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10 CFR 50.90

October 30, 2012

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

Subject: Duke Energy Carolinas, LLC  
Oconee Nuclear Station (ONS), Units 1, 2, and 3  
Docket Numbers 50-269, 50-270, and 50-287  
License Amendment Request to Clarify the Application of the 45-day Completion  
Time of Technical Specification 3.8.1 Required Action C.2.2.5  
License Amendment Request (LAR) No. 2012-14

In accordance with 10 CFR 50.90, Duke Energy Carolinas, LLC (Duke Energy) proposes to amend Renewed Facility Operating License Nos. DPR-38, DPR-47, and DPR-55 for ONS Units 1, 2, and 3. This LAR proposes to clarify that the 45-day Completion Time (CT) to Technical Specification (TS) 3.8.1 Required Action (RA) C.2.2.5 is cumulative over a 3-year time period for each KHU. The 45-day CT is used for major Keowee Hydroelectric Unit (KHU) maintenance.

Currently, TS 3.8.1 RA C.2.2.5 requires the KHU and its required overhead emergency power path to be restored to operable status within 45 days of discovery of an initial inoperability when Condition C is entered due to an inoperable KHU if not used for that KHU in the previous 3 years. Duke Energy interprets the 45-day Completion Time as cumulative and available for maintenance activities requiring single or multiple entries as long as the cumulative time does not exceed 45 days over any 3-year time period. This interpretation was confirmed during a conference call with Nuclear Regulatory Commission (NRC) Staff (members of Nuclear Reactor Regulation (NRR) and Region 2) on September 25, 2006. During that call, NRC concluded that this Duke Energy interpretation was consistent with earlier NRC communications (November 20, 1985, conference call as documented in Duke Energy letter to NRC dated November 22, 1985) and demonstrated acceptable operation of Oconee in accordance with ONS TS. During the September 25, 2006 call, the participants noted that an improvement opportunity exists for Duke Energy to clarify the meaning of the ONS TS 3.8.1 RA C.2.2.5 45-day Completion Time. Duke Energy communicated to NRC that a corrective action would be initiated to submit an LAR to clarify and enhance the wording in the TS and associated Bases.

During a recent August 21, 2012, telephone conversation between Duke Energy and NRC Staff (members of NRR and an ONS NRC resident inspector), NRC questioned the past interpretation that the 45 days can be applied on a cumulative basis. This telephone call was prompted by an ONS NRC resident inspector after becoming aware of Duke Energy plans to use some of the remaining portion of the 45-day Completion Time to complete the Protected Service Water (PSW) tie-in to KHU emergency power. After significant discussion of the issue,

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the NRC concluded that the TS wording was not definitive and recommended Duke Energy submit a TS change to clarify the requirement.

An evaluation of the proposed change is provided in the Enclosure. A No Significant Hazards Consideration Evaluation and the Environmental Impact Analysis are also included in the Enclosure. The marked up and revised TS pages are provided in Attachments 1 and 2, respectively. The marked up and revised TS Bases pages are provided in Attachments 3 and 4, respectively.

In accordance with Duke Energy administrative procedures and the Quality Assurance Program Topical Report, the proposed TS change has been reviewed and approved by the Plant Operations Review Committee. Additionally, a copy of this LAR is being sent to the State of South Carolina in accordance with 10 CFR 50.91 requirements.

Duke Energy requests approval of the proposed LAR by April 30, 2013, to support work associated with the PSW tie-in to the KHU emergency power. Implementation of these changes will not result in an undue risk to the health and safety of the public. The Oconee Updated Final Safety Analysis Report has been reviewed and no changes are necessary to support this LAR. There are no new commitments being made as a result of this proposed change.

If there are any additional questions, please contact Boyd Shingleton, ONS Regulatory Affairs, at (864) 873-4716.

I declare under penalty of perjury that the foregoing is true and correct. Executed on October 30, 2012.

Sincerely,

 T. PRESTON GILLESPIE

T. Preston Gillespie, Jr., Vice President  
Oconee Nuclear Station

Enclosure:  
Evaluation of Proposed Change

Attachments

1. Attachment 1 – Marked up TS Pages
2. Attachment 2 – Revised TS Pages
3. Attachment 3 – Marked up TS Base Pages
4. Attachment 4 – Revised TS Bases Pages

Nuclear Regulatory Commission  
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**ENCLOSURE**  
**EVALUATION OF PROPOSED CHANGE**

License Enclosure - Evaluation of Proposed Change  
Amendment Request No. 2012-14  
October 30, 2012

Subject: License Amendment Request to Clarify The Application of the 45-Day Completion  
Time of Technical Specification 3.8.1 Required Action C.2.2.5

1. SUMMARY DESCRIPTION
2. DETAILED DESCRIPTION
3. TECHNICAL EVALUATION
4. RISK INSIGHTS
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6. ENVIRONMENTAL CONSIDERATION
7. REFERENCES

## 1.0 SUMMARY DESCRIPTION

This LAR proposes to clarify that the 45-day Completion Time (CT) to Technical Specification (TS) 3.8.1 Required Action (RA) C.2.2.5 is cumulative over a 3-year time period for each KHU. The 45-day CT is used for major Keowee Hydroelectric Unit (KHU) maintenance.

Currently, TS 3.8.1 RA C.2.2.5 requires the KHU and its required overhead emergency power path to be restored to operable status within 45 days of discovery of an initial inoperability when Condition C is entered due to an inoperable KHU if not used for that KHU in the previous 3 years. Duke Energy interprets the 45-day Completion Time as cumulative and available for maintenance activities requiring single or multiple entries as long as the cumulative time does not exceed 45 days over any 3 year time period. This interpretation was confirmed during a telephone conversation with Nuclear Regulatory Commission (NRC) Staff (members of Nuclear Reactor Regulation (NRR) and Region 2) on September 25, 2006. During that telephone conversation, NRC concluded that this Duke interpretation was consistent with earlier NRC communications (November 22, 1985) and demonstrated acceptable operation of Oconee in accordance with ONS TS. During the September 25, 2006 call, the participants noted that an improvement opportunity exists for Duke Energy to clarify the meaning of the ONS TS 3.8.1 RA C.2.2.5 45-day Completion Time. Duke Energy communicated to NRC that a corrective action would be initiated to submit an LAR to clarify and enhance the wording in the TS and associated Bases.

During a recent August 21, 2012, telephone conversation between Duke Energy and NRC Staff (members of NRR and an ONS NRC resident inspector), NRC questioned the past interpretation that the 45 days can be applied on a cumulative basis. This telephone call was prompted by an ONS NRC resident inspector after becoming aware of Duke Energy plans to use some of the remaining portion of the 45-day Completion Time to complete the Protected Service Water (PSW) tie-in to KHU emergency power. After significant discussion of the issue, the NRC concluded that the TS wording was not definitive and recommended Duke Energy submit a TS change to clarify the requirement.

An evaluation of the safety impact of the proposed clarification to the 45-day Completion Time is provided in Section 3.0, Technical Evaluation, below.

Duke Energy requests approval of the proposed LAR by April 30, 2013, to support work associated with the PSW tie-in to the KHU emergency power. Implementation of these changes will not result in an undue risk to the health and safety of the public. The Oconee Updated Final Safety Analysis Report has been reviewed and no changes are necessary to support this LAR.

## 2.0 DETAILED DESCRIPTION

### 2.1 AC Power System

The Oconee Nuclear Station (ONS) AC Power System consists of the offsite power sources (preferred power) and the onsite standby power sources, Keowee Hydro Units (KHUs). This system is designed to supply the required Engineered Safeguards (ES) loads of one unit and safe shutdown loads of the other two units and is so arranged that no single failure can disable enough loads to jeopardize plant safety. The design of the AC Power System provides independence and redundancy to ensure an available source of power to the ES systems.

The Keowee Hydro Station contains two units rated 87,500 kVA each, which generate at 13.8 kV. The KHU turbine generators are powered through a common intake by water taken from Lake Keowee. Upon loss of power from the Oconee generating unit and 230 kV switchyard, power is supplied from both KHUs through two separate and independent routes. The underground emergency power path is from one KHU through the underground feeder circuit, transformer CT-4, the CT-4 incoming breakers (SK breakers), standby bus and the standby breakers (S breakers). The overhead emergency power path is from the other KHU through the startup transformer and the startup incoming breakers (E breakers).

The standby buses can also receive power from either one of two combustion turbine generators at the Lee Steam Station through a dedicated 100 kV transmission line, transformer CT-5, and both CT-5 incoming breakers (SL breakers). The 100 kV transmission line can be supplied from a Lee combustion turbine (LCT) and electrically separated from the system grid and offsite loads.

### 2.2 Planned Major Maintenance Activities

The Keowee hydroelectric station has been in service since 1971. The last major maintenance performed on KHU-2 was from September 23, 2006 to October 19, 2006 (26 days, 9 hours, 20 minutes) to repair failed/degraded field pole connectors. The last major maintenance performed on KHU-1 was from August 31, 2010 to September 23, 2010 (23 days, 5 hours, 15 minutes) for stator repair. Due to the extensive nature of this repair work, the KHUs could not be returned to service within the 72 hours allowed by TS 3.8.1 RA C.2.1, requiring the use of the 45-day Completion Time of RA C.2.2.5.

Duke Energy plans to use some of the remaining portion of the 45-day Completion Time for KHU-1 to complete PSW tie-ins to KHU emergency power as this work cannot be completed within the 72 hour Completion Time of Required Action C.2.1. There are 21 days, 18 hours, and 45 minutes remaining in the current 3-year time period for KHU-1.



## 2.3 Technical Specification Change Description

### TS 3.8.1, AC Sources - Operating

Current TS 3.8.1, Condition C RA C.2.2.5 requires that the KHU and its required overhead emergency power path be restored to an OPERABLE status within 45 days from discovery of initial inoperability when Condition due to an inoperable KHU if not used for that KHU in the previous 3 years. The proposed change deletes the “if not used for that KHU in the previous 3 years” from the Completion Time:

The following clarifying note is added:

-----NOTE-----

Not to exceed 45 days  
cumulative per rolling 3-year  
time period for each KHU

The above note replaces the following note which is deleted since it is no longer applicable:

-----NOTE-----

An additional 30 days is  
allowed prior to  
November 3, 2006 at  
1029 hours

### TS Bases 3.8.1, AC Sources - Operating

TS Bases 3.8.1 will be revised to reflect addition of the NOTE to TS 3.8.1, Condition C, RA C.2.2.5. The change to the TS Bases will clarify that a cumulative total of 45 days can be used for single or multiple entries.

## 3.0 TECHNICAL EVALUATION

The 45-day completion time allows major maintenance to be performed on one KHU during operation of one or more ONS Unit(s). This is particularly important for ONS since, unlike plants with emergency diesel generators (EDGs) dedicated to one unit, each KHU provides emergency power to all three Oconee Units so there is no extended time available in an outage to perform major maintenance work when both KHU's are not required to be operable. The ONS configuration allows a Lee Combustion Turbine (LCT) to energize standby buses and be available to automatically provide emergency power to Engineered Safeguards (ES) equipment.

ONS has two LCTs, each capable of serving as an emergency power source. One LCT is required to be operable and energizing the standby buses prior to and during the use of the

45-day Completion Time. The following is required by existing TS 3.8.1 RAs C.2.2.1, C.2.2.2, C.2.2.3, and C.2.2.4 prior to exceeding the 72-hour Completion Time of Required Action C.2.1:

- 1) Energize both standby buses using an LCT.
- 2) Suspend KHU generation to the grid except for testing.
- 3) Verify by administrative means that the remaining KHU and its required underground emergency power path and both required offsite sources are OPERABLE.
- 4) Verify by administrative means that other electrical TS Limiting Conditions for Operation (LCOs) (3.8.3, 3.8.6, 3.8.8) and instrumentation TS LCOs (3.3.17, 3.3.18, 3.3.19, and 3.3.21) are fully met.
- 5) Verify alternate power source capability by performing SR 3.8.1.16.

With both standby buses energized from an LCT via an isolated power path, a high degree of reliability for the emergency power system is provided. In this configuration, the LCT is serving as an emergency power source. Suspending KHU generation reduces the number of possible failures which could cause loss of the underground emergency power path. Verifying that the remaining KHU and its required underground emergency power path and both required offsite sources are OPERABLE provides additional assurance that offsite power will be available and that the KHU and its required underground emergency power path are available. Verifying the other electrical power system LCOs and emergency power switching logic (EPSL) LCOs are met increases the probability, even in the unlikely event of an additional failures, that the DC power system and the 120 VAC Vital Instrumentation power panelboards will function as required to support EPSL, power will not be lost to ES equipment, and the EPSL will function as required. Verifying alternate power source capability by performing SR 3.8.1.16 confirms that entry into Condition C is due only to an inoperable main step-up transformer or an inoperable KHU, as applicable.

The proposed TS change does not affect the risk associated with having an inoperable KHU for 45 days. The risk over a 3-year time period is the same regardless of whether the KHU is inoperable for a continuous 45-day time period or inoperable multiple times for a total of 45 days. The proposed change clarifies that the 45-day Completion Time of RA C.2.2.5 is cumulative and can be used more than one time in any 3-year time period. This continues to ensure that the accumulated inoperability of KHU-1 or KHU-2 does not exceed 45 days in any 3-year time period.

#### **4.0 Risk Insights**

The justification for the TS Completion Time clarification is based on the deterministic evaluation in section 3.0.

Duke Energy reviewed the Probabilistic Risk Assessment (PRA) to gain additional insights concerning the configuration of ONS with one KHU inoperable for a cumulative 45 days over 3-year time period versus one KHU inoperable for one continuous 45-day time period. The Incremental Conditional Core Damage Probability (ICCDP) and the Incremental Conditional Large Early Release Frequency (ICLERP) risk metrics are the same regardless of whether or not a KHU is inoperable for a continuous 45-day time period or for a cumulative 45 days over any 3-year time period. The insights from the Duke Energy risk analysis support the deterministic analysis showing that there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner of this license amendment request.

## 5.0 REGULATORY EVALUATION

### 5.1 Significant Hazards Consideration

Duke Energy Carolinas, LLC, has evaluated whether or not a significant hazards consideration is involved with the proposed amendment 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?

No. The proposed amendment adds a note to the 45-day Completion Time for Technical Specification (TS) 3.8.1 Required Action (RA) C.2.2.5 to clarify the 45 days is cumulative for each Keowee Hydroelectric Unit (KHU) over a rolling 3-year time period rather than limited to one continuous 45-day time period. During the time that one KHU is inoperable for > 72 hours, a Lee Combustion Turbine (LCT) will be energizing both standby buses, two offsite power sources will be maintained available, and maintenance on electrical distribution systems will not be performed unless necessary.

There is no adverse impact on containment integrity, radiological release pathways, fuel design, filtration systems, main steam relief valve set points, or radwaste systems. No new radiological release pathways are created.

The consequences of an event occurring during the modified 45-day Completion Time, which clarifies the 45 days is cumulative for each KHU over a rolling 3-year time period, are the same as those that would occur during a continuous 45-day Completion Time. Duke Energy reviewed the Probabilistic Risk Assessment (PRA) to gain additional insights concerning the configuration of ONS with one KHU inoperable for one continuous 45 day period versus multiple time periods totally 45 days. Based on this review, Duke Energy concluded that there is no change in risk.

Therefore, the probability or consequences of an accident previously evaluated is not significantly increased.

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

No. The proposed amendment adds a note to the 45-day Completion Time for TS 3.8.1 Required Action C.2.2.5 to clarify the 45 days is cumulative for each KHU over a rolling 3-year time period rather than limited to one continuous 45-day time period. During the time period that one KHU is inoperable and the 45-day Completion Time is being applied, the redundancy requirement for the emergency power source will be fulfilled by an LCT and other compensatory measures required by TS 3.8.1 RA C.2.2.1, C.2.2.2, C.2.2.3, and C.2.2.4 will be in place to minimize electrical power system vulnerabilities.

The proposed change to the 45-day Completion Time does not involve a physical effect on the Oconee Units, nor is there any increased risk of an Oconee Unit trip or reactivity excursion. No new failure modes or credible accident scenarios are postulated from this activity.

Therefore, the possibility of a new or different kind of accident from any kind of accident previously evaluated is not created.

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

No. The proposed amendment adds a note to the 45-day Completion Time for TS 3.8.1 RA C.2.2.5 to clarify the 45 days is cumulative for each KHU over a rolling 3-year time period rather than limited to one continuous 45-day time period. During the time period that one KHU is inoperable and the 45-day Completion Time is being applied, the redundancy requirement for the emergency power source will be fulfilled by an LCT and other compensatory measures required by TS 3.8.1 RA C.2.2.1, C.2.2.2, C.2.2.3, and C.2.2.4 will be in place to minimize electrical power system vulnerabilities.

The proposed TS change does not involve: 1) a physical alteration of the Oconee Units; 2) the installation of new or different equipment; 3) operating any installed equipment in a new or different manner; 4) a change to any set points for parameters which initiate protective or mitigation action; or 5) any impact on the fission product barriers or safety limits.

Therefore, this request does not involve a significant reduction in a margin of safety.

5.2 Applicable Regulatory Requirements/Criteria

10 CFR 50.36

5.3 Oconee Precedence

November 22, 1985 Duke letter to NRC documenting a November 20, 1985, conference call regarding the application of the 45-day Completion Time for Restoring a Keowee Hydro Unit

September 27, 2006 License Amendment Request Applicable to Technical Specification 3.8.1, AC Sources – Operating (LAR 2006-16)

October 3, 2006 Oconee Nuclear Station, Units 1, 2 and 3 Re: Issuance of Amendments 354, 356, and 355

5.4 Conclusions

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 issuance of the amendment will not be adverse to the common defense and security or to the health and safety of the public.

## **6.0 ENVIRONMENTAL CONSIDERATION**

Duke Energy Carolinas, LLC, has evaluated this license amendment request against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. Duke Energy Carolinas, LLC has determined that this license amendment request meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR 50 that changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or that changes an inspection or a surveillance requirement, and the amendment meets the following specific criteria:

- (i) The amendment involves no significant hazards consideration.

As demonstrated in Section 5.1, the proposed Technical Specification change does not involve a significant hazards consideration.

- (ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite.

This LAR will not change the types or amounts of any effluents that may be released offsite.

- (iii) There is no significant increase in individual or cumulative occupational radiation exposure.

This LAR will not increase the individual or cumulative occupational radiation exposure.

## **7.0 REFERENCES**

1. ONS UFSAR Section 8.3.1, AC Power Systems.
2. ONS Technical Specification Bases 3.8.1, AC Sources – Operating.

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October 30, 2012

**ATTACHMENT 1**  
**TECHNICAL SPECIFICATION**  
**MARK UPS**

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	<p>C.2.2.4 Verify alternate power source capability by performing SR 3.8.1.16.</p> <p><u>AND</u></p> <p>C.2.2.5 Restore KHU and its required overhead emergency power path to OPERABLE status.</p> <div data-bbox="678 919 948 1125" style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Not to exceed 45 days cumulative per rolling 3-year time period for each KHU</p> </div>	<p>72 hours</p> <p><u>AND</u></p> <p>Every 31 days thereafter</p> <p><u>AND</u></p> <p>28 days when Condition due to an inoperable Keowee main step-up transformer</p> <p><u>AND</u></p> <p>-----NOTE-----  <del>An additional 30 days is allowed prior to November 3, 2006 at 1029 hours</del></p> <p>45 days from discovery of initial inoperability when Condition due to an inoperable KHU if <del>not used for that KHU in the previous 3 years</del></p>

(continued)

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**ATTACHMENT 2**  
**TECHNICAL SPECIFICATION**  
**RETYPE**



ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	<p>C.2.2.4 Verify alternate power source capability by performing SR 3.8.1.16.</p> <p><u>AND</u></p> <p>C.2.2.5 Restore KHU and its required overhead emergency power path to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>Every 31 days thereafter</p> <p>28 days when Condition due to an inoperable Keowee main step-up transformer</p> <p><u>AND</u></p> <p>-----NOTE-----            Not to exceed 45 days cumulative per rolling 3-year time period for each KHU            -----</p> <p>45 days from discovery of initial inoperability when Condition due to an inoperable KHU</p>

(continued)

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**ATTACHMENT 3**  
**TECHNICAL SPECIFICATION BASES**  
**MARK UPS**

BASES

ACTIONS

C.1, C.2.1, C.2.2.1, C.2.2.2, C.2.2.3, C.2.2.4, and C.2.2.5 (continued)

repairs which are estimated to be necessary every six to eight years. Also, generator thrust and guide bearing replacements are necessary. Other items which manifest as failures are expected to be rare and may be performed during the permitted maintenance periods. ~~As such, the 45 day restoration time of Required Action C.2.2.5 is allowed only once in a three year period for each KHU. This Completion Time is 45 days from discovery of initial inoperability of the KHU. This effectively limits the time the KHU can be inoperable to 45 days from discovery of initial inoperability rather than 45 days from entry into Condition C and precludes any additional time that may be gained as a result of switching an inoperable KHU from the underground to the overhead emergency power path. The Completion Time is modified by a note indicating an additional 30 days is allowed when entering Condition C prior to November 3, 2006 at 1029 hours.~~

45-day Completion Time

to be applied cumulatively over a rolling

it is not to exceed 45 days cumulative in a rolling 3-year time period for each KHU

For example, if KHU-1 is inoperable for 15 days, the 45-day Completion Time for KHU-1 is reduced to 30 days for the rolling 3-year time period containing the 15 day inoperability. If the 72 hour Completion Time of C.2.1 is not exceeded, the 45-day Completion is not applicable and is not reduced.

Required Actions C.2.2.1, C.2.2.2, C.2.2.3, and C.2.2.4 must be met in order to allow the longer restoration times of Required Action C.2.2.5. Required Action C.2.2.1 requires that both standby buses be energized using an LCT through the 100 kV transmission circuit. With this arrangement (100 kV transmission circuit electrically separated from the system grid and all offsite loads), a high degree of reliability for the emergency power system is provided. In this configuration, the LCT is serving as a second emergency power source, however, since the 100 kV transmission circuit is vulnerable to severe weather a time limit is imposed. The second Completion Time of Required Action C.2.2.1 permits the standby buses to be re-energized by an LCT within 1 hour in the event this source is subsequently lost. Required Action C.2.2.2 requires suspension of KHU generation to the grid except for testing. The restriction reduces the number of possible failures which could cause loss of the underground emergency power path. Required Action C.2.2.3 requires verifying by administrative means that the remaining KHU and its required underground emergency power path and both required offsite sources are OPERABLE. This provides additional assurance that offsite power will be available. In addition, this assures that the KHU and its required underground emergency power path are available.

Required Action C.2.2.3 also requires verifying by administrative means that the requirements of the following LCOs are met:

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October 30, 2012

**ATTACHMENT 4**  
**TECHNICAL SPECIFICATION BASES**  
**RETYPE**

BASES

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ACTIONS

C.1, C.2.1, C.2.2.1, C.2.2.2, C.2.2.3, C.2.2.4, and C.2.2.5 (continued)

repairs which are estimated to be necessary every six to eight years. Also, generator thrust and guide bearing replacements are necessary. Other items which manifest as failures are expected to be rare and may be performed during the permitted maintenance periods. The 45-day Completion Time of Required Action C.2.2.5 is allowed to be applied cumulatively over a rolling three year period for each KHU. This Completion Time is 45 days from discovery of initial inoperability of the KHU. This effectively limits the time the KHU can be inoperable to 45 days from discovery of initial inoperability rather than 45 days from entry into Condition C and precludes any additional time that may be gained as a result of switching an inoperable KHU from the underground to the overhead emergency power path. The Completion Time is modified by a note indicating it is not to exceed 45 days cumulative in a rolling 3-year time period for each KHU. For example, if KHU-1 is inoperable for 15 days, the 45-day Completion Time for KHU-1 is reduced to 30 days for the rolling 3-year time period containing the 15 day inoperability. If the 72 hour Completion Time of C.2.1 is not exceeded, the 45-day Completion is not applicable and is not reduced.

Required Actions C.2.2.1, C.2.2.2, C.2.2.3, and C.2.2.4 must be met in order to allow the longer restoration times of Required Action C.2.2.5. Required Action C.2.2.1 requires that both standby buses be energized using an LCT through the 100 kV transmission circuit. With this arrangement (100 kV transmission circuit electrically separated from the system grid and all offsite loads), a high degree of reliability for the emergency power system is provided. In this configuration, the LCT is serving as a second emergency power source, however, since the 100 kV transmission circuit is vulnerable to severe weather a time limit is imposed. The second Completion Time of Required Action C.2.2.1 permits the standby buses to be re-energized by an LCT within 1 hour in the event this source is subsequently lost. Required Action C.2.2.2 requires suspension of KHU generation to the grid except for testing. The restriction reduces the number of possible failures which could cause loss of the underground emergency power path. Required Action C.2.2.3 requires verifying by administrative means that the remaining KHU and its required underground emergency power path and both required offsite sources are OPERABLE. This provides additional assurance that offsite power will be available. In addition, this assures that the KHU and its required underground emergency power path are available.

Required Action C.2.2.3 also requires verifying by administrative means that the requirements of the following LCOs are met: