



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

December 16, 2009

Mr. Joseph Jensen
Senior Vice President and
Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

**SUBJECT: D. C. COOK NUCLEAR POWER PLANT - NOTIFICATION OF AN NRC
TRIENNIAL HEAT SINK PERFORMANCE INSPECTION AND REQUEST
FOR INFORMATION 05000315/2010002; 05000316/2010002**

Dear Mr. Jensen:

On February 8, 2010, the NRC will begin the on-site portion of the Triennial Heat Sink Performance Inspection at your D.C Cook Nuclear Power Plant. This inspection will be performed in accordance with NRC baseline inspection procedure (IP) 71111.07.

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 January 4, 2010. By January 11, 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 January 25, 2010. This information should be separated for 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 on February 8, 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 Gerard O'Dwyer. If there are questions about the material requested, or the inspection, please call Mr. O'Dwyer at (630) 829-9624. Send all information to the following e-mail address Gerard.ODwyer@nrc.gov. A hard-copy with the required information is also an acceptable option.

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 on-site inspection.

All requested documents are to be for the time period from the onsite inspection period back to the last Heat Sink Performance Inspection. If no activities were accomplished in that time period, then the request applies to the last applicable document in the previous time period.

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).

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.

Sincerely,

/RA/

Ann Marie Stone, Chief
Engineering Branch 2
Division of Reactor Safety

Docket No. 50-315; 05-316
License No. DPR-58; DPR-74

Enclosure: TRIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT
REQUEST

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REQUEST FOR INFORMATION

TRIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST

Inspection Report: 05000315/2010002; 05000316/2010002(DRS)

Inspection Dates: February 8–12, 2010

Inspection Procedure: IP 71111.07, Triennial “Heat Sink Performance Inspection”

Lead Inspector: Gerard O’Dwyer
(630) 829-9624
Gerard.ODwyer@nrc.gov

I. Information Requested by January 4, 2009

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 two years or since the last Triennial Heat Sink inspection.
4. Copy of any self-assessment done on any of GL 89-13 heat exchangers.
5. System health report(s) and maintenance rule system notebooks for all the GL 89-13 heat exchangers.

II. Information Requested by January 25, 2010

1. For the specific heat exchangers selected:
 - a. Copies of the two most recent completed tests confirming thermal performance for those heat exchangers which are performance tested;
 - b. Copy of system description and design basis document for the heat exchangers (as applicable);

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TRIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST

- c. 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;
 - d. Copy of the Updated Final Safety Analysis Report (UFSAR) sections applicable for each heat exchanger; and
 - e. Provide a list of calculations with a description which currently apply to each heat exchanger.
2. A schedule of all inspections, cleanings, maintenance, or testing of any plant heat exchanger to be done during the on-site portion of the inspection.
3. Copies of procedures developed to implement the recommendations of GL 89-13, e.g., the GL 89-13 Heat Exchanger Program description.
4. Updated Final Safety Analysis Report pages for the GL 89-13 Heat Exchanger Program.
5. Maximum Cooling Water system inlet temperature limit that still allows full licensed power operation of the nuclear reactor. Please provide the document that states this limit (e.g., USAR or TRM) and the operating procedure that ensures this limit is not exceeded.

Information Requested to be Available on First Day of Inspection, February 8, 2010

1. For the specific heat exchangers selected:
 - a. Provide the Design Basis Documents and Updated Final Safety Analysis Report pages for the selected heat exchangers;
 - b. Copy of the design specification and heat exchanger data sheets for each heat exchanger;
 - c. Copy of the vendor manuals including component drawings for each heat exchanger;
 - d. 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;
 - e. 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);
 - f. Copy of the calculations or documents which evaluate the potential for water hammer or excessive tube vibration in the heat exchanger or associated piping;

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- g. List of engineering-related Operator Workarounds/Temporary Modifications for these heat exchangers since the last Heat Sink Performance;
 - h. Copy of the evaluations of data for the two most recent completed tests confirming the thermal performance of each heat exchanger;
 - i. 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;
 - j. Copies of those documents that describe the methods taken to control water chemistry in the heat exchangers;
 - k. 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;
 - l. The cleaning and inspection maintenance schedule for each heat exchanger for the next five years;
 - m. Copy of the document describing the inspection results for the last two clean and inspection activities completed on each heat exchanger;
 - 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; and
 - p. Information regarding any alarms which monitor on-line performance.
2. For the Ultimate Heat Sink (UHS):
- a. Copies of maintenance and inspection procedures of inaccessible below-water portions of the UHS system including results of underwater diving inspections and assessments of sediment intrusion and/or removal of sediment;
 - b. Copies of procedures associated with operating during adverse weather conditions, e.g. icing or high temperatures or low levels;
 - c. Copies of calculations and surveillances that determine the UHS reservoir capacity and heat transfer capability; and

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- d. Copies of surveillance procedures and testing results conducted on the level instrumentation relied upon to determine UHS reservoir capability.
3. For the safety-related service water system and the UHS:
- a. Last two performance tests, such as the ASME in-service test, for all pumps, all valves and the cooling towers, if applicable, in the safety-related service water system. If the components are not performance tested, please provide documentation verifying performance by the methods actually used;
 - b. Copies of the documents that verify flow testing was done at maximum design flow during the last two years or since the last time it was done. Copies of the documents that verify maximum design flow testing will continue to be periodically done in the future;
 - c. Copies of any design changes performed on the system(s);
 - d. Copies of procedures for a loss of service water system or loss of UHS;
 - e. Copies of inspections and/or maintenance related to macrofouling (silt, dead mussel shells, debris, etc.) and aquatic life such as fish, algae, grass or kelp;
 - f. Copies of inspections and/or maintenance related to preventing biotic fouling;
 - g. Copies of chemistry procedures and surveillances that monitor for pH, calcium hardness, etc.;
 - h. Copies of procedures and/or test results to survey or monitor interface valves between the safety-related section of the service water system and the non-safety-related section;
 - i. Copies of the pipe testing and/or inspection program procedures and surveillances;
 - j. 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;
 - k. History of any thru wall pipe leak on the system; and
 - l. Copies of the procedures to monitor assess and disposition active thru wall pipe leaks, including structural evaluations and/or planned corrective actions.

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

J. Jensen

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Ann Marie Stone, Chief
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Letter to Mr. Joseph Jensen from Ms. Ann Marie Stone dated December 16, 2009.

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