your energy partner
OPPD
Omaha Public Power District

444 South 16th Street Mall
Omaha NE 68102-2247

March 4, 2005
LIC-05-0017

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

Reference:
1. Docket No. 50-285
2. NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors" (NRC-04-0115)

SUBJECT: 90 Day Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors"

In Attachment 1 of this letter, the Omaha Public Power District (OPPD) provides the initial 90 day response information requested in Reference 2. Attachment 2 lists the only commitments made in the response. Additionally, OPPD agrees to participate as a Pilot Plant for the resolution of Generic Safety Issue (GSI) 191, "Assessment of Debris Accumulation on PWR Sump Performance."

I declare under penalty of perjury that the foregoing is true and correct. (Executed on March 7, 2005.)

If you have additional questions, or require further information, please contact Thomas R. Byrne at (402) 533-7368.

Sincerely,

Ralph L. Phelps
Division Manager
Nuclear Engineering

RLP/TRB/trb

Attachment 1 - Response to NRC Generic Letter 2004-02, "90 Day Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors"
Attachment 2 – List of Commitments

ATTACHMENT 1

90 Day Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors"

90 Day Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors"

NRC Request 1a:

[Provide] a description of the methodology that is used or will be used to analyze the susceptibility of the [Emergency Core Cooling System] ECCS and [Containment Spray System] CSS recirculation functions for your reactor to the adverse effects identified in this generic letter of post-accident debris blockage and operation with debris-laden fluids identified in this generic letter. Provide the completion date of the analysis that will be performed.

OPPD Answer:

The Omaha Public Power District (OPPD) will perform the analyses to determine the susceptibility of the ECCS and CSS recirculation functions for Fort Calhoun Station Unit No. 1 (FCS) to the adverse effects of post-accident debris blockage and operation with debris-laden fluids by September 1, 2005, except the analysis of the debris head loss across the strainers. A preliminary debris head loss analysis will be completed by September 1, 2005. The final debris head loss analysis will be completed as part of the strainer modification process by December 31, 2007. OPPD plans to adopt the NEI 04-07 (Reference 1) methodology as approved in the NRC Safety Evaluation Report (Reference 2) to the greatest extent practicable. Details of the methodology used for FCS will be provided in the Generic Letter 2004-02 response that is due on September 1, 2005.

In summary, the FCS analyses will address the following major areas:

- Pipe Break Characterization
- Debris Generation
- Latent Debris Accumulation within Containment
- Debris Transport to the Sump
- Head Loss as a Result of Debris Accumulation
- Analytical Refinements
- Debris Source Term Reduction (such as insulation removal during the Fall 2006 Refueling Outage)
- Sump Structural Analysis
- Upstream Effects of Debris Accumulation
- Downstream Effects associated with any Debris Bypass

For recirculation transport, OPPD will utilize 3D Computational Fluid Dynamics (CFD) methods to perform recirculation transport assessments.

The Chemical Precipitation Effects of Debris Accumulation will not be addressed until current NRC testing is completed, the data has been appropriately evaluated with respect to plant specific conditions, and an approved methodology for application of chemical effects is established.

NRC Request 1b:

[Provide] a statement of whether you plan to perform a containment walkdown surveillance in support of the analysis of the susceptibility of the ECCS and CSS recirculation functions to the adverse effects of debris blockage identified in this generic letter. Provide justification if no containment walkdown surveillance will be performed. If a containment walkdown surveillance will be performed, state the planned methodology to be used and the planned completion date.

OPPD Answer:

OPPD has already completed a containment walkdown surveillance in support of the analysis of the susceptibility of the ECCS and CSS recirculation functions to the adverse effects of debris blockage. The containment walkdown surveillance was performed during the Fall 2003 Refueling Outage. The walkdown surveillance was performed generally in accordance with the guidance provided in NEI-02-01 (Reference 3) for performance of containment walkdowns related to debris blockage issues. The walkdown surveillance results are currently being utilized for evaluations to analyze the susceptibility of the ECCS and CSS recirculation functions at FCS.

Since a containment walkdown surveillance has been performed and documented, no additional formal containment walkdown surveillances are planned to be performed in response to Generic Letter 2004-02.

References

1. NEI-04-07, "Pressurized Water Reactor Sump Performance Evaluation Methodology.

2. Letter from Susan C. Black (NRC) to Anthony R. Pietrangelo (NEI), "Pressurized Water Reactor Containment Sump Evaluation Methodology," dated December 6, 2004.

3. NEI 02-01, "Condition Assessment Guidelines, Debris Sources inside Containment," April 2002.

ATTACHMENT 1

List of Commitments

List of Commitments

COMMITMENT	Due Date/Event
The Omaha Public Power District (OPPD) will perform the analyses to determine the susceptibility of the ECCS and CSS recirculation functions for Fort Calhoun Station Unit No. 1 (FCS) to the adverse effects of post-accident debris blockage and operation with debris-laden fluids by September 1, 2005, except the analysis of the debris head loss across the strainers. (AR 35867)	September 1, 2005
A preliminary debris head loss analysis will be completed by September 1, 2005. (AR 35867)	September 1, 2005
Details of the methodology used for FCS will be provided in the Generic Letter 2004-02 response that is due on September 1, 2005. (AR 35867)	September 1, 2005
The final debris head loss analysis will be completed as part of the strainer modification process by December 31, 2007. (AR 35867)	December 31, 2007