Duke Energy®

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October 29, 2009

U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

ATTENTION: Document Control Desk

SUBJECT: Duke Energy Carolinas (DEC), LLC

McGuire Nuclear Station (MNS), Units 1 and 2
Docket Nos. 50-369, 50-370

Catawba Nuclear Station (CNS), Units 1 and 2
Docket Nos. 50-413, 50-414

License Amendment Request (LAR) Proposing Deletion of Facility Operating License (FOL) Condition Limiting Maximum Fuel Rod Burnup to 60 Giga-Watt Days per Metric Ton Uranium (GWd/MTU).

Pursuant to 10 CFR 50.90, DEC is submitting a LAR applicable to a FOL condition currently contained in FOL NPF-9 for MNS Unit 1, FOL NPF-17 for MNS Unit 2, FOL NPF-35 for CNS Unit 1, and FOL NPF-52 for CNS Unit 2. The specific changes that are proposed in this amendment will delete the license condition located in Appendix B of the respective Unit's FOL which restricts the maximum fuel rod average burnup to 60 gigawatt days per metric ton uranium (GWd/MTU) until the completion of an NRC environmental assessment supporting an increased limit. The NRC has completed an environmental assessment supporting peak-rod fuel burnup up to and including 62 GWd/MTU.

Deletion of the subject FOL condition will provide DEC the opportunity to increase maximum fuel rod average burnup up to and including 62 GWd/MTU in the future and increase fuel management flexibility.

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Enclosure 1 provides a description of the proposed change, the technical justification for the change, a No Significant Hazards Consideration evaluation pursuant to 10 CFR 50.92(c), an Environmental Assessment, and attachments 1a, 1b, and 1c.

Attachments 1a and 1b to Enclosure 1: Provide a marked up copy of the existing FOL Appendix B for MNS Units 1 and 2 and CNS Units 1 and 2, respectively. The marked up copies show the proposed changes. Retyped (clean) FOL pages will be provided to the NRC immediately prior to issuance of the approved amendment.

Attachment 1c provides a summary of NUREG/CR-6703 Conclusions and an Evaluation of these conclusions with respect to McGuire and Catawba Nuclear Stations.

In accordance with DEC internal procedures and the Quality Assurance Topical Report, the proposed amendment has been reviewed and approved by the MNS and CNS Plant Operations Review Committee and the DEC Corporate Nuclear Safety Review Board.

Pursuant to 10CFR50.91, a copy of this LAR has been forwarded to the appropriate North and South Carolina state officials.

Implementation of the changes proposed at MNS and CNS will result in the need to revise both of the stations' Updated Final Safety Analysis Reports (UFSAR). The necessary UFSAR revisions will be made in accordance with 10 CFR 50.71(e).

There are no regulatory commitments contained in this submittal.

Duke requests that NRC review and approval of this LAR be completed by March 31, 2010. Duke has determined that a 30-day implementation grace period will be sufficient to implement this LAR.

Please direct any questions you may have in this matter to J.W. Bryant at (980) 875-4162.

Sincerely,

Bruce Hamilton

B. H. Hamilton

Enclosures

xc w/ Attachments:

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Bruce H. Hamilton 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.

Bruce Hamilton

Bruce H. Hamilton, Vice President, McGuire Nuclear Station

Subscribed and sworn to me: 10-29-09
Date

Kay L Crane, Notary Public

My commission expires: 4-1-2012
Date

KAY L CRANE
NOTARY
PUBLIC
LINCOLN COUNTY, N.C.

EVALUATION OF THE PROPOSED CHANGE

Subject: License Amendment Request to Delete Facility Operating License Condition Limiting Maximum Fuel Rod Burnup to 60 Giga-Watt Days per metric Ton Uranium

1.0 DESCRIPTION

This evaluation supports a request to amend McGuire Nuclear Station (MNS) Unit 1 Facility Operating License (FOL) No. NPF-9, MNS Unit 2 FOL No. NPF-17, Catawba Nuclear Station (CNS) Unit 1 FOL No. NPF-35, and CNS Unit 2 FOL No. NPF-52. The specific changes that are proposed in this amendment will delete the license condition located in Appendix B of the respective Unit's FOL which restricts the maximum rod average burnup to 60 gigawatt days per metric ton uranium (GWd/MTU) until the completion of an NRC environmental assessment supporting an increased limit. The NRC has completed an environmental assessment supporting peak-rod fuel burnup up to and including 62 GWd/MTU[1]. As stated in the NRC assessment, maximum peak-rod limitations envelope core average burnup limitations.

Deletion of the subject FOL condition will provide Duke Energy Corporation (DEC) the opportunity to increase maximum rod average burnup up to and including 62 GWd/MTU for fuel used in core reloads at MNS and CNS.

2.0 PROPOSED CHANGES

The proposed amendment would delete the following condition contained in Appendix B of the MNS Unit 1 and Unit 2 FOLs and in Appendix B of the CNS Unit 1 and Unit 2 FOLs:

> *"The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit."*

No changes to the MNS or CNS Technical Specifications (TS) or the TS Bases are necessary to support this amendment request.

3.0 BACKGROUND

3.1 Background

In 1999, the NRC approved and issued Amendment No. 188 to the MNS Unit 1 FOL No. NPF-9 and Amendment No. 169 to the MNS Unit 2 FOL No. NPF-17[2]. Also at that time, the NRC approved and issued Amendment No. 180 to the CNS Unit 1 FOL No. NPF-35 and Amendment No. 172 to the CNS Unit 2 FOL No. NPF-52[3]. These amendments revised various sections of the MNS and CNS TS's to permit transition from the use of Framatome Cogema Mark-BW fuel for MNS and CNS core reloads to the use of Westinghouse RFA fuel. Concurrent with the approval of the referenced amendments, the NRC also approved Topical Report DPC-NE-2009-P-A, "Duke Power Company

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[1] NUREG/CR-6703, "Environmental Effects of Extending Fuel Burnup Above 60 GWd/MTU," dated January 2001, ADAMS Accession No. ML010310298.

[2] Letter, F. Rinaldi (USNRC) to H. B. Barron (Duke Energy), Subject: McGuire Nuclear Station Units 1 and 2, Re: Issuance of Amendments (TAC Nos. MA2411 and MA2412), dated September 22, 1999.

[3] Letter, P. S. Tam (USNRC) to G. R. Peterson (Duke Energy), Subject: Catawba Nuclear Station Units 1 and 2, Re: Issuance of Amendments (TAC Nos. MA2359 and MA2361), dated September 22, 1999.

Westinghouse Fuel Transition Report". The transition to 100% use of Westinghouse RFA fuel for MNS and CNS core reloads has been completed.[4]

In approving the 1999 amendments, the NRC found that the DEC design limits and thermal-mechanical analysis methodologies discussed in DPC-NE-2009-P-A supported a rod average burnup limit up to and including 62 GWd/MTU for the RFA fuel design. However, from an environmental perspective, the NRC stated in the SEs for these amendments that the NRC generic environmental assessment regarding fuel burnup in place at that time had only considered fuel exposures up to 60 GWd/MTU. Consequently, as part of the amendments, the NRC imposed a license condition for both CNS and MNS limiting maximum fuel rod average burnup to the 60 GWd/MTU value until the NRC completed an environmental assessment supporting an increased limit. That license condition is currently described in Appendix B of the MNS and CNS FOLs.

In 2001, the NRC completed an environmental assessment supporting a maximum peak-rod fuel burnup up to and including 62 GWd/MTU. As stated in the NRC assessment, peak-rod limitations envelope core average burnup limitations. In 2003, the NRC also issued an SE approving an extension of the burnup limit for Framatome Cogema Mark-BW fuels up to and including 62 GWd/MTU[5]. Therefore, DEC is proposing to delete the current condition in Appendix B of the MNS and CNS FOLs which limits maximum rod average burnup at both MNS and CNS to 60 GWd/MTU. Upon deletion of this license condition, it will be acceptable, from both a methodology and environmental perspective, for MNS and CNS to increase the maximum rod average burnup up to and including 62 GWd/MTU for fuel used in core reloads.

4.0 TECHNICAL ANALYSIS

As stated in Enclosure 1 Section 3.0 - "Background", approved 1999 amendments revised various sections of the MNS and CNS TS's to permit transition from the use of Framatome Cogema Mark-BW fuels for MNS and CNS core reloads to the use of Westinghouse RFA fuel. The transition to 100% use of Westinghouse RFA fuel for MNS and CNS core reloads has been completed. Concurrent with the approval of the 1999 amendments, the NRC also approved Topical Report DPC-NE-2009-P-A, "Duke Power Company Westinghouse Fuel Transition Report". In approving this Topical Report, the NRC determined the current DEC design limits and thermal-mechanical analysis methodologies discussed in DPC-NE-2009-P-A support a rod average burnup limit up to and including 62 GWd/MTU for the Westinghouse RFA fuel design. In 2003, the NRC also issued an SE approving an extension of the burnup limit for Framatome Cogema Mark-BW fuels up to and including 62 GWd/MTU.

Upon approval of the 1999 amendments, DEC was unable to increase maximum rod average burnup to as high as 62 GWd/MTU since the NRC generic environmental assessment in place at that time regarding fuel burnup had only considered fuel exposures up to 60 GWd/MTU. In 2001, the NRC issued NUREG/CR-6703 - "Environmental Effects of Extending Fuel Burnup Above 60 GWd/MTU" which provided an environmental assessment supporting a maximum peak-rod fuel burnup up to and including 62 GWd/MTU. As stated in the NRC assessment, maximum peak-rod limitations envelope core average burnup limitations. Therefore, DEC is proposing to

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[4] CNS currently has 4 Westinghouse new generation fuel Lead Test Assemblies (LTA) in use in Unit 1. These LTAs will be discharged in 1EOC18 (scheduled to end December 2009).
[5] Letter, H. N. Berkow (USNRC) to J. F. Mallay (Framatome ANP), Subject: Safety Evaluation of Framatome ANP Topical Report BAW-10186P-A, Revision 1, Supplement 1, "Extended Burnup Evaluation" (TAC Nos MB3650 and MB7548), dated June 18, 2003.

delete the current MNS and CNS FOLs Appendix B condition which limits maximum rod average burnup at both MNS and CNS to 60 GWd/MTU. Deletion of the subject FOL condition will provide DEC the opportunity to increase maximum rod average burnup up to and including 62 GWd/MTU in the future and increase fuel management flexibility.

4.1 Evaluation of NUREG/CR-6703 With Respect To MNS and CNS

The NUREG/CR-6703 environmental assessment concluded there are no significant adverse environmental impacts associated with extending peak rod fuel burnup up to and including 62 GWd/MTU. The assumptions and analysis methodologies contained in the environmental assessment envelope the fuel design and the analysis methods utilized at MNS and CNS. A summary of the 2001 NRC environmental assessment conclusions and an evaluation of these conclusions with respect to MNS and CNS are summarized in Attachment 1c to Enclosure 1.

4.2 Summary

Upon approval of this LAR by the NRC and deletion of the MNS and CNS FOL condition currently limiting maximum rod average burnup to 60 GWd/MTU, it will be acceptable, from both a methodology and environmental perspective, to increase maximum rod average burnup up to and including 62 GWd/MTU for fuel used in core reloads at MNS and CNS. This limitation will become part of the MNS and CNS license bases governed by previous NRC SEs related to approval of MNS and CNS fuel analysis methodologies and the SE associated with this LAR. Fuel cycle specific reload calculations that confirm all fuel design criteria are satisfied will continue to be performed and documented each cycle. All current fuel design, core design, and safety analysis limits will continue to be met.

Implementation of this LAR will result in a need to revise both the MNS and CNS Updated Final Safety Analysis Reports (UFSAR) to include a discussion of the new fuel burnup limit.

5.0 REGULATORY SAFETY ANALYSIS

The changes which delete an additional condition currently contained in the MNS and CNS FOLs are being proposed in accordance with the timeframe contained in the condition itself. The proposed changes delete a condition which limits fuel burnup, consistent with NUREG/CR-6703. This document provides the regulatory basis for extending fuel burnup at nuclear power plants.

5.1 No Significant Hazards Consideration

Upon approval of this LAR by the NRC and deletion of the MNS and CNS FOL Appendix B condition currently limiting maximum rod average burnup to 60 GWd/MTU, it will be acceptable from both a methodology and environmental perspective to increase maximum rod average burnup up to and including 62 GWd/MTU for fuel used in core reloads at MNS and CNS. DEC has made the determination that this LAR involves a No Significant Hazards Consideration by applying the three standards set forth in 10 CFR 50.92(c), "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.

Deletion of the MNS and CNS FOL Appendix B conditions currently limiting maximum rod average burnup to 60 GWd/MTU does not add, delete, or modify any MNS or CNS systems, structures, or components (SSCs). The proposed amendment would effectively allow future increases in the MNS and CNS maximum rod average burnup limit up to and including 62 GWd/MTU using existing fuel management methods, analyses, and models that have been reviewed and approved by the NRC. Maximum average rod burnup limits will continue to be maintained within safe and acceptable limits using these fuel management methods and models.

Increasing the MNS and CNS maximum rod average burnup limit does not affect the thermal hydraulic response or the radiological consequences of any previously evaluated accident. The fuel rod design criteria will continue to be met at the maximum burnup limits allowed utilizing the current fuel management, analysis, and evaluation processes. An increase to the maximum rod average burnup limit will not increase the likelihood of a malfunction of nuclear fuel since the fuel currently used at MNS and CNS has been designed to support a maximum rod average burnup up to and including 62 GWd/MTU. Therefore, the proposed amendment does not involve 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 amendment would delete MNS and CNS FOL Appendix B condition which currently limits maximum rod average burnup to 60 GWd/MTU. The proposed amendment would effectively allow future increases in the MNS and CNS maximum rod average burnup limit up to and including 62 GWd/MTU using existing fuel management methods, analyses, and models that have been reviewed and approved by the NRC. The proposed amendment does not change the design function of the nuclear fuel or create any credible new failure mechanisms or malfunctions for the nuclear fuel. Fuel rod design criteria will continue to be met at the maximum burnup limits allowed under the fuel management methods and models that have been previously reviewed and approved by the NRC. Therefore, the proposed amendment 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 proposed amendment would delete a MNS and CNS FOL Appendix B condition which currently limits maximum rod average burnup to 60 GWd/MTU. The proposed amendment would effectively allow future increases in the MNS and CNS maximum rod

average burnup limit up to and including 62 GWd/MTU using existing fuel management methods, analyses, and models that have been reviewed and approved by the NRC. The proposed amendment does not result in altering or exceeding a design basis or safety limit for the plant. All current fuel design criteria will continue to be satisfied, and the safety analysis of record, including evaluations of the radiological consequences of design basis accidents, will remain applicable. Radiological consequences have been evaluated consistent with methodologies approved by the NRC.

Based on the above, Duke concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10CFR50.92(c), and, accordingly, a finding of "No Significant Hazards Consideration" is justified.

5.2. Applicable Regulatory Requirements/Criteria

As discussed in the MNS and CNS UFSAR Section 4.3, applicable General Design Criterion (GDC) from 10 CFR 50, Appendix A include the following:

GDC 10 - "Reactor design", which requires that "The reactor core and associated coolant, control, and protection systems shall be designed with appropriate margin to assure that specified acceptable fuel design limits are not exceeded during any condition of normal operation, including the effects of anticipated operational occurrences."

GDC 61 - "Fuel storage and handling and radioactivity control", which requires, in part, that "The fuel storage and handling, radioactive waste, and other systems which may contain radioactivity shall be designed to assure adequate safety under normal and postulated accident conditions."

Other applicable regulatory criteria are as follows:

10 CFR 51.52 Table S-4 "Environmental Effects of Transportation of Fuel and Waste"

10 CFR 71 "Packaging and Transportation of Radioactive Material"

Compliance with the above GDC requirements and applicable regulatory criteria will continue to be met upon approval and implementation of this LAR. All current fuel design criteria will continue to be satisfied, and the safety analysis of record, including evaluations of the radiological consequences of design basis accidents, will remain applicable. Radiological consequences have been evaluated consistent with methodologies approved by the NRC.

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 inimical to the common defense and security or to the health and safety of the public.

5.3 PRECEDENTS

Below are NRC-approved precedent licensing actions for other stations which provided for deletion of requirements similar to the MNS and CNS FOL Appendix B license condition:

- Kewaunee Power Station amendment dated July 2, 2007 and related NRC SE dated July 2, 2008 (TAC No. MD6085).

- Surry Power Station amendment dated March 6, 2007 and related NRC SE dated December 10, 2007 (TAC Nos. MD4716 and MD4717).

6.0 ENVIRONMENTAL CONSIDERATION

The proposed license amendment request is supported by a formal NRC environmental assessment as documented in NUREG/CR-6703 - "Environmental Effects of Extending Fuel Burnup Above 60 GWd/MTU". Further, the proposed amendment does not involve a significant hazards consideration nor significantly increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Therefore, the proposed amendment meets the criteria given in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirement for performing an Environmental Assessment/Impact Statement.

7.0 REFERENCES

1. NUREG/CR-6703, "Environmental Effects of Extending Fuel Burnup Above 60 GWd/MTU," dated January 2001, ADAMS Accession No. ML010310298.

2. Letter, F. Rinaldi (USNRC) to H. B. Barron (Duke Energy), SUBJECT: McGuire Nuclear Station Units 1 and 2, Re: Issuance of Amendments (TAC Nos. MA2411 and MA2412), dated September 22, 1999.

3. Letter, P. S. Tam (USNRC) to G. R. Peterson (Duke), SUBJECT: Catawba Nuclear Station Units 1 and 2, Re: Issuance of Amendments (TAC Nos. MA2359 and MA2361), dated September 22, 1999.

4. Letter, H. N.Berkow (USNRC) to J. F. Mallay (Framatome ANP), Subject: Safety Evaluation of Framatome ANP Topical Report BAW-10186P-A, Revision 1, Supplement 1, "Extended Burnup Evaluation" (TAC Nos MB3650 and MB7548), dated June 18, 2003.

5. Letter, Gerald T. Bischof (Vice President - Nuclear Engineering, Virginia Electric and Power Company) to U. S. Nuclear Regulatory Commission - SUBJECT: Surry Power Station, Units 1 and 2, Proposed Increase In The Lead Rod Average Burnup Limit, dated March 6, 2007.

6. Letter, S. Lingam (USNRC) to D. A. Christian (Virginia Electric and Power Company), SUBJECT: Surry Power Station, Unit NOS. 1 and 2, Environmental Assessment Related To Your Application For License Amendment Regarding Increase In The Lead Rod Average Burnup Limit (TAC Nos. MD4716 AND MD4717), dated December 10, 2000.

7. Letter, Gerald T. Bischof (Vice President - Nuclear Engineering, Dominion Energy Kewaunee Inc) to U. S. Nuclear Regulatory Commission, SUBJECT: Kewaunee Power Station, Deletion of License Condition 2.C(5), Fuel Burnup, dated July 2, 2007.

8. Letter, J. Cushing (USNRC) to D. A. Christian (Dominion Energy Kewaunee, Inc), SUBJECT: Kewaunee Power Station – Issuance of Amendment RE: Deletion of License Condition on Fuel Burnup (TAC NO. MD6085), dated July 2, 2008.

9. Topical Report DPND-DPC-NE-2009-PA, "Duke Power Company Westinghouse Fuel Transition Report, Revision 2A."

10. Letter, F. Rinaldi (NRC) to H. B. Barron (McGuire Nuclear Station), finding use of high burnup methodology described in topical report BAW-10186P-A acceptable for reload licensing application at McGuire, March 3, 1999.

11. Letter, P. S. Tam (NRC) to G. R. Peterson (Catawba Nuclear Station), finding use of high burnup methodology described in topical report BAW-10186P- A acceptable for reload licensing application at Catawba, March 3, 1999.

Attachment 1a to Enclosure 1

Marked Up Pages of The Existing FOL for MNS

APPENDIX B

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-9

Duke Energy Carolinas, LLC shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Conditions		Implementation Date
184	The schedule for the performance of new and revised surveillance requirements shall be as follows: For surveillance requirements (SRs) that are new in Amendment No. 184 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 184. For SRs that existing prior to Amendment No. 184, including SRs with modified acceptance criteria and SRs whose intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 184. For SRs that existed prior to Amendment No. 184, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 184.		Within 90 days of the date of this amendment.
188	The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.		Within 30 days of date of this amendment

DELETE

Renewed License No. NPF-9
Amendment No. [Later]

APPENDIX B

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-17

Duke Energy Carolinas, LLC shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Conditions	Implementation Date
166	The schedule for the performance of new and revised surveillance requirements shall be as follows: For surveillance requirements (SRs) that are new in Amendment No. 166 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 166. For SRs that existed prior to Amendment No. 166, including SRs with modified acceptance criteria and SRs whose intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 166. For SRs that existed prior to Amendment No. 166, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 166.	Within 90 days of the date of this amendment.
169	The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.	Within 30 days of date of amendment

Delete

Attachment 1b to Enclosure 1

Marked Up Pages of The Existing FOL for CNS

Amendment Number	Additional Condition		Implementation Date
173	The schedule for the performance of new and revised surveillance requirements shall be as follows: For surveillance requirements (SRs) that are new in Amendment No. 173 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 173. For SRs that existing prior to Amendment No. 173, including SRs with modified acceptance criteria and SRs who intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 173. For SRs that existed prior to Amendment No. 173, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 173		By January 31, 1999 Delete
180	The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.		Within 30 days of date of amendment.
	In association with the ECCS sump strainer modification and Generic Safety Issue (GSI)-191 requirements: 1. Unit 1 shall enter Mode 5 for the outage to install the sump strainer modification no later than May 19, 2008 and 2. The Unit 1 sump strainer modification shall be completed prior to entry into Mode 4 after May 19, 2008.		Within 30 days of date of amendment and no later than December 31, 2007

Amendment No. [Later]

Amendment Number	Additional Condition		Implementation Date
165	The schedule for the performance of new and revised surveillance requirements shall be as follows: For surveillance requirements (SRs) that are new in Amendment No. 165 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 165. For SRs that existing prior to Amendment No. 165, including SRs with modified acceptance criteria and SRs who intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 165. For SRs that existed prior to Amendment No. 165, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 165		By January 31, 1999
172	The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.		Within 30 days of date of amendment.
244	For steam generator (SG) integrity assessments, the ratio of 2.5 will be used in completion of both the Condition Monitoring (CM) and the Operational Assessment (OA) upon implementation of the Interim Alternate Repair Criterion (IARC). For example, for the CM assessment, the component of leakage from the lower 4 inches of the most limiting SG during the prior cycle of operation will be multiplied by a factor of 2.5 and added to the total leakage from any other source and compared to the allowable accident analysis leakage assumption. For the OA, the difference in leakage from the allowable limit during the limiting design basis accident minus the leakage from the other sources will be divided by 2.5 and compared to the observed leakage. An administrative limit will be established to not exceed the calculated value.		Prior to any entry into Mode 4 during Cycle 17 operation

Delete

Summary of NUREG/CR-6703 Conclusions and Evaluation of These Conclusions With Respect To MNS and CNS

Summary of NUREG/CR-6703 Conclusions and Evaluation of These Conclusions With Respect To MNS and CNS

NUREG/CR-6703 Conclusion Summary	Evaluation With Respect To MNS and CNS	Does NUREG/CR-6703 Conclusion Envelope MNS and CNS?
The NUREG/CR-6703 environmental assessment concluded that increasing fuel burnup above 60 GWd/MTU changes the radionuclide mixture in the reactor fuel. Whereas the activities of short-lived fission products tend to remain constant or decrease slightly, the activities associated with activation products and actinides tends to increase.	Analyses of the core, assembly, and rod radionuclide inventories for MNS and CNS specifically accounted for the increase in burnup up to a maximum average rod burnup of 62 GWd/MTU. These analyses determined that, for a maximum peak-rod fuel burnup up to and including 62 GWd/MTU, any results from an increase in radionuclide inventories would remain bounded by current NRC regulations and guidance.	Yes
The NUREG/CR-6703 environmental assessment concluded that increasing fuel burnup above 60 GWd/MTU tends to increase the gap release fraction. However, the gap release fractions predicted to occur at 62 GWd/MTU remain below fractions assumed in current NRC guidance.	With regard to gap release fractions, the applicable safety and radiological analyses performed for MNS and CNS comply with the relevant current NRC guidance. Therefore, the increases in fission product gap release fraction predicted to occur at 62 GWd/MTU in the 2001 NRC environmental assessment would be bounded by current regulations and guidance.	Yes
The NUREG/CR-6703 environmental assessment concluded that increasing fuel burnup above 60 GWd/MTU is not likely to increase environmental impacts from normal reactor operations because coolant activity has been decreasing as fuel burnup has been increasing. This decrease is attributed to the reduction in the number of fuel failures as a result of better quality control in fuel fabrication.	The MNS and CNS coolant activity performance record exhibits the general trend described here. Therefore, it is expected the environmental impacts from normal operation at MNS and CNS would not increase by allowing a maximum fuel rod average burnup up to and including 62 GWd/MTU.	Yes

Summary of NUREG/CR-6703 Conclusions and Evaluation of These Conclusions With Respect To MNS and CNS

NUREG/CR-6703 Conclusion Summary	Evaluation With Respect To MNS and CNS	Does NUREG/CR-6703 Conclusion Envelope MNS and CNS?
The NUREG/CR-6703 environmental assessment concluded that increasing fuel burnup above 60 GWd/MTU decreases the rate of discharge of fuel to the spent fuel pool. This will preserve space in the spent fuel pool postponing the need to remove spent fuel from the pool. It also reduces the total heat load on the spent fuel pool cooling system.	It is expected that allowing a maximum fuel rod average burnup up to and including 62 GWd/MTU at MNS and CNS would result in these benefits with respect to rate of discharge of fuel, preservation of spent fuel pool space, spent fuel removal frequency, and spent fuel pool cooling heat load.	Yes
The NUREG/CR-6703 environmental assessment concluded that increasing fuel burnup above 60 GWd/MTU reduces the requirement for mining and processing uranium ore and fabrication of fuel assemblies. As a result, environmental consequences associated with the front end of the fuel cycle should decrease.	It is expected that allowing a maximum fuel rod average burnup up to and including 62 GWd/MTU at MNS and CNS would result in these benefits with respect to fuel assembly related mining, processing, and fabrication.	Yes
The NUREG/CR-6703 environmental assessment concluded that increasing fuel burnup above 60 GWd/MTU will not change limits on coolant activity. Consequently, the potential environmental impacts of postulated LOCAs and PWR steam generator tube rupture accidents are unchanged.	With regard to accidents involving a release of reactor coolant, the MNS and CNS TS limits on allowable coolant activity will not change. Consequently, the potential environmental impacts of these accidents, which assume reactor coolant activities are at the TS limits, will be unchanged.	Yes
The NUREG/CR-6703 environmental assessment concluded that increasing fuel burnup above 60 GWd/MTU increases the potential environmental impacts from a fuel handling accident. However, the doses calculated for fuel handling accidents remain well below regulatory limits.	MNS and CNS analyses which evaluate the impact of a fuel handling accident assume radionuclide inventories corresponding to a maximum fuel rod average burnup of 62 GWd/MTU. These analyses demonstrate that the doses calculated for these fuel handling accidents remain below regulatory limits.	Yes

Summary of NUREG/CR-6703 Conclusions and Evaluation of These Conclusions With Respect To MNS and CNS

NUREG/CR-6703 Conclusion Summary	Evaluation With Respect To MNS and CNS	Does NUREG/CR-6703 Conclusion Envelope MNS and CNS?
The NUREG/CR-6703 environmental assessment concluded that increasing fuel burnup above 60 GWd/MTU does not significantly change the potential environmental impacts of incident-free transportation of spent nuclear fuel or the accident risks associated with spent fuel transportation if the fuel is cooled for five years after discharge from the reactor. Doses associated with incident-free transportation of spent fuel with burnup to 75 GWd/MTU are bounded by the doses in 10CFR51.52, Table S-4 if dose rates from the shipping casks are maintained within regulatory limits.	Internal processes and procedures ensure dose rates from shipping casks for MNS and CNS are maintained within applicable regulatory limits. With regard to spent fuel transportation accidents, the environmental impact conclusions of NUREG/CR-6703 are applicable. With respect to any future transportation of MNS and CNS fuel discharged from the reactor, DEC will comply with regulations and requirements at time of transport	Yes
The NUREG/CR-6703 environmental assessment concluded that increasing fuel burnup above 60 GWd/MTU has an economical benefit.	Allowing MNS and CNS to increase maximum fuel rod average burnup up to and including 62 GWd/MTU for fuel rods used in core reloads at MNS and CNS could reduce the amount of fuel required per unit of electricity generated. It is expected this could provide an economic benefit to MNS and CNS related to front-end and back-end fuel cycle costs.	Yes