



July 31, 1998

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington D. C. 20555 - 0001

Subject: Revision G to the Improved Technical Specifications (ITS) Submittal -
ITS Sections 3.1 and 3.2 Closeout

Byron Nuclear Power Station, Units 1 and 2
Facility Operating Licenses NPF-37 and NPF-66
NRC Docket Numbers: 50-454 and 50-455

Braidwood Nuclear Power Station, Units 1 and 2
Facility Operating Licenses NPF-72 and NPF-77
NRC Docket Numbers: 50-456 and 50-457

Reference: G. Stanley and K. Graesser (Commonwealth Edison) letter to NRC
Document Control Desk, "Conversion to the Improved Standard Technical
Specifications," dated December 13, 1996

The purpose of this letter is to provide Revision G to the Referenced ITS submittal. ITS Revision G contains Commonwealth Edison's (ComEd's) final Package Closeout for ITS Sections 3.1 and 3.2. However, in ITS Section 3.1, ComEd is awaiting the Staff's resolution of TSTF-234 in order to close RAI 3.1.7-01. In ITS Section 3.2, ComEd is awaiting the WOG ITS Subcommittee's resolution of WOG-117 (RAI 3.2.1-02) and the Staff's resolution of TSTF-241 in order to close RAI 3.2.4-01 and RAI 3.2.4-02 respectively.

Enclosure 1 contains ITS Revision G. Attachment 1 contains ComEd's final RAI Responses to Sections 3.1 and 3.2. Any revised response is noted along with the original response. As requested by the Staff, Attachment 2 contains an affected page list identifying submittal pages that have changed as a result of incorporating RAI responses. Attachment 3 contains an affected page list summarizing all submittal pages that have changed in ITS Revision G.

9808060079 980731
PDR ADOCK 05000454
P PDR

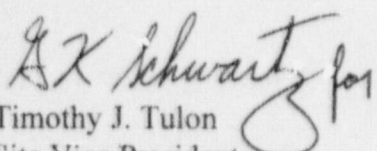
Document Control Desk
July 30, 1998
Page 2

These Revisions are being provided in the same ten-section format as the initial ITS submittal:

1. Byron ITS
2. Braidwood (Brwd) ITS
3. Byron CTS Markups
4. Brwd CTS Markups
5. CTS Discussion of Changes (DOCs)
6. LCO Markups
7. LCO Justification for Differences (JFDs)
8. Bases Markups
9. Bases JFDs
10. No Significant Hazards Consideration (NSHC)

Please address any comments or questions regarding this matter to our Nuclear Licensing Department.

Sincerely,


Timothy J. Tulon
Site Vice President
Braidwood Nuclear Generating Station

Enclosure: ITS Revision G

Attachments: Attachment 1 - ITS Sections 3.1 and 3.2 RAI Revised Responses
Attachment 2 - ITS Sections 3.1 and 3.2 RAI Affected Page List
Attachment 3 - ITS Sections 3.1 and 3.2 Section Closeout Affected Page List

cc: NRC Regional Administrator - Region III
Senior Resident Inspector - Braidwood
Senior Resident Inspector - Byron
Office of Nuclear Facility Safety - IDNS

bec: Byron Project Manager - NRR
Braidwood Project Manager - NRR
W. Beckaer - NRR
R. Asra - NRR
C. Harbuck - NRR

SER TABLES
ITS SECTIONS 3.1 AND 3.2

Table A - Administrative Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement
ITS Section 3.1, Reactivity Control Systems			
3.1 A1	Editorial rewording, reformatting, and renumbering changes were made to conform with conventions used in Westinghouse Standard Technical Specifications NUREG-1431(STS).	3.1	3/4.1, 3/4.10
3.1 A2	Footnote reference to Special Test Exception (STE) Specification 3.10.1 was deleted in conformance with STS which reformats the presentation of these STE requirements in the ITS Specification to which they apply.	3.1.1 Applicability	3.1.1.1 Applicability
3.1 A3	Mode conditional information regarding beginning of life moderator temperature coefficient was moved from a footnote to the Applicability.	3.1.3 Applicability	3.1.1.3 Applicability
3.1 A4	Footnote reference to STE Specification 3.10.3 was deleted in conformance with STS which reformats the presentation of these STS requirements in the ITS Specification to which they apply.	3.1.3 Applicability	3.1.1.3 Applicability
3.1 A5	Footnote references to STE Specifications 3.10.2 and 3.10.3 were deleted in conformance with STS which reformats the presentation of these STS requirements in the ITS Specification to which they apply.	3.1.4 Applicability, 3.1.5 Applicability, 3.1.6 Applicability	3.1.3.1 Applicability, 3.1.3.5 Applicability, 3.1.3.6 Applicability
3.1 A6	Action to restore a trippable but misaligned rod to within alignment limits was deleted since the option to restore inoperable components currently exists and does not need to be stated.	3.1.4 Action B	3.1.3.1 Action b.1

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

3.1VA_TABLE

Table A - Administrative Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement
3.1 A7	References to Specification 3.1.1.1 for determining that the shutdown margin (SDM) requirement is satisfied were replaced with specified actions and actions to initiate boration to restore SDM to within limit were included.	3.1.4 Actions A and B	3.1.3.1 Actions a and b 3
3.1 A8	The terms "upper MTC (moderator temperature coefficient)" and "lower MTC" were substituted for the equivalent terms "BOL (beginning of life)" and "EOL (end of life)", respectively, for moderator temperature coefficient limits. The phrase "specified in the OLR (Operating Limits Report)" was deleted since it is redundant to the reference in the LCO.	3.1.3 Actions A and C	3.1.1.3 Action a and b
3.1 A9	Rod drop time LCO and SR for all rods following each removal of the reactor head were combined and retained as an SR in the ROD Group Alignment Limits Specification.	SR 3.1.4.3	3/4.1.3.4
3.1 A10	Obsolete, cycle-specific rod drop time limits were deleted.	SR 3.1.4.3	LCO 3.1.3.4
3.1 A11	The stated requirement to restore the rod drop time to within the LCO limit prior to proceeding to the Modes of Applicability was eliminated since it is redundant to the requirements of LCO 3.0.4.	N/A	3.1.3.4 Applicability and Action a, 3.0.4
3.1 A12	A note was included for the actions which allows separate Condition entry for each inoperable rod position indicator or demand position indicator and the action for an inoperable demand position indicator was clarified with the addition of the phrase "for one or more banks". These changes are consistent with the CTS intent.	3.1.7 Actions Note and Action C	3.1.3.2

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

3.1A_TABLE

Table A - Administrative Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement
3.1 A13	The requirement to immediately determine the position of a nonindicating rod after any motion which exceeds 24 steps in one direction since the last determination of the rod's position was deleted. This requirement is unnecessary since the TS allows 8 hours for the completion of the position determination of any nonindicating rod and since its completion is restricted by the completion time for the default action to reduce power to $\leq 50\%$ RTP within 8 hours.	3.1.7 Actions A and B	3.1.3.2 Action a.1
3.1 A14	Not used.		
3.1 A15	Not used.		
3.1 A16	The term "shutdown banks" was substituted for "shutdown rods" consistent with STS. Whenever a shutdown rod is not within limits, neither is the shutdown bank and the actions applicable to rods also apply to banks.	3.1.5	3/4.1.3.5
3.1 A17	The Applicability of the LCO for Physics Tests STE was revised to MODE 2 "during Physics Tests" to clarify that the exceptions apply only during Physics Tests with RTP $\leq 5\%$.	3.1.8 Applicability	3.10.3 Applicability
3.1 A18	The rod cluster control assembly (RCCA) pseudo ejection test, RCCA pseudo drop and misalignment test, and xeron stability test performed under this STE were part of the initial plant startup testing programs. This Specification was deleted since there is no need to reperform these tests.	N/A	3/4.10.2
3.1 A19	The rod worth measurement test to the N-1 condition performed under this STE is no longer used and was deleted. Other rod worth techniques provide the necessary physics measurements while maintaining SDM during the measurement process.	N/A	3/4.10.1

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

3.1A_TABLE

Table A - Administrative Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement
3.1 A20	The requirement to set the Reactor Trip Setpoints on the Operable Intermediate and Power Range Channels at $\leq 25\%$ RTP is redundant to the values required in the Reactor Trip System Instrumentation Specifications and was deleted.	LCO 3.1.8	LCO 3.10.3.b, Table 2.2-1, Table 3.3-1
3.1 A21	Surveillance to compare measured to predicted core reactivity values was reformatted as an LCO with Applicability of Modes 1 and 2. Since effective full power days (EFPD) can only be accumulated during Modes 1 and 2, elimination of Modes 3 and 4 Applicability is consistent with the intent and performance of this SR.	3.1.2	4.1.1.1.2
3.1 A22	The requirement that predicted reactivity values "shall" be adjusted before 60 EFPD after refueling was changed to "may". Normalization is not necessary if predicted and measured core reactivity are in agreement.	SR 3.1.2.2	4.1.1.1.2
3.1 A23	A surveillance to determine SDM is within limits by verifying that control bank insertion is within limits and a surveillance to determine SDM is within limits prior to achieving reactor criticality by verifying that the predicted critical control rod position is within limits were moved from the SDM Specification to the control rod insertion limits Specification.	SR 3.1.6.2, SR 3.1.6.1	4.1.1.1.1.b, 4.1.1.1.1.c

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table R - Relocated CTS

Discussion of Change	Relocated CTS	Description of Relocated CTS	New Location	Control Process
CTS Section 3/4.1, Reactivity Control Systems				
3.1 R1	3/4.1.1.1 for Modes 1 and 2 with $K_{eff} \geq 1.0$, 4.1.1.2.a	Shutdown Margin - $T_{avg} > 200^\circ F$	TRM	\$50.59
3.1 R2	3/4.1.2.1	Boration Systems - Flow Path - Shutdown	TRM	\$50.59
3.1 R3	3/4.1.2.2	Boration Systems - Flow Path - Operating	TRM	\$50.59
3.1 R4	3/4.1.2.3	Charging Pump - Shutdown	TRM	\$50.59
3.1 R5	3/4.1.2.4	Charging Pumps - Operating	TRM	\$50.59
3.1 R6	Not used.			
3.1 R7	Not used.			
3.1 R8	3.1.3.3, 3/4.10.5	Position Indication System - Shutdown	TRM	\$50.59
3.1 LA15 (meets criteria of Relocated CTS)	3/4.1.2.5, 3/4.1.2.6	Borated Water Sources - Shutdown Borated Water Sources - Operating	TRM	\$50.59

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table M - More Restrictive Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement
ITS Section 3.1, Reactivity Control Systems			
3.1 M1	A requirement for performing a reactivity balance calculation for Mode 2 with $k_{eff} < 1.0$ was added to ensure that sufficient negative reactivity is provided to meet the assumptions of the safety analyses.	SR 3.1.1.1	4.1.1.1.1.e
3.1 M2	The allowance for Mode changes with the moderator temperature coefficient (MTC) more positive than the upper limit specified in the Core Operating Limits Report (COLR) was removed to prohibit changing Modes with control rod withdrawal limits not established.	SR 3.1.3.1	3.1.1.3 Action a.4
3.1 M3	Not used.		
3.1 M4	The allowance for continued power operation with more than one rod inoperable or misaligned, provided the remainder of the rods in the group are aligned with the inoperable rods within 1 hour and the inoperable rods are restored within 72 hours, has been deleted and replaced with requirements to verify shutdown margin (SDM) or borate to SDM within 1 hour, and shutdown to Mode 3 within 6 hours.	3.1.4 Action D	3.1.3.1 Action c
3.1 M5	The allowance for performing rod drop testing with only three reactor coolant pumps operating, provided thermal power is restricted to $\leq 66\%$ Rated Thermal Power, was deleted. ITS requires all four pumps operating to perform this test.	SR 3.1.4.3	3.1.3.4 Action b
3.1 M6	Changes to the Shutdown Rod (bank) Insertion Limits Specification included broadening the Applicability to "Mode 2 with any control bank not fully inserted," reducing to 1 hour the effective time to determine SDM requirements are satisfied, and the disallowance for continued operation with a shutdown bank not within insertion limits.	3.1.5 Applicability and Actions	3.1.3.5 Applicability and Action b
3.1 M7	Changes to the Control Rod (bank) Insertion Limits Specification included the addition of sequence and overlap limits to the LCO requirements, associated actions, and an associated SR.	3.1.6	3/4.1.3.6

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table M - More Restrictive Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement
3.1 M8	The action to verify SDM or initiate boration to restore SDM within 1 hour was added when the control banks are inserted beyond the insertion limits.	3.1.6 Action A	3.1.3.6 Actions
3.1 M9	An LCO was added to provide new actions if the measured core reactivity is not within $\pm 1\%$ $\Delta k/k$ of predicted values.	3.1.2	4.1.1.1.2
3.1 M10	Changes to the Special Test Exception (STE) for the suspension of certain Specifications during Physics Tests added an additional requirement that SDM must be within the limits specified in the COLR and an SR to perform this verification. Also included was an action to initiate boration to restore SDM within limits within 15 minutes and to suspend Physics Tests exceptions within 1 hour if the SDM requirement is not met.	3.1.8	3/4.10.3
3.1 M11	An action to place the unit in a Mode in which the LCO does not apply when the action requirements for the Digital Rod Position Indication System or the Demand Position Indication System are not met was included rather than defer to LCO 3.0.3 for this requirement. The result is a completion time of 1 hour less to have the unit in Mode 3.	3.1.7 Action D	3.1.3.2 Actions, 3.0.3
3.1 M12	An action to place the unit in a Mode in which the LCO does not apply when the action requirements for a misaligned but trippable rod are not met was included rather than defer to LCO 3.0.3 for this requirement. The result is a completion time of 1 hour less to have the unit in Mode 3.	3.1.4 Action C	3.1.3.1 Actions, 3.0.3

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table LA - Details Relocated from CTS

Discussion of Change	CTS Reference	Description of Relocated Details	New Location	Control Process	Type
ITS Section 3.1, Reactivity Control Systems					
3.1 LA1	3/4.1.1.1, 3/4.1.1.2	Specific values for Shutdown Margin (SDM).	COLR	§50.59	1
3.1 LA2	3.1.1.1 Actions, 3.1.1.2 Action b	Flow rate and solution concentration for boration when SDM is not within limit.	TRM	§50.59	2
3.1 LA3	4.1.1.1.1.d, 4.1.1.1.1.e, 4.1.1.1.2, 4.1.1.2.b	List of reactivity factors to be taken into account when determining SDM.	Bases	ITS 5.5.14	3
3.1 LA4	3.1.1.3 Action a.1, 3.1.1.3 Action a.2, 4.1.1.3.a	Details associated with the method of complying with the administrative control bank withdrawal limits that are established when moderator temperature coefficient (MTC) is more positive than the beginning of life (BOL) MTC limit.	Bases	ITS 5.5.14	3
3.1 LA5	3.1.1.3 Action a.3	Special Report to the Commission when the MTC is more positive than the upper (BOL) limit.	TRM	§50.59	3
3.1 LA6	3.1.3.1 Action a	Examples of what constitutes an immovable rod.	TRM	§50.59	3
3.1 LA7	3.1.3.1 Action b.2	Aligning the remainder of the rods in the group with the inoperable rod and restricting Thermal Power in order to continue Power Operation with one rod trippable but inoperable.	Bases	ITS 5.5.14	2

Relocated Detail Types

1 Details of System Design

2 Description of System Operation

3 Procedural Details for Meeting TS Requirements

(By) - Byron specific

(Bw) - Braidwood specific

Byron and Braidwood

Table LA - Details Relocated from CTS

Discussion of Change	CTS Reference	Description of Relocated Details	New Location	Control Process	Type
3.1 LA8	3.1.3.1 Action b 3.d, Table 3.1-1	Table listing accident analyses requiring reevaluation in the event of an inoperable full-length rod.	Bases	ITS 5.5.14	3
3.1 LA9	4.1.3.1.1, 4.1.3.2, 4.1.3.6	Requirement to increase the surveillance frequency when the rod position deviation monitor is inoperable.	TRM	§50.59	3
3.1 LA10	4.1.3.4.b	Post maintenance testing to demonstrate the rod drop time limits of full-length rods.	TRM	§50.59	3
3.1 LA11	LCO 3.1.3.2	Requirement that the position indication systems must be capable of determining the control rod positions within ± 12 steps.	Bases	ITS 5.5.14	1
3.1 LA12	4.1.3.5.a	Verification that each shutdown bank is within the insertion limit specified in the COLR within 15 minutes prior to withdrawal of any control bank rods during an approach to criticality.	TRM	§50.59	3
3.1 LA13	3.1.3.6 Action b	Requirement to restore the control banks to within limits by reducing Thermal Power to be consistent with rod position when the control banks are outside the acceptable insertion limits.	Bases	ITS 5.5.14	2
3.1 LA14	3.1.3.1 Action b 3.c	Use of a power distribution map from the movable incore detectors to verify the Heat Flux Hot Channel Factor and the Nuclear Enthalpy Rise Hot Channel Factor.	Bases	ITS 5.5.14	3
3.1 LA15	3/4.1.2.5, 3/4.1.2.6	See Table R - Relocated CTS.	TRM	§50.59	N/A

Relocated Detail Types
1 Details of System Design
2 Description of System Operation
3 Procedural Details for Meeting TS Requirements

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table LA - Details Relocated from CTS

Discussion of Change	CTS Reference	Description of Relocated Details	New Location	Control Process	Type
3.1 LA16	3.1.1.2 Action a 4.1.1.1.1.a, 4.1.1.2.a	Actions associated with the Boron Dilution Protection System when $SDM \leq 1.3\%$ $\Delta k/k$ in Mode 5 to comply with the LCO.	TRM	\$50.59	2
3.1 LA17	4.1.1.1.1.a, 4.1.1.2.a	Increased frequency of SDM determinations after detection of an inoperable control rod in Mode 1 and Mode 2 with $k_{eff} \geq 1.0$ to ensure compliance with the LCO.	TRM	\$50.59	3
3.1 LA17	4.1.1.1.1.d	Procedural prerequisite to perform SDM determination with control banks at the maximum insertion limit.	TRM	\$50.59	3

Relocated Detail Types
 1 Details of System Design
 2 Description of System Operation
 3 Procedural Details for Meeting TS Requirements

(By) - Byron specific
 (Bw) - Braidwood specific

Byron and Braidwood

Table L - Less Restrictive Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement	Change Category
ITS Section 3.1, Reactivity Control Systems				
3.1 L1	Required action to "immediately initiate and continue boration" until Shutdown Margin (SDM) is restored was relaxed to "initiate boration" with a completion time of 15 minutes to provide the operator with sufficient time to perform the correct alignments and to start the required systems.	3.1.1 Action A	3.1.1.1 Actions, 3.1.1.2 Action b	IV
3.1 L2	Default action to place the unit in a Mode in which the LCO does not apply was relaxed from "Mode 3" to "Mode 2 with $K_{eff} < 1.0$ " to be consistent with the Applicability.	3.1.3 Action B	3.1.1.3 Action a.1	III
3.1 L3	Moderator temperature coefficient (MTC) surveillance was relaxed such that the SR need not be repeated if the MTC measured at the equivalent of equilibrium Rated Thermal Power (RTP) -all rods out (AOT) boron concentration of ≤ 60 ppm is less negative than the 60 ppm surveillance limit specified in the Core Operating Limits Report (COLR).	SR 3.1.3.2 Note 3	4.1.1.3.b	V
3.1 L4	CTS allows a maximum of one digital rod position indicator per bank to be inoperable. A required action was added to allow more than one DRPI to be inoperable provided, within 24 hours, the DRPIs are restored to Operable status such that a maximum of one DRPI per group is inoperable. This change allows time to restore one or more inoperable DRPIs before subjecting the unit to an unnecessary transient.	3.1.7 Action B	3.1.3.2 Actions, 3.0.3	III
3.1 L5	Not used.			

Less Restrictive Change Categories
I Relaxation of LCO requirements
II Relaxation of Applicability
III Relaxation of Action requirements
IV Relaxation of completion time

V Relaxation of SR acceptance criteria
VI Relaxation of Surveillance Frequency
VII Deletion of requirements redundant to regulation
VIII Deletion of Surveillance requirements

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table L - Less Restrictive Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement	Change Category
3.1 L6	Deleted action requirement to reduce the High Neutron Flux Trip Setpoint to $\leq 85\%$ RTP within 4 hours when Power Operation is continued with an inoperable rod and SDM requirements are satisfied.	N/A	3.1.3.1 Action b.3.a	III
3.1 L7	Not used.			
3.1 L8	Action requirements were relaxed to consider a rod Operable if it becomes immovable but remains trippable and aligned.	3.1.4	3.1.3.1 Actions a, b, and c	III
3.1 L9	Not used.			
3.1 L10	Deleted 18 month frequency for demonstrating rod drop times was deleted.	N/A	4.1.3.4.c	VI
3.1 L11	CTS allows a maximum of one DRPI per "bank" to be inoperable. The required actions now apply to one DRPI inoperable per "group." For banks with two groups, this change allows two DRPIs per bank to be inoperable before the specified actions apply.	3.1.7 Actions A and B	3.1.3.2 Action a	III
3.1 L12	Not used.			
3.1 L13	The frequency for determining DRPI Operability was relaxed from at least once per 18 months to prior to criticality after each removal of the reactor head to obviate the potential for unnecessary plant transients if the surveillance is performed with the reactor at power.	SR 3.1.7.1	4.1.3.3	VI

Less Restrictive Change Categories

- I Relaxation of LCO requirements
- II Relaxation of Applicability
- III Relaxation of Action requirements
- IV Relaxation of completion time
- V Relaxation of SR acceptance criteria
- VI Relaxation of Surveillance Frequency
- VII Deletion of requirements redundant to regulation
- VIII Deletion of Surveillance requirements

(By) - Byron specific

(Bw) - Braidwood specific

Byron and Braidwood

Table L - Less Restrictive Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement	Change Category
3.1 L14	The completion time to withdraw the rod when a shutdown rod is not fully withdrawn was relaxed from 1 to 2 hours.	3.1.5 Action A	3.1.3.5 Action a	IV
3.1 L15	CTS requires that, with more than one shutdown rods not fully withdrawn, the unit be placed in a Mode in which the LCO does not apply. Required actions now apply to one or more rods not fully withdrawn for up to 2 hours, provided compensatory actions to verify SDM or initiate boration to restore SDM within limits within 1 hour.	3.1.5 Action A	3.1.3.5 Actions, 3.0.3	III
3.1 L16	The default action to place the unit in a Mode in which the LCO does not apply has been relaxed from "Mode 3" to "Mode 2 with $k_{eff} < 1.0$ " to be consistent with the Applicability.	3.1.6 Action C	3.1.3.6 Action c	III
3.1 L17	Requirement to perform an additional Analog Channel Operational Test (Channel Operatic... Test) on each Intermediate and Power Range channel within 12 hours prior to initiating Physics Tests was relaxed.	SR 3.1.8.1	4.10.3.2	VI
3.1 L18	Initial performance, at least once per 31 effective full power days (EFPD), of surveillance to verify that core reactivity balance agrees with predicted values, was relaxed to coincide with the performance prior to 60 EFPD after each fuel loading, which normalizes the predicted values to the measured values.	SR 3.1.2.2 Note 1	4.1.1.1.2	VI

Less Restrictive Change Categories
I Relaxation of LCO requirements
II Relaxation of Applicability
III Relaxation of Action requirements
IV Relaxation of completion time

V Relaxation of SR acceptance criteria
VI Relaxation of Surveillance Frequency
VII Deletion of requirements redundant to regulation
VIII Deletion of Surveillance requirements

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table A - Administrative Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement
ITS Section, 3.2, Power Distribution Limits			
3.2 A1	Editorial rewording, reformatting, and renumbering changes were made to conform with conventions used in Westinghouse Standard Technical Specifications NUREG-1431(STS).	3.2	3/4.2
3.2 A2	Not used.		
3.2 A3	Not used.		
3.2 A4	The minimum (15%) range of rated thermal power (RTP) at which the indicated axial flux difference (AFD) may deviate outside the required target band subject to the specified cumulative penalty deviation time was deleted as redundant to the Applicability.	LCO 3.2.3.c	LCO 3.2.1
3.2 A5	Applicability references to Special Test Exceptions (STE) Specification 3.10.2 were deleted since this STE Specification was deleted (see DOC 3.1-18).	LCO 3.2.3, LCO 3.2.4	LCO 3.2.1, LCO 3.2.4
3.2 A6	The frequency and method of performing target flux difference determinations by both measurement and design prediction updates was clarified.	SR 3.2.3.3, SR 3.2.3.2	4.2.1.3, 4.2.1.4
3.2 A	The cumulative penalty deviation time limitation for allowing indicated AFD to deviate outside the target band for operation at 15-50% RTP was deleted since the associated Action requirements prevent increasing power ≥ 50% until AFD is within the target band.	LCO 3.2.3.c, 3.2.3 Action C	LCO 3.2.1, 3.2.3 Action a

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

3.2A_TABLE

Table A - Administrative Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement
3.2 A8	Substitution of essentially equivalent " $\geq$ " and "<" for "above" and "less than or equal to", respectively, consistent with STS.	SR 3.2.4.2 Note, SR 3.2.4.1 Note 1	4.2.4.2, Table 3.3-1 Action 2.c
3.2 A9	Action to restore Nuclear Enthalpy Rise Hot Channel Factor to within limits was deleted since the option to restore out of limit conditions always applies and does not need to be stated.	3.2.2 Actions	3.2.3 Action a.1
3.2 A10	Note was included to clarify the CTS intent that Thermal Power need not be reduced to perform Nuclear Enthalpy Rise Hot Channel Factor limit verifications prior to increasing Thermal Power beyond specified RTP levels.	3.2.2 Action A Required Action A.4 Note	N/A
3.2 A11	Exception to the provisions of CTS 4.0.4 was removed for the surveillance of Nuclear Enthalpy Rise Hot Channel Factor limits. Wording and format of the surveillance and SR 3.0.4 make such exceptions unnecessary.	N/A	4.2.3.1
3.2 A12	Actions to restore Quadrant Power Tilt Ratio to within limits was deleted since the provision to restore out of limit conditions always applies and does not need to be stated.	3.2.4 Action A	3.2.4 Actions a.1.a and a.2.a

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

3.2A_TABLE

Table R - Relocated CTS

Discussion of Change	Relocated CTS	Description of Relocated CTS	New Location	Control Process
CTS Section 3/4.2, Power Distribution Limits				
None				

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table M - More Restrictive Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement
ITS Section 3.2, Power Distribution Limits			
3.2 M1	Actions Note was added to require completion of the action to reduce power to < 50% whenever initiated. Consequently, reduction of power to < 50% is required even though the indicated AFD is restored to within either the required target band or the acceptable operation limits before reaching 50% power.	3.2.3 Action C	3.2.1 Action b
3.2 M2	An action was added to require further reduction in power to < 15% within 9 hours if the indicated AFD is not restored to within the required target band or within the acceptable operation limits within 30 minutes.	3.2.3 Action D	3.2.1 Action c

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table LA - Details Relocated from CTS

Discussion of Change	CTS Reference	Description of Relocated Details	New Location	Control Process	Type
ITS Section 3.2, Power Distribution Limits					
3.2 LA1	4.2.4.2	Details regarding the method for confirming the normalized symmetric power distribution.	Bases	ITS 5.5.14	3
3.2 LA2	LCO 3.2.2	Details for calculating Heat Flux Hot Channel Factor, $F_o(z)$.	Bases	ITS 5.5.14	3
3.2 LA3	LCO 3.2.3	Details for calculating Nuclear Enthalpy Rise Hot Channel Factor, F_{Δ}^N .	Bases COLR	ITS 5.5.14 §50.59	3
3.2 LA4	4.2.1.4	Alternate methods for determining target flux difference.	Bases	ITS 5.5.14	3
3.2 LA5	3.2.2 Action b, 3.2.3 Action c	Action to identify and correct the cause of the out of limit condition prior to increasing thermal power.	TRM	§50.59	3
3.2 LA6	4.2.1.1.b, 4.2.4.1.b	Conditional surveillance requirements whenever the axial flux difference (AFD) monitor alarm or quadrant power tilt ratio (QPTR) monitor alarm is inoperable.	TRM	§50.59	3
3.2 LA7	4.2.1.3	Details for determining the target flux difference during surveillance.	Bases	ITS 5.5.14	3
3.2 LA8	3.2.2 Action b, 3.2.3 Actions b and c	Use of incore flux mapping to verify $F_o(z)$ and F_{Δ}^N .	Bases	ITS 5.5.14	3

Relocated Detail Types
1 Details of System Design
2 Description of System Operation
3 Procedural Details for Meeting TS Requirements

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table L - Less Restrictive Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement	Change Category
ITS Section 3.2, Power Distribution Limits				
3.2 L1	Action to reduce the Power Range Neutron Flux - High Setpoints to $\leq$ 55% Rated Thermal Power (RTP) when the axial flux difference (AFD) is outside the target band or Acceptable Operation Limits was deleted. The action to reduce power level to $<$ 50% RTP and the overtemperature ΔT trip function ensure that power distributions remain within assumptions.	3.2.3 Action C	3.2.1 Action b.2	III
3.2 L2	The increased frequency for monitoring the AFD for each Operable excore channel for 24 hours following restoration of an AFD Monitor Alarm was deleted since the monitor alarm memory can be manually updated for the previous 24 hours.	N/A	4.2.1.1 Action a.2	VI
3.2 L3	CTS requires that, with the indicated AFD outside the required target band, either the restoration action or the power reduction action be completed within 15 minutes. ITS allows these actions to be completed sequentially, resulting in an additional 15 minutes for completion of power reduction.	3.2.3 Actions A and B	3.2.1 Action b.2	IV
3.2 L4	With the quadrant power tilt ratio (QPTR) not within limit, the specified interval for performing the calculation was reduced from one hour to 12 hours with a power reduction requirement dependent upon the calculation.	3.2.4 Action A Required Action A.2	3.2.4 Action a.1	III, IV
3.2 L5	With the QPTR not within limit, the action to reduce the Power Range Neutron Flux-High Trip Setpoints within the next 4 hours was deleted. Compensatory actions to increase the frequency of monitoring peaking factors would result in reducing the Power Range Neutron Flux-High Trip Setpoints if not met.	N/A	3.2.4 Actions a.2.b and a.3	III

Less Restrictive Change Categories

- I Relaxation of LCO requirements
- II Relaxation of Applicability
- III Relaxation of Action requirements
- IV Relaxation of completion time
- V Relaxation of SR acceptance criteria
- VI Relaxation of Surveillance Frequency
- VII Deletion of requirements redundant to regulation
- VIII Deletion of Surveillance requirements

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table L - Less Restrictive Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement	Change Category
3.2 L6	The completion time for reducing power to exit the Applicability (50% RTP) if the QPTR is not restored to within limit was increased from 2 hours to 4 hours in consideration of the additional actions required in ITS.	3.2.4 Action B	3.2.4 Action a.3	IV
3.2 L7	CTS requires the identification and correction of the out of limit QPTR condition prior to increasing power, and after power is increased above 50% RTP the QPTR must be calculated once per hour for 12 hours. These actions were replaced with actions to verify the peaking factor remain within their limiting values following the Thermal Power increase, and to re-evaluate the safety analyses to ensure that the reactor core conditions remain bounded and recalibrate the excore detectors to normalize currents and eliminate the indicated tilt prior increasing Thermal Power.	3.2.4 Action A Required Actions A.4, A.5, and A.6	3.2.4 Action a.4	III
3.2 L8	Separate action requirements for QPTR > 1.09 have been deleted and replaced with one set of requirements which applies to any out of limit QPTR. These actions ensure that the peaking factors are met and remain below their limiting values, and that the gross radial power distribution remains consistent with the design values used in the safety analyses.	3.2.4 Action A	3.2.4 Actions b and c	III
3.2 L9	The $F_{xy}(Z)$ methodology for monitoring compliance with the Heat Flux Hot Channel Factor LCO was changed to the $F_o(Z)W(Z)$ methodology as allowed by STS. The new methodology provides more available margin to the $F_o(Z)$ limit than is available with the current methodology. This change also incorporates an allowance to reduce Thermal Power below the APL whenever $F_o^k(Z)$ limits are not met rather than reducing AFD limits.	3.2.1	3/4.2.2	I, III, V

Less Restrictive Change Categories
I Relaxation of LCO requirements
II Relaxation of Applicability
III Relaxation of Action requirements
IV Relaxation of completion time

V Relaxation of SR acceptance criteria
VI Relaxation of Surveillance Frequency
VII Deletion of requirements redundant to regulation
VIII Deletion of Surveillance requirements

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table L - Less Restrictive Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement	Change Category
3.2 L10	The completion time for reducing the Power Range Neutron Flux-High Trip Setpoints following a prompt reduction in power was changed from 4 hours to 72 hours to provide adequate time to accomplish the action.	3.2.1 Action A Required Action A.2	3.2.2 Action a	IV
3.2 L11	The completion time for reducing thermal power to < 50% RTP following an $F_{\Delta H}^N$ excursion was changed from 2 hours to 4 hours to provide time to complete an orderly shutdown.	3.2.2 Action A Required Action A.1	3.2.3 Action a	IV
3.2 L12	The completion time for reducing the Power Range Neutron Flux-High Trip Setpoints following a prompt reduction in power was changed from 4 hours to 72 hours to provide adequate time to accomplish the action.	3.2.2 Action A Required Action A.3	3.2.3 Action a.2	IV
3.2 L13	The completion time for reducing power < 5% RTP if $F_{\Delta H}^N$ cannot be restored to within limits within 24 hours was changed from 2 hours to 6 hours to provide adequate time to accomplish the action.	3.2.2 Action A Required Action A.2	3.2.3 Action b	IV
3.2 L14	CTS requires verification that the QPTR is within limit within 24 hours after exceeding the limit. This action was replaced with actions to verify the peaking factor remain within their limiting values following the Thermal Power increase, and to re-evaluate the safety analyses to ensure that the reactor core conditions remain bounded and recalibrate the excore detectors to normalize currents and eliminate the indicated tilt prior increasing Thermal Power.	3.2.4 Action A Required Actions A.4, A.5, and A.6	3.2.4 Action a.3	III

Less Restrictive Change Categories

- I Relaxation of LCO requirements
- II Relaxation of Applicability
- III Relaxation of Action requirements
- IV Relaxation of completion time

- V Relaxation of SR acceptance criteria
- VI Relaxation of Surveillance Frequency
- VII Deletion of requirements redundant to regulation
- VIII Deletion of Surveillance requirements

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

Table L - Less Restrictive Changes to CTS

Discussion of Change	Description of Change	ITS Requirement	CTS Requirement	Change Category
3.2 L15	With one channel of Power Range Neutron Flux instrumentation inoperable and if power is restricted to $\leq 75\%$ RTP, the requirement to also reduce the Power Range Neutron Flux Trip Setpoint was deleted since an alternate method of verifying QPTR is available.	SR 3.2.4.1	Table 3.3-1 Action 2.c	V
3.2 L16	The surveillance to verify QPTR once per 12 hours using incore detectors with one Power Range Neutron Flux channel inoperable, was modified to allow its performance 12 hours after increasing Thermal Power $\geq 75\%$ RTP rather than requiring the surveillance to be met prior to entering this power condition.	SR 3.2.4.2 Note	4.2.4.2	VI
3.2 L17	The method for performing the surveillance to verify QPTR within limit when $\geq 75\%$ RTP was changed to allow the alternate use of movable incore detectors when one or more Power Range Neutron Flux channels is inoperable.	SR 3.2.4.2, Note SR 3.2.4.1, Note 1	4.2.4.2, Specification 1.25	V

Less Restrictive Change Categories
I Relaxation of LCO requirements
II Relaxation of Applicability
III Relaxation of Action requirements
IV Relaxation of completion time

V Relaxation of SR acceptance criteria
VI Relaxation of Surveillance Frequency
VII Deletion of requirements redundant to regulation
VIII Deletion of Surveillance requirements

(By) - Byron specific
(Bw) - Braidwood specific

Byron and Braidwood

ATTACHMENT 1

ITS SECTION 3.1
RAI REVISED RESPONSES

Response to NRC RAI For ITS Section 3.1

09-Jul-98

NRC RAI Number	NRC Issued Date	RAI Status
3.1-01	8/5/97	Closed

NRC Description of Issue

3.1-01 JFD-P19

SR 3.1.6.1, the verification of the estimated critical control bank position

The word "Once" has been added to the frequency which specifies an interval "Within" a particular time frame ("Within 4 hours prior to criticality"). Comment: This is a legitimate use of the word "Once" in an SR frequency, and it is a generic change. This should be brought to the Tech Spec Task Force for future action.

ComEd Response to Issue

4/1/98 Revised Response: ComEd will withdraw this change. This change is provided in our comprehensive ITS Section 3.1 closeout submittal revision.

Original Response: ComEd will submit a traveler at the next Westinghouse Owner's Group (WOG) ITS meeting scheduled for November 19 and 20, 1997 to propose the Byron and Braidwood plant specific change to the WOG. In the interim, ComEd continues to pursue this change. (See RAIs 3.1.6-04, 3.6.3-09, 3.4.14-09, 3.4.16-05, and 3.4.18-03.)

NRC RAI Number	NRC Issued Date	RAI Status
3.1.1-01	8/5/97	Closed

NRC Description of Issue

3.1.1-01 Bases discussion of ITS SR 3.1.1.1, page B 3.1-6

The sentence "The SDM is specified in the COLR." has been added to the Bases. Comment: Revise this insert to read "The SDM limits are specified in the COLR."

ComEd Response to Issue

ITS and NUREG were revised to reword the Bases insert (Ref. Bases JFD 3.1-P2 on page B 3.1-6) to read "The SDM limits are specified in the COLR."

NRC RAI Number	NRC Issued Date	RAI Status
3.1.2-01	8/5/97	Closed

NRC Description of Issue

3.1.2-01 JFD-P4

JFD-BF9

ITS SR 3.1.2.1 and SR 3.1.2.2

STS SR 3.1.3.1

In lieu of adopting STS SR 3.1.3.1, verification of core reactivity - with two frequencies, the ITS specifies two SRs, SR 3.1.2.1 and SR 3.1.2.2. Comment: This is an editorial change. Submit a TSTF change request.

ComEd Response to Issue

ComEd will submit a traveler at the next Westinghouse Owner's Group (WOG) ITS meeting scheduled for November 19 and 20, 1997 to propose the Byron and Braidwood plant specific change to the WOG. In the interim, ComEd continues to pursue this change.

Response to NRC RAI For ITS Section 3.1

09-Jul-98

NRC RAI Number	NRC Issued Date	RAI Status
3.1.3-01	8/5/97	Closed

NRC Description of Issue

3.1.3-01 ☐ JFD-BP6

☐ Bases discussion for ITS SR 3.1.3.2, page B 3.1-23

The discussion about the 300 ppm surveillance limit for the MTC has not been adopted. The reason given for this difference is that the discussion is at a level of detail not actually in the SR. This material is relevant to understanding the development of the 300 ppm MTC Surveillance limit. Comment: This is not a justifiable plant specific or editorial difference from the STS. Revise the submittal to adopt the STS discussion.

ComEd Response to Issue

ITS and NUREG were revised to include in the Surveillance Requirements Section of the Bases for ITS LCO 3.1.3 "Because the RTP MTC value will gradually become more negative with further core depletion and boron concentration reduction, a 300 ppm SR value of MTC should necessarily be less negative than the EOL LCO limit. The 300 ppm SR value is sufficiently less negative than the EOL LCO limit value to ensure that the LCO limit will be met when the 300 ppm Surveillance criterion is met." As a result, Bases JFD 3.1-P6 was changed to "Not used."

NRC RAI Number	NRC Issued Date	RAI Status
3.1.4-01	8/5/97	Closed

NRC Description of Issue

3.1.4-01 ☐ DOC-A6

☐ JFD-P7

☐ ITS 3.1.4, Required Action B

☐ CTS 3.1.3.1.b.1

☐ STS 3.1.5, Required Action B.1

The CTS and STS contain the required action to restore rod alignment. The ITS deletes this action, since complying with the LCO is always an option. Approved.

Comment: Provide a TSTF change request for this change.

ComEd Response to Issue

ComEd will submit a traveler at the next Westinghouse Owner's Group (WOG) ITS meeting scheduled for November 19 and 20, 1997 to propose the Byron and Braidwood plant specific change to the WOG. In the interim, ComEd continues to pursue this change. (See RAI 3.2.2-01.)

Response to NRC RAI For ITS Section 3.1

09-Jul-98

NRC RAI Number	NRC Issued Date	RAI Status
3.1.4-02	8/5/97	Closed

NRC Description of Issue

3.1.4-02 □ DOC-LA9

□ JFD-C10

□ ITS SR 3.1.4.1

□ CTS SR 4.1.3.1.1

□ STS SR 3.1.5.1

The CTS and STS have an increased SR frequency to verify rod alignment when the rod position deviation monitor is inoperable. This change has been submitted in TSTF traveller 110. TSTF-110 final disposition is pending, and has been recommended for rejection.

Comment: Retain increased SR frequency when the rod position deviation monitor is inoperable.

ComEd Response to Issue

4/1/98 Revised Response: ComEd will incorporate approved TSTF-110 Revision 2. This change is provided in our comprehensive ITS Section 3.1 closeout submittal revision.

Original Response: No change. TSTF-110 Revision 1 relocates conditional Surveillance Requirements (SRs) for functions with inoperable alarms from the Technical Specifications (TSs) to plant procedures or programs. The TSTF justifies this by stating that the alarms do not directly relate to the LCO limits. Inoperable alarms do not affect the operability of the TS function. This justification was used and accepted by the Staff during the development of the BWR NUREGs to allow relocation of the alarm functions from the BWR Technical Specifications to plant procedures. This justification was accepted by the Staff prior to the issuance of Revision 0 of the NUREGs. Typically these alarms are monitoring parameters which must be verified met on a specified Frequency (e.g., 12 hours). The basis for this Frequency is justified due to the operability of the alarm function. Whenever this alarm function becomes inoperable, a more frequent SR Frequency interval is performed on the parameter (e.g., 4 hours). This Frequency continues until the alarm function is restored to operable status. Relocating this detail to plant procedures or programs would not impact the safety significance of the TS requirement since the parameter being monitored is presumed to be operable whenever the alarm becomes inoperable. The inoperable alarm function does not impact operability of the monitored parameter. In addition, other ITS SR Frequencies are stated in the ITS Bases to be based on associated alarms or indications which are assumed to be operable or available. (e.g., The Actions Section of the Bases for ITS LCO 3.2.4 for Required Action A.2 states "A 12 hour Completion Time is sufficient because any additional change in QPTR should be relatively slow. Further, this Completion Time is consistent with the Frequency required for the Surveillances with an inoperable alarm or instrumentation." The Surveillance Requirements Section of the Bases for ITS LCO 3.8.1 discussing SR 3.8.1.4 states "The 31 day Frequency is adequate to assure that a sufficient supply of fuel oil is available, since low level alarms are provided and facility operators would be aware of any large uses of fuel oil during this period." The Surveillance Requirements Section of the Bases for ITS LCO 3.9.5 discussing SR 3.9.5.1 states "The Frequency of 12 hours is sufficient, considering the flow, temperature, pump control, and alarm indications available to the operator in the control room for monitoring the RHR System." The Surveillance Requirements Section of the Bases for ITS LCO 3.9.6 discussing SR 3.9.6.1 states "The Frequency of 12 hours is sufficient, considering the flow, temperature, pump control, and alarm indications available to the operator for monitoring the RHR System.") These alarms/indications are not specified in the TSs but typically require additional actions within plant procedures to account for the alarm/indication not being available. Typically alarm response procedures provide guidance for any necessary actions whenever alarms are inoperable. Placing this detail in these procedures ensures that the operator has sufficient guidance to respond to the inoperable alarm function and to perform the necessary conditional SRs. (See RAIs 3.1.6-05 and 3.2.3-04) ComEd continues to pursue this change.

Response to NRC RAI For ITS Section 3.1

09-Jul-98

NRC RAI Number	NRC Issued Date	RAI Status
3.1.5-01	8/5/97	Closed

NRC Description of Issue

3.1.5-01 ☐ JFD-P12
☐ JFD-P14
☐ ITS 3.1.5, Applicability
☐ Bases for ITS 3.1.5, Applicability - page B 3.1-36
STS 3.1.6 Applicability Note

The STS Applicability Note states, "This LCO is not applicable while performing SR 3.1.5.2." This note is adopted in corresponding ITS 3.1.5, with changes, but is placed with the LCO statement to prevent a possible misinterpretation of SR 3.0.4. The ITS note states "Shutdown banks may be outside the limit when required for performance of SR 3.1.4.2." Comment: These are not justifiable plant specific or editorial differences from the STS. The STS presentation is clear. Revise the submittal to adopt the STS presentation.

ComEd Response to Issue

ITS and NUREG have been revised to adopt the NUREG wording for the Note. As a result, LCO JFD 3.1-P13 was changed to "Not used." However, the relocation of the Note from the Applicability to the LCO has not changed. ComEd continues to pursue this change. All of the Notes in the Applicability section of the NUREG LCOs have been moved to the LCO section of the ITS LCOs either plant specifically or as a result of a TSTF that was incorporated. The Note applies to exceptions to the entire LCO and not to exceptions to the Applicability. Having a Note that modifies the Applicability requirements could imply an exception to the Applicability and thus, could lead to a misinterpretation of SR 3.0.4. Placing the Note in the LCO Section prevents misinterpretation of SR 3.0.4. The following is a list of ITS LCOs in which this convention was adopted. LCOs in which the Note was moved by a plant specific change: 3.1.5, 3.1.6, 3.3.9, 3.4.1, 3.4.10, 3.4.12, and 3.9.6 (SR Note moved to LCO); LCOs in which the Note was moved by a TSTF: 3.2.3, 3.5.2, and 3.5.3 (SR Note moved to LCO); LCOs in which the Note was added by a plant specific change: 3.7.12, 3.8.5, and 3.9.4; LCOs in which the Note was added by a TSTF: 3.6.3. (See RAIs 3.1.6-01, 3.4.1-04, 3.4.10-03, and 3.4.12-01 item b.)

NRC RAI Number	NRC Issued Date	RAI Status
3.1.5-02	8/5/97	Closed

NRC Description of Issue

3.1.5-02 ☐ JFD-C12
☐ ITS 3.1.5 Applicability
☐ (recurring editorial changes)

The ITS incorporates editorial changes to the presentation of the Applicability paragraph (semi-colons and the word "and" have been added). Comment: Revise the submittal to adopt the STS presentation.

ComEd Response to Issue

WOG-81 was withdrawn from the ITS submittal. ITS and NUREG were revised to adopt the ISTS presentation in the Applicability section of ITS LCOs 3.1.1, 3.1.3, 3.1.5, and 3.1.6. As a result, LCO JFD 3.1-C12 was changed to "Not used." (See RAIs 3.4-01, 3.5-01, 3.7.10-03, 3.7.11-02, 3.7.13-06, 3.9.4-06, 3.8.2-02, and 3.9.7-05.)

Response to NRC RAI For ITS Section 3.1

09-Jul-98

NRC RAI Number	NRC Issued Date	RAI Status
3.1.6-01	8/5/97	Closed

NRC Description of Issue

3.1.6-01 ☐ JFD-P12

☐ JFD-P14

☐ ITS 3.1.6, Applicability

☐ Bases discussion for ITS 3.1.6, Applicability - page B 3.1-42

STS 3.1.7, Applicability Note

The STS Applicability Note states, "This LCO is not applicable while performing SR 3.1.5.2." This note is adopted in corresponding ITS 3.1.6, with changes, but is placed with the LCO statement to prevent a possible misinterpretation of SR 3.0.4. The ITS note states, "Shutdown banks may be outside the limit when required for performance of SR 3.1.4.2."

Comment: These are not justifiable plant specific or editor... differences from the STS. The STS presentation is clear. Revise the submittal to adopt the STS presentation.

ComEd Response to Issue

ITS and NUREG have been revised to adopt the NUREG wording for the Note. As a result, LCO JFD 3.1-P14 was changed to "Not used." However, the relocation of the Note from the Applicability to the LCO has not changed. ComEd continues to pursue this change. All of the Notes in the Applicability section of the NUREG LCOs have been moved to the LCO section of the ITS LCOs either plant specifically or as a result of a TSTF that was incorporated. The Note applies to exceptions to the entire LCO and not to exceptions to the Applicability. Having a Note that modifies the Applicability requirements could imply an exception to the Applicability and thus, could lead to a misinterpretation of SR 3.0.4. Placing the Note in the LCO Section prevents misinterpretation of SR 3.0.4. The following is a list of ITS LCOs in which this convention was adopted. LCOs in which the Note was moved by a plant specific change: 3.1.5, 3.1.6, 3.3.9, 3.4.1, 3.4.10, 3.4.12, and 3.9.6 (SR Note moved to LCO); LCOs in which the Note was moved by a TSTF: 3.2.3, 3.5.2, and 3.5.3 (SR Note moved to LCO); LCOs in which the Note was added by a plant specific change: 3.7.12, 3.8.5, and 3.9.4; LCOs in which the Note was added by a TSTF: 3.6.3. (See RAI 3.1.5-01, 3.4.1-04, 3.4.10-03, and 3.4.12-01 item b.)

NRC RAI Number	NRC Issued Date	RAI Status
3.1.6-02	8/5/97	Closed

NRC Description of Issue

3.1.6-02 ☐ CTS 4.1.3.6

ITS SR 3.1.6.1

SR 3.1.6.1 provides the Surveillance Requirement and the associated Frequency for the verification of the estimated critical control bank position. Corresponding CTS 4.1.3.6 does not show this material. Comment: This material does not appear in the markup of CTS 3/4.1.3.6. Revise the submittal to show the addition of this Surveillance Requirement to the CTS.

ComEd Response to Issue

CTS markup pages 3/4 1-1 for CTS SR 4.1.1.1.1.b and 4.1.1.1.1.c were revised to include the material originally deleted by CTS DOC 3.1-R1. CTS SR 4.1.1.1.1.b was annotated with "SR 3.1.6.2" in the margin and CTS SR 4.1.1.1.1.c was annotated with "SR 3.1.6.1" in the margin. In addition, CTS markup pages 3/4 1-21 and Insert 3.1-21C were revised to add SR 3.1.6.1 to CTS Insert 3.1-21C. CTS DOC 3.1-A23 was created to document this change and reads "CTS SR 4.1.1.1.1.b requires that the SDM shall be determined to be within the limits specified in the COLR when in MODE 1 or 2 with keff greater than or equal to 1 at least once per 12 hours by verifying that control bank insertion is within the limits of Specification 3.1.3.6. This requirement has been retained in ITS as SR 3.1.6.2. In addition, CTS SR 4.1.1.1.1.c requires that the SDM shall be determined to be within the limits specified in the COLR when in MODE 2 with keff less than 1 within 4 hours prior to achieving reactor criticality by verifying that the predicted critical control rod position is within the limits of Specification 3.1.3.6. This requirement has been retained in ITS as SR 3.1.6.1. Since the SRs have been changed in format and presentation only, and the original intent was not changed, this is considered to be an administrative change and is consistent with NUREG-1431."

Response to NRC RAI For ITS Section 3.1

09-Jul-98

NRC RAI Number	NRC Issued Date	RAI Status
3.1.6-03	8/5/97	Closed

NRC Description of Issue

3.1.6-03 BP34

☐ Bases for ITS 3.1.6, Background - page B 3.1-39

Figure B 3.1.7-1, Control Bank Insertion vs. Percent RTP, has not been adopted. The justification for this difference is that the figure in the Bases duplicates the figure contained in the COLR, and to prevent misapplication and misinterpretation of the figure in the COLR. Comment: Figure in STS is for illustrative purposes. Consider using figure identical to figure in COLR.

ComEd Response to Issue

No change. The convention adopted in the Byron and Braidwood ITS submittal was to delete "illustration only" figures in the Bases to eliminate the possibility of an Operator inadvertently using a Bases figure in place of an actual figure. (See RAIs 2.6-03 and 3.2.3-03.) ComEd continues to pursue this change.

NRC RAI Number	NRC Issued Date	RAI Status
3.1.6-04	8/5/97	Closed

NRC Description of Issue

3.1.6-04 JFD-P19

☐ ITS SR 3.1.6.1

☐ STS SR 3.1.7.1

The word "Once" has been added to the frequency which specifies an interval "Within" a particular time frame ("Within 4 hours prior to criticality"). Comment: This is a legitimate use of the word "Once" in an SR frequency, and it is a generic change. This should be brought to the Tech Spec Task Force for future action.

ComEd Response to Issue

4/1/98 Revised Response: In a meeting between ComEd and the NRC on 4/1/98, this comment was withdrawn.

ComEd will submit a traveler at the next Westinghouse Owner's Group (WOG) ITS meeting scheduled for November 19 and 20, 1997 to propose the Byron and Braidwood plant specific change to the WOG. In the interim, ComEd continues to pursue this change. (See RAIs 3.1-01, 3.6.3-09, 3.4.14-09, 3.4.16-05, and 3.4.18-03.)

Response to NRC RAI For ITS Section 3.1

09-Jul-98

NRC RAI Number	NRC Issued Date	RAI Status
3.1.6-05	8/5/97	Closed

NRC Description of Issue

3.1.6-05 JFD-C10

☐ ITS SR 3.1.6.2

☐ CTS SR 4.1.3.6

☐ STS SR 3.1.7.2

The CTS and STS have an increased SR frequency to verify rod alignment when the rod position deviation monitor is inoperable. This change has been submitted in TSTF traveller 110. TSTF-110 final disposition is pending, and has been recommended for rejection.

Comment: Retain increased SR frequency when the rod position deviation monitor is inoperable.

ComEd Response to Issue

4/1/98 Revised Response: ComEd will incorporate approved TSTF-110 Revision 2. This change is provided in our comprehensive ITS Section 3.1 closeout submittal revision.

Original Response: No change. TSTF-110 Revision 1 relocates conditional Surveillance Requirements (SRs) for functions with inoperable alarms from the Technical Specifications (TSs) to plant procedures or programs. The TSTF justifies this by stating that the alarms do not directly relate to the LCO limits. Inoperable alarms do not affect the operability of the TS function. This justification was used and accepted by the Staff during the development of the BWR NUREGs to allow relocation of the alarm functions from the BWR Technical Specifications to plant procedures. This justification was accepted by the Staff prior to the issuance of Revision 0 of the NUREGs. Typically these alarms are monitoring parameters which must be verified met on a specified Frequency (e.g., 12 hours). The basis for this Frequency is justified due to the operability of the alarm function. Whenever this alarm function becomes inoperable, a more frequent SR Frequency interval is performed on the parameter (e.g., 4 hours). This Frequency continues until the alarm function is restored to operable status. Relocating this detail to plant procedures or programs would not impact the safety significance of the TS requirement since the parameter being monitored is presumed to be operable whenever the alarm becomes inoperable. The inoperable alarm function does not impact operability of the monitored parameter. In addition, other ITS SR Frequencies are stated in the ITS Bases to be based on associated alarms or indications which are assumed to be operable or available. (e.g., The Actions Section of the Bases for ITS LCO 3.2.4 for Required Action A.2 states "A 12 hour Completion Time is sufficient because any additional change in QPTR should be relatively slow. Further, this Completion Time is consistent with the Frequency required for the Surveillances with an inoperable alarm or instrumentation." The Surveillance Requirements Section of the Bases for ITS LCO 3.8.1 discussing SR 3.8.1.4 states "The 31 day Frequency is adequate to assure that a sufficient supply of fuel oil is available, since low level alarms are provided and facility operators would be aware of any large uses of fuel oil during this period." The Surveillance Requirements Section of the Bases for ITS LCO 3.9.5 discussing SR 3.9.5.1 states "The Frequency of 12 hours is sufficient, considering the flow, temperature, pump control, and alarm indications available to the operator in the control room for monitoring the RHR System." The Surveillance Requirements Section of the Bases for ITS LCO 3.9.6 discussing SR 3.9.6.1 states "The Frequency of 12 hours is sufficient, considering the flow, temperature, pump control, and alarm indications available to the operator for monitoring the RHR System.") These alarms/indications are not specified in the TSs but typically require additional actions within plant procedures to account for the alarm/indication not being available. Typically alarm response procedures provide guidance for any necessary actions whenever alarms are inoperable. Placing this detail in these procedures ensures that the operator has sufficient guidance to respond to the inoperable alarm function and to perform the necessary conditional SRs. (See RAIs 3.1.4-02 and 3.2.3-04) ComEd continues to pursue this change.

Response to NRC RAI For ITS Section 3.1

09-Jul-98

NRC RAI Number	NRC Issued Date	RAI Status
3.1.6-06	8/5/97	Closed

NRC Description of Issue

3.1.6-06 JFD-P1
☐ ITS SR 3.1.6.3
☐ STS SR 3.1.7.3

ITS SR 3.1.6.3 has been editorially rewritten.

Comment: These are not justifiable plant specific or editorial differences from the STS. The STS presentation is clear. Revise the submittal to adopt the STS presentation.

ComEd Response to Issue

No change. The change was for consistency in parallel construction within the LCO, the Required Actions, and the other two SRs. The LCO states "{Each control bank} shall be within the {insertion, sequence, and overlap} limits specified in the COLR." The Required Actions and the SRs were constructed similarly (i.e., "Verify {...} is within the {...} limits specified in the COLR."). Required Actions A.1.1 and B.1.1 state "Verify {SDM} is within the limits specified in the COLR." SR 3.1.6.1 states "Verify {estimated critical control bank position} is within the limits specified in the COLR." SR 3.1.6.2 states "Verify {each control bank} is within the {insertion} limits specified in the COLR." Likewise, SR 3.1.6.3 states "Verify {each control bank not fully withdrawn from the core} is within the {sequence and overlap} limits specified in the COLR." This change has been previously approved by the NRC as documented in the Ginna and Vogtle Safety Evaluation Reports. ComEd continues to pursue this change.

NRC RAI Number	NRC Issued Date	RAI Status
3.1.7-01	8/5/97	Open - NRC Action Required

NRC Description of Issue

3.1.7-01 DOC-L11
☐ DOC-L4
☐ JFD-C13
☐ JFD-P10
☐ ITS 3.1.7
☐ CTS 3.1.3.2
☐ STS 3.1.8

CTS 3.1.3.2 contains provisions for one Digital Rod Position Indication (DRPI) per bank inoperable. The STS relaxes this requirement by allowing one DRPI per group inoperable. The ITS attempts to take this a step further and allow all DRPI to be inoperable for up to 24 hours; by rewording the ACTIONS NOTE, and replacing CONDITION B. DOCs L4 and L11 do not adequately or accurately address these changes. Justification for these changes is based upon WOG-73, which has not been approved through the TSTF process. These changes are not consistent with NUREG-1431 as stated. Comment: Revise the submittal to adopt the STS wording. Revise the CTS markup to show the entire proposed change.

ComEd Response to Issue

4/1/98 Revised Response: This item is open pending NRC resolution of TSTF-234.

Original Response: No change. The NRC, Owner's Group Chairpersons, and utility management are scheduling a meeting to discuss generic issues (i.e., TSTFs) that involve changes to the Improved Technical Specifications (ITS). The main focus of this meeting is to discuss a schedule for reviewing the TSTFs, who is reviewing the TSTFs, and what direction is to be provided to utilities which have submitted ITS and have taken credit for the TSTFs that have not yet been approved. Therefore, the status of this RAI is pending resolution of these issues.

Response to NRC RAI For ITS Section 3.1

09-Jul-98

NRC RAI Number	NRC Issued Date	RAI Status
3.1.7-02	8/5/97	Closed

NRC Description of Issue

3.1.7-02 Bases discussion for ITS 3.1.7 Background, page B 3.1-47

Bases Insert B 3.1-47A states that the Bank Demand Position Indication System is "not very reliable..." No additional quantification has been provided. In contrast with this, Bases Insert B 3.1-47B provides substantially more information about the Digital Rod Position Indication System. Comment: Revise the submittal to provide additional information about the reliability of the Bank Demand Position Indication System.

ComEd Response to Issue

No change. Clarifying information about the reliability of the Bank Demand Position Indication System is found in the Background Section of the Bases for ITS LCO 3.1.7. In the Bases Markups section, page B 3.1-47, second paragraph, last sentence, it states "For example, if a rod does not move one step for each demand pulse, the step counter will still count the pulse and incorrectly reflect the position of the rod." ComEd continues to pursue this change.

NRC RAI Number	NRC Issued Date	RAI Status
3.1.8-01	8/5/97	Closed

NRC Description of Issue

3.1.8-01 Bases discussion for ITS 3.1.8 Background, page B 3.1-63

An insert has been proposed that discusses the beginning of life (BOL) and end of life (EOL) moderator temperature coefficient (MTC) tests that are performed and the associated Surveillance Requirements that they fulfill. Comment: The EOL MTC test is not performed in Mode 2, it is performed at power. The physics test exceptions provided by ITS 3.1.8 do not relate to the EOL MTC test. Revise the submittal and delete the reference to the EOL MTC test from the insert.

ComEd Response to Issue

ITS and NUREG were revised to delete the reference to the EOL MTC test from the insert and to delete the reference to SR 3.1.3.2 from the insert. The insert now reads "The Moderator Temperature Coefficient (MTC) at Beginning Of Life (BOL) is determined from the measured ITC. This test satisfies the requirement of SR 3.1.3.1."

Bottom of Report

ATTACHMENT 2

ITS SECTION 3.1
RAI AFFECTED PAGE LIST

ATTACHMENT 2

ITS SECTION 3.1
RAI AFFECTED PAGE LIST

RAI #	TAB	PAGE
RAI 3.1-01	BYRON ITS	3.1.6-2 B 3.1.6-6
	BRWD ITS	3.1.6-2 B 3.1.6-6
	LCO MARKUPS	3.1-15
	LCO JFDs	3.1-6
	BASES MARKUPS	B 3.1-44
	BASES JFDs	3.1-9
RAI 3.1.1-01	BYRON ITS	B 3.1.1-5
	BRWD ITS	B 3.1.1-5
	BASES MARKUPS	B 3.1-6
RAI 3.1.3-01	BYRON ITS	B 3.1.3-7
	BRWD ITS	B 3.1.3-7
	BASES MARKUPS	B 3.1-23
	BASES JFDs	3.1-4
RAI 3.1.4-02	LCO JFDs	3.1-2
	BASES JFDs	3.1-2
RAI 3.1.5-01	BYRON ITS	3.1.5-1 B 3.1.5-4
	BRWD ITS	3.1.5-1 B 3.1.5-4

ATTACHMENT 2

ITS SECTION 3.1
RAI AFFECTED PAGE LIST

RAI #	TAB	PAGE
	LCO MARKUPS	3.1-12
	LCO JFDs	3.1-6
	BASES MARKUPS	INSERT B 3.1-36A
RAI 3.1.5-02	BYRON ITS	3.1.1-1 3.1.3-1 3.1.5-1 3.1.6-1
	BRWD ITS	3.1.1-1 3.1.3-1 3.1.5-1 3.1.6-1
	LCO MARKUPS	3.1-1 3.1-5 3.1-12 3.1-14
	LCO JFDs	3.1-2
RAI 3.1.6-01	BYRON ITS	3.1.6-1 B 3.1.6-4
	BRWD ITS	3.1.6-1 B 3.1.6-4
	LCO MARKUPS	3.1-14
	LCO JFDs	3.1-6
	BASES MARKUPS	INSERT B 3.1-42A
RAI 3.1.6-02	BYRON CTS MARKUPS	3/4 1-1 3/4 1-21 INSERT 3.1-21C

ATTACHMENT 2

ITS SECTION 3.1
RAI AFFECTED PAGE LIST

RAI #	TAB	PAGE
	BRWD CTS MARKUPS	3/4 1-1 3/4 1-21 INSERT 3.1-21C
	CTS DOCs	3.1-6
RAI 3.1.6-05	LCO JFDs	3.1-2
	BASES JFDs	3.1-2
RAI 3.1.8-01	BYRON ITS	B 3.1.8-5
	BRWD ITS	B 3.1.8-5
	BASES MARKUPS	B 3.1-63

ATTACHMENT 3

ITS SECTION 3.1
SECTION CLOSEOUT
AFFECTED PAGE LIST

ATTACHMENT 3

ITS SECTION 3.1 SECTION CLOSEOUT AFFECTED PAGE LIST

SECTION/TAB	REMOVE PAGE	INSERT PAGE
3.1 BYRON ITS	3.1-1 3.1-2 - 3.1-3 3.1-4 - 3.1-6 3.1-7 - 3.1-10 3.1-11 - 3.1-12 3.1-13 - 3.1-15 3.1-16 - 3.1-18 3.1-19 - 3.1-20 B 3.1-1 - B 3.1-7 B 3.1-8 - B 3.1-15 B 3.1-16- B 3.1-23 B 3.1-24- B 3.1-37 B 3.1-38- B 3.1-43 B 3.1-44- B 3.1-50 B 3.1-51- B 3.1-58 B 3.1-59- B 3.1-68	3.1.1-1 3.1.2-1 - 3.1.2-2 3.1.3-1 - 3.1.3-3 3.1.4-1 - 3.1.4-4 3.1.5-1 - 3.1.5-2 3.1.6-1 - 3.1.6-3 3.1.7-1 - 3.1.7-3 3.1.8-1 - 3.1.8-2 B 3.1.1-1- B 3.1.1-6 B 3.1.2-1- B 3.1.2-7 B 3.1.3-1- B 3.1.3-8 B 3.1.4-1- B 3.1.4-12 B 3.1.5-1- B 3.1.5-6 B 3.1.6-1- B 3.1.6-7 B 3.1.7-1- B 3.1.7-8 B 3.1.8-1- B 3.1.8-10

ATTACHMENT 3

ITS SECTION 3.1
SECTION CLOSEOUT
AFFECTED PAGE LIST

SECTION/TAB	REMOVE PAGE	INSERT PAGE
3.1 BRWD ITS	3.1-1 3.1-2 - 3.1-3 3.1-4 - 3.1-6 3.1-7 - 3.1-10 3.1-11 - 3.1-12 3.1-13 - 3.1-15 3.1-16 - 3.1-18 3.1-19 - 3.1-20 B 3.1-1 - B 3.1-7 B 3.1-8 - B 3.1-15 B 3.1-16- B 3.1-23 B 3.1-24- B 3.1-37 B 3.1-38- B 3.1-43 B 3.1-44- B 3.1-50 B 3.1-51- B 3.1-58 B 3.1-59- B 3.1-68	3.1.1-1 3.1.2-1 - 3.1.2-2 3.1.3-1 - 3.1.3-3 3.1.4-1 - 3.1.4-4 3.1.5-1 - 3.1.5-2 3.1.6-1 - 3.1.6-3 3.1.7-1 - 3.1.7-3 3.1.8-1 - 3.1.8-2 B 3.1.1-1- B 3.1.1-6 B 3.1.2-1- B 3.1.2-7 B 3.1.3-1- B 3.1.3-8 B 3.1.4-1- B 3.1.4-12 B 3.1.5-1- B 3.1.5-6 B 3.1.6-1- B 3.1.6-7 B 3.1.7-1- B 3.1.7-8 B 3.1.8-1- B 3.1.8-10

ATTACHMENT 3

ITS SECTION 3.1
SECTION CLOSEOUT
AFFECTED PAGE LIST

SECTION/TAB	REMOVE PAGE	INSERT PAGE
3.1 BYRON CTS MARKUPS	3/4 1-1 3/4 1-2 INSERT 3.1-2A 3/4 1-3 3/4 1-14 3/4 1-15 3/4 1-20 3/4 1-21 INSERT 3.1-21C 3/4 1-22 3/4 10-3 INSERT 3.10-3A	3/4 1-1 3/4 1-2 INSERT 3.1-2A 3/4 1-3 3/4 1-14 3/4 1-15 3/4 1-20 3/4 1-21 INSERT 3.1-21C 3/4 1-22 3/4 10-3 INSERT 3.10-3A
3.1 BRWD CTS MARKUPS	3/4 1-1 3/4 1-2 INSERT 3.1-2A 3/4 1-3 3/4 1-14 3/4 1-15 3/4 1-17 3/4 1-20 3/4 1-21 INSERT 3.1-21C 3/4 1-22 3/4 10-3 INSERT 3.10-3A	3/4 1-1 3/4 1-2 INSERT 3.1-2A 3/4 1-3 3/4 1-14 3/4 1-15 3/4 1-17 3/4 1-20 3/4 1-21 INSERT 3.1-21C 3/4 1-22 3/4 10-3 INSERT 3.10-3A

ATTACHMENT 3

ITS SECTION 3.1 SECTION CLOSEOUT AFFECTED PAGE LIST

SECTION/TAB	REMOVE PAGE	INSERT PAGE
3.1 CTS DOCs	3.1-2 3.1-4 3.1-6 3.1-7 3.1-12 3.1-13 3.1-17 3.1-18 3.1-25 3.1-26 3.1-27	3.1-2 3.1-4 3.1-6 3.1-7 3.1-12 3.1-13 3.1-17 3.1-18 3.1-25 3.1-26 3.1-27
3.1 LCO MARKUPS	3.1-1 3.1-3 3.1-5 3.1-12 3.1-14 3.1-15 3.1-24	3.1-1 3.1-3 3.1-5 3.1-12 3.1-14 3.1-15 3.1-24
3.1 LCO JFDs	3.1-2 3.1-3 3.1-4 3.1-6	3.1-2 3.1-3 3.1-4 3.1-6

ATTACHMENT 3

ITS SECTION 3.1
SECTION CLOSEOUT
AFFECTED PAGE LIST

SECTION/TAB	REMOVE PAGE	INSERT PAGE
3.1 BASES MARKUPS	B 3.1-6 B 3.1-16 INSERT B 3.1-17A/B B 3.1-23 B 3.1-27 X B 3.1-36 INSERT B 3.1-36A B 3.1-37 INSERT B 3.1-42A B 3.1-44 B 3.1-50 B 3.1-61 B 3.1-62 X B 3.1-63 B 3.1-64 B 3.1-66 B 3.1-67 INSERT B 3.1-67A	B 3.1-6 B 3.1-16 INSERT B 3.1-17A/B B 3.1-23 B 3.1-27 INSERT B 3.1-27A B 3.1-36 INSERT B 3.1-36A B 3.1-37 INSERT B 3.1-42A B 3.1-44 B 3.1-50 B 3.1-61 B 3.1-62 INSERT B 3.1-62A B 3.1-63 B 3.1-64 B 3.1-66 B 3.1-67 INSERT B 3.1-67A
3.1 BASES JFDs	3.1-2 3.1-3 3.1-4 3.1-9 X	3.1-2 3.1-3 3.1-4 3.1-9 3.1-9a
3.1 NSHC	3.1-45 3.1-46	3.1-45 3.1-46

ENCLOSURE 1

ITS REVISION G
ITS SECTION 3.1