

September 8, 2006

TSTF-06-22

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

SUBJECT: TSTF-477, Revision 3, "Add Action for Two Inoperable Control Room AC Subsystems"

Dear Sir or Madam:

Enclosed for NRC review is Revision 3 of TSTF-477, "Add Action for Two Inoperable Control Room AC Subsystems." This revision addresses NRC comments on Revision 2.

Any NRC review fees associated with the review of TSTF-477 should be billed to the Boiling Water Reactor Owners' Group.

The TSTF requests that the Traveler be made available under the Consolidated Line Item Improvement Process.

Should you have any questions, please do not hesitate to contact us.



Wesley Sparkman (PWROG/W)



Brian Woods (PWROG/CE)



Michael Crowthers (BWROG)



Paul Infanger (PWROG/B&W)

Enclosure

cc: Tim Kobetz, Technical Specifications Branch, NRC  
Ross Telson, Technical Specifications Branch, NRC

## Technical Specification Task Force Improved Standard Technical Specifications Change Traveler

### Add Action for Two Inoperable Control Room AC Subsystems

NUREGs Affected:  1430  1431  1432  1433  1434

Classification: 1) Technical Change

Recommended for CLIP?: Yes

Correction or Improvement: Improvement

NRC Fee Status: Not Exempt

Benefit: Provides Longer Completion Time

Industry Contact: Mike Crowthers, (610) 774-7766, mhcrowthers@pplweb.com

### **1.0 Description**

The Actions of the [Control Room AC] System Technical Specification are revised to provide a new Action for both [control room AC] subsystems inoperable. The new Action allows a finite time to restore one [control room AC] subsystem to operable status and requires verification that control room temperature is maintained < [90] F once every 4 hours. The BWR/6 (NUREG-1434) Completion Time is 7 days. The BWR/4 (NUREG-1433) Completion Time is 72 hours.

### **2.0 Proposed Change**

BWR/4 (NUREG-1433) Specification 3.7.5, [Control Room AC] System, and BWR/6 (NUREG-1434) Specification 3.7.4, [Control Room AC] System are revised to add a new Action B. Action B applies when two [control room AC] subsystems are inoperable. Required Action B.1 requires verification once per 4 hours that control room area temperature is < [90] F. Required Action B.2 requires restoration of one [control room AC] subsystem to operable status within 72 hours (7 days for BWR/6 plants).

Action B, now renamed Action C, which applies when the Required Action and associated Completion Time of Condition A (one [control room AC] subsystem inoperable) is not met in MODES 1, 2, or 3, is revised to also be applicable when the Required Actions and associated Completion Times of Condition B are not met. Renumbered Condition C requires being in Mode 3 in 12 hours and Mode 4 in 36 hours.

Action D, which applied when two [control room AC] subsystems are inoperable in MODE 1, 2, or 3, and requires entry into LCO 3.0.3, is deleted.

Action E, which applies when two [control room AC] subsystems are inoperable during movement of [recently] irradiated fuel assemblies in the [secondary] containment or during OPDRVs, is revised to be applicable when the Required Actions and associated Completion Times of Condition B are not met.

The Bases are revised to reflect the changes to the Specifications.

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### **3.0 Background**

The [Control Room AC] System provides temperature control for the control room following isolation of the control room. The [Control Room AC] System consists of two independent, redundant subsystems that provide cooling and heating of recirculated control room air. Each subsystem consists of heating coils, cooling coils, fans, chillers, compressors, ductwork, dampers, and instrumentation and controls to provide for control room temperature control.

The [Control Room AC] System is designed to provide a controlled environment under both normal and accident conditions. The design basis of the [Control Room AC] System is to maintain the control room temperature for a 30 day continuous occupancy. During emergency operation, the [Control Room AC] System maintains a habitable environment and ensures the OPERABILITY of components in the control room.

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#### **4.0 Technical Analysis**

A recent survey of BWR plants determined that the Technical Specifications of all of the BWR/6 plants (Grand Gulf, River Bend, Clinton, and Perry) contain an Action for two [control room AC] subsystems inoperable that allows 7 days to restore an inoperable system and requires verification that the control room temperature is within a temperature limit every 4 hours. This action was added during conversion to the ITS. Therefore, the changes to the BWR/6 NUREG are considered administrative, intended to have the BWR/6 Standard Technical Specifications reflect the plant-specific specifications of all of the BWR/6 plants.

The BWR/6 plant's Actions are also applicable to the non-BWR/6 plants. There are no significant design or operational differences between the BWR/4 and BWR/6 [control room AC] systems. There are no differences in the BWR/4 or BWR/6 accident analysis assumptions regarding the [control room AC] system. Therefore, there should be no difference the in TS requirements for these systems.

With one [control room AC] subsystem inoperable, 30 days is provided to restore the inoperable subsystem. Technical Specifications with 30 day Completion Times for one inoperable train typically provide a finite time to restore one train when both trains are inoperable. Examples are:

- Post Accident Monitoring (7 days),
- Main Steam Isolation Valve (MSIV) Leakage Control System (LCS) (7 days),
- [Drywell Cooling System Fans] (7 days),
- Containment Atmosphere Dilution (CAD) System (7 days),
- Residual Heat Removal Service Water (RHRSW) System pumps (7 days), and
- [Plant Service Water (PSW)] System and [Ultimate Heat Sink (UHS)] (7 days).

The requirement to monitor control room temperature ensures the environment for the control room equipment is maintained with the design limits. Provided that temperature may be maintained within the design limits, 72 hours is allowed to restore one [control room AC] subsystem for the BWR/4 plants. The 72 hour Completion Time is reasonable considering that control room temperature is being maintained within limits and the low probability of an event occurring that would require control room isolation. The 72 hour Completion Time is more conservative than the approved Completion Times for the BWR/6 plants and more conservative than other similar Conditions in the ISTS. Alternate methods of maintaining control room temperature, such as non-safety grade air conditioning systems or fans, can also be used to maintain control room temperature.

Topical Report NEDC 31336 PA, "General Electric Instrument Setpoint Methodology," states that the error allowance for control room in-cabinet temperatures is 40-104 degrees F for BWR/6 plants and 40 to 156 degrees F for BWR/4 plants. The qualified life of the panel components (as an example, Rosemount 710 DU trip units) is dependent on the continuous ambient temperature at the installation site, from a maximum life of over 30 years for approximately 95 degree temperatures to just over two years for continuous ambient temperatures over 150 degrees. The temperature rise in closed control room trip panels is 14 to 18 degrees. With control room temperature controlled at less than 90 degrees, the maximum control room panel temperature would be less than the qualification temperature and would be within the temperature assumed in the setpoint accuracy calculations. This Traveler does not change the equipment qualification temperature in the control room. Therefore, the equipment enclosed in the cabinets is unaffected by this change.

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## 5.0 Regulatory Analysis

### 5.1 No Significant Hazards Consideration

The TSTF has evaluated whether or not a significant hazards consideration is involved with the proposed generic change by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change allows 72 hours to restore an inoperable [control room AC] subsystem when both subsystems are inoperable provided temperature is verified to be within the design limits every 4 hours. The [control room AC] system is not an initiator of any accident previously evaluated. As a result, the probability of any accident previously evaluated is not significantly increased. The consequences of any accident previously evaluated during the requested Completion Time are no different that that accident during the current Completion Time. As a result, the consequences of any accident previously evaluated are not significantly increased.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

No new or different accidents result from utilizing the proposed change. The changes do not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. In addition, the changes do not impose any new or different requirements. The changes do not alter assumptions made in the safety analysis. The proposed changes are consistent with the safety analysis assumptions.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed change allows 72 hours to restore an inoperable [control room AC] subsystem when both subsystems are inoperable provided temperature is verified to be within the design limits every 4 hours. The requirement to monitor control room temperature ensures the environment for the control room equipment is maintained within the design limits. Provided that temperature may be maintained within the design limits, the 72 hour Completion Time to restore one [control room AC] subsystem will not cause a significant reduction in the margin of safety considering that control room temperature is being maintained within limits, the low probability of an event occurring that would require control room isolation, and the availability of alternate cooling methods.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

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Based on the above, the TSTF concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

## **5.2 Applicable Regulatory Requirements/Criteria**

The operability requirements of the [control room AC] system have not changed. The regulatory requirements do not specifically address Completion Times with inoperable systems. As a result, the regulatory requirements and criteria are not affected by the proposed change.

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the approval of the proposed change will not be inimical to the common defense and security or to the health and safety of the public.

## **6.0 Environmental Consideration**

A review has determined that the proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

## **7.0 References**

None

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## **Revision History**

### **OG Revision 0**

**Revision Status: Closed**

Revision Proposed by: BWROG

Revision Description:

Original Issue

### **Owners Group Review Information**

Date Originated by OG: 10-May-04

Owners Group Comments

(No Comments)

Owners Group Resolution: Approved Date: 10-May-04

### **TSTF Review Information**

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**OG Revision 0****Revision Status: Closed**

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TSTF Received Date: 19-Jun-04 Date Distributed for Review 19-Jun-04

OG Review Completed:  BWOG  WOG  CEOG  BWROG

TSTF Comments:

(No Comments)

TSTF Resolution: Approved

Date: 25-Aug-04

**NRC Review Information**

NRC Received Date: 30-Aug-04

NRC Comments:

NRC requested additional information to support the requested change in a teleconference. After further consideration, the requested BWR/4 Completion Time was changed to 72 hours.

Final Resolution: Superseded by Revision

**TSTF Revision 1****Revision Status: Closed**

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Revision Proposed by: BWROG

Revision Description:

The BWR/4 Completion Time is revised from 7 days to 72 hours.

**TSTF Review Information**

TSTF Received Date: 22-Feb-06 Date Distributed for Review 22-Feb-06

OG Review Completed:  BWOG  WOG  CEOG  BWROG

TSTF Comments:

(No Comments)

TSTF Resolution: Approved

Date: 30-Mar-06

**NRC Review Information**

NRC Received Date: 31-Mar-06

NRC Comments:

NRC requested additional justification regarding the in-cabinet temperatures in the control room.

Final Resolution: Superseded by Revision

Final Resolution Date: 06-Jul-06

**TSTF Revision 2****Revision Status: Closed**

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Revision Proposed by: NRC

Revision Description:

Added additional Technical Analysis regarding the in-cabinet temperatures in the control room.

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**TSTF Revision 2****Revision Status: Closed**

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**TSTF Review Information**

TSTF Received Date: 06-Jul-06 Date Distributed for Review 06-Jul-07

OG Review Completed:  BWOG  WOG  CEOG  BWROG

TSTF Comments:

(No Comments)

TSTF Resolution: Approved

Date: 17-Jul-06

**NRC Review Information**

NRC Received Date: 18-Jul-06

NRC Comments:

At the 8/17/2006 TSTF/NRC meeting, the NRC requested that the TSTF confirm and add the following to the justification, "This Traveler does not change the equipment qualification temperature in the control room. Therefore, the equipment enclosed in the cabinets is unaffected by this change." The TSTF confirmed that the statement was accurate and added it to the justification.

Final Resolution: NRC Requests Changes: TSTF Will Revise Final Resolution Date: 17-Aug-06

**TSTF Revision 3****Revision Status: Active**

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Revision Proposed by: NRC

Revision Description:

At the 8/17/2006 TSTF/NRC meeting, the NRC requested that the TSTF confirm and add the following to the justification, "This Traveler does not change the equipment qualification temperature in the control room. Therefore, the equipment enclosed in the cabinets is unaffected by this change." The TSTF confirmed that the statement was accurate and added it to the justification.

**TSTF Review Information**

TSTF Received Date: 23-Aug-06 Date Distributed for Review 23-Aug-06

OG Review Completed:  BWOG  WOG  CEOG  BWROG

TSTF Comments:

(No Comments)

TSTF Resolution: Approved

Date: 08-Sep-06

**NRC Review Information**

NRC Received Date: 08-Sep-06

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## Affected Technical Specifications

Action 3.7.5.B	[Control Room AC] System Change Description: Renumbered C	NUREG(s)- 1433 Only
Action 3.7.5.B	[Control Room AC] System Change Description: New Action	NUREG(s)- 1433 Only
Action 3.7.5.B Bases	[Control Room AC] System Change Description: New Action	NUREG(s)- 1433 Only
Action 3.7.5.B Bases	[Control Room AC] System Change Description: Renumbered C	NUREG(s)- 1433 Only
Action 3.7.5.C	[Control Room AC] System Change Description: Renumbered D	NUREG(s)- 1433 Only
Action 3.7.5.C Bases	[Control Room AC] System Change Description: Renumbered D	NUREG(s)- 1433 Only
Action 3.7.5.D	[Control Room AC] System Change Description: Action deleted	NUREG(s)- 1433 Only
Action 3.7.5.D Bases	[Control Room AC] System Change Description: Action deleted	NUREG(s)- 1433 Only
Action 3.7.5.E	[Control Room AC] System	NUREG(s)- 1433 Only
Action 3.7.5.E Bases	[Control Room AC] System	NUREG(s)- 1433 Only
Action 3.7.4.B	[Control Room AC] System Change Description: Renumbered C	NUREG(s)- 1434 Only
Action 3.7.4.B	[Control Room AC] System Change Description: New Action	NUREG(s)- 1434 Only
Action 3.7.4.B Bases	[Control Room AC] System Change Description: New Action	NUREG(s)- 1434 Only
Action 3.7.4.B Bases	[Control Room AC] System Change Description: Renumbered C	NUREG(s)- 1434 Only
Action 3.7.4.C	[Control Room AC] System Change Description: Renumbered D	NUREG(s)- 1434 Only
Action 3.7.4.C Bases	[Control Room AC] System Change Description: Renumbered D	NUREG(s)- 1434 Only
Action 3.7.4.D	[Control Room AC] System Change Description: Action deleted	NUREG(s)- 1434 Only
Action 3.7.4.D Bases	[Control Room AC] System Change Description: Action deleted	NUREG(s)- 1434 Only

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Action 3.7.4.E	[Control Room AC] System	NUREG(s)- 1434 Only
Action 3.7.4.E Bases	[Control Room AC] System	NUREG(s)- 1434 Only

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3.7 PLANT SYSTEMS

3.7.5 [Control Room Air Conditioning (AC)] System

LCO 3.7.5 Two [control room AC] subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,  
 During movement of [recently] irradiated fuel assemblies in the  
 [secondary] containment,  
 During operations with a potential for draining the reactor vessel  
 (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One [control room AC] subsystem inoperable.	A.1 Restore [control room AC] subsystem to OPERABLE status.	30 days
<u>B.</u> Two [control room AC] subsystems inoperable.	<u>B.1</u> Verify control room area temperature < [90]°F.  <u>AND</u> <u>B.2</u> Restore one [control room AC] subsystem to OPERABLE status.	<u>Once per 4 hours</u>  <u>72 hours</u>
<u>BC.</u> Required Action and associated Completion Time of Condition A <u>or B</u> not met in MODE 1, 2, or 3.	<u>BC.1</u> Be in MODE 3.  <u>AND</u> <u>BC.2</u> Be in MODE 4.	12 hours  36 hours
<u>CD.</u> Required Action and associated Completion Time of Condition A not met during movement of [recently] irradiated fuel assemblies in the [secondary] containment or during OPDRVs.	-----NOTE----- LCO 3.0.3 is not applicable. ----- <u>CD.1</u> Place OPERABLE [control room AC] subsystem in operation.	Immediately

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<u>OR</u>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p><del>ED</del>.2.1 Suspend movement of [recently] irradiated fuel assemblies in the [secondary] containment.</p> <p><u>AND</u></p> <p><del>ED</del>.2.2 Initiate action to suspend OPDRVs.</p>	<p>Immediately</p> <p>Immediately</p>
<del>D. Two [control room AC] subsystems inoperable in MODE 1, 2, or 3.</del>	<del>D.1 Enter LCO 3.0.3.</del>	<del>Immediately</del>
E. <del>Two [control room AC] subsystems inoperable</del> <u>Required Action and associated Completion Time of Condition B not met</u> during movement of [recently] irradiated fuel assemblies in the [secondary] containment or during OPDRVs.	<p>-----NOTE-----          LCO 3.0.3 is not applicable.          -----</p> <p>E.1 Suspend movement of [recently] irradiated fuel assemblies in the [secondary] containment.</p> <p><u>AND</u></p> <p>E.2 Initiate action to suspend OPDRVs.</p>	<p>Immediately</p> <p>Immediately</p>

## BASES

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### ACTIONS (continued)

#### B.1 and B.2

If both [control room AC] subsystems are inoperable, the [Control Room AC] System may not be capable of performing its intended function. Therefore, the control room area temperature is required to be monitored to ensure that temperature is being maintained low enough that equipment in the control room is not adversely affected. With the control room temperature being maintained within the temperature limit, 72 hours is allowed to restore a [Control Room AC] subsystem to OPERABLE status. This Completion time is reasonable considering that the control room temperature is being maintained within limits and the low probability of an event occurring requiring control room isolation.

#### BC.1 and BC.2

In MODE 1, 2, or 3, if the inoperable [control room AC] subsystem(s) cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE that minimizes risk. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

#### CD.1, CD.2.1, and CD.2.2

The Required Actions of Condition CD are modified by a Note indicating that LCO 3.0.3 does not apply. If moving [recently] irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of [recently] irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

During movement of [recently] irradiated fuel assemblies in the [secondary] containment or during OPDRVs, if Required Action A.1 cannot be completed within the required Completion Time, the OPERABLE [control room AC] subsystem may be placed immediately in operation. This action ensures that the remaining subsystem is OPERABLE, that no failures that would prevent actuation will occur, and that any active failure will be readily detected.

An alternative to Required Action CD.1 is to immediately suspend activities that present a potential for releasing radioactivity that might

require isolation of the control room. This places the unit in a condition that minimizes risk.

If applicable, movement of [recently] irradiated fuel assemblies in the [secondary] containment must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, actions must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until the OPDRVs are suspended.

BASES

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ACTIONS (continued)

D.1

~~If both [control room AC] subsystems are inoperable in MODE 1, 2, or 3, the [Control Room AC] System may not be capable of performing the intended function. Therefore, LCO 3.0.3 must be entered immediately.~~

E.1 and E.2

The Required Actions of Condition E are modified by a Note indicating that LCO 3.0.3 does not apply. If moving [recently] irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of [recently] irradiated fuel assemblies is not a sufficient reason to require a reactor shutdown.

During movement of [recently] irradiated fuel assemblies in the [secondary] containment or during OPDRVs, ~~with two [control room AC] subsystems inoperable~~ if Required Actions B.1 and B.2 cannot be met within the required Completion Times, action must be taken ~~to~~ immediately ~~to~~ suspend activities that present a potential for releasing radioactivity that might require isolation of the control room. This places the unit in a condition that minimizes risk.

If applicable, handling of [recently] irradiated fuel in the [secondary] containment must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, actions must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until the OPDRVs are suspended.

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SURVEILLANCE  
REQUIREMENTS

SR 3.7.5.1

This SR verifies that the heat removal capability of the system is sufficient to remove the control room heat load assumed in the [safety analyses]. The SR consists of a combination of testing and calculation. The [18] month Frequency is appropriate since significant degradation of the [Control Room AC] System is not expected over this time period.

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REFERENCES

1. FSAR, Section [6.4].
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3.7 PLANT SYSTEMS

3.7.4 [Control Room Air Conditioning (AC)] System

LCO 3.7.4 Two [control room AC] subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,  
 During movement of [recently] irradiated fuel assemblies in the [primary or secondary containment],  
 During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One [control room AC] subsystem inoperable.	A.1 Restore [control room AC] subsystem to OPERABLE status.	30 days
<u>B.</u> Two [control room AC] subsystems inoperable.	<u>B.1</u> Verify control room area temperature < [90]°F.  <u>AND</u> <u>B.2</u> Restore one [control room AC] subsystem to OPERABLE status.	<u>Once per 4 hours</u>  <u>7 days</u>
<u>BC.</u> Required Action and associated Completion Time of Condition A <u>or B</u> not met in MODE 1, 2, or 3.	<u>BC.1</u> Be in MODE 3.  <u>AND</u> <u>BC.2</u> Be in MODE 4.	12 hours  36 hours
<u>CD.</u> Required Action and associated Completion Time of Condition A not met during movement of [recently] irradiated fuel assemblies in the [primary or secondary containment] or during	-----NOTE----- LCO 3.0.3 is not applicable. ----- <u>CD.1</u> Place OPERABLE [control room AC] subsystem in operation.	Immediately



CONDITION	REQUIRED ACTION	COMPLETION TIME
OPDRVs.	<u>OR</u>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p><del>CD</del>.2.1 Suspend movement of [recently] irradiated fuel assemblies in the [primary and secondary containment].</p> <p><u>AND</u></p> <p><del>CD</del>.2.2 Initiate action to suspend OPDRVs.</p>	<p>Immediately</p> <p>Immediately</p>
<del>D. Two [control room AC] subsystems inoperable in MODE 1, 2, or 3.</del>	<del>D.1 Enter LCO 3.0.3.</del>	<del>Immediately</del>
E. <del>Two [control room AC] subsystems inoperable</del> <u>Required Action and associated Completion Time of Condition B not met</u> during movement of [recently] irradiated fuel assemblies in the [primary or secondary containment] or during OPDRVs.	<p>-----NOTE-----          LCO 3.0.3 is not applicable.          -----</p> <p>E.1 Suspend movement of [recently] irradiated fuel assemblies in the [primary and secondary containment].</p> <p><u>AND</u></p> <p>E.2 Initiate action to suspend OPDRVs.</p>	<p>Immediately</p> <p>Immediately</p>

## BASES

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### ACTIONS (continued)

#### B.1 and B.2

If both [control room AC] subsystems are inoperable, the [Control Room AC] System may not be capable of performing its intended function. Therefore, the control room area temperature is required to be monitored to ensure that temperature is being maintained low enough that equipment in the control room is not adversely affected. With the control room temperature being maintained within the temperature limit, 7 days is allowed to restore a [Control Room AC] subsystem to OPERABLE status. This Completion time is reasonable considering that the control room temperature is being maintained within limits and the low probability of an event occurring requiring control room isolation.

#### BC.1 and BC.2

In MODE 1, 2, or 3, if the inoperable [control room AC] subsystem(s) cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE that minimizes risk. To achieve this status the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

#### CD.1, CD.2.1, and CD.2.2

The Required Actions of Condition ~~C~~D are modified by a Note indicating that LCO 3.0.3 does not apply.

If moving [recently] irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of [recently] irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

During movement of [recently] irradiated fuel assemblies in the [primary or secondary containment] or during OPDRVs, if Required Action A.1 cannot be completed within the required Completion Time, the OPERABLE [control room AC] subsystem may be placed immediately in operation. This action ensures that the remaining subsystem is OPERABLE, that no failures that would prevent actuation will occur, and that any active failure will be readily detected.

An alternative to Required Action ~~C~~D.1 is to immediately suspend activities that present a potential for releasing radioactivity that might

require isolation of the control room. This places the unit in a condition that minimizes risk.

If applicable, movement of [recently] irradiated fuel assemblies in the [primary and secondary containment] must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, actions must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until the OPDRVs are suspended.

BASES

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ACTIONS (continued)

D.1

~~If both [control room AC] subsystems are inoperable in MODE 1, 2, or 3, the [Control Room AC] System may not be capable of performing the intended function. Therefore, LCO 3.0.3 must be entered immediately.~~

E.1 and E.2

The Required Actions of Condition E.1 are modified by a Note indicating that LCO 3.0.3 does not apply. If moving [recently] irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of [recently] irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

During movement of [recently] irradiated fuel assemblies in the [primary or secondary containment] or during OPDRVs ~~with two [control room AC] subsystems inoperable~~ if Required Actions B.1 and B.2 cannot be met within the required Completion Times, action must be taken to immediately suspend activities that present a potential for releasing radioactivity that might require isolation of the control room. This places the unit in a condition that minimizes risk.

If applicable, handling of [recently] irradiated fuel in the [primary or secondary containment] must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, actions must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until the OPDRVs are suspended.

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SURVEILLANCE  
REQUIREMENTS

SR 3.7.4.1

This SR verifies that the heat removal capability of the system is sufficient to remove the control room heat load assumed in the [safety analyses]. The SR consists of a combination of testing and calculation. The [18] month Frequency is appropriate since significant degradation of the [Control Room AC] System is not expected over this time period.

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REFERENCES

1. FSAR, Section [6.4].
  2. FSAR, Section [9.4.1].
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