**UNITED STATES**
**NUCLEAR REGULATORY COMMISSION**
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

March 10, 2010

Mr. Timothy J. O'Connor
Site Vice President
Monticello Nuclear Generating Plant
Northern States Power Company, Minnesota
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT – NOTIFICATION OF AN NRC TRIENNIAL HEAT SINK PERFORMANCE INSPECTION AND REQUEST FOR INFORMATION -- INSPECTION REPORT 05000263/2010003

Dear Mr. O'Connor:

On April 26, 2010, the NRC will begin the on-site portion of the Triennial Heat Sink Performance Inspection at your Monticello Nuclear Generating Plant. This inspection will be performed in accordance with NRC baseline inspection procedure (IP) 71111.07. The onsite portion of the inspection will take place on April 26 – 30, 2010.

In order to minimize the impact that the inspection has on the site and to ensure a productive inspection, we have enclosed a request for documents needed for the inspection. The documents have been divided into three groups.

- The first group lists information necessary for our initial inspection scoping activities. This information should be available to the lead inspector no later than March 29, 2010. By April 5, 2010, the inspector will communicate the initial selected set of approximately 2-3 risk significant heat exchangers.

- The second group of documents requested is those items needed to support our in-office preparation activities. This set of documents, including the calculations associated with the selected heat exchangers, should be available at the Regional Office no later than April 16, 2010. This information should be separated by each selected component, especially if provided electronically (e.g., folder with component name that includes calculations, condition reports, maintenance history, etc.). During the in-office preparation activities, the inspector may identify additional information needed to support the inspection.

- The last group includes the additional information above, as well as, plant specific reference material. This information should be available to the inspector by the first day of the onsite inspection, April 26, 2010. It is also requested that corrective action documents and/or questions developed during the inspection be provided to the inspector as the documents are generated.

The lead inspector for this inspection is Mr. Gerard O'Dwyer. We understand that our regulatory contact for this inspection is Mr. Ronald N. Baumer of your organization. If there are questions about the inspection or material requested, please contact the lead inspector at (630) 829-9624 or via email gerard.odwyer@nrc.gov.

It is important that these documents be as complete as possible, in order to minimize the number of documents requested during the preparation week, or during the onsite inspection. A hard-copy with the required information is also an acceptable option.

All requested documents are to be within the time period from the onsite inspection back to the documents that were provided in response to the previous heat sink performance inspection. If no activities were accomplished in that time period, then the request applies to the last applicable documents in the previous time period.

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, Control Number 3150-0011.

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Jamie Benjamin, Acting Chief
Engineering Branch 2
Division of Reactor Safety

Docket No. 50-263;
License No. DRP-22

Enclosure: TRIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST

cc w/encl: Distribution via ListServ

**TRIENNIAL HEAT SIK PERFORMANCE INSPECTION DOCUMENT REQUEST**

**Inspection Report:** **05000263/2010003**

**Inspection Dates:** **April 26 – 30, 2010 Inspection week**

**Inspection Procedure:** **IP 71111.07, "Heat Sink Performance"**

**Lead Inspector:** **Gerard O'Dwyer**
**(630) 829-9624**
**Gerard.Odwyer@nrc.gov**

## *I. Information Requested By March 29, 2010*

*1.* List of the Generic Letter (GL) 89-13, "Service Water System Problems Affecting Safety-Related Equipment," heat exchangers in order of risk significance.

*2.* Copy of heat exchanger performance trending data tracked for each GL 89-13 heat exchanger.

*3.* List of corrective action program documents (with a short description) associated with GL 89-13 heat exchangers, heat sinks, silting, corrosion, fouling, or heat exchanger testing, for the previous three years or since the last corrective action program document list was sent to the NRC for the previous heat sink performance inspection. The list should include all corrective action program documents not on the last corrective action program document list.

*4.* Copy of any self-assessment done on any of GL 89-13 heat exchangers.

*5.* Last two system health report(s) and maintenance rule system notebooks for all the GL 89-13 heat exchangers.

*6.* List of engineering-related operator workarounds (with a short description) associated with GL 89-13 heat exchangers. The requested documents are to be for the time period from the onsite inspection period back to the documents that were provided in response to the previous heat sink performance inspection.

*7.* List of permanent and temporary modifications (with a short description) associated with GL 89-13 heat exchangers. The requested documents are to be for the time period from the onsite inspection period back to the documents that were provided in response to the previous heat sink performance inspection.

***2. Information Requested By April 16, 2010***

1. Copy of the UFSAR section applicable to the GL 89-13 Heat Exchanger Program.

2. Copies of procedures developed to implement the recommendations of GL 89-13 (e.g., the GL 89-13 Heat Exchanger Program description).

3. For the specific heat exchangers selected:

   a. Copies of the Updated Final Safety Analysis Report (UFSAR) sections applicable for each heat exchanger;

   b. Copy of system description and design basis document for the heat exchangers (as applicable);

   c. Provide a list of calculations (with a short description) which currently apply to each heat exchanger; and

   d. Copy of any operability determinations or other documentation of degradation associated with the heat exchangers or the systems that support the operation for the selected heat exchangers.

4. For the ultimate heat sink (UHS) and the safety-related service water system (or equivalent):

   a. Copies of the applicable Updated Final Safety Analysis Report (UFSAR) sections;

   b. Copy of system description and design basis document (as applicable);

   c. Copy of any operability determinations or other documentation of degradation associated with the UHS and the safety-related service water system; and

   d. Copy of the document (e.g. UFSAR or Technical Requirements Manual) that states the maximum cooling water system inlet temperature limit that still allows full licensed power operation of the nuclear reactor.

5. A schedule of all inspections, cleanings, maintenance, or testing of <u>any</u> safety-related plant heat exchanger to be performed during the on-site portion of the inspection.

***3. Information Requested to be Available on First Day of Inspection, April 26, 2010***

*1.* For the specific heat exchangers selected:

   a. Copy of the calculation which correlates surveillance testing results from these heat exchangers with design basis heat removal capability (e.g., basis for surveillance test acceptance criteria);

b. Copies of the two most recent completed tests and evaluation data confirming thermal performance for those heat exchangers which are performance tested;

c. Documentation and procedures that identify the types, accuracy, and location of any special instrumentation used for the two most recently completed thermal performance tests for the heat exchangers (e.g., high accuracy ultrasonic flow instruments or temperature instruments). Include calibration records for the instruments used during these tests;

d. Information regarding any alarms which monitor on-line performance;

e. Copy of the document describing the inspection results of each heat exchanger;

f. The cleaning and inspection maintenance schedule for each heat exchanger for the next 5 years;

g. Copy of the design specification and heat exchanger data sheets for each heat exchanger;

h. Copy of the vendor manuals including component drawings for each heat exchanger;

i. Copy of the calculation which establishes the limiting (maximum) design basis heat load which is required to be removed by each of these heat exchangers;

j. Copy of the operating procedure that ensures that the maximum cooling water system inlet temperature limit is not exceeded;

k. Copy of the calculations or documents which evaluate the potential for water hammer in each heat exchanger or associated piping;

l. Copy of the calculations that evaluate excessive tube vibration in each heat exchanger and the documents that describe the controls that prevent heat exchanger degradation due to excessive flow induced vibration during operation;

m. Copy of the periodic flow testing at or near maximum design flow. The requested documents are to be for the time period from the onsite inspection period back to the documents that were provided in response to the previous heat sink performance inspection;

n. Copy of the document which identifies the current number of tubes in service for each heat exchanger and the supporting calculation which establishes the maximum number of tubes which can be plugged in each heat exchanger;

o. Copy of the document establishing the repair criteria (plugging limit) for degraded tubes which are identified in each heat exchanger;

p. Copies of the documents that verify the structural integrity of the heat exchanger (e.g. eddy current summary sheets, ultrasonic testing results, and visual inspection results);

q. Copies of those documents that describe the methods taken to control water chemistry in the heat exchangers;

***4. For the review of the operation of the safety-related service water system (or equivalent) and the UHS:***

1. Copies of any design change performed on the UHS. The requested documents are to be for the time period from the onsite inspection period back to the documents that were provided in response to the previous heat sink performance inspection.

2. Copies of any design change performed on the safety-related service water system. The requested documents are to be for the time period from the onsite inspection period back to the documents that were provided in response to the previous heat sink performance inspection.

3. Copies of procedures for a loss of UHS.

4. Copies of procedures for a loss of service water system.

5. Inspections and/or maintenance related to preventing macrofouling (e.g. silt, dead mussel shells, or debris) and biotic fouling (e.g. fish, algae, grass, or kelp). The requested documents are to be for the time period from the onsite inspection period back to the documents that were provided in response to the previous heat sink performance inspection.

6. Copies of chemistry procedures that monitor for pH, calcium hardness, etc. Also, provide copies of the associated results. The requested documents are to be for the time period from the onsite inspection period back to the documents that were provided in response to the previous heat sink performance inspection.

7. Copies of documents associated with the monitoring of pump performance for potential strong-pump vs. weak-pump interaction.

***5. For the review associated with the system walkdown of the Closed Cooling Water System :***

1. Copies of the testing, inspection, or monitoring program procedures for buried or inaccessible piping and the associated results. The requested documents are to be for the time period from the onsite inspection period back to the documents that were provided in response to the previous heat sink performance inspection.

2. Copies of the ultrasonic test results and/or visual inspections that verify the structural integrity of the piping.

3. Copies of the procedures to monitor assess, and disposition active through wall pipe leaks, including structural evaluations and/or planned corrective actions.

4. History of any thru wall pipe leak on the system. The requested documents are to be for the time period from the onsite inspection period back to the documents that were provided in response to the previous heat sink performance inspection.

5. Copies of the documents associated with the periodic inspection program used to detect protective coating failure, corrosion, and erosion.

6. Copies of the IST vibration monitoring results and operational history for deep draft vertical pumps, if applicable. The requested documents are to be for the time period from the onsite inspection period back to the documents that were provided in response to the previous heat sink performance inspection.

If the information requested above will not be available, please contact Mr. O'Dwyer as soon as possible at (630) 829-9624 or email at Gerard.Odwyer@nrc.gov.

The lead inspector for this inspection is Mr. Gerard O'Dwyer. We understand that our regulatory contact for this inspection is Mr. Ronald N. Baumer of your organization. If there are questions about the inspection or material requested, please contact the lead inspector at (630) 829-9624 or via email gerard.odwyer@nrc.gov.

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Sincerely,
/RA/
Jamie Benjamin, Acting Chief
Engineering Branch 2
Division of Reactor Safety

Docket No. 50-263;
License No. DRP-22

Enclosure: TRIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST

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Letter to Mr. Timothy O'Connor from Mr. Jamie Benjamin dated March 10, 2010.

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT – NOTIFICATION OF AN NRC TRIENNIAL HEAT SINK PERFORMANCE INSPECTION AND REQUEST FOR INFORMATION -- INSPECTION REPORT 05000263/2010003

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