

March 27, 2007

U.S. Nuclear Regulatory Commission
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Washington, DC 20555-001

Subject: Duke Power Company LLC d.b.a. Duke Energy Carolinas,
LLC

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

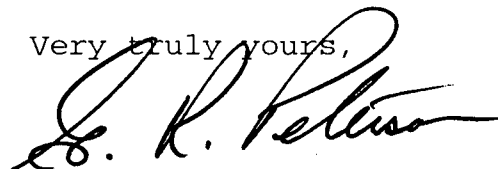
Response to a Request for Additional Information
Regarding License Amendment Request Revising McGuire
Units 1 and 2 Commitments to USNRC Regulatory Guide
1.82, Revision 0, "Sumps For Emergency Core Cooling
and Containment Spray Systems" and Revising McGuire
Units 1 and 2 Technical Specification Surveillance
Requirement (SR) 3.5.2.8 and Associated Bases (TACs MD
4748 and 4749)

Please find the Duke Power Company LLC d.b.a. Duke Energy
Carolinas, LLC (Duke) response to the Request for Additional
Information (RAI) transmitted electronically on March 26, 2007.
The License Amendment Request was originally submitted by letter
dated March 8, 2007. The RAI responses are included as
Attachment A to this letter.

There are no regulatory commitments contained in this letter or
the associated attachment.

Please direct any questions you may have in this matter to K. L.
Ashe at (704) 875-4535.

Very truly yours,



G. R. Peterson

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xc w/ Attachments:

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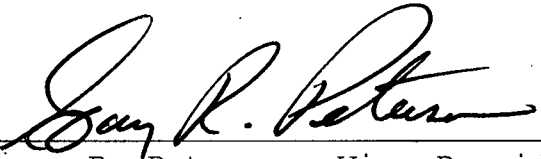
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Gary R. Peterson affirms that he is the person who subscribed his name to the foregoing statement, and that all the matters and facts set forth herein are true and correct to the best of his knowledge.



Gary. R. Peterson, Vice President, McGuire Nuclear Station

Subscribed and sworn to me: March 27, 2007
Date

Deanna A. DeLoach, Notary Public

My commission expires: June 18, 2008
Date

ATTACHMENT A

Response to NRC Request for Additional Information
License Amendment Request Revising McGuire Units 1 and 2
Commitments to USNRC Regulatory Guide 1.82, Revision 0, "Sumps
for Emergency Core Cooling and Containment Spray Systems" and
Revising McGuire Units 1 and 2 Technical Specification
Surveillance Requirement (SR) 3.5.2.8 and Associated Bases
(TACs MD 4748 and 4749)

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

1. The strainer design shows that a substantial amount of the strainer will be located inside the crane wall, potentially near the Reactor Coolant System and other potential high-energy pipe systems. Physical damage due to impingement from a pipe whip or jet, or missile generated from a high-energy line break could be a credible failure mechanism for the sump strainer. Please provide the basis for concluding that the strainer portion inside the crane wall [ICW] is protected from pipe whip or jet from a high-energy line break and this failure mode is not credible. Small breaks in close proximity to the strainer modules should be evaluated.

Response:

Impacts to the ECCS Sump were evaluated in accordance with design and licensing requirements described in UFSAR Section 3.6, "Protection Against Dynamic Effects Associated With The Postulated Rupture Of Piping". Postulated high energy pipe breaks that could potentially interact with the new sump screen were identified by the following method. High Energy Pipe Rupture Composite drawings were reviewed, and postulated breaks in close proximity to the new sump screens were listed. Then, piping isometric drawings associated with the breaks along with applicable rupture restraint drawings were reviewed to determine if the new sump screen was a target of pipe whip or jet impingement. Two postulated pipe breaks were identified that resulted in unacceptable jet impingement interaction with the new sump screen. A new rupture restraint and jet barrier is required to protect the sump screen from these postulated breaks. These restraints are discussed on page 24 of 44 of Attachment 3 of the License Amendment Request and a commitment to install these restraints is stated in Attachment 5 of the Request. Small breaks were included in the evaluation. Piping and other miscellaneous components in the area of the new screen are mounted per QA Condition 1 or 4 requirements and will not pose a threat to the new screen.

Related discussions on this [RAI Question 1: physical damage of the ICW enclosure due to pipe whip or jet impingement] issue contained in the following areas may

need to be revised depending on your response to this RAI.

- a) Attachment 1 Marked-Up McGuire UFSAR, Insert for items C.2 and C.6

Response:

As indicated by the responses provided to RAIs 1 and 2, Duke has determined that changes are not required.

- b) Attachment 3, page 12 of 44, Table 1 Proposed Licensing Basis Changes, the "Proposed Change" for Regulatory Position C.2 repeats the statement "ECCS/CS train separation within the common sump strainer is not required due to the absence of any credible failure of the sump strainer."

Response:

As indicated by the responses provided to RAIs 1 and 2, Duke has determined that changes are not required.

- c) Attachment 3, page 24 of 44, references UFSAR Chapter 3.6 "Protection Against Dynamic Effects Associated with the Postulated Rupture of Piping." Specifically, subsection 3.6.5.1.2 "Protective Provisions for Vital Equipment" may need to be updated to include the ICW enclosure.

Response:

The UFSAR markups provided as Attachment 1 to Duke's March 8, 2007 License Amendment Request only included those associated with the requested exceptions to Regulatory Guide 1.82, Rev 0. Any additional changes to the UFSAR that may be necessitated by the modification of the ECCS sumps will be forwarded in accordance with 10CFR50.71(e).

- d) Attachment 3, page 36 or 44, Justification for Change: A new exception to Regulatory Position C.8 is requested so as to reflect the new sump strainer design. **The preference for a submerged solid top deck is intended to provide an additional protective**

barrier against missiles (bold added for emphasis)
and protection against air and debris entrainment
via vortex. Rather than...

Response:

The statement highlighted in the note above should have been identified as Duke's understanding for the preference for a solid top deck in Regulatory Guide 1.82, Rev 0, Regulatory Position C.8. As such, the discussion in our justification continues by stating the shielded pipechase location itself provides protection from missiles.

2. Please explain whether the [enclosure] "solid deck feature" is credited for providing protection of the portion of strainer assembly inside the crane wall against pipe whip or whether it is only credited for vortex suppression. If the solid deck and ICW enclosure are being credited for providing this protection of the strainer, please provide design and design basis information for evaluation. Related discussion on this issue contained in Attachment 1 Marked-Up McGuire UFSAR, Insert for items C.2 and C.6, may need to be revised, depending on your response to this RAI.

Response:

The inside crane wall (ICW) enclosure "solid deck feature" referenced above is not credited for providing protection of the portion of strainer assembly inside the crane wall against pipe whip or jets. It is credited for vortex suppression.

As indicated by our response, Duke has determined that changes to the Proposed Change to Regulatory Positions C.2 and C.6 are not required.

3. Please provide information related to the potential for the ICW enclosure to become completely clogged with large debris and the potential for the solid plate to trap air on the underside, and how this is accounted for in the strainer performance analysis. Related discussion on this issue contained in Attachment 3, page 12 of 44, Table 1 Proposed Licensing Basis Changes, the "Proposed Change" for

Regulatory Position C.8, may need to be revised depending on your response to this RAI.

Response:

Reference paragraph (b.) on page 30 of Attachment 3 to the License Amendment Request. The ICW enclosure sides are assumed to become clogged with debris and are not credited as a flow path. The credited flow path (i.e., hydraulic analysis) assumes all flow to the strainer elements enters through the crane wall (reference Figure 6). Prior to swap over from the Refueling Water Storage Tank to the ECCS Containment Sump, the ICW enclosure fully floods (i.e., the top deck will be fully submerged) and vents (the structure is not air tight).

As indicated by our response, Duke has determined that changes to the Proposed Change to Regulatory Position C.8 are not required.