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January 2, 2013

10 CFR 50.90

U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

ATTENTION: Document Control Desk

Subject: Duke Energy Carolinas, LLC (Duke Energy)  
McGuire Nuclear Station, Units 1 and 2  
Docket Nos. 50-369 and 50-370

Revision to a Response to a Request for Additional Information  
Regarding License Amendment Request Related to Measurement  
Uncertainty Recapture Power Uprate (TAC Nos. ME8213 and ME8214)

This letter provides revised responses to questions 50 and 53 in a September 7, 2012 Nuclear Regulatory Commission (NRC) request for additional information (RAI) related to a March 5, 2012 McGuire Nuclear Station (MNS) Units 1 and 2 License Amendment Request (LAR) submitted pursuant to 10 CFR 50.90 in support of a measurement uncertainty recapture (MUR) power uprate.

The original responses to MUR LAR RAI questions 50 and 53 were provided via correspondence dated November 1, 2012. A revision to responses provided in that submittal is necessary to accommodate LAR implementation timeframes different from those described in the original responses. The revised responses are provided in Enclosure 1. Enclosure 2 provides a proposed Unit 1 License Condition reflecting the revised responses. Enclosure 3 documents a regulatory commitment described in this submittal. Enclosure 4 provides revised MNS MUR LAR pages reflecting changes described in this submittal. Enclosures 1 through 4 supersede the corresponding Enclosures provided in the November 1, 2012 submittal.

The conclusions reached in the original determination that this LAR contains No Significant Hazards Considerations and the basis for the categorical exclusion from performing an Environmental/Impact Statement have not changed as a result of the revised RAI responses and other information provided in this submittal.

ADD1  
NRR

January 2, 2013  
Nuclear Regulatory Commission  
Page 2

Please contact Richard E. Abbott at 980-875-4685 if additional questions arise regarding this LAR.

Sincerely,

A handwritten signature in black ink, appearing to read "S. D. Capps", written in a cursive style.

S. D. Capps

Enclosures

cc: w/enclosures

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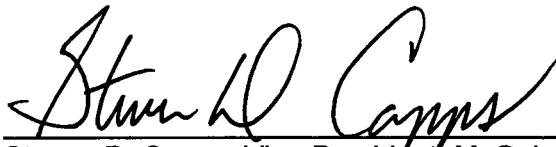
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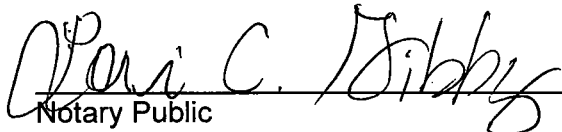
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OATH AND AFFIRMATION

Steven D. Capps affirms that he is the person who subscribed his name to the foregoing statement, and that all the matters and facts set forth herein are true and correct to the best of his knowledge.

  
\_\_\_\_\_  
Steven D. Capps, Vice-President, McGuire Nuclear Station

Subscribed and sworn to me: Jan. 2, 2013  
Date

  
\_\_\_\_\_  
Notary Public

My commission expires: July 1, 2017  
Date



## **Enclosure 1**

### **McGuire Nuclear Station's Revised Responses to MUR LAR RAI Questions 50 and 53 In The September 7, 2012 NRC Request for Additional Information**

By letter dated March 5, 2012 (Agencywide Documents Access and Management System (ADAMS), Accession No. ML12082A210), as supplemented, Duke Energy Carolinas, LLC (Duke Energy, the licensee), submitted a license amendment request (LAR) to change the McGuire Nuclear Station, Units 1 and 2 (McGuire 1 and 2), Technical Specifications (TSs). The proposed change revises the TSs to implement a measurement uncertainty recapture (MUR) power uprate for McGuire 1 and 2.

As part of an email dated September 7, 2012, the NRC issued MUR LAR RAI questions 50 and 53. The original responses to these questions, provided as part of correspondence dated November 1, 2012, were based upon the MUR implementation schedule at that time. However, an assessment of activities necessary to implement MUR upon approval of the MUR LAR has identified items which could impact the current Unit 1 and Unit 2 MUR implementation schedules. Consequently, a revision to responses provided in the November 1, 2012 submittal is necessary. The below revised responses replace the original responses to RAI questions 50 and 53 provided in Enclosure 1 of the November 1, 2012 submittal.

#### **NRC Question 50**

In the letter by Duke Energy dated July 16, 2012, in response to the NRC staff RAI question 40, the licensee stated that the degraded voltage relay settings at the safety-related buses will not be changed under post-MUR uprate conditions. Therefore, any changes in switchyard voltages after MUR implementation will be dependent on plant loading. Any change in these post-MUR switchyard voltages will be discussed and communicated with the TSO [Transmission System Operator] prior to implementation of the MUR.

Provide assurance, including the use of a regulatory commitment as appropriate, that any changes in the switchyard voltages required (so as not to impact the degraded voltage relay settings), corresponding to the post-MUR uprate and HP Turbine replacement conditions, will be evaluated prior to the implementation of MUR uprate.

## **Revised McGuire Response to NRC Question 50**

The McGuire Nuclear Station (MNS) Unit 1 High Pressure (HP) Turbine Replacement is scheduled to be implemented during the Spring 2013 1EOC22 Refueling Outage (RFO), currently scheduled to start on approximately March 16, 2013 and end on approximately April 20, 2013. Due to vendor delays, the Unit 1 Generator Stator/Exciter Replacement has been rescheduled to occur during the Fall 2014 1EOC23 RFO, currently scheduled to start on approximately September 20, 2014 and end on approximately October 24, 2014. Installation of the Unit 1 CheckPlus Leading Edge Flow Meter (LEFM) system is scheduled to occur during the 1EOC22 RFO. Post-installation acceptance testing of the Unit 1 CheckPlus LEFM system is scheduled to be completed online (after startup from the 1EOC22 RFO) during Unit 1 Fuel Cycle 23, currently scheduled to start on approximately April 20, 2013 and end on approximately September 20, 2014. Unit 1 MUR implementation, which is not dependent on implementation of the HP Turbine and Generator Stator/Exciter Replacements, is currently scheduled to occur online during Unit 1 Fuel Cycle 23, after successful post-installation acceptance testing of the Unit 1 CheckPlus LEFM system.

Despite the rescheduled Unit 1 Generator Stator/Exciter Replacement, after implementation of the Unit 1 MUR uprate and Unit 1 HP Turbine Replacement, it is anticipated that Unit 1 will have the capability to realize the maximum expected post-MUR uprate megawatts thermal (MWt) power level and, from a reliability perspective, the existing Unit 1 Generator Stator/Exciter will allow Unit 1 to generate the maximum expected post-MUR uprate megawatts electrical (MWe). MNS switchyard voltages required (so as not to impact the degraded voltage relay settings), corresponding to Unit 1 post-MUR uprate conditions, will be evaluated prior to implementation of MUR on Unit 1. However, if at the time of this evaluation, Unit 1 is not capable of realizing the expected maximum post-MUR uprate MWt power level and/or Unit 1 is not capable of generating the expected maximum post-MUR uprate MWe, then an additional evaluation will be performed when Unit 1 has these capabilities. If this additional evaluation is necessary, any changes in the MNS switchyard voltages required (so as not to impact the degraded voltage relay settings), corresponding to conditions associated with the additional Unit 1 MWt capability and/or the additional Unit 1 MWe capability, will be evaluated prior to raising Unit 1 reactor core full steady state power to the expected maximum post-MUR uprate MWt power level and/or prior to Unit 1 generating the expected maximum post-MUR uprate MWe. Consistent with the above, as documented in Enclosure 2, MNS would accept a Unit 1 License Condition addressing the below. Enclosure 2 replaces the corresponding Enclosure 2 in the November 1, 2012 submittal providing the original responses to MUR LAR RAI questions 50 and 53:

- MNS switchyard voltages required (so as not to impact the degraded voltage relay settings), corresponding to Unit 1 post-MUR uprate conditions, will be evaluated prior to implementation of MUR on Unit 1. However, if at the time of this evaluation, Unit 1 is not capable of realizing the expected maximum post-MUR uprate MWt power level and/or Unit 1 is not capable of generating the expected maximum post-MUR uprate MWe, then an additional evaluation will be performed when Unit 1 has these capabilities. If this

additional evaluation is necessary, any changes in the MNS switchyard voltages required (so as not to impact the degraded voltage relay settings), corresponding to conditions associated with the additional Unit 1 MWt capability and/or the additional Unit 1 MWe capability, will be evaluated prior to raising Unit 1 reactor core full steady state power to the expected maximum post-MUR uprate MWt power level and/or prior to Unit 1 generating the expected maximum post-MUR uprate MWe.

MNS Unit 2 HP Turbine Replacement, MNS Unit 2 Generator Stator/Exciter Replacement, and installation of the Unit 2 CheckPlus LEFM system occurred during the Unit 2 2EOC21 RFO, which ended on November 30, 2012. Post-installation acceptance testing of the Unit 2 CheckPlus LEFM system was completed online during Unit 2 Fuel Cycle 22. Unit 2 Fuel Cycle 22 started on November 30, 2012 and is scheduled to end on approximately March 8, 2014. MUR implementation is currently scheduled to be implemented on Unit 2 online during Unit 2 Fuel Cycle 22. After MUR implementation, Unit 2 will have the capability to realize the expected maximum post-MUR uprate MWt power level and the expected maximum post-MUR uprate MWe. Any changes in the MNS switchyard voltages required (so as not to impact the degraded voltage relay settings), corresponding to the Unit 2 post-MUR uprate conditions will be evaluated prior to implementation of the MUR uprate on Unit 2.

Consistent with the above, this RAI response provides the following MNS switchyard voltage related regulatory commitment. This commitment is documented in Enclosure 3 which replaces the corresponding Enclosure 3 in the November 1, 2012 submittal providing the original responses to MUR LAR RAI questions 50 and 53:

- Any changes in the MNS switchyard voltages required (so as not to impact the degraded voltage relay settings), corresponding to the Unit 2 post-MUR uprate conditions will be evaluated prior to implementation of the MUR uprate on Unit 2.

Note, as part of the July 16, 2012 response to NRC staff RAI question 40, MNS provided minimum 230 KV and 500 KV switchyard voltages agreed upon between MNS and the TSO for N-1 (generator trip) conditions for the pre-MUR uprate and post-MUR uprate operating conditions. The implementation plan described above did not result in any changes to the minimum switchyard voltages provided in the response.

### **NRC Question 53**

In the letter by Duke Energy dated March 5, 2012, it states that:

Duke Energy requests approval of this amendment request by October 5, 2012 to support implementation during the Unit 2 Fall 2012 refueling outage. Implementation of the approved amendment on Unit 1 is scheduled to occur during the Spring 2013 refueling outage.

The NRC staff typically requires that license amendments are implemented within 30 days of issuance of the amendment. Please provide additional clarification and justification for your proposed time frame for implementation of the license amendment.

### **McGuire Response to NRC Question 53**

The MNS Unit 1 HP Turbine Replacement is scheduled to be implemented during the Spring 2013 1EOC22 RFO, currently scheduled to start on approximately March 16, 2013 and end on approximately April 20, 2013. Due to vendor delays, the Unit 1 Generator Stator/Exciter Replacement has been rescheduled to occur during the Fall 2014 1EOC23 RFO, currently scheduled to start on approximately September 20, 2014 and end on approximately October 24, 2014. Installation of the Unit 1 CheckPlus LEFM system is scheduled to occur during the 1EOC22 RFO. Post-installation acceptance testing of the Unit 1 CheckPlus LEFM system is scheduled to be completed online (after startup from the 1EOC22 RFO) during Unit 1 Fuel Cycle 23, currently scheduled to start on approximately April 20, 2013 and end on approximately September 20, 2014. Unit 1 MUR implementation, which is not dependent on implementation of the HP Turbine and Generator Stator/Exciter Replacements, is scheduled to occur online during Unit 1 Fuel Cycle 23, after successful post-installation acceptance testing of the Unit 1 CheckPlus LEFM system.

An assessment of MNS activities necessary to implement MUR upon approval of the MUR LAR has identified items which could impact the above Unit 1 MUR implementation schedule. An evaluation is in progress to determine the final impact on the Unit 1 MUR implementation schedule. If the above schedule is impacted, the worse case Unit 1 MUR implementation schedule changes could result in Unit 1 MUR implementation occurring after the end of the 1EOC23 RFO. In order to accommodate the current Unit 1 MUR implementation schedule and the potential worse case Unit 1 MUR implementation schedule changes, as part of NRC approval of the MNS MUR LAR, MNS requests the NRC specify the Unit 1 MUR amendment shall be implemented in the time period between the start of Unit 1 Fuel Cycle 23 and 30 days after the end of the 1EOC23 RFO.

MNS Unit 2 HP Turbine Replacement, MNS Unit 2 Generator Stator/Exciter Replacement, and installation of the Unit 2 CheckPlus LEFM system occurred during the Unit 2 2EOC21 RFO, which ended on November 30, 2012. Post-installation acceptance testing of the Unit 2 CheckPlus LEFM system was completed online during Unit 2 Fuel Cycle 22. Unit 2 Fuel Cycle 22 started on November 30, 2012 and is scheduled to end on approximately March 8, 2014. MUR implementation is currently scheduled to be implemented on Unit 2 online during Unit 2 Fuel Cycle 22. Therefore, Duke Energy requests approval of the MNS MUR LAR by January 25, 2013 to support the scheduled MUR implementation on Unit 2.

An assessment of MNS activities necessary to implement MUR upon approval of the MUR LAR has identified items which could impact the above Unit 2 MUR implementation schedule. An evaluation is in progress to determine the final impact on the Unit 2 MUR implementation schedule. If the above schedule is impacted, the worse case Unit 2 MUR implementation schedule changes could result in Unit 2 MUR implementation occurring after the end of the 2EOC22 RFO, currently scheduled to begin on approximately March 8, 2014 and end on approximately April 2, 2014. In order to accommodate the current Unit 2 MUR implementation schedule and the potential worse case Unit 2 MUR implementation schedule changes, as part of NRC approval of the MNS MUR LAR, MNS requests the NRC specify the Unit 2 MUR amendment shall be implemented in the time period between the start of Unit 2 Fuel Cycle 22 and 30 days after the end of the 2EOC22 RFO.

During development of this RAI response, MNS performed a review of the MNS MUR LAR submitted on March 5, 2012 to determine if the above implementation plan would require any changes to statements and conclusions in the LAR and RAI responses to date. This review identified the below additional required LAR changes. The revised pages are provided in Enclosure 4. These revised pages replace both the corresponding pages in Enclosure 4 of the November 1, 2012 submittal providing the original responses to MUR LAR RAI questions 50 and 53 and the corresponding pages in the March 5, 2012 MUR LAR:

- Revise implementation related text in the first paragraph of Enclosure 1, Page E1-3, of the LAR to be consistent with the implementation plan described in this RAI response.
- Revise the marked up Technical Specification (TS) Page 1.1-5 in Attachment 2, Page A2-4 of the LAR and add Page A2-6 of the LAR to ensure the Definition of RTP reflects the appropriate MWt consistent with the MUR implementation schedule. Since MUR uprate will be implemented on a staggered basis for each Unit, the revised marked up TS Page 1.1-5 will have a footnote indicating this change is accomplished by the use of a temporary footnote. This footnote indicates that, following implementation of MUR on the respective Unit, the value of RTP shall be 3469 MWt.



- Revise RTP TS definition related text in Enclosure 1, Page E1-3, of the LAR to indicate, the TS change is accomplished by the use of a temporary footnote. This footnote indicates that, following implementation of MUR on the respective Unit, the value of RTP shall be 3469 MWt.
- Revise Attachment 1 of the LAR dated March 5, 2012 to add a commitment to ensure submittal of a follow-up administrative license amendment request to delete the superseded footnote on TS Page 1.1-5 described above. This follow-up amendment will be submitted within 180 days after implementation of the MUR uprate on the last Unit.

As part of the review to determine if the above implementation plan would require any changes to statements and conclusions in the LAR and RAI responses to date, the impact on the grid related statements and conclusions in the LAR and RAI responses was assessed. System performance was assessed using the same methodology used to provide the basis for the grid related statements and conclusions to date. This assessment was performed considering conditions that envelope:

- Conditions which will exist during execution of the MUR uprate, HP Turbine Replacements, and Generator Stator/Exciter Replacements consistent with the implementation schedule described above, including conditions which would exist if, after the Unit 1 MUR uprate, Unit 1 cannot achieve the expected maximum post-MUR uprate MWt power level and/or the expected maximum post-MUR uprate MWe.
- Conditions which would exist if, as a result of the possible schedule impacts identified during the assessment of MUR implementation activities, the potential worse case MUR implementation schedule changes are realized and Unit 1 and/or Unit 2 MUR implementation does not occur until after the end of the 1EOC23 RFO and 2EOC22 RFO respectively.

Based upon the above assessment, system performance during all stages of MUR implementation will remain acceptable. Note, it was identified that a clarification is needed regarding the response to MUR LAR RAI question 1.c provided in correspondence dated May 29, 2012. This clarification is provided in the below revised response to RAI question 1.c which replaces the RAI question 1.c response provided on May 29, 2012. No other required changes in the grid related statements and conclusions in the LAR and RAI responses were identified. The clarification to the RAI question 1.c response does not impact the results of the assessment described above.

#### NRC Question 1.c

Provide the MVARs (mega-voltampere-reactive) required, corresponding to the maximum MW generation expected, based on the agreement with the transmission system operator and meeting the voltage requirement at the switchyard.

Revised McGuire Response to Question 1.c

At the point of interconnection, the MVARs required to meet the voltage requirements at the switchyard and corresponding to the maximum acceptable MW generation of approximately 1185 MWe/Unit, is 468 MVAR lagging and (-) 297 MVAR leading. These MVAR values were calculated using a 0.93 power factor (pf) lagging and a 0.97 pf leading requirement as specified in Duke's Facility Connection Requirements. These pf requirements supersede the 0.95 pf lagging and a 0.95 pf leading requirement specified in Duke's Large Generator Interconnection Agreement which was the basis for the March 29, 2012 response to RAI question 1.c. All grid studies and documented generator capabilities support the ability of the new generators to meet the system requirements.

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION BY THE OFFICE OF  
NUCLEAR REGULATION REGARDING A MCGUIRE LICENSE AMENDMENT TO SUPPORT  
A MEASUREMENT UNCERTAINTY RECAPTURE (MUR) POWER UPRATE

**Enclosure 2**

**MNS Unit 1 License Condition Proposed In This RAI Response**

**Proposed Unit 1 License Condition**

MNS switchyard voltages required (so as not to impact the degraded voltage relay settings), corresponding to Unit 1 post-MUR uprate conditions, will be evaluated prior to implementation of MUR on Unit 1. However, if at the time of this evaluation, Unit 1 is not capable of realizing the expected maximum post-MUR uprate MWt power level and/or Unit 1 is not capable of generating the expected maximum post-MUR uprate MWe, then an additional evaluation will be performed when Unit 1 has these capabilities. If this additional evaluation is necessary, any changes in the MNS switchyard voltages required (so as not to impact the degraded voltage relay settings), corresponding to conditions associated with the additional Unit 1 MWt capability and/or the additional Unit 1 MWe capability, will be evaluated prior to raising Unit 1 reactor core full steady state power to the expected maximum post-MUR uprate MWt power level and/or prior to Unit 1 generating the expected maximum post-MUR uprate MWe.

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION BY THE OFFICE OF  
NUCLEAR REGULATION REGARDING A MCGUIRE LICENSE AMENDMENT TO SUPPORT  
A MEASUREMENT UNCERTAINTY RECAPTURE (MUR) POWER UPRATE

**Enclosure 3**

**List of MNS Switchyard Voltage Related Commitments**

<b>Commitment</b>	<b>Commitment Date</b>
Any changes in the MNS switchyard voltages required (so as not to impact the degraded voltage relay settings), corresponding to the Unit 2 post-MUR uprate conditions will be evaluated.	Prior to implementation of the MUR uprate on Unit 2.

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION BY THE OFFICE OF  
NUCLEAR REGULATION REGARDING A MCGUIRE LICENSE AMENDMENT TO SUPPORT  
A MEASUREMENT UNCERTAINTY RECAPTURE (MUR) POWER UPRATE

**Enclosure 4**

**Revisions to Pages In MNS MUR LAR Dated March 5, 2012**

The Unit 2 HP turbine/Main Generator changes were completed during the Unit 2 EOC21 outage in Fall 2012. The Unit 1 HP turbine and main generator changes are scheduled for the Unit 1 EOC22 outage (Spring 2013) and the Unit 1 EOC23 outage (Fall 2014) respectively. The turbine/generator changes and LEFM are independent of one another but were designed to work together. Duke Energy is not requesting NRC approval for the turbine/generator changes except for the change to TS Table 3.3.1-1, as noted above. The remainder of the turbine/generator changes will be installed in both units under 10 CFR 50.59.

### **3 DETAILED DESCRIPTION OF PROPOSED CHANGES**

To accommodate a rated thermal power level of 3469 megawatts thermal for McGuire Units 1 and 2, Duke Energy proposes to modify the Operating License, Technical Specifications and Technical Specification Bases. The proposed changes are listed below:

#### TS 1.1, Definition of Rated Thermal Power

RATED THERMAL POWER will change from 3411 MWt to 3469 MWt.

Since MUR Uprate will be implemented on a staggered basis for each Unit, this change is accomplished by the use of a temporary footnote which indicates, following implementation of MUR on the respective Unit, the value of RATED THERMAL POWER shall be 3469 MWt.

#### TS Table 3.7.1-1, OPERABLE Main Steam Safety Valves (MSSVs) versus Maximum Allowable Power Range Neutron Flux High Setpoints in Percent of RATED THERMAL POWER

As discussed in Technical Specification (TS) Bases 3.7.1, Actions A.1 and A.2, operation with one or more MSSVs inoperable is permissible if THERMAL POWER is proportionally limited to the relief capacity of the remaining MSSVs. The basis for determining the reduced high flux trip setpoint is detailed in TS Bases 3.7.1, Actions A.1 and A.2. With the MUR uprate, there is an increase in steam flow as shown in Enclosure 2, Table IV-1. Revised maximum allowable power range neutron flux high setpoints were calculated and resulted in changes to TS Table 3.7.1-1 with 4 and 3 MSSVs per steam generator OPERABLE. The setpoint with 2 MSSVs per steam generator OPERABLE was within the round off error and was not changed. This TS change can be implemented on both units in the common McGuire Units 1 and 2 TS since the limitation on THERMAL POWER is conservative for the unit that has not yet implemented the MUR changes.

#### Operating Licenses Page 3 – Maximum Power Level

For each of the two operating licenses, the steady state licensed power level will change from 3411 MWt to 3469 MWt.

#### Selected Licensee Commitments (SLCs)

As discussed in Enclosure 2, Criterion 1 from ER-157P, Rev. 8, a Selected Licensee Commitment (SLC) is being added to support this LAR. The new SLC adds functionality requirements for the leading edge flow meters and appropriate Required Actions and Completion Times when an LEFM is not functional. The SLC changes are not provided as part of this LAR, but are being controlled using the 10 CFR 50.59 process.

### **4 TECHNICAL EVALUATION**

McGuire Units 1 and 2 are presently licensed for a Rated Thermal Power (RTP) of 3411 MWt. A more accurate feedwater flow measurement supports an increase to 3469 MWt. The technical evaluation for this MUR power uprate addressed the following categories: the feedwater flow measurement technique and power measurement uncertainty, accidents and transients that remain bounded at the higher power level, accidents and transients that are not bounded at the higher power level, mechanical/structural/material component integrity and design, electrical equipment design, system design, operating, emergency, and abnormal procedures including associated operator actions, environmental impact, and any changes to the Technical Specifications including protective system setpoints. The evaluation conclusions are summarized in Enclosure 2, in the format of NRC Regulatory Issue Summary (RIS) 2002-03 (Reference 1.2).

Definitions  
1.1

1.1 Definitions (continued)

QUADRANT POWER TILT  
RATIO (QPTR)

QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.

RATED THERMAL POWER  
(RTP)

RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3411 MWt. ✖

REACTOR TRIP  
SYSTEM (RTS) RESPONSE  
TIME

The RTS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and the methodology for verification have been previously reviewed and approved by the NRC.

SHUTDOWN MARGIN (SDM)

SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming:

- a. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. However, with all RCCAs verified fully inserted by two independent means, it is not necessary to account for a stuck RCCA in the SDM calculation. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and
- b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level.

SLAVE RELAY TEST

A SLAVE RELAY TEST shall consist of energizing each slave relay and verifying the OPERABILITY of each slave relay. The SLAVE RELAY TEST shall include, as a minimum, a continuity check of associated testable actuation devices.

INSERT 1

**Technical Specification Page 1.1-5 Insert**

Insert 1:      \* Following implementation of MUR on the respective Unit, the value of RTP shall be 3469 MWt.



## ATTACHMENT 1 LICENSEE COMMITMENTS

The following commitment table identifies those actions committed to by Duke Energy Carolinas, LLC (Duke Energy) in this submittal. Other actions discussed in the submittal represent intended or planned actions by Duke Energy. They are described to the Nuclear Regulatory Commission (NRC) for the NRC's information and are not regulatory commitments.

Commitment		Completion Date
1	Any revisions to setpoint calculations or calibration procedures necessary to reflect the increased rated thermal power will be implemented. All maintenance procedures for the new equipment added for the MUR uprate will be implemented.	Prior to implementation of the MUR power uprate.
2	Duke Energy will complete modifications related to the MUR power uprate identified in Enclosure 2, VII.2.B.	Prior to implementation of the MUR power uprate.
3	Duke Energy will revise any impacted operating procedures and complete all training of operators on the changes related to the MUR power uprate.	Prior to implementation of the MUR power uprate.
4	Duke Energy will develop maintenance procedures for the Cameron equipment, develop a preventive maintenance program, and train maintenance personnel on those procedures, prior to implementation of the MUR.	Prior to implementation of the MUR power uprate.
5	Acceptance testing following installation of the CheckPlus systems in the McGuire units will confirm that as built parameters are within the bounds of the error analyses.	Prior to implementation of the MUR power uprate.
6	A Selected Licensee Commitment will be added to address functional requirements for the LEFMs and appropriate Required Actions and Completion Times when an LEFM is not functional.	Prior to implementation of the MUR power uprate.
7	An "LEFM System Trouble" alarm window will be added to the control room alarm panel to alert the operator when there is a problem with the LEFM.	Prior to implementation of the MUR power uprate.
8	The procedure related to temporary operation above full steady-state licensed power levels will be reviewed and modified as necessary.	Prior to implementation of the MUR power uprate.
9	Duke Energy will re-evaluate the Loss-of-Coolant Accidents (UFSAR 15.6.5) consistent with the reload methodology.	Prior to implementation of the MUR power uprate.
10	Duke Energy will submit a follow-up administrative license amendment request to delete the superseded footnote on Technical Specification Page 1.1-5.	Within 180 days after implementation of the MUR uprate on the last Unit.