

## REVISED RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

### APR1400 Design Certification

Korea Electric Power Corporation / Korea Hydro & Nuclear Power Co., LTD

Docket No. 52-046

RAI No.: 154-8064  
SRP Section: 16 - Technical Specification  
Application Section: 16 - Technical Specification  
Date of RAI Issue: 08/17/2015

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### **Question No. 16-44**

Paragraph (a)(11) of 10 CFR 52.47 and paragraph (a)(30) of 10 CFR 52.79 state that a design certification (DC) applicant and a combined license (COL) applicant, respectively, are to propose TS prepared in accordance with 10 CFR 50.36 and 50.36a.

DCD Tier 2 Section 16.1.2.4 states "Single brackets ([ ]) are used to identify the preliminary design information or plant-specific information. Double brackets ([[ ]]) indicate the conceptual design information for those portions of the plant for which the application does not seek certification." SRP Section 16.0 explains that COL action items, also referred to as site-specific information, are indicated in the generic technical specifications (TS) and Bases, DCD Tier 2 Chapter 16, usually by use of square brackets. Section 182a of the Atomic Energy Act requires TS to be included with any operating license for a utilization facility issued by the NRC. Consequently, the plant-specific TS issued with a COL must be complete and useable for facility operation. Therefore, a COL applicant must resolve all COL action items in the generic TS and Bases in order to complete the plant-specific TS for issuance with the COL in accordance with 10 CFR 52.97. Since it is possible for "conceptual design information" to not be finalized until after COL issuance, generic TS and Bases cannot contain placeholders for such information. The applicant is requested to revise DCD Tier 2 Section 16.2.4 to omit discussion of the possible use of double bracketed conceptual design information, and delete any placeholders for such information from the generic TS and Bases, or replace it with placeholders for site-specific information in square brackets, which can be finalized by a COL applicant before COL issuance. (Staff observed that double brackets are only used in generic TS 3.7.9, Ultimate Heat Sink.)

In addition, the applicant is requested to provide a list of the Chapter 16 COL Action Items, providing a concise description of each. Staff suggests enumerating each action item using a prefix consisting of either (a) the numerical label designation of the affected generic TS section or subsection, that contains the bracketed TS information (e.g., COL Action Item 3.8.1-1, 3.3.1-3, 2.0-1, 1.1-2, 5.5.4-2); or (b) the alpha numerical designation of the affected generic TS Bases section or subsection (e.g., B 3.8.1-1, B 3.3.1-3, B 2.1.2-1, B 3.0-1, B

3.6.3-2, etc.), that contains the bracketed TS Bases information. To the prefix append a hyphen and a sequential number of the item in that section or subsection, as appropriate.

As necessary, provide guidance to clarify expectations for properly completing or resolving each COL action item needing such guidance. This guidance has been presented by previous design certification applications as bracketed reviewer's notes in the generic TS Bases or in a table listing the action items located in the introductory part of DCD Tier 2 Chapter 16.

### **Response**

KHNP will replace double brackets to single brackets used in generic TS 3.7.9, Ultimate Heat Sink as shown in attached markup. The definition of the double brackets will be removed from section 16.1.2.4 Combined License Information.

KHNP will provide a list of the COL Action Items with a concise description of each item in Section 16.1.2.4. as shown in the attached markup.

### **Feedback on response to Question 16-44**

Staff believes there are places in the generic TS and Bases that have bracketed information other than Subsections 3.7.11, 3.8.1, and 3.8.3 (the only ones listed in the attachment to the response). Also, Subsection 3.7.9 should also be listed in Table 16-1.

Staff asks that KHNP to do a bracket search of Chapter 16 to verify it has not missed any other occurrences of COL information. Also request that KHNP decide how it will enumerate its COL information; at the very least, the DCD Chapter 1 should list one COL Action Item for Chapter 16; e.g., 16-1. The title for Table 16-1 should say "List of COL Action Items"

### **Response – (Rev.1)**

KHNP verified all the bracketed information in DCD Tier 2 Section 16 based on Rev.1. List of COL Action Items of Table 16-1 in the DCD Rev.1 will be updated to add COL Action Items with a concise description of each item in other Subsections as shown in the attached markup. Table 1.8-2 in the DCD Chapter 1 will be also revised to add COL Action Items in the generic TS and Bases as indicated in the attached markup.

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### **Impact on DCD**

Same as changes described in Impact on Technical Specifications section.

### **Impact on PRA**

There is no impact on the PRA.

**Impact on Technical Specifications**

Technical Specification 16.1.2.4 and 3.7.9 Ultimate Heat Sink LCO and Bases sections will be revised as shown in attached markup.

DCD Table 16-1 of Chapter 16, Table 1.8-2 of Chapter 1, Subsection 16.1.1, TS 3.1.8, TS 3.5.4, TS 3.8.1, TS 5.1.2, TS 5.5.19, and TS 5.6.7 will be revised as shown in the attached markup.

**Impact on Technical/Topical/Environmental Report**

There is no impact on any Technical, Topical, or Environment Reports.

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Table 16-1 (1 of 2)

Replace with 'A' in the  
next pages

List of COL Action Item

TS Section	Description	Resolution
3.7.11	Control Room Habitability Area option for design features to protect occupant exposures to toxic gases	The specific toxic gas concentrations in the air intakes will vary depending on site. If the applicant determines that the maximum concentrations for the air intakes for a given toxic gases do not exceed the toxicity limits from Regulatory Guide 1.78 prior to 2 minutes, toxic gas detector is not required and the bracketed phrases are deleted.
3.8.1	SR 3.8.1.4, Day Tank Capacity	The specific value will vary depending on engine manufacturer's specific design recommendations.
	SR 3.8.1.8, Offsite Power Transfer Test	Plant operation MODES which allow the Surveillance depend on the plant operation and surveillance policy.
	SR 3.8.1.9, Emergency Diesel Generator (EDG) Single Largest Load Rejection Test	1) Plant operation MODES which allow the Surveillance depend on the plant operation and surveillance policy. 2) EDG operation power factor depends on plant specific EDG technical specification.
	SR 3.8.1.10, EDG Full-Load Rejection Test	1) Plant operation MODES which allow the Surveillance depend on the plant operation and surveillance policy. 2) EDG operation power factor depends on plant specific EDG technical specification.
	SR 3.8.1.12, EDG Engineered Safety Features (ESF) Actuation Test	Plant operation MODES which allow the Surveillance depend on the plant operation and surveillance policy.
	SR 3.8.1.13, EDG Bypassed Trip Signal Test	Plant operation MODES which allow the Surveillance depend on the plant operation and surveillance policy.
	SR 3.8.1.14, EDG Endurance and Load Test	1) Plant operation MODES which allow the Surveillance depend on the plant operation and surveillance policy. 2) EDG operation power factor depends on plant specific EDG technical specification.

**APR1400 DCD TIER 2**

Replace with 'A' in the  
next pages

Table 16-1 (2 of 2)

TS Section	Description	Resolution
3.7.11	Control Room Habitability Area option for design features to protect occupant exposures to toxic gases	The specific toxic gas concentrations in the air intakes will vary depending on site. If the applicant determines that the maximum concentrations for the air intakes for a given toxic gases do not exceed the toxicity limits from Regulatory Guide 1.78 prior to 2 minutes, toxic gas detector is not required and the bracketed phrases are deleted.
3.8.3	Actions E, Surveillance Requirement 3.8.3.4 Starting Air Receiver Pressure	The air pressure of the starting air receiver will vary depending on engine manufacturer's specific design recommendations.

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List of COL Action Items

Item No.	TS Section	Description	Resolution
COL 16-3.6(1)	3.6.7	Containment Penetrations – Shutdown Operations	The COL applicant is to provide the minimum number of bolt, completion time, and surveillance frequency for shutdown operations. The value will be determined based on plant specific Shutdown Evaluation Report to satisfy the 10 CFR 50.34 dose limits.
COL 16-3.7(1)	3.7.9	Ultimate Heat Sink	The COL applicant is to provide the completion time, and surveillance frequency for ultimate heat sink. Ultimate heat sink design value varies depending on site characteristics.
COL 16-3.7(2)	3.7.11	Control Room Habitability Area option for design features to protect occupant exposures to toxic gases	The COL applicant is to provide the details of specific toxic chemicals of mobile and stationary sources and evaluate the MCR habitability based on the recommendation in RG 1.78. The specific toxic gas concentrations in the air intakes will vary depending on site. If the applicant determines that the maximum concentrations in the MCR for a given toxic gases do not exceed the toxicity limits from RG 1.78, toxic gas detector is not required and the bracketed phrases are deleted.
COL 16-3.8(1)	3.8.1	SR 3.8.1.4, Day Tank Capacity	The COL applicant is to provide the specific value in accordance with EDG manufacture's specific design characteristics.
COL 16-3.8(2)	3.8.1	SR 3.8.1.8, Offsite Power Transfer Test SR 3.8.1.9, EDG Single Largest Load Rejection Test SR 3.8.1.10, EDG Full-Load Rejection Test SR 3.8.1.12, EDG ESF Actuation Test SR 3.8.1.13, EDG Bypassed Trip Signal Test	The COL applicant is to determine plant operation MODES which allow the Surveillance depend on the plant operation and surveillance policy. The MODES restrictions may be deleted if the COL applicant demonstrates that the plant safety is maintained or enhanced when the surveillance is performed in restricted MODES
COL 16-3.8(3)	3.8.1	SR 3.8.1.9, EDG Single Largest Load Rejection Test SR 3.8.1.10, EDG Full-Load Rejection Test SR 3.8.1.14, EDG Endurance and Load Test	The COL applicant is to determine EDG power factor as applicable to the tests. EDG operation power factor depends on plant specific EDG Class 1E loads and offsite power condition.
COL 16-3.8(4)	3.8.3	Actions E, SR 3.8.3.4 Starting Air Receiver Pressure	The COL applicant is to provide the specific value in accordance with EDG manufacturer's specific design recommendation.

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COL 16-3.9(1)	3.9.3	Containment Penetration	The COL applicant is to provide the minimum number of bolt for equipment hatch. The value will be determined based on plant specific Shutdown Evaluation Report to satisfy the 10 CFR 50.34 dose limits.
COL 16-4.1(1)	4.1	Site Location	Information on site location is to be provided by the COL applicant
COL 16-5.3(1)	5.3	Unit Staff Qualification	The requirement for unit staff qualification shall be determined by COL applicant based on latest NRC RG 1.8 and ANSI standard acceptable to NRC staff.
COL 16-5.4(1)	5.4	Procedure	The COL applicant will determine the modification of core protection calculator (CPC) addressable constants based on plant specific data.
COL 16-5.5(1)	5.5.3	Post-Accident Sampling	Information on licensee is to be provided by the COL applicant
COL 16-5.5(2)	5.5.3	Post-Accident Sampling	Information on plant is to be provided by the COL applicant
COL 16-5.5(3)	5.5.11	Ventilation Filter Testing Program	Information on plant specific allowable penetration equation is to be provided by the COL applicant
COL 16-5.5(4)	5.5.12	Explosive Gas and Storage Tank Radioactivity Monitoring Program	The methodology for gaseous radioactivity quantities and the liquid radwaste quantities is to be provided by the COL applicant
COL 16-5.5(5)	5.5.19	Setpoint Control Program	The FSAR reference on setpoint control document is to be specified by the COL applicant
COL 16-5.6(1)	5.6.1	Annual Radiological Environmental Operating Report	A single submittal of reporting on multiple unit stations is to be determined in COL stage.
	5.6.2	Radiological Effluent Release Report	
COL 16-5.6(2)	5.6.1	Annual Radiological Environmental Operating Report	The COL applicant will determine the format of the table. Either format of the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979, or use another format that is acceptable to NRC

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Table 1.8-2 (32 of 38)

Item No.	Description
COL 14.2(11)	The COL applicant is to provide a schedule for the development of plant procedures, as well as a description of how, and to what extent, the plant operating, emergency, and surveillance procedures are use-tested during the initial test program.
COL 14.2(12)	The COL applicant that references the APR1400 design certification is to identify the specific operator training to be conducted as part of the low-power testing program related to the resolution of TMI Action Plan Item I.G.1, as described in (1) NUREG-0660 – NRC Action Plans Developed as a Result of the TMI-2 Accident, Revision 1, August 1980 and (2) NUREG-0737 – Clarification of TMI Action Plan Requirements.
COL 14.2(13)	The COL applicant is to develop a sequence and schedule for the development of the plant operating and emergency procedures should allow sufficient time for trial use of these procedures during the Initial Test Program. The sequence and schedule for plant startup is to be developed by the COL applicant to allow sufficient time to systematically perform the required testing in each phase.
COL 14.2(14)	The COL applicant is to perform the appropriate interface testing of the gaseous PERMSS monitors with ERDS.
COL 14.2(15)	The COL applicant is to prepare the preoperational test of cooling tower and associated auxiliaries, and raw water and service water cooling systems.
COL 14.2(16)	The COL applicant is to develop the test program of personnel monitors, radiation survey instruments, and laboratory equipment used to analyze or measure radiation levels and radioactivity concentrations.
COL 14.2(17)	The COL applicant is to prepare the site-specific preoperational and startup test specification and test procedure and/or guideline for plant and offsite communication system.
COL 14.2(18)	The COL applicant is to prepare the pre-operational test of ultimate heat sink pump house.
COL 14.2(19)	The COL applicant is to prepare the testing and verification of ultimate heat sink cooling chains.
COL 14.3(1)	The COL applicant is to provide the ITAAC for the site-specific portion of the plant systems specified in Subsection 14.3.3.
COL 14.3(2)	The COL applicant is to provide a design ITAAC closure schedule for implementing the V&V design ITAAC as addressed in Subsection 14.3.2.9.
COL 14.3(3)	The COL applicant is to provide the proposed ITAAC for the facility's emergency planning not addressed in the DCD in accordance with RG 1.206.
COL 14.3(4)	The COL applicant is to provide the proposed ITAAC for the site specific facility's physical security hardware not addressed in the DCD in accordance with RG 1.206.
COL 15.0(1)	The COL applicant is to perform the radiological consequence analysis using site-specific $\chi/Q$ values, unless the $\chi/Q$ values used in the DCD envelop the site-specific short-term or long-term $\chi/Q$ values of the DCD, and to show that the resultant doses are within the guideline values of 10 CFR 50.34 for EAB and LPZ and that of 10 CFR Part 50, Appendix A, GDC 19 for the MCR and TSC.
COL 16.1(1)	The choice of units is a COL information to be resolved by COL applicant

→  
Insert "B" in the next  
pages after COL 16.1(1)



B

Item No.	Description
COL 16-3.6(1)	The COL applicant is to provide the minimum number of bolt, completion time, and surveillance frequency for shutdown operations. The value will be determined based on plant specific Shutdown Evaluation Report to satisfy the 10 CFR 50.34 dose limits.
COL 16-3.7(1)	The COL applicant is to provide the completion time, and surveillance frequency for ultimate heat sink. Ultimate heat sink design value varies depending on site characteristics.
COL 16-3.7(2)	The COL applicant is to provide the details of specific toxic chemicals of mobile and stationary sources and evaluate the MCR habitability based on the recommendation in RG 1.78. The specific toxic gas concentrations in the air intakes will vary depending on site. If the applicant determines that the maximum concentrations in the MCR for a given toxic gases do not exceed the toxicity limits from RG 1.78, toxic gas detector is not required and the bracketed phrases are deleted.
COL 16-3.8(1)	The COL applicant is to provide the specific value in accordance with EDG manufacture's specific design characteristics.
COL 16-3.8(2)	The COL applicant is to determine plant operation MODES which allow the Surveillance depend on the plant operation and surveillance policy. The MODES restrictions may be deleted if the COL applicant demonstrates that the plant safety is maintained or enhanced when the surveillance is performed in restricted MODES
COL 16-3.8(3)	The COL applicant is to determine EDG power factor as applicable to the tests. EDG operation power factor depends on plant specific EDG Class 1E loads and offsite power condition.
COL 16-3.8(4)	The COL applicant is to provide the specific value in accordance with EDG manufacturer's specific design recommendation.
COL 16-3.9(1)	The COL applicant is to provide the minimum number of bolt for equipment hatch. The value will be determined based on plant specific Shutdown Evaluation Report to satisfy the 10 CFR 50.34 dose limits.
COL 16-4.1(1)	Information on site location is to be provided by the COL applicant
COL 16-5.3(1)	The requirement for unit staff qualification shall be determined by COL applicant based on latest NRC RG 1.8 and ANSI standard acceptable to NRC staff.
COL 16-5.4(1)	The COL applicant will determine the modification of core protection calculator (CPC) addressable constants based on plant specific data.
COL 16-5.5(1)	Information on licensee is to be provided by the COL applicant
COL 16-5.5(2)	Information on plant is to be provided by the COL applicant
COL 16-5.5(3)	Information on plant specific allowable penetration equation is to be provided by the COL applicant
COL 16-5.5(4)	The methodology for gaseous radioactivity quantities and the liquid radwaste quantities is to be provided by the COL applicant
COL 16-5.5(5)	The FSAR reference on setpoint control document is to be specified by the COL applicant
COL 16-5.6(1)	A single submittal of reporting on multiple unit stations is to be determined in COL stage.
COL 16-5.6(2)	The COL applicant will determine the format of the table. Either format of the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979, or use another format that is acceptable to NRC

**APR1400 DCD TIER 2****CHAPTER 16 – TECHNICAL SPECIFICATIONS****16.1 Introduction to Technical Specifications****16.1.1 Technical Specification Content**

The content of the APR1400 Technical Specifications (TS) meets the requirements of 10 CFR 50.36. The APR1400 Technical Specifications were developed using the most appropriate guidance, NUREG-1432 Rev. 4.0 (Ref. 1).

The difference between NUREG-1432 and the APR1400 Technical Specification only exists as necessary to reflect advanced design features and operational features. The units specified in the APR1400 Technical Specifications are the International system of units (SI units) and the English units. The SI units have been used as the primary unit and the English units have been used in parentheses. The choice of units is a Combined License (COL) information item to be resolved by a COL applicant; however the TS and Bases do not enclose the parameter value pairs in square brackets. This is an exception to the use of brackets to denote COL information in the TS and Bases.

**16.1.1.1 Completion Times and Surveillance Frequencies**

(COL 16.1(1))

The Completion Times and Surveillance Frequencies specified in NUREG-1432 have generally applied to the associated Actions and Surveillance Requirements of the APR1400 Technical Specifications. For unique systems and features of the APR1400 design, similar Completion Times and Surveillance Frequencies have been adopted as appropriate.



**16.1.1.2 Plant Design Difference**

There are some design differences between the APR1400 Technical Specifications and current design in NUREG-1432. Major design differences include the four train emergency core cooling system design, the adoption of pilot operated safety relief valves (POS RVs), the change of ventilation systems, and auxiliary feedwater system configuration.

## 3.1 REACTIVITY CONTROL SYSTEMS

## 3.1.8 Charging Flow

LCO 3.1.8 Charging flow shall be maintained below 567.8 L/min (150 gpm) by closing charging flow restriction orifice bypass valves (CV-576, CV-577) and removing the power to the charging flow restriction orifice bypass valves.

APPLICABILITY: MODE 5 with reactor vessel level  $\leq$  36.3 m (119 ft 1 in)  hot leg level indication  $\leq$  100% 

## ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One of the required charging flow restriction orifice bypass valves not closed.</p> <p><u>OR</u></p> <p>One of the required charging flow restriction orifice bypass valves with power not removed.</p>	A.1 Close CV-575 manually	Immediately
<p>B. Both of required charging flow restriction orifice bypass valves not closed.</p> <p><u>OR</u></p> <p>Both of required charging flow restriction orifice bypass valves with power not removed.</p>	<p>-----NOTE----- Auxiliary charging pump operation is allowed. -----</p> <p>B.1 Turn off all charging pump.</p>	Immediately

## SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.4.1	Verify IRWST water temperature is $\geq 10^{\circ}\text{C}$ ( $50^{\circ}\text{F}$ ) and $\leq 49^{\circ}\text{C}$ ( $120^{\circ}\text{F}$ ).	24 hours
SR 3.5.4.2	Verify IRWST water volume is $\geq$ <del><math>2,373.5\text{ m}^3</math></del> ( <del><math>627,000\text{ gal}</math></del> ) and $\leq$ <del><math>2,540.6\text{ m}^3</math></del> ( <del><math>671,162\text{ gal}</math></del> ) (i.e., $\geq 74.43\%$ and $\leq 79.67\%$ ).	7 days
SR 3.5.4.3	Verify IRWST boron concentration is $\geq 4,000\text{ ppm}$ and $\leq 4,400\text{ ppm}$ .	7 days

 Brackets are deleted

## SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.10</p> <p>----- NOTES -----</p> <p>[1. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.]</p> <p>2. If performed with EDG synchronized with offsite power, it shall be performed at a power factor <math>\leq 0.9</math>. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable.</p> <p>[0.9]</p> <p>-----</p> <p>Verify each EDG does not trip, and voltage is maintained <math>\leq 4,576</math> V during and following a load rejection of <math>\geq 90\%</math> rating and <math>\leq 100\%</math> rating.</p>	<p>18 months</p>

## SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.12	<p>-----NOTES-----</p> <p>1. <del>[All EDG starts may be preceded by an engine prelube period.]</del> ←</p> <p>2. [This Surveillance shall not be performed in MODE 1 or 2. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.]</p>	18 months
	<p>Verify on an actual or simulated Engineered Safety Features (ESF) actuation signal each EDG auto-starts from standby condition and:</p> <p>a. In <math>\leq 17</math> seconds after auto-start and during tests, achieves voltage <math>\geq 3,744</math> V and frequency <math>\geq 58.8</math> Hz,</p> <p>b. Achieves steady state voltage <math>\geq 3,744</math> V and <math>\leq 4,576</math> V and frequency <math>\geq 58.8</math> Hz and <math>\leq 61.2</math> Hz,</p> <p>c. Operates for <math>\geq 5</math> minutes,</p> <p>d. Permanently connected loads remain energized from the offsite power system, and</p> <p>e. Emergency loads are energized or auto-connected through the automatic load sequencer from the offsite power system.</p>	

Brackets are deleted

SURVEILLANCE		FREQUENCY
SR 3.8.1.19	<p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. <del>[All EDG starts may be preceded by an engine prelube period.]</del> ← Brackets are dele</li> <li>2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> </ol> <p>-----</p> <p>Verify on an actual or simulated loss of offsite power signal in conjunction with an actual or simulated ESF actuation signal:</p> <ol style="list-style-type: none"> <li>a. De-energization of emergency buses,</li> <li>b. Load shedding from emergency buses,</li> <li>c. EDG auto-starts from standby condition and:               <ol style="list-style-type: none"> <li>1. energizes permanently connected loads in <math>\leq 19</math> seconds,</li> <li>2. energizes auto-connected emergency loads through load sequencer,</li> <li>3. achieves steady state voltage <math>\geq 3,744</math> V and <math>\leq 4,576</math> V,</li> <li>4. achieves steady state frequency <math>\geq 58.8</math> Hz and <math>\leq 61.2</math> Hz, and</li> <li>5. supplies permanently connected and auto-connected emergency loads for <math>\geq 5</math> minutes.</li> </ol> </li> </ol>	<p>18 months</p>

## 5.0 ADMINISTRATIVE CONTROLS

### 5.1 Responsibility

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#### REVIEWER'S NOTES

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1. Titles for members of the unit staff shall be specified by use of an overall statement referencing an ANSI Standard acceptable to the NRC staff from which the titles were obtained, or an alternative title may be designated for this position. Generally, the first method is preferable; however, the second method is adaptable to those unit staffs requiring special titles because of unique organizational structures.
  2. The ANSI Standard shall be the same ANSI Standard referenced in Section 5.3, Unit Staff Qualifications. If alternative titles are used, all requirements of these Technical Specifications apply to the position with the alternative title as apply with the specified title. Unit staff titles shall be specified in the Final Safety Analysis Report or Quality Assurance Plan. Unit staff titles shall be maintained and revised using those procedures approved for modifying/revising the Final Safety Analysis Report or Quality Assurance Plan.
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- 5.1.1 The plant manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence. The plant manager or his designee shall approve, prior to implementation, each proposed test, experiment, or modification to systems or equipment that affect nuclear safety.

- 5.1.2 The ~~{Shift Supervisor (SS)}~~ shall be responsible for the control room command function. During any absence of the ~~{SS}~~ from the control room while the unit is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the ~~{SS}~~ from the control room while the unit is in MODE 5 or 6, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.

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## 5.5 Programs and Manuals

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### 5.5.19 Setpoint Control Program

This program shall establish the requirements for ensuring that setpoints for automatic protective devices are initially within and remain within the assumptions of the applicable safety analyses, provides a means for processing changes to instrumentation setpoints, and identifies setpoint methodologies to ensure instrumentation will function as required. The program shall ensure that testing of automatic protective devices related to variables having significant safety functions as delineated by 10 CFR 50.36(c)(1)(ii)(A) verifies that instrumentation will function as required.

- a. The program shall list the Functions in the following specifications to which it applies:
1. LCO 3.3.1, "Reactor Protection System (RPS) Instrumentation – Operating";
  2. LCO 3.3.2, "Reactor Protection System (RPS) Instrumentation – Shutdown";
  3. LCO ~~3.3.3~~, "Control Element Assembly Calculators (CEACs)";
  4. LCO 3.3.5, "Engineered Safety Features Actuation System (ESFAS) Instrumentation";
  5. LCO 3.3.7, "Emergency Diesel Generator (EDG) – Loss of Voltage Start (LOVS)";
  6. LCO 3.3.8, "Containment Purge Isolation Actuation Signal (CPIAS)";
  7. LCO 3.3.9, "Control Room Emergency Ventilation Actuation Signal (CREVAS)";
  8. LCO 3.3.10, "Fuel Handling Area Emergency Ventilation Actuation Signal (FHEVAS)"; and
  9. LCO 3.3.13, "Logarithmic Power Monitoring Channels".

Brackets are deleted



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5.6 Reporting Requirements

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5.6.5 Accident Monitoring Report

When a report is required by Condition B or F LCO 3.3.11, "Accident Monitoring Instrumentation (AMI)," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

5.6.6 Tendon Surveillance Report

Any abnormal degradation of the containment structure detected during the tests required by the Pre-stressed Concrete Containment Tendon Surveillance Program shall be reported to the NRC within 30 days. The report shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and the corrective action taken.

5.6.7 Steam Generator Tube Inspection Report

A report shall be submitted within 180 days after the initial entry into MODE 4 following completion of an inspection performed in accordance with Specification 5.5.9, "Steam Generator (SG) Program." The report shall include:

- a. The scope of inspections performed on each SG,
- b. Active degradation mechanisms found,
- c. Nondestructive examination techniques utilized for each degradation mechanism,
- d. Location, orientation (if linear), and measured sizes (if available) of service induced degradation,
- e. Number of tubes plugged during the inspection outage for each degradation mechanism,
- f. The number and percentage of tubes plugged to date, and the effective plugging percentage in each steam generator,
- g. The results of condition monitoring, including the results of tube pulls and in-situ testing, and
- h. [ Repair method utilized and number of tubes repaired by each repair method. ]

Brackets are deleted