mode function provides a control rod block to prevent control rod withdrawal.

Clarification of Startup Surveillance Requirements (items 2, 7, and 10)

The current CPS Technical Specifications 3/4.3.1 and 3/4.3.6 require a Channel Functional Test of the APRM Neutron Flux-High, Setdown; APRM Flow-Biased Simulated Thermal Power-High; APRM Neutron Flux-High; IRM Neutron Flux-High; IRM and SRM Detector-not-full-in; IRM and SRM Upscale; IRM and SRM Inoperative; and IRM and SRM Downscale functions to be performed within 24 hours prior to startup, if not performed within the previous seven days. Additionally, Technical Specification 3/4.3.7.6 requires a Channel Functional Test of the SRMs to be performed within 24 hours prior to moving the reactor mode switch from the Shutdown position, if not performed within the previous seven days.

By letter dated October 30, 1987, IP requested a proposed change to note (b) of Technical Specification Table 4.3.6-1 to delete the requirement to perform the control rod block Channel Functional Tests within 24 hours prior to startup. The requirement to perform these tests within seven days prior to startup would be retained. That request stated that the current wording is potentially confusing and that the proposed changes were provided for clarification. The existing wording of these notes requires anticipating the exact time of a startup (or mode switch position change) so as to implement the first part of the current note. This is not always possible. That is, plant startup (or the change in mode switch position) could be delayed for more than 24 hours after test completion. As long as the delay after test completion is less than seven days, the surveillance frequency has still been satisfied even though the intent of the first part of the current note (within 24 hours) is not fulfilled. Incorporation of the changes proposed now to the applicable notes would prevent confusion and provide greater

operational flexibility while providing the same degree of confidence that the associated instrumentation is operable.

Additionally, the "S/U" annotation associated with these notes for those surveillances that are performed at least once per seven days is not needed and should be deleted. Since Technical Specification 4.0.4 prohibits entry into an Operational Condition unless the Surveillance Requirement(s) associated with the Technical Specification has been performed within the applicable surveillance interval, the "S/U" annotation is redundant to the "W" requirement to perform the Channel Functional Test at least once per seven days. Therefore, IP proposes to delete the "S/U" annotation for the above IRM and SRM Channel Functional Tests. IP believes that these proposed changes are justified since they will make the Technical Specifications easier to implement with no significant reduction in the effectiveness of ensuring the operability of these functions.

Deletion of APRM Neutron Flux-High RPS Setpoint Verification (item 4)

Note (e) of Technical Specification Table 4.3.1.1-1 currently prescribes a weekly calibration of the RPS APRM Flow-Biased Simulated Thermal Power-High and Neutron Flux-High functions that consists of verifying the setpoints for these APRM functions. IP proposes to delete the setpoint verification requirement for the APRM Neutron Flux-High function. It was noted previously that the setpoint verification requirement for the APRM Flow-Biased Simulated Thermal Power-High function would be retained and that the setpoint of the APRM Neutron Flux-High function will continue to be verified during the required once-per-184-days Channel Calibration.

The weekly setpoint verification was originally intended to be applied only to the APRM Flow-Biased Simulated Thermal Power-High function. Since the trip setpoint of this RPS function continuously changes as a function of reactor recirculation flow, additional assurance that this setpoint continues to properly follow recirculation flow is required. In contrast, the APRM Neutron Flux-High trip setpoint is a fixed value. In this respect, the APRM Neutron Flux-High function is no different than the APRM Neutron Flux-High, Setdown function which does not require a setpoint verification at least once per seven days. Therefore, IP proposes to delete the once-per-seven-days setpoint verification of the APRM Neutron Flux-High RPS function. This proposed change is consistent with the Standard Technical Specifications and the Technical Specifications of the other BWR/6 plants.

Revision of SRM Control Rod Block Applicability (item 6)

Technical Specification 3/4.3.6 currently requires the SRM Detector-not-full-in, Upscale, Inoperative and Downscale control rod block functions to be operable in Operational Conditions 2 and 5. However, Technical Specification 3/4.3.7.6 requires the SRMs to be operable in Operational Conditions 3 and 4 and in Operational Condition 2 when the IRMs are on range 2 or below.

The Bases for Technical Specification 3/4.3.7.6 state that the SRMs provide reactor operators with information regarding the status of the neutron level in the core at very low power levels during reactor startup and shutdown. When the IRMs are on scale, adequate neutron level information is available without the SRMs so that the SRMs can be withdrawn. In addition, the SRMs provide input to the Rod Control and Information System (RC&IS) which generates control rod blocks to prevent control rod withdrawal under certain conditions.

At the very low reactor power levels corresponding to the range of the SRMs, control rod movements are controlled by the Rod Pattern Control System of the RC&IS. As described in USAR Section 7.6.1.7, the Rod Pattern Control System reduces the consequences of a postulated control rod drop accident to an acceptable level by restricting the patterns of control rods that can be established to predetermined sets. The SRMs do not provide reactor power level input to the Rod Pattern Control System since the purpose of the SRM control rod block functions is to ensure that adequate neutron level monitoring is available during control rod movements.

When the IRMs are on range 3 or higher, adequate neutron level is available to the operators via the IRMs so that the SRMs (and the associated control rod block functions) are no longer required. The proposed change is therefore consistent with the requirements for neutron level monitoring capability. In addition, the proposed change provides additional time during shutdowns to perform SRM surveillances which cannot be maintained current during extended operation in Operational Condition 1 since the reactor mode switch is typically placed in the Startup position at power levels above those corresponding to IRM range 3.

Revision of IRM and SRM Control Rod Block Channel Calibration Frequency (item 8)

Technical Specification 3/4.3.1 currently requires the IRM Neutron Flux-High RPS function to be calibrated at least once per 18 months ("R"). However, Technical Specification 3/4.3.6 currently requires the IRM Upscale and Downscale control rod block functions to be calibrated at least once per 184 days ("SA"). Similarly, Technical Specification 3/4.3.7.6 currently requires the SRMs to be calibrated at least once per 18 months. However, Technical Specification 3/4.3.6 currently requires the SRM Upscale and Downscale control rod block functions to be calibrated at least once per 184 days("SA"). This proposed change seeks to make the calibration requirements for the IRMs and SRMs consistent throughout these Technical Specifications.

There is no significant difference between the instrumentation used for the IRM RPS trips and that used for the control rod block trips since, at the channel level, the instrumentation is the same. Accordingly, there is no specific design basis that requires these trip channels to be calibrated more often for the control rod block function than for the RPS function. (From a drift allowance point of view, the difference between the trip setpoint and the allowable value is the same (2/125) for both functions.) Notwithstanding, the CPS procedures used to perform the channel functional testing of these IRM and SRM functions require verification of proper channel operation and include verification of the control rod block setpoints for these functions. As a result, there is adequate assurance that performing Channel Calibrations on an 18-month frequency is adequate to ensure that control rod blocks will be initiated when intended.

Additionally, the IRM/SRM Channel Calibrations cannot be maintained current during extended operation in Operational Condition 1 since the definition of CHANNEL CALIBRATION requires the performance of a Channel Functional Test. As previously stated, Channel Functional Testing of the IRMs and SRMs cannot be performed while in Operational Condition 1 because the trips from these instruments are bypassed with the reactor mode switch in the Run position. The proposed changes will resolve this conflict by changing this calibration frequency to 18 months. This frequency is consistent with the current operating cycles of CPS, and therefore, this proposed frequency will allow the Channel Calibration surveillances to remain current throughout an operating cycle.

Editorial Changes (item 9)

The proposed changes to Surveillance Requirement 4.3.7.6.a.1 are purely editorial. These changes are being made to make these specified conditions consistent with Definition 1.28 of the CPS Technical Specifications. Therefore, this proposed change does not result in any change to the technical requirements of these surveillances.

Basis for No Significant Hazards Consideration

In accordance with 10CFR50.92, a proposed change to the operating license (Technical Specifications) involves no significant hazards considerations if operation of the facility in accordance with the proposed change would not: (1) involve a significant increase in the probability or consequences of any 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. These proposed changes are evaluated against each of these criteria below.

(1) These proposed changes do not result in any change to the plant design or its operating modes. Therefore, these proposed changes cannot increase the probability of any accident previously evaluated.

The proposed addition of Surveillance Requirements 4.3.1.4 and 4.3.6.2, together with the incorporation of the proposed additional text for Surveillance Requirements 4.3.6.2, 4.3.7.6.a and 4.3.7.6.b, provide the flexibility required to perform the associated IRM and SRM surveillances during plant shutdowns following extended operation in Operational Condition 1. These surveillances cannot be performed with the unit in Operational Condition 1. The proposed changes merely provide the formal means to avoid violation of Technical Specification 4.0.4 and provide adequate time to perform these surveillances without causing unnecessary stress on plant personnel to complete these surveillances under the provisions of Action Statements (or Technical Specification 3.0.3). Adequate scram protection and neutron monitoring capability are provided by the APRMs during the short time period needed to perform these surveillances.

The proposed change to allow entry into Operational Condition 1 before the APRM gains have been adjusted to conform to the power values calculated by a heat balance provides adequate time for plant conditions to be achieved that will result in an accurate heat balance calculation. The APRM Flow-Biased Simulated Thermal Power-High function still provides adequate scram protection during the short time period needed to achieve 25% of RATED THERMAL POWER and perform these APRM gain adjustments after entering Operational Condition 1.

The proposed deletion of the requirements to perform Channel Functional Tests within 24 hours prior to startup or within 24 hours prior to moving the reactor mode switch from the Shutdown position, unless performed within the previous seven days, makes these requirements easier to implement without reducing the effectiveness of these surveillances. The Technical Specifications, when revised as proposed, will still require that these Channel Functional Tests be performed within seven days prior to entering the conditions for which these instruments are required.

The deletion of the setpoint verification of the APRM Neutron Flux-High RPS function at least once per seven days still provides adequate assurance that this trip function is properly calibrated. This RPS setpoint is maintained at a constant value and is therefore similar to the APRM Neutron Flux-High, Setdown RPS function which does not currently require setpoint verification at least once per seven days. This proposed change is also consistent with the Standard Technical Specifications and the Technical Specifications of the other BWR/6 plants.

Regarding the proposed change to modify the Applicability of the SRM control rod block functions with respect to Operational Condition 2, the Technical Specifications, as revised, will still ensure that adequate monitoring of neutron flux levels are available to the operator during control rod movements. The IRMs on range 3 or higher provide adequate neutron monitoring capability without the SRMs. The SRMs provide no other input to the RC&IS other than ensuring neutron monitoring is available during control rod movements.

The proposed change to the Channel Calibration frequency for the IRM and SRM control rod block functions should not result in any significant change in the availability of these functions with respect to ensuring that neutron monitoring capability is available to the operators during control rod movements at low power conditions.

The remaining changes are editorial only and do not affect any technical requirements of the current Technical Specifications.

Based upon the above, these proposed changes cannot increase the probability or the consequences of any accident previously evaluated.

(2) These proposed changes do not result in any change to the plant design or operation. As a result, no new failure modes are introduced. Therefore, these proposed changes cannot create the possibility of a new or different kind of accident from any accident previously evaluated.

(3) As discussed in (1) above, these proposed changes still provide adequate assurance that each of the applicable safety functions are capable of being effected when required, including reactor scram protection, control rod block, and neutron monitoring. Therefore, these proposed changes do not result in a significant reduction in the margin of safety.

Based upon the foregoing, IP concludes that these proposed changes do not involve a significant hazards consideration.

INSTRUMENTATION

REACTOR PROTECTION SYSTEM INSTRUMENTATION

SURVEILLANCE REQUIREMENTS (Continued)

4.3.1.3 The REACTOR PROTECTION SYSTEM RESPONSE TIME of each reactor trip functional unit shown in Table 3.3.1-2 shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least two logic trains such that all logic trains are tested at least once per 36 months and one channel per trip function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function.

4.3.1.4 The provisions of Specification 4.0.4 are not applicable to the Intermediate Range Monitor Surveillance Requirements for entry into OPERATIONAL CONDITION 2 or 3 from Operational Condition 1, provided the Surveillances are performed within 12 hours after entering OPERATIONAL CONDITION 2 or 3.

TABLE 4.3.1.1-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| FUNCTIONAL UNIT | CHANNEL CHECK | CHANNEL FUNCTIONAL TEST | CHANNEL CALIBRATION[a] | OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED |
|---|---|---|---|---|
| 1. Intermediate Range Monitors: | | | | |
| a. Neutron Flux - High | S/U,S,(b)<br>S | ~~S/U~~[e] W<br>W | R<br>R | 2<br>3, 4, 5 |
| b. Inoperative | NA | W | NA | 2, 3, 4, 5 |
| 2. Average Power Range Monitor:[f] | | | | |
| a. Neutron Flux - High, Setdown | S/U,S,(b)<br>S | ~~S/U~~[e] W<br>W | SA<br>SA | 2<br>3, 4, 5 |
| b. Flow Biased Simulated Thermal Power - High | S | ~~S/U~~[e] W | W[d][e], SA, R[i] | 1 |
| c. Neutron Flux - High | S | ~~S/U~~[e] W | W[d]~~[e]~~, SA | 1 |
| d. Inoperative | NA | W | NA | 1, 2, 3, 4, 5 |
| 3. Reactor Vessel Steam Dome Pressure - High | S | M | R[g] | 1, 2[j] |
| 4. Reactor Vessel Water Level - Low, Level 3 | S | M | R[g] | 1, 2 |
| 5. Reactor Vessel Water Level - High, Level 8 | S | M | R[g] | 1 |
| 6. Main Steam Line Isolation Valve - Closure | NA | M | R | 1 |
| 7. Main Steam Line Radiation - High | S | M | R | 1, 2[j] |
| 8. Drywell Pressure - High | S | M | R[g] | 1, 2[l] |

TABLE 4.3.1.1-1 (Continued)

REACTOR PROTECTION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TABLE NOTATIONS

(a) Neutron detectors may be excluded from CHANNEL CALIBRATION.

(b) The IRM and SRM channels shall be determined to overlap for at least 1/2 decade during each startup after entering OPERATIONAL CONDITION 2 and the IRM and APRM channels shall be determined to overlap for at least 1 decade during each controlled shutdown, if not performed within the previous 7 days.

(c) ~~Within 24 hours prior to startup, if not performed within the previous 7 days.~~ [DELETED]

(d) This calibration shall consist of the adjustment of the APRM channel to conform to the power values calculated by a heat balance during OPERATIONAL CONDITION 1 when THERMAL POWER ≥ 25% of RATED THERMAL POWER (*). Adjust the APRM channel if the absolute difference is greater than 2% of RATED THERMAL POWER.

(e) This calibration shall consist of a setpoint verification of the ~~Neutron Flux-High and the~~ Flow Biased Simulated Thermal Power-High trip functions. The Flow Biased Simulated Thermal-High trip function is verified using a calibrated flow signal.

(f) The LPRMs shall be calibrated at least once per 1000 effective full power hours (EFPH) using the TIP system.

(g) Calibrate the analog trip module at least once per 31 days.

(h) Deleted.

(i) This calibration shall consist of verifying the 6±0.6 second simulated thermal power time constant.

(j) This function is not required to be OPERABLE when the reactor pressure vessel head is removed per Specification 3.10.1.

(k) With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

(l) This function is not required to be OPERABLE when DRYWELL INTEGRITY is not required to be OPERABLE per Special Test Exception 3.10.1.

(m) The CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION shall include the turbine first stage pressure instruments.

* The provisions of Specification 4.0.4 are not applicable, provided the surveillance is performed within 12 hours after exceeding 25 % of RATED THERMAL POWER.

INSTRUMENTATION

3/4.3.6 CONTROL ROD BLOCK INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.6 The control rod block instrumentation channels shown in Table 3.3.6-1 shall be OPERABLE, with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.6-2.

APPLICABILITY: As shown in Table 3.3.6-1.

ACTION:

a. With a control rod block instrumentation channel trip setpoint less conservative than the value shown in the Allowable Value column of Table 3.3.6-2, declare the channel inoperable until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.

b. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, take the ACTION required by Table 3.3.6-1.

SURVEILLANCE REQUIREMENTS

4.3.6.1 Each of the above required control rod block trip systems and instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.6-1.

4.3.6.2 The provisions of Specification 4.0.4 are not applicable to the Intermediate Range Monitor and Source Range Monitor Surveillance Requirements for entry into OPERATIONAL CONDITION 2 from OPERATIONAL CONDITION 1, provided the surveillances are performed within 12 hours after entering OPERATIONAL CONDITION 2.

## TABLE 3.3.6-1

## CONTROL ROD BLOCK INSTRUMENTATION

| TRIP FUNCTION | MINIMUM OPERABLE CHANNELS PER TRIP FUNCTION(e) | APPLICABLE OPERATIONAL CONDITIONS | ACTION |
|---|---|---|---|
| 1. ROD PATTERN CONTROL SYSTEM | | | |
| a. Low Power Setpoint | 2 | 1, 2 | 60 |
| b. RWL High Power Setpoint | 2 | 1 | 60 |
| 2. APRM | | | |
| a. Flow Biased Neutron Flux - Upscale | 3 | 1 | 61 |
| b. Inoperative | 3 | 1, 2, 5 | 61 |
| c. Downscale | 3 | 1 | 61 |
| d. Neutron Flux - Upscale, Startup | 3 | 2, 5 | 61 |
| 3. SOURCE RANGE MONITORS | | | |
| a. Detector not full in(a) | 3 | 2# | 61 |
| | 2** | 5 | 62 |
| b. Upscale(b) | 3 | 2# | 61 |
| | 2** | 5 | 62 |
| c. Inoperative(b) | 3 | 2# | 61 |
| | 2** | 5 | 62 |
| d. Downscale(c) | 3 | 2# | 61 |
| | 2** | 5 | 62 |
| 4. INTERMEDIATE RANGE MONITORS | | | |
| a. Detector not full in | 6 | 2, 5 | 61 |
| b. Upscale | 6 | 2, 5 | 61 |
| c. Inoperative | 6 | 2, 5 | 61 |
| d. Downscale(d) | 6 | 2, 5 | 61 |
| 5. SCRAM DISCHARGE VOLUME | | | |
| a. Water Level-High | 2 | 1, 2, 5* | 62 |
| 6. REACTOR COOLANT SYSTEM RECIRCULATION FLOW | | | |
| a. Upscale | 3 | 1 | 62 |
| 7. REACTOR MODE SWITCH | | | |
| a. Shutdown Mode | 2 | 3, 4 | 63 |
| b. Refuel Mode | 2 | 5 | 63 |

# With IRMs on range 2 or below.



TABLE 3.3.6-1 (Continued)

CONTROL ROD BLOCK INSTRUMENTATION

TABLE NOTATIONS

* With more than one control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

** OPERABLE channels must be associated with SRMs required OPERABLE per Specification 3.9.2.

(a) This function shall be automatically bypassed if detector count rate is > 100 cps or the IRM channels are on range 3 or higher.

(b) This function shall be automatically bypassed when the associated IRM channels are on range 8 or higher.

(c) This function shall be automatically bypassed when the IRM channels are on range 3 or higher.

(d) This function shall be automatically bypassed when the IRM channels are on range 1.

(e) A channel may be placed in an inoperable status for up to 2 hours for required surveillance provided at least one other OPERABLE channel in the same trip function is monitoring that parameter.

ACTION

ACTION 60 - Declare the RPCS inoperable and take the ACTION required by Specification 3.1.4.2.

ACTION 61 - With the number of OPERABLE Channels:

a. One less than required by the Minimum OPERABLE Channels per Trip Function requirement, restore the inoperable channel to OPERABLE status within 7 days or place the inoperable channel in the tripped condition within the next hour.

b. Two or more less than required by the Minimum OPERABLE Channels per Trip Function requirement, place at least one inoperable channel in the tripped condition within 1 hour.

ACTION 62 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, place the inoperable channel in the tripped condition within 1 hour.

ACTION 63 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, initiate a rod block.

TABLE 4.3.6-1

CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| TRIP FUNCTION | CHANNEL CHECK | CHANNEL FUNCTIONAL TEST | CHANNEL CALIBRATION(a) | OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED |
|---|---|---|---|---|
| 1. ROD PATTERN CONTROL SYSTEM | | | | |
| a. Low Power Setpoint | NA | ~~S/U(b)(c)(d)(e)~~ S/U(b), M | R(f) | 1, 2 |
| b. RWL High Power Setpoint | NA | ~~S/U(b)(c)(d)(e)~~ S/U(b), M | R(f) | 1 |
| 2. APRM | | | | |
| a. Flow Biased Neutron Flux - Upscale | NA | S/U(b), M | SA | 1 |
| b. Inoperative | NA | S/U(b), M | NA | 1, 2, 5 |
| c. Downscale | NA | S/U(b), M | SA | 1 |
| d. Neutron Flux - Upscale, Startup | NA | S/U(b), M | SA | 2, 5 |
| 3. SOURCE RANGE MONITORS | | | | |
| a. Detector not full in | NA | ~~S/U(b)~~, W | NA | 2**, 5 |
| b. Upscale | NA | ~~S/U(b)~~, W | ~~SA~~ R | 2**, 5 |
| c. Inoperative | NA | ~~S/U(b)~~, W | NA | 2**, 5 |
| d. Downscale | NA | ~~S/U(b)~~, W | ~~SA~~ R | 2**, 5 |
| 4. INTERMEDIATE RANGE MONITORS | | | | |
| a. Detector not full in | NA | ~~S/U(b)~~, W | NA | 2, 5 |
| b. Upscale | NA | ~~S/U(b)~~, W | ~~SA~~ R | 2, 5 |
| c. Inoperative | NA | ~~S/U(b)~~, W | NA | 2, 5 |
| d. Downscale | NA | ~~S/U(b)~~, W | ~~SA~~ R | 2, 5 |
| 5. SCRAM DISCHARGE VOLUME | | | | |
| a. Water Level-High | S | M | R(f) | 1, 2, 5* |
| 6. REACTOR COOLANT SYSTEM RECIRCULATION FLOW | | | | |
| a. Upscale | NA | S/U(b), M | SA | 1 |
| 7. REACTOR MODE SWITCH | | | | |
| a. Shutdown Mode | NA | R | NA | 3, 4 |
| b. Refuel Mode | NA | R | NA | 5 |

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TABLE 4.3.6-1 (Continued)

CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TABLE NOTATIONS

(a) Neutron detectors may be excluded from CHANNEL CALIBRATION.

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(b) Within ~~24 hours~~ prior to startup, ~~if not performed within the previous 7 days.~~ 7 days

(c) ~~Within one hour prior to control rod movement, unless performed within the previous 24 hours, and as each power range above the RPCS low power setpoint is entered for the first time during any 24 hour period during power increase or decrease.~~ [DELETED]

(d) ~~At least once per 31 days while operation continues within a given power range above the RPCS low power setpoint.~~ [DELETED]

(e) ~~Includes reactor manual control multiplexing system input.~~ [DELETED]

(f) Calibrate the analog trip module at least once per 31 days.

* With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

** With IRMs on range 2 or below.

INSTRUMENTATION

SOURCE RANGE MONITORS

LIMITING CONDITION FOR OPERATION

3.3.7.6 At least the following source range monitor channels shall be OPERABLE:

a. In OPERATIONAL CONDITION 2*, three.
b. In OPERATIONAL CONDITIONS 3 and 4, two.

APPLICABILITY: OPERATIONAL CONDITIONS 2*, 3 and 4.

ACTION:

a. In OPERATIONAL CONDITION 2* with one of the above required source range monitor channels inoperable, restore at least three source range monitor channels to OPERABLE status within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours.

b. In OPERATIONAL CONDITION 3 or 4 with one or more of the above required source range monitor channels inoperable, verify all insertable control rods to be fully inserted in the core and lock the reactor mode switch in the Shutdown position within 1 hour.

SURVEILLANCE REQUIREMENTS

4.3.7.6 Each of the above required source range monitor channels shall be demonstrated OPERABLE by:

a. Performance of a:

1. CHANNEL CHECK at least once per:

a) 12 hours in OPERATIONAL CONDITION 2* and
b) 24 hours in OPERATIONAL CONDITION 3 or 4.

2. CHANNEL CALIBRATION** at least once per 18 months.

INSERT

b. Performance of a CHANNEL FUNCTIONAL TEST:

1. Within ~~24 hours~~ 7 days prior to moving the reactor mode switch from the Shutdown position, ~~if not performed within the previous 7 days~~ and

2. At least once per 31 days.

INSERT

c. Verifying, prior to withdrawal of control rods, that the SRM count rate is at least 3 cps*** with the detector fully inserted.

*With IRMs on range 2 or below.

**Neutron detectors may be excluded from CHANNEL CALIBRATION.

***For the initial core loading, the count rate may be reduced to 0.7 cps provided signal to noise ratio is $\geq$ 20.

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The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 2* or 3 from OPERATIONAL CONDITION 1, provided the surveillance is performed within 12 hours after entering OPERATIONAL CONDITION 2* or 3.