February 14, 2019
L-2019-005
10 CFR 50.90

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

Re: Turkey Point Nuclear Plant, Units 3 and 4
Docket Nos. 50-250 and 50-251

License Amendment Request 266, Clarify Requirements When One Unit is Outside the Applicability of Certain Technical Specifications

In accordance with the provisions of 10 CFR 50.90, Florida Power & Light Company (FPL) is submitting License Amendment Request 266 for an amendment to the technical specifications (TS) for Turkey Point Units 3 and 4. Certain systems and components that are controlled by the TS are shared between the two units, and some TS requirements change when only one unit is operating and the other unit is shutdown in mode 4, 5, or 6. The proposed change clarifies that shutdown also includes the defueled condition. In addition, the change removes from a TS action an inappropriate footnote that allows an exception from TS 4.0.4, which requires that surveillance requirements must be met prior to entering the applicability of a TS.

The enclosure to this letter provides FPL's evaluation of the proposed change. Attachment 1 to the enclosure provides a markup of the TS showing the proposed changes. Attachment 2 provides a markup showing a proposed change to the TS Bases. The proposed Bases change is provided for information only and will be implemented in accordance with the TS Bases Control Program upon implementation of the amendment. The retyped TS pages containing the proposed change will be provided when requested by the NRC Project Manager.

As discussed in the evaluation, the proposed change does not involve a significant hazards consideration pursuant to 10 CFR 50.92, and there are no significant environmental impacts associated with the change.

The Turkey Point Onsite Review Group has reviewed the proposed license amendment. In accordance with 10 CFR 50.91(b)(1), a copy of this letter is being forwarded to the designee of the State of Florida.

There are no new or revised commitments in this submittal.

FPL requests approval of the proposed amendment following a one-year review with implementation of the amendment within 90 days following approval.

Should you have any questions regarding this submittal, please contact Mr. Robert Hess, Licensing Manager, at (305) 246-4112.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 14, 2019

Sincerely,

Robert Coffey
Regional Vice President - Southern Region
Florida Power & Light Company

Enclosure

cc: USNRC Regional Administrator, Region II
USNRC Project Manager, Turkey Point Nuclear Plant
USNRC Senior Resident Inspector, Turkey Point Nuclear Plant
Ms. Cindy Becker, Florida Department of Health

Enclosure

Evaluation of the Proposed Change

Subject: License Amendment Request 266, Clarify Requirements When One Unit is Outside the Applicability of Certain Technical Specifications

1.0 SUMMARY DESCRIPTION

Florida Power & Light Company (FPL) is submitting License Amendment Request 266 for an amendment to the technical specifications (TS) for Turkey Point Units 3 and 4. Certain systems and components that are controlled by the TS are shared between the two units, and some TS requirements change when only one unit is operating and the other unit is shutdown in mode 4, 5, or 6. The proposed change clarifies that shutdown also includes the defueled condition. In addition, the change removes from a TS action an inappropriate footnote that allows an exception from TS 4.0.4, which requires that surveillance requirements must be met prior to entering the applicability of a TS.

2.0 DETAILED DESCRIPTION

2.1 System Design and Operations

The proposed change involves TS associated with the systems and components described below.

Safety Injection System

The purpose of the safety injection (SI) system, which includes four high head SI pumps, is to automatically deliver cooling water to the reactor core in the event of a loss-of-coolant accident. With one SI pump associated with the shutdown non-accident unit inoperable and the failure of an emergency diesel generator associated with the accident unit, the emergency core cooling equipment available is two of four SI pumps, one of two residual heat removal pumps, and two of three accumulators. This combination of equipment meets the emergency core cooling design objectives for all break sizes.

Condensate Storage Tanks

Two 250,000-gallon condensate storage tanks serve as the normal supply to the auxiliary feedwater pumps. The required volume is sufficient for each unit to achieve hot standby following a loss of offsite power and then either maintain hot standby for four hours followed by a cooldown to 350 degrees in nine hours or maintain hot standby for 18 hours.

AC Power System

Each unit has three safety related 4.16 kV buses. Two of the buses provide power to the A and B trains of engineered safety features in each unit, and the third safety related 4.16 kV bus is utilized as a swing bus. It can be manually aligned to either the train A or train B 4.16 kV bus of its respective unit.

Each unit has five safety related 480V load center buses, four of which are arranged in double-ended load center configuration. Each of the four double-ended load center buses is fed from its associated unit by a separate load center transformer. The two transformers of each double-ended unit are energized from different 4.16 kV buses, which ensures the availability of equipment associated with a particular function in the event of loss of one 4.16 kV bus.

The fifth safety related 480V load center in each unit is a swing load center. When the 480V swing load center is connected to either 480V supply bus, it is an extension of that 480V supply bus. While the swing load center can be manually aligned to either train A or B, the swing load center bus will automatically transfer in the event of a loss of power on the supply load center to which it was aligned.

DC Power System

Emergency power for vital instrumentation and controls is supplied by a station DC power system, which contains five safety related 125 volt batteries and four DC distribution panels. Two battery banks are associated with each unit, and a spare battery bank can be substituted to allow for testing or maintenance on any of the other four battery banks.

One of the two safety related battery chargers associated with each battery is powered by a vital motor control center (MCC) in the same train and unit of its associated battery. The second safety related battery charger for each battery is powered by the vital swing MCC of the opposite unit.

2.2 Current Technical Specifications Requirements

1. The limiting condition for operation (LCO) in TS 3.5.2, "ECCS Subsystems-Tavg Greater than or Equal to 350°F," item a, is modified by the following footnote:

   *Only three Safety Injection (SI) pumps (two associated with the unit and one from the opposite unit), each capable of being powered from its associated OPERABLE diesel generator#, with discharge flow paths aligned to the RCS cold leg are required if the opposite unit is in MODE 4, 5, or 6.

2. TS action 3.5.2.c for an inoperable SI pump or inoperable discharge flow path is modified with the footnote: "***The provisions of Specification 4.0.4 are not applicable."

3. TS 3.5.2 Action e addresses the condition: "With one of the three required Safety Injection pumps or its associated discharge flow path inoperable and the opposite unit in MODE 4, 5, or 6…."

4. Certain requirements associated with the LCO and Actions in TS 3.7.1.3, "Condensate Storage Tank," apply with the "Opposite Unit in MODES 4, 5, or 6."

5. The two hour completion time in TS 3.8.2.1, "D.C. Sources - Operating," Action b, is modified with the following footnote:

   *Can be extended to 24 hours if the opposite unit is in MODE 5 or 6 and each of the remaining required battery chargers is capable of being powered from its associated diesel generator(s).

6. The LCO requirement in TS 3.8.3.1, "Onsite Power Distribution - Operating," regarding tie breakers between redundant buses is modified by the footnote:

   ** With the opposite unit in MODE 5 or 6, its 480-Volt Load Center can be cross-tied under conditions specified in Specification 3.8.3.2.a.

7. The two-hour completion time in TS 3.8.3.1, "Onsite Power Distribution - Operating," Action d, is modified with the following footnote:

   * Can be extended to 24 hours if the opposite unit is in MODE 5 or 6 and each of the remaining required battery chargers is capable of being powered from its associated diesel generator(s).

2.3 Reason for the Proposed Change

Certain requirements in the TS are changed when one of the two units is outside the Applicability of the TS. For example, with both units operating, TS 3.5.2, which is applicable in modes 1, 2, and 3, requires four operable SI pumps. However, when one unit is outside the applicability of the TS, the LCO requires only three operable SI pumps for the operating unit. The footnote that provides this relaxation applies when the shutdown unit is in Mode 4, 5, or 6. However, the shutdown unit could also be in a defueled condition, where the plant is not in a TS-defined mode. Therefore, to include all plant conditions outside the Applicability of the TS, the proposed change adds the defueled condition to the provisions that change the TS requirements when one unit is outside the Applicability of the TS.

The proposed change also deletes from TS 3.5.2, Action c, an exception to TS 4.0.4, which requires that surveillance requirements must be met prior to entering the Applicability of a TS. TS 4.0.4 applies to surveillance requirements not actions, so modifying a TS Action with an exception to TS 4.0.4 is meaningless.

2.4 Description of the Proposed Change

1. The footnote associated with limiting condition for operation (LCO) in TS 3.5.2, "ECCS Subsystems- Tavg Greater than or Equal to 350°F," item a, is modified to add the defueled condition.

   *Only three Safety Injection (SI) pumps (two associated with the unit and one from the opposite unit), each capable of being powered from its associated OPERABLE diesel generator#, with discharge flow paths aligned to the RCS cold leg are required if the opposite unit is in MODE 4, 5, ~~or~~ 6, ***or defueled.***

2. The footnote associated with TS action 3.5.2.c for an inoperable SI pump or inoperable discharge flow path is deleted.

   ~~***The provisions of Specification 4.0.4 are not applicable.~~

3. TS 3.5.2 Action e is modified to add the defueled condition.

   With one of the three required Safety Injection pumps or its associated discharge flow path inoperable and the opposite unit in MODE 4, 5, ~~or~~ 6***, or defueled*** ….

4. The LCO and Action in TS 3.7.1.3, "Condensate Storage Tank," are modified to add the defueled condition.

   Opposite Unit in MODES 4, 5, ~~or~~ 6***, or defueled***

5. The footnote associated with the two-hour completion time in TS 3.8.2.1, "D.C. Sources - Operating," Action b, is modified to add the defueled condition:

   *Can be extended to 24 hours if the opposite unit is in MODE 5***,** ~~or~~ 6***, or defueled*** and each of the remaining required battery chargers is capable of being powered from its associated diesel generator(s).

6. The footnote associated with the LCO in TS 3.8.3.1, "Onsite Power Distribution - Operating," regarding tie breakers between redundant buses is modified to add the defueled condition:

   ** With the opposite unit in MODE 5***,*** ~~or~~ 6, ***or defueled,*** its 480-Volt Load Center can be cross-tied under conditions specified in Specification 3.8.3.2.a.

7. The footnote associated with the two-hour completion time in TS 3.8.3.1, "Onsite Power Distribution - Operating," Action d, is modified to add the defueled condition:

   * Can be extended to 24 hours if the opposite unit is in MODE 5, ~~or~~, 6, ***or defueled*** and each of the remaining required battery chargers is capable of being powered from its associated diesel generator(s).

3.0 TECHNICAL EVALUATION

3.1 Addition of Defueled Condition

Certain systems and components, such as SI pumps and 125 volt DC batteries and battery chargers, are shared by Turkey Point units 3 and 4. The TS below establish requirements for shared systems and components.

- TS 3.5.2, "ECCS Subsystems- Tavg Greater than or Equal to 350°F," for shared SI pumps
- TS 3.7.1.3, "Condensate Storage Tank"
- TS 3.8.2.1, "D.C. Sources - Operating," for shared batteries and battery chargers
- TS 3.8.3.1, "Onsite Power Distribution - Operating," for shared electrical buses

Each of the above TS establishes the operability requirements for the shared equipment when both units are operating in the Applicability of the TS. These TS also contain provisions that change certain requirements when one unit is outside the applicability of the TS. For example, with both units operating in Mode 1, TS 3.5.2 requires four operable safety injection pumps. However, with one unit in Mode 4, 5, or 6 (outside the Applicability of TS 3.5.2), the operating unit is required to have only three operable safety injection pumps. Similarly, TS 3.7.1.3 requires a condensate storage tank volume of 420,000 gallons of water with both units operating in Modes 1, 2, or 3; however, with one unit in mode 4, 5, or 6, the required volume is reduced to 210,000 gallons.

The changes in the TS requirements are based on one unit being in a Mode outside the applicability of the TS when the shared equipment only needs to support the operating unit. The provisions in the current TS, however, do not recognize that the non-operating unit could also be in defueled condition, which is outside the applicability of the TS but is not a TS-defined Mode. Consequently, a literal application of the current TS would prevent implementing the changes to the TS requirements when the non-operating unit is in the defueled condition.

The proposed change clarifies that the plant conditions outside the applicability of a TS include not only lower Modes but also the defueled condition where the plant is no longer in a TS-defined Mode. This proposed change is administrative in nature and does not alter the technical requirements of the affected TS.

3.2 Elimination of Exception to TS 4.0.4

TS 3.5.2, Action c, addresses the condition of one inoperable SI pump when both units are in the Applicability of the TS. The Action has an associated footnote that states, "The provisions of Specification 4.0.4 are not applicable." The proposed change deletes this footnote.

TS 4.0.4 establishes the requirement that entry into a Mode or other specified condition in the Applicability of an LCO shall only be made when the LCO's surveillances have been met within their specified frequency, except as provided by Specification 4.0.3. However, in some cases, a surveillance requirement cannot be met or performed prior to entering the Mode or other specified condition in the Applicability of an LCO. In these situations, the TS provide an exception to TS 4.0.4 for the affected surveillance requirement.

The current TS contain a footnote that applies the exception from TS 4.0.4 to an Action. Because TS 4.0.4 does not apply to Actions, the proposed change deletes this inappropriate footnote. This change does not alter the technical requirements of the TS; rather, it is an administrative change that removes an irrelevant footnote from Action c in TS 3.5.2.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

10 CFR 50.36, Technical specifications, requires that the TS include limiting conditions for operation, which are the lowest functional capability or performance levels of equipment required for safe operation of the facility. The TS must also include surveillance requirements to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

The proposed change to the TS is consistent with the requirements of 10 CFR 50.36.

4.2 Significant Hazards Consideration Analysis

Florida Power & Light Company (FPL) is submitting License Amendment Request 266 for an amendment to the technical specifications (TS) for Turkey Point Units 3 and 4. Certain systems and components that are controlled by the TS are shared between the two units, and some TS requirements change when only one unit is

operating and the other unit is shutdown in mode 4, 5, or 6. The proposed change clarifies that shutdown also includes the defueled condition. In addition, the change removes from a TS action an inappropriate footnote that allows an exception from TS 4.0.4, which requires that surveillance requirements must be met prior to entering the applicability of a TS.

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

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

   Response: No

   The technical specification (TS) requirements associated with the proposed change to the TS are not initiators of any accidents previously evaluated, so the probability of accidents previously evaluated is unaffected by the proposed change. The proposed change does not alter the design, function, or operation of any plant structure, system, or component (SSC). The capability of any operable TS-required SSC to perform its specified safety function is not impacted by the proposed change. As a result, the outcomes of accidents previously evaluated are unaffected. Therefore, the proposed change does not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

   Response: No.

   The proposed change does not challenge the integrity or performance of any safety-related systems. No plant equipment is installed or removed, and the change does not alter the design, physical configuration, or method of operation of any plant SSC. No physical changes are made to the plant, so no new causal mechanisms are introduced. Therefore, the proposed change to the TS does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

   Response: No.

The ability of any operable SSC to perform its designated safety function is unaffected by the proposed change. The proposed change does not alter any safety analyses assumptions, safety limits, limiting safety system settings, or method of operating the plant. The change does not adversely affect plant operating margins or the reliability of equipment credited in the safety analyses. Therefore, the proposed change does not involve a significant reduction in the margin of safety.

Based on the above, FPL concludes that the proposed amendment 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.

4.3 Conclusion

In conclusion, based on the considerations 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 issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the general public.

5.0 ENVIRONMENTAL EVALUATION

FPL has evaluated the proposed amendment for environmental considerations. The review has determined that the proposed amendment 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 amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set for in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the proposed amendment.

ATTACHMENT 1

Markup of the Technical Specifications

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS SUBSYSTEMS - T_{avg} GREATER THAN OR EQUAL TO 350°F

LIMITING CONDITION FOR OPERATION

3.5.2 The following Emergency Core Cooling System (ECCS) equipment and flow paths shall be OPERABLE:

a. Four Safety Injection (SI) pumps, each capable of being powered from its associated OPERABLE diesel generator#, with discharge flow paths aligned to the RCS cold legs,*

b. Two RHR heat exchangers,

c. Two RHR pumps with discharge flow paths aligned to the RCS cold legs,

d. A flow path capable of taking suction from the refueling water storage tank as defined in Specification 3.5.4, and

e. Two flow paths capable of taking suction from the containment sump.

APPLICABILITY: MODES 1, 2, and 3**

ACTION:

a. With one of the following components inoperable:

1. RHR heat exchanger,
2. RHR suction flow path from the containment sump,
3. RHR parallel injection flow path, or
4. SI parallel injection flow path

Restore the inoperable component to OPERABLE status within 72 hours, or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. Deleted

c. With one of the four required Safety Injection pumps or its associated discharge flow path inoperable and the opposite unit in MODE 1, 2, or 3, restore the pump or flow path to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 12 hours and in HOT SHUTDOWN within the following 6 hours.***

6, or defueled

*Only three Safety Injection (SI) pumps (two associated with the unit and one from the opposite unit), each capable of being powered from its associated OPERABLE diesel generator#, with discharge flow paths aligned to the RCS cold leg are required if the opposite unit is in MODE 4, 5, ~~or 6~~.

**The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 for the Safety Injection flow paths isolated pursuant to Specification 3.4.9.3 provided that the Safety Injection flow paths are restored to OPERABLE status prior to Tavg exceeding 380°F. Safety Injection flow paths may be isolated when Tavg is less than 380°F.

~~***The provisions of Specification 4.0.4 are not applicable.~~

#Inoperability of the required diesel generators does not constitute inoperability of the associated Safety Injection pumps.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS SUBSYSTEMS - T_{avg} GREATER THAN OR EQUAL TO 350°F

LIMITING CONDITION FOR OPERATION

d. With two of the four required Safety Injection pumps or their associated discharge flow paths inoperable and the opposite unit in MODE 1, 2, or 3, restore one of the two inoperable pumps or flow paths to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 12 hours and in HOT SHUTDOWN within the following 6 hours. This ACTION applies to both units simultaneously.

e. With one of the three required Safety Injection pumps or its associated discharge flow path inoperable and the opposite unit in MODE 4, 5, ~~or 6~~, 6, or defueled restore the pump or flow path to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

f. With a required Safety Injection pump OPERABLE, but not capable of being powered from its associated diesel generator, restore the capability within 14 days or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

g. With an ECCS subsystem inoperable due to an RHR pump or its associated discharge flow path being inoperable, restore the inoperable RHR pump or its associated discharge flow path to OPERABLE status within 7 days or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

h. With the suction flow path from the refueling water storage tank inoperable, restore the suction flow path to OPERABLE status within 1 hour or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

PLANT SYSTEMS

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tanks (CST) system shall be OPERABLE with:

Opposite Unit in MODES 4, ~~5 or 6~~

A minimum indicated water volume of 210,000 gallons in either or both condensate storage tanks.

Opposite Unit in MODES 1, 2 or 3

5, 6, or defueled

A minimum indicated water volume of 420,000 gallons.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

Opposite Unit in MODES 4, ~~5 or 6~~

With the CST system inoperable, within 4 hours restore the CST system to OPERABLE status or be in at least HOT STANDBY in the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

Opposite Unit in MODES 1, 2 or 3

1) With the CST system inoperable due to indicating less than 420,000 gallons, but greater than or equal to 210,000 gallons indicated, within 4 hours restore the inoperable CST system to OPERABLE status or place one unit in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

2) With the CST system inoperable with less than 210,000 gallons indicated, within 1 hour restore the CST system to OPERABLE status or be in at least HOT STANDBY within the next 12 hours and in HOT SHUTDOWN within the following 6 hours. This ACTION applies to both units simultaneously.

D.C. SOURCES

LIMITING CONDITION FOR OPERATION

ACTION: (Continued)

b. With one of the required battery banks inoperable, or with none of the full-capacity chargers associated with a battery bank OPERABLE, restore all battery banks to OPERABLE status and at least one charger associated with each battery bank to OPERABLE status within two hours* or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 12 hours and in COLD SHUTDOWN within the following 30 hours. This ACTION applies to both units simultaneously.

SURVEILLANCE REQUIREMENTS

4.8.2.1 Each 125-volt battery bank and its associated full capacity charger(s) shall be demonstrated OPERABLE:

a. In accordance with the Surveillance Frequency Control Program by verifying that:

1) The parameters in Table 4.8-2 meet the Category A limits, and

2) The total battery terminal voltage is greater than or equal to 129 volts on float charge and the battery charger(s) output voltage is ≥ 129 volts, and

3) If two battery chargers are connected to the battery bank, verify each battery charger is supplying a minimum of 10 amperes, or demonstrate that the battery charger supplying less than 10 amperes will accept and supply the D.C. bus load independent of its associated battery charger.

b. In accordance with the Surveillance Frequency Control Program and within 7 days after a battery discharge with battery terminal voltage below 105 volts (108.6 volts for spare battery D-52), or battery overcharge with battery terminal voltage above 143 volts, by verifying that:

1) The parameters in Table 4.8-2 meet the Category B limits,

2) The average electrolyte temperature of every sixth cell is above 60°F, and

3) There is no visible corrosion at either terminals or connectors, or verify battery connection resistance is:

Battery 3B, 4A	Connection inter-cell / termination inter-cell (brace locations) transition cables or total battery connections	Limit (Micro-Ohms) ≤ 29 ≤ 30 ≤ 125 ≤ 1958
Battery 3A, 4B, D-52	Connection inter-cell / termination inter-cell (brace locations) transition cables or total battery connections	Limit (Micro-Ohms) ≤ 35 ≤ 40 ≤ 125 ≤ 2463

c. In accordance with the Surveillance Frequency Control Program by verifying that:

1) The cells, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration,

5, 6, or defueled

*Can be extended to 24 hours if the opposite unit is in MODE ~~5 or 6~~ and each of the remaining required battery chargers is capable of being powered from its associated diesel generator(s).

3/4.8.3 ONSITE POWER DISTRIBUTION

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.3.1 The following electrical busses* shall be energized in the specified manner with the tie breakers open between redundant busses within the unit** and between the busses of Units 3 and 4.

a. One train of A.C. Busses consisting of:

1) 4160-Volt Bus A,
2) 480-Volt Load Center Busses A, C and H***, and
3) 480-Volt Motor Control Center Busses A (Unit 4 only),C and D***,

b. One train of A.C. Busses consisting of:

1) 4160-Volt Bus B
2) 480-Volt Load Center Busses B, D and H***, and
3) 480-Volt Motor Control Center Busses B and D***

c. One opposite unit train of AC busses consisting of either:

1) 4160-Volt Bus A, 480-Volt Load Center Busses A, C and H***, and 480-Volt Motor Control Center Busses A (Unit 4 only), C and D***, or
2) 4160-Volt Bus B, 480-Volt Load Center Busses B, D and H***, and 480-Volt Motor Control Center Busses B and D***.

d. 120 Volt AC Vital Panel 3P06 and 3P21 energized from its associated inverter connected to D.C. Bus 3B.****

e. 120 Volt AC Vital Panel 4P06 and 4P21 energized from its associated inverter connected to D.C. Bus 3B.****

f. 120 Volt AC Vital Panel 3P07 and 3P22 energized from its associated inverter connected to D.C. Bus 3A.****

g. 120 Volt AC Vital Panel 4P07 and 4P22 energized from its associated inverter connected to D.C. Bus 3A.****

h. 120 Volt AC Vital Panel 3P08 and 3P23 energized from its associated inverter connected to D.C. Bus 4B.****

i. 120 Volt AC Vital Panel 4P08 and 4P23 energized from its associated inverter connected to D.C. Bus 4B.****

5, 6, or defueled

* For Motor Control Center busses, vital sections only.

** With the opposite unit in MODE ~~5 or 6~~, its 480-Volt Load Center can be cross-tied under conditions specified in Specification 3.8.3.2.a.

*** Electrical bus can be energized from either train of its unit and swing function to opposite train must be OPERABLE for the Unit(s) in MODES 1, 2, 3, and 4.

****A back-up inverter may be used to replace the normal inverter provided the normal inverter on the same DC bus for the opposite unit is not replaced at the same time.

ONSITE POWER DISTRIBUTION

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

within 24 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 12 hours and in COLD SHUTDOWN within the following 30 hours. This ACTION applies to both units simultaneously.

d. With one D.C. bus not energized from its associated battery bank or associated charger, reenergize the D.C. bus from its associated battery bank within 2 hours* or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 12 hours and in COLD SHUTDOWN within the following 30 hours. This ACTION applies to both units simultaneously.

SURVEILLANCE REQUIREMENTS

4.8.3.1 The specified busses shall be determined energized and aligned in the required manner by verifying correct breaker alignment and indicated voltage on the buses in accordance with the Surveillance Frequency Control Program.

5, 6, or defueled

* Can be extended to 24 hours if the opposite unit is in MODE ~~5 or 6~~ and each of the remaining required battery chargers is capable of being powered from its associated diesel generator(s).

ATTACHMENT 2

Change to the Technical Specification Bases

ATTACHMENT 2
Technical Specification Bases
(Page 184 of 201)

3/4.8.1, 3/4.8.2 & 3/4.8.3 (Continued)

The minimum number of battery chargers required to be OPERABLE is based on the following criteria:

1) A minimum of one battery charger per bus with each powered from a separate 480 volt MCC is required to satisfy the single failure criteria when assuming the failure of a MCC. This restriction prohibits the use of two chargers powered from the same bus for meeting the minimum requirements.

2) To satisfy the single failure criteria, when assuming a Loss-Of-Offsite Power with the loss of an EDG, an additional restriction is stipulated which requires each battery charger to have its associated diesel generators OPERABLE. This requires both EDGs associated with a swing bus battery charger to be OPERABLE.

Provisions for requiring the OPERABILITY of the EDG associated with the battery charger is explicitly specified in the LCO. This is because conditions exist where the affected unit would **NOT** enter the applicable ACTION statement in the LCO without this provision. For example, with Unit 3 in MODE 1 and Unit 4 in MODE 5, the operability of both EDG 4A and 4B is **NOT** required. One could postulate conditions where battery chargers 4A1, 3A2, 3B2, or 4B1 could be used to satisfy the LCO without having an associated OPERABLE EDG, unless specific provisions were made to preclude these conditions.

5, 6, or defueled

An out-of-service limit of 72 hours is applied when the required EDG is **NOT** OPERABLE. With less than the required battery chargers OPERABLE, an allowable out-of-service time of 2 hours is applied, which can be extended to 24 hours if the opposite unit is in MODES ~~5 or 6~~ and each of the remaining required battery chargers is capable of being powered from its associated diesel generators.

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage on float charge, connection resistance values, and the performance of battery service and discharge tests ensure the effectiveness of the charging system, the ability to handle high discharge rates, and verifies the battery capability to supply its required load.