

REACTIVITY CONTROL SYSTEMS

3/4.1.3 MOVABLE CONTROL ASSEMBLIES

~~FULL LENGTH CEA POSITION~~

LIMITING CONDITION FOR OPERATION

3.1.3.1 The CEA Motion Inhibit and all ~~full length~~ shutdown and regulating CEAs shall be OPERABLE with each CEA of a given group positioned within 7.5 inches (indicated position) of all other CEAs in its group.

APPLICABILITY: MODES 1\* and 2\*.

ACTION:

- a. With one or more ~~full length~~ CEAs inoperable due to being immovable as a result of excessive friction or mechanical interference or known to be untrippable, be in at least HOT STANDBY within 6 hours.
- b. With the CEA Motion Inhibit inoperable, within 6 hours either:
  1. Restore the CEA Motion Inhibit to OPERABLE status, or
  2. Place and maintain the CEA drive system mode switch in either the "Off" or any "Manual Mode" position and fully withdraw all CEAs in groups 3 and 4 and withdraw the CEAs in group 5 to less than 5% insertion, or
  3. Be in at least HOT STANDBY.
- c. With one ~~full length~~ CEA inoperable due to causes other than addressed by ACTION a, above, and inserted beyond the Long Term Steady State Insertion Limits but within its above specified alignment requirements, operation in MODES 1 and 2 may continue for up to 7 days per occurrence with a total accumulated time of  $\leq$  14 days per calendar year.
- d. With one ~~full length~~ CEA inoperable due to causes other than addressed by ACTION a, above, but within its above specified alignment requirements and either fully withdrawn or within the Long Term Steady State Insertion Limits if in CEA group 5, operation in MODES 1 and 2 may continue.

\* See Special Test Exceptions 3.10.2 and 3.10.4.

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## REACTIVITY CONTROL SYSTEMS

### LIMITING CONDITION FOR OPERATION

- e. With one or more ~~full length~~ CEAs misaligned from any other CEAs in its group by more than 7.5 inches but less than 15 inches, operation in MODES 1 and 2 may continue, provided that within one hour the misaligned CEA(s) is either:
1. Restored to OPERABLE status within its above specified alignment requirements, or
  2. Declared inoperable. After declaring the CEA inoperable, operation in MODES 1 and 2 may continue for up to 7 days per occurrence with a total accumulated time of  $\leq 14$  days per calendar year provided all of the following conditions are met:
    - a) The THERMAL POWER level shall be reduced to  $\leq 70\%$  of the maximum allowable THERMAL POWER level for the existing Reactor Coolant Pump combination within one hour; if negative reactivity insertion is required to reduce THERMAL POWER, boration shall be used.
    - b) Within one hour after reducing the THERMAL POWER as required by a) above, the remainder of the CEAs in the group with the inoperable CEA shall be aligned to within 7.5 inches of the inoperable CEA while maintaining the allowable CEA sequence and insertion limits shown on Figure 3.1-2; the THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation.

REPLACE WITH  
INSERT A

f. With one full length CEA misaligned from any other CEA in its group by 15 inches or more, reduce THERMAL POWER to  $\leq 70\%$  of the maximum allowable THERMAL POWER level for the existing Reactor Coolant Pump combination within one hour, if negative reactivity insertion is required to reduce THERMAL POWER, boration shall be used. Within one hour after reducing THERMAL POWER as required above, either:

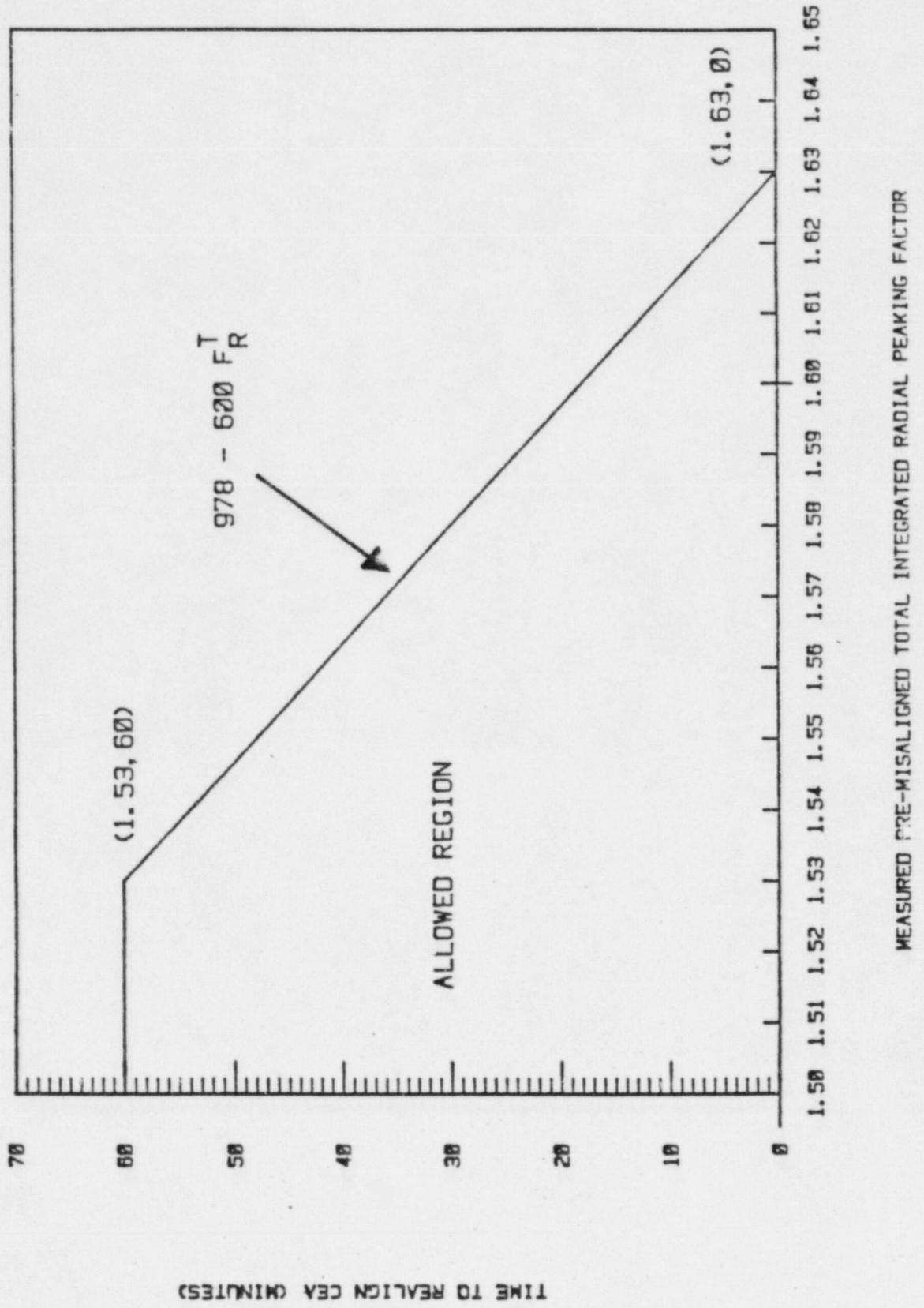
1. Restore the CEA to within the above specified alignment requirements, or

INSERT A

- f. With one CEA misaligned from any other CEA in its group by 15 inches or more, operation in MODES 1 and 2 may continue, provided that the misaligned CEA is positioned within 7.5 inches of the other CEAs in its group in accordance with the time allowance shown in Figure 3.1-3. The pre-misaligned  $F_r^T$  value used to determine the allowable time to realign the CEA from Figure 3.1-3 shall be the latest measurement taken within 5 days prior to the CEA misalignment. If no measurements were taken within 5 days prior to the misalignment, a pre-misaligned  $F_r^T$  of 1.65 shall be assumed.
- g. With one CEA misaligned from any other CEA in its group by 15 inches or more at the conclusion of the time allowance permitted in Figure 3.1-3, immediately start to implement the following actions:
1. If the THERMAL POWER level prior to the misalignment was greater than 50% of RATED THERMAL POWER, THERMAL POWER shall be reduced to less than the greater of:
    - a) 50% of RATED THERMAL POWER
    - b) 75% of the THERMAL POWER level prior to the misalignmentwithin one hour after exceeding the time allowance permitted by Figure 3.1-3.
  2. If the THERMAL POWER level prior to the misalignment was less than 50% of RATED THERMAL POWER, maintain THERMAL POWER no higher than the value prior to the misalignment.

If negative reactivity insertion is required to reduce THERMAL POWER, boration shall be used. Within one hour after establishing the appropriate THERMAL POWER as required above, either:

FIGURE 3.1-3  
ALLOWABLE TIME TO REALIGN CEA VERSUS  
INITIAL TOTAL INTEGRATED RADIAL PEAKING FACTOR



## REACTIVITY CONTROL SYSTEMS

### LIMITING CONDITION FOR OPERATION

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2. Declare the CEA inoperable. After declaring the CEA inoperable, POWER OPERATION may continue for up to 7 days per occurrence with a total accumulated time of < 14 days per calendar year provided the remainder of the CEAs in the group with the inoperable CEA are aligned to within 7.5 inches of the inoperable CEA while maintaining the allowable CEA sequence and insertion limits shown on Figure 3.1-2; the THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation.
- b. With more than one ~~full length~~ CEA inoperable or misaligned from any other CEA in its group by 15 inches (indicated position) or more, be in at least HOT STANDBY within 6 hours.
- c. For the purposes of performing the CEA operability test of TS 4.1.3.1.2, if the CEA has an inoperable position indication channel, the alternate indication system (pulse counter or voltage dividing network) will be used to monitor position. If a direct position indication (full out reed switch or voltage dividing network) cannot be restored within ten minutes from the commencement of CEA motion, or CEA withdrawal exceeds the surveillance testing insertion by > 7.5 inches, the position of the CEA shall be assumed to have been > 15 inches from its group at the commencement of CEA motion.

### SURVEILLANCE REQUIREMENTS

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- 4.1.3.1.1 The position of each ~~full length~~ CEA shall be determined to be within 7.5 inches (indicated position) of all other CEAs in its group at least once per 12 hours except during time intervals when the Deviation Circuit and/or CEA Motion Inhibit are inoperable, then verify the individual CEA positions at least once per 4 hours.
- 4.1.3.1.2 Each ~~full length~~ CEA not fully inserted shall be determined to be OPERABLE by inserting it at least 7.5 inches at least once per 31 days.
- 4.1.3.1.3 The CEA Motion Inhibit shall be demonstrated OPERABLE at least once per 31 days by a functional test which verifies that the circuit maintains the CEA group overlap and sequencing requirements of Specification 3.1.3.6 and that the circuit also prevents any CEA from being misaligned from all other CEAs in its group by more than 7.5 inches (indicated position).

TABLE 3.3-5

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION

RESPONSE TIME IN SECONDS

1. <u>Manual</u>	
a. SIAS Safety Injection (ECCS)	Not Applicable
b. CSAS Containment Spray	Not Applicable
c. CIS Containment Isolation	Not Applicable
d. RAS Containment Sump Recirculation	Not Applicable
e. AFAS Auxiliary Feedwater Initiation	Not Applicable
2. <u>Pressurizer Pressure-Low</u>	
a. Safety Injection (ECCS)	$\leq 30^*/30^{**}$
3. <u>Containment Pressure-High</u>	
a. Safety Injection (ECCS)	$\leq 30^*/30^{**}$
b. Containment Isolation	$\leq 30$
c. Containment Fan Coolers	$\leq 35^*/10^{**}$
4. <u>Containment Pressure-High</u>	
a. Containment Spray	$\leq 60^*/60^{**}(1)$
5. <u>Containment Radiation-High</u>	
a. Containment Purge Valves Isolation	$\leq 5/7$

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REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

In addition to the requirements of Specification 4.0.5, each Reactor Coolant Pump flywheel shall be inspected per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.

4.4.10.1.2 Augmented Inservice Inspection Program for Main Steam and Main Feedwater Piping - The unencapsulated welds greater than 4 inches in nominal diameter in the main steam and main feedwater piping runs located outside the containment and traversing safety related areas or located in compartments adjoining safety related areas shall be inspected per the following augmented inservice inspection program using the applicable rules, acceptance criteria, and repair procedures of the ASME Boiler and Pressure Vessel Code, Section XI, ~~1974~~ Edition and Addenda through Summer ~~1975~~, for Class 2 components. <sup>1983</sup> <sub>1983</sub>

~~a.~~ ~~System integrity and baseline data shall be established by performing a 100% volumetric examination of each weld prior to exceeding 18 months of operation.~~

~~a.~~ Each weld shall be examined in accordance with the above ASME Code requirements, except that 100% of the welds shall be examined, cumulatively, during each 10 year inspection interval. The welds to be examined during each inspection period shall be selected to provide a representative sample of the conditions of the welds. If these examinations reveal unacceptable structural defects in one or more welds, an additional 1/3 of the welds shall be examined and the inspection schedule for the repaired welds shall revert back ~~to the first 10 year inspection program.~~ <sup>AS IF A NEW</sup> <sub>program.</sub> If additional unacceptable defects are detected in the second sampling, the remainder of the welds shall also be inspected.

INTERVAL HAD <sup>BEGUN</sup>

REACTIVITY CONTROL SYSTEMS

REPLACE WITH  
INSERT B

POSSIBLE

BASES

Overpower margin is provided to protect the core in the event of a large misalignment ( $> 15$  inches) of a CEA. However, this misalignment would cause distortion of the core power distribution. The reactor protective system would not detect the degradation in radial peaking factors and since variations in other system parameters (e.g., pressure and coolant temperature) may not be sufficient to cause trips, it is probable that the reactor could be operating with process variables less conservative than those assumed in generating LCO and LSSS setpoints. Therefore, the ACTION statement associated with the large misalignment of a CEA requires a prompt and significant reduction in THERMAL POWER prior to attempting realignment of the misaligned CEA.

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The ACTION statements applicable to misaligned or inoperable CEAs include requirements to align the OPERABLE CEAs in a given group with the inoperable CEA. Conformance with these alignment requirements bring the core, within a short period of time, to a configuration consistent with that assumed in generating LCO and LSSS setpoints. However, extended operation with CEAs significantly inserted in the core may lead to perturbations in 1) local burnup, 2) peaking factors, and 3) available shutdown margin which are more adverse than the conditions assumed to exist in the safety analyses and LCO and LSSS setpoints determination. Therefore, time limits have been imposed on operation with inoperable CEAs to preclude such adverse conditions from developing.

Operability of the CEA position indicators is required to determine CEA positions and thereby ensure compliance with the CEA alignment and insertion limits and ensures proper operation of the rod block circuit. The CEA "Full In" and "Full Out" limits provide an additional independent means for determining the CEA positions when the CEAs are at either their fully inserted or fully withdrawn positions. Therefore, the OPERABILITY and the ACTION statements applicable to inoperable CEA position indicators permit continued operations when positions of CEAs with inoperable position indicators can be verified by the "Full In" or "Full Out" limits.

CEA positions and OPERABILITY of the CEA position indicators are required to be verified on a nominal basis of once per 12 hours with more frequent verifications required if an automatic monitoring channel is inoperable. These verification frequencies are adequate for assuring that the applicable LCOs are satisfied.

The surveillance requirements affecting CEAs with inoperable position indication channels allow 10 minutes for testing each affected CEA. This time limit was selected so that 1) the time would be long enough for the required testing, and 2) if all position indication were lost during testing, the time would be short enough to allow a power reduction to 70% of maximum allowable thermal power within one hour from when the testing was initiated. The time limit ensures CEA misalignments occurring during CEA testing are corrected within the time requirements required by existing specifications.

### INSERT B

The ACTION statement associated with a large CEA misalignment requires prompt action to realign the CEA to avoid excessive margin degradation. If the CEA is not realigned within the given time constraints, action is specified which will preserve margin, including reductions in THERMAL POWER.

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For a single CEA misalignment, the time allowance to realign the CEA (Figure 3.1-3) is permitted for the following reasons:

1. The margin calculations which support the power distribution LCOs for DNBR are based on a steady-state  $F_r^T$  as specified in Technical Specification 3.2.3.
2. When the actual  $F_r^T$  is less than the Technical Specification value, additional margin exists.
3. This additional margin can be credited to offset the increase in  $F_r^T$  with time that will occur following a CEA misalignment due to xenon redistribution.

The requirement to reduce power level after the time limit of Figure 3.1-3 is reached offsets the continuing increase in  $F_r^T$  that can occur due to xenon redistribution. A power reduction is not required below 50% power. Below 50% power there is sufficient conservatism in the DNB power distribution LCOs to completely offset any, or any additional, xenon redistribution effects.

## REACTIVITY CONTROL SYSTEMS

### 3/4.1.3 MOVABLE CONTROL ASSEMBLIES

#### ~~FULL LENGTH CEA POSITION~~

#### LIMITING CONDITION FOR OPERATION

3.1.3.1 The CEA Motion Inhibit and all ~~full length~~ shutdown and regulating CEAs shall be OPERABLE with each CEA of a given group positioned within 7.5 inches (indicated position) of all other CEAs in its group.

APPLICABILITY: MODES 1\* and 2\*.

#### ACTION:

- a. With one or more ~~full length~~ CEAs inoperable due to being immovable as a result of excessive friction or mechanical interference or known to be untrippable, be in at least HOT STANDBY within 6 hours.
- b. With the CEA Motion Inhibit inoperable, within 6 hours either:
  1. Restore the CEA Motion Inhibit to OPERABLE status, or
  2. Place and maintain the CEA drive system mode switch in either the "Off" or any "Manual Mode" position and fully withdraw all CEAs in groups 3 and 4 and withdraw the CEAs in group 5 to less than 5% insertion, or
  3. Be in at least HOT STANDBY.
- c. With one ~~full length~~ CEA inoperable due to causes other than addressed by ACTION a, above, and inserted beyond the Long Term Steady State Insertion Limits but within its above specified alignment requirements, operation in MODES 1 and 2 may continue for up to 7 days per occurrence with a total accumulated time of  $\leq$  14 days per calendar year.
- d. With one ~~full length~~ CEA inoperable due to causes other than addressed by ACTION a, above, but within its above specified alignment requirements and either fully withdrawn or within the Long Term Steady State Insertion Limits if in CEA group 5, operation in MODES 1 and 2 may continue.

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\* See Special Test Exceptions 3.10.2 and 3.10.4.

## REACTIVITY CONTROL SYSTEMS

### LIMITING CONDITION FOR OPERATION

- e. With one or more ~~full length~~ CEAs misaligned from any other CEAs in its group by more than 7.5 inches but less than 15 inches, operation in MODES 1 and 2 may continue, provided that within one hour the misaligned CEA(s) is either:
1. Restored to OPERABLE status within its above specified alignment requirements, or
  2. Declared inoperable. After declaring the CEA inoperable, operation in MODES 1 and 2 may continue for up to 7 days per occurrence with a total accumulated time of  $\leq 14$  days per calendar year provided all of the following conditions are met:
    - a) The THERMAL POWER level shall be reduced to  $\leq 70\%$  of the maximum allowable THERMAL POWER level for the existing Reactor Coolant Pump combination within one hour; if negative reactivity insertion is required to reduce THERMAL POWER, boration shall be used.
    - b) Within one hour after reducing the THERMAL POWER as required by a) above, the remainder of the CEAs in the group with the inoperable CEA shall be aligned to within 7.5 inches of the inoperable CEA while maintaining the allowable CEA sequence and insertion limits shown on Figure 3.1-2; the THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation.

REPLACE WITH  
INSERT A

f. With one full length CEA misaligned from any other CEA in its group by 15 inches or more, reduce THERMAL POWER to  $\leq 70\%$  of the maximum allowable THERMAL POWER level for the existing Reactor Coolant Pump combination within one hour; if negative reactivity insertion is required to reduce THERMAL POWER, boration shall be used. Within one hour after reducing THERMAL POWER as required above, either:

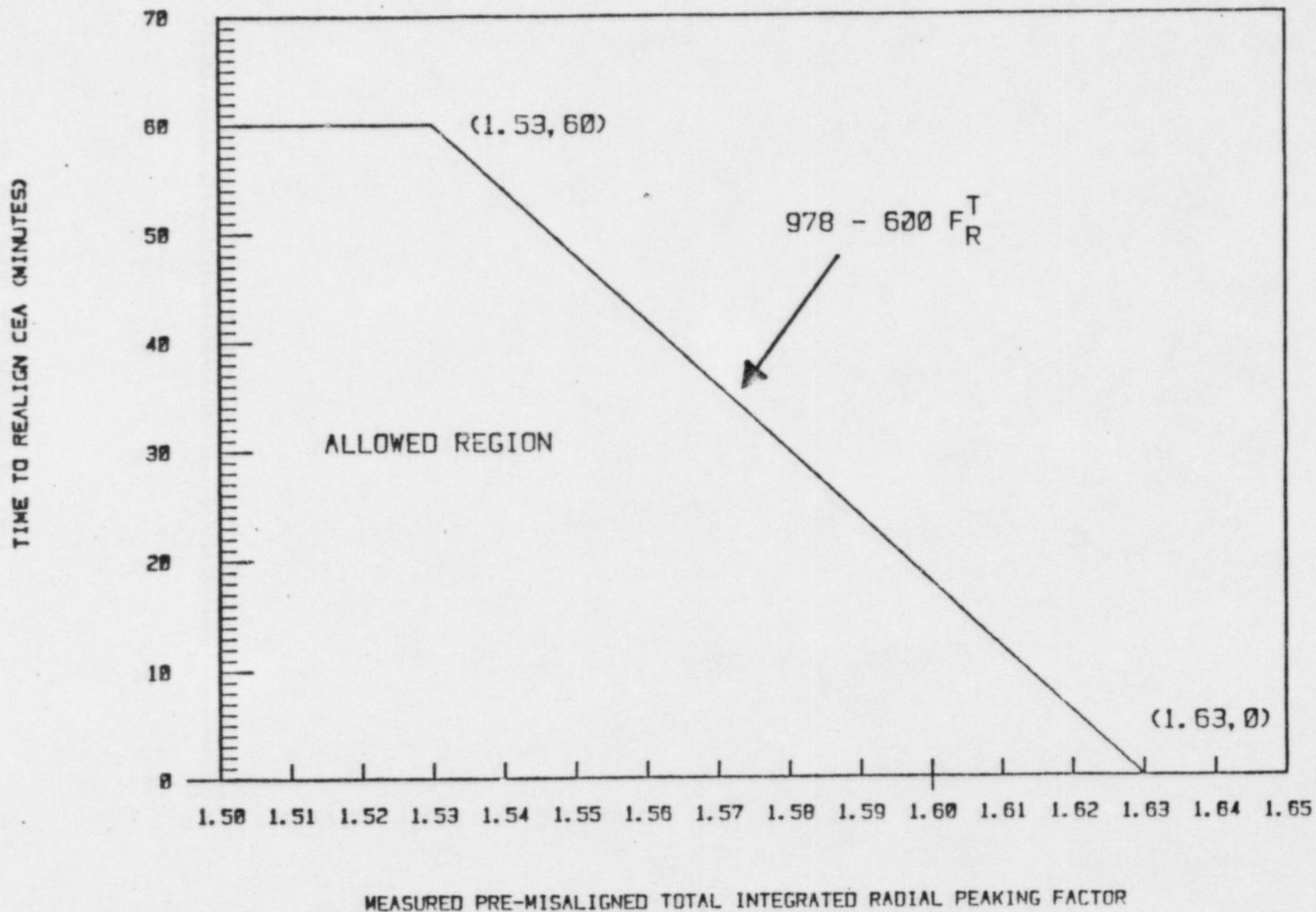
1. Restore the CEA to within the above specified alignment requirements, or

INSERT A

- f. With one CEA misaligned from any other CEA in its group by 15 inches or more, operation in MODES 1 and 2 may continue, provided that the misaligned CEA is positioned within 7.5 inches of the other CEAs in its group in accordance with the time allowance shown in Figure 3.1-3. The pre-misaligned  $F_r^T$  value used to determine the allowable time to realign the CEA from Figure 3.1-3 shall be the latest measurement taken within 5 days prior to the CEA misalignment. If no measurements were taken within 5 days prior to the misalignment, a pre-misaligned  $F_r^T$  of 1.65 shall be assumed.
- g. With one CEA misaligned from any other CEA in its group by 15 inches or more at the conclusion of the time allowance permitted in Figure 3.1-3, immediately start to implement the following actions:
1. If the THERMAL POWER level prior to the misalignment was greater than 50% of RATED THERMAL POWER, THERMAL POWER shall be reduced to less than the greater of:
    - a) 50% of RATED THERMAL POWER
    - b) 75% of the THERMAL POWER level prior to the misalignmentwithin one hour after exceeding the time allowance permitted by Figure 3.1-3.
  2. If the THERMAL POWER level prior to the misalignment was less than 50% of RATED THERMAL POWER, maintain THERMAL POWER no higher than the value prior to the misalignment.

If negative reactivity insertion is required to reduce THERMAL POWER, boron shall be used. Within one hour after establishing the appropriate THERMAL POWER as required above, either:

FIGURE 3.1-3  
ALLOWABLE TIME TO REALIGN CEA VERSUS  
INITIAL TOTAL INTEGRATED RADIAL PEAKING FACTOR



## REACTIVITY CONTROL SYSTEMS

### LIMITING CONDITION FOR OPERATION

2. Declare the CEA inoperable. After declaring the CEA inoperable, POWER OPERATION may continue for up to 7 days per occurrence with a total accumulated time of  $\leq 14$  days per calendar year provided the remainder of the CEAs in the group with the inoperable CEA are aligned to within 7.5 inches of the inoperable CEA while maintaining the allowable CEA sequence and insertion limits shown on Figure 3.1-2; the THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation.
- h* ~~h~~. With more than one ~~full length~~ CEA inoperable or misaligned from any other CEA in its group by 15 inches (indicated position) or more, be in at least HOT STANDBY within 6 hours.
- i* ~~i~~. For the purposes of performing the CEA operability test of T.S. 4.1.3.1.2, if the CEA has an inoperable position indication channel, the alternate indication system (pulse counter or voltage dividing network) will be used to monitor position. If a direct position indication (full out reed switch or voltage dividing network) cannot be restored within ten minutes from the commencement of CEA motion, or CEA withdrawal exceeds the surveillance testing insertion by  $> 7.5$  inches the position of the CEA shall be assumed to have been  $> 15$  inches from its group at the commencement of CEA motion.

### SURVEILLANCE REQUIREMENTS

- 4.1.3.1.1 The position of each ~~full length~~ CEA shall be determined to be within 7.5 inches (indicated position) of all other CEAs in its group at least once per 12 hours except during time intervals when the Deviation Circuit and/or CEA Motion Inhibit are inoperable, then verify the individual CEA positions at least once per 4 hours.
- 4.1.3.1.2 Each ~~full length~~ CEA not fully inserted shall be determined to be OPERABLE by inserting it at least 7.5 inches at least once per 31 days.
- 4.1.3.1.3 The CEA Motion Inhibit shall be demonstrated OPERABLE at least once per 31 days by a functional test which verifies that the circuit maintains the CEA group overlap and sequencing requirements of Specification 3.1.3.6 and that the circuit also prevents any CEA from being misaligned from all other CEAs in its group by more than 7.5 inches (indicated position).

TABLE 3.3-5

ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
1. <u>Manual</u>	
a. SIAS Safety Injection (ECCS)	Not Applicable
b. CSAS Containment Spray	Not Applicable
c. CIS Containment Isolation	Not Applicable
d. RAS Containment Sump Recirculation	Not Applicable
e. AFAS Auxiliary Feedwater Actuation	Not Applicable
2. <u>Pressurizer Pressure-Low</u>	
a. Safety Injection (ECCS)	$\leq 30^*/30^{**}$
3. <u>Containment Pressure-High</u>	
a. Safety Injection (ECCS)	$\leq 30^*/30^{**}$
b. Containment Isolation	$\leq 30$
c. Containment Fan Coolers	$\leq 35^*/10^{**}$
4. <u>Containment Pressure--High</u>	
a. Containment Spray	$\leq 60^*/60^{**}$
5. <u>Containment Radiation-High</u>	
a. Containment Purge Valves Isolation	$\leq 7$

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

In addition to the requirements of Specification 4.0.5, each Reactor Coolant Pump flywheel shall be inspected per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.

4.4.10.1.2 Augmented Inservice Inspection Program for Main Steam and Main Feedwater Piping - The unencapsulated welds greater than 4 inches in nominal diameter in the main steam and main feedwater piping runs located outside the containment and traversing safety related areas or located in compartments adjoining safety related areas shall be inspected per the following augmented inservice inspection program using the applicable rules, acceptance criteria, and repair procedures of the ASME Boiler and Pressure Vessel Code, Section XI, ~~1974~~ Edition and Addenda through Summer ~~1975~~, for Class 2 components. <sup>1983</sup> <sub>1983</sub>

- a. ~~System integrity and baseline data shall be established by performing a 100% volumetric examination of each weld prior to exceeding 18 months of operation.~~
- b. Each weld shall be examined in accordance with the above ASME Code requirements, except that 100% of the welds shall be examined, cumulatively, during each 10 year inspection interval. The welds to be examined during each inspection period shall be selected to provide a representative sample of the conditions of the welds. If these examinations reveal unacceptable structural defects in one or more welds, an additional 1/3 of the welds shall be examined and the inspection schedule for the repaired welds shall revert back to the first 10 year inspection ~~program~~ AS IF A NEW INTERVAL <sup>HAD BEGUN</sup> program. If additional unacceptable defects are detected in the second sampling, the remainder of the welds shall also be inspected.

# REACTIVITY CONTROL SYSTEMS

REPLACE WITH  
INSERT B

## BASES

POSSIBLE

protective system would not detect the degradation in radial peaking factors and since variations in other system parameters (e.g., pressure and coolant temperature) may not be sufficient to cause trips, it is ~~probable~~ that the reactor could be operating with process variables less conservative than those assumed in generating LCO and LSSS setpoints. Therefore, the ACTION statement associated with the large misalignment of a CEA requires a prompt and significant reduction in THERMAL POWER prior to attempting realignment of the misaligned CEA.

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C → The ACTION statements applicable to misaligned or inoperable CEAs include requirements to align the OPERABLE CEAs in a given group with the inoperable CEA. Conformance with these alignment requirements brings the core, within a short period of time, to a configuration consistent with that assumed in generating LCO and LSSS setpoints. However, extended operation with CEAs significantly inserted in the core may lead to perturbations in 1) local burnup, 2) peaking factors and 3) available shutdown margin which are more adverse than the conditions assumed to exist in the safety analyses and LCO and LSSS setpoints determination. Therefore, time limits have been imposed on operation with inoperable CEAs to preclude such adverse conditions from developing.

Operability of the CEA position indicators is required to determine CEA positions and thereby ensure compliance with the CEA alignment and insertion limits and ensures proper operation of the rod block circuit. The CEA "Full In" and "Full Out" limits provide an additional independent means for determining the CEA positions when the CEAs are at either their fully inserted or fully withdrawn positions. Therefore, the OPERABILITY and the ACTION statements applicable to inoperable CEA position indicators permit continued operations when the positions of CEAs with inoperable position indicators can be verified by the "Full In" or "Full Out" limits.

CEA positions and OPERABILITY of the CEA position indicators are required to be verified on a nominal basis of once per 12 hours with more frequent verifications required if an automatic monitoring channel is inoperable. These verification frequencies are adequate for assuring that the applicable LCOs are satisfied.

The surveillance requirements affecting CEAs with inoperable position indication channels allow 10 minutes for testing each affected CEA. This time limit was selected so that 1) the time would be long enough for the required testing, and 2) if all position indication were lost during testing, the time would be short enough to allow a power reduction to 70% of maximum allowable thermal power within one hour from when the testing was initiated. The time limit ensures CEA misalignments occurring during CEA testing are corrected within the time requirements required by existing specifications.

The maximum CEA drop time restriction is consistent with the assumed CEA drop time used in the accident analyses. Measurements with  $T_{avg} \geq 515^\circ$  and with all reactor coolant pumps operating ensures that the

### INSERT B

The ACTION statement associated with a large CEA misalignment requires prompt action to realign the CEA to avoid excessive margin degradation. If the CEA is not realigned within the given time constraints, action is specified which will preserve margin, including reductions in THERMAL POWER.

### INSERT C

For a single CEA misalignment, the time allowance to realign the CEA (Figure 3.1-3) is permitted for the following reasons:

1. The margin calculations which support the power distribution LCOs for DNBR are based on a steady-state  $F_r^T$  as specified in Technical Specification 3.2.3.
2. When the actual  $F_r^T$  is less than the Technical Specification value, additional margin exists.
3. This additional margin can be credited to offset the increase in  $F_r^T$  with time that will occur following a CEA misalignment due to xenon redistribution.

The requirement to reduce power level after the time limit of Figure 3.1-3 is reached offsets the continuing increase in  $F_r^T$  that can occur due to xenon redistribution. A power reduction is not required below 50% power. Below 50% power there is sufficient conservatism in the DNB power distribution LCOs to completely offset any, or any additional, xenon redistribution effects.