



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

August 21, 2012

Mr. Larry Weber
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, UNITS 1 AND 2 - NOTIFICATION OF AN NRC TRIENNIAL HEAT SINK PERFORMANCE AND REVIEW OF IMPLEMENTATION OF THE INDUSTRY INITIATIVE TO CONTROL DEGRADATION OF UNDERGROUND PIPING AND TANKS INSPECTION; AND REQUEST FOR INFORMATION INSPECTION REPORT 05000315/2012005; 05000316/2012005

Dear Mr. Weber:

On November 26, 2012, the Nuclear Regulatory Commission (NRC) will begin the onsite portion of the Triennial Heat Sink Performance Inspection and Temporary Instruction (TI) 2515-182 inspection, "Review of Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks," at your D. C. Cook Nuclear Power Plant, Units 1 and 2. This inspection will be performed in accordance with NRC baseline inspection procedure (IP) 71111.07 and TI 2515-182.

In order to minimize the impact that the inspection has on the site and to ensure a productive inspection, Enclosure 1 is a request for documents needed for the Heat Sink inspection. An information request for the TI 2515-182 Phase I inspection was previously sent on February 6, 2012, and is included here as Enclosure 2 for completeness. The documents for the inspection 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 October 22, 2012. By October 29, 2012, the inspector will communicate the initial selected set of approximately 1-2 risk-significant heat exchangers.
- The second group of documents requested is 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 November 14, 2012. 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 onsite to the inspector on November 26, 2012. 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 Andrew Dunlop. If there are questions about the material requested, or the inspection, please call Mr. Dunlop at (630) 829-9726. Please send the information to the following e-mail address andrew.dunlop@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 onsite inspection.

All 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 no activities were accomplished in that time period, then the request applies to the last applicable document 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/

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

Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74

Enclosures:

1. TRIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST
2. TEMPORARY INSTRUCTION 2515-182 INSPECTION DOCUMENT REQUEST

cc w/encl: Distribution via ListServ™

TRIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST

Inspection Report: 05000315/2012005; 05000316/2012005

Inspection Dates: November 26 – 30, 2012

Inspection Procedure: IP 71111.07, "Heat Sink Performance"

Lead Inspector: Andrew Dunlop, Lead Inspector
(630) 829-9726
andrew.dunlop@nrc.gov

Inspector: Elba Sanchez-Santiago
(630) 829-9715
elba.sanchezsantiago@nrc.gov

I. Information Requested By October 22, 2012

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.

TRIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST

II. Information Requested By November 14, 2012

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 any safety-related plant heat exchanger to be performed during the onsite portion of the inspection.

III. Information Requested to be Available on First Day of Inspection, November 26, 2012

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;

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- 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. 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;
- 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); and

TRIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST

- q. Copies of those documents that describe the methods taken to control water chemistry in the heat exchangers.
2. For the review associated with the system walkdown of the service water system:
 - a. 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;
 - b. Copies of the ultrasonic test results and/or visual inspections that verify the structural integrity of the piping;
 - c. Copies of the procedures to monitor, assess, and disposition active thru wall pipe leaks, including structural evaluations and/or planned corrective actions;
 - d. 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;
 - e. Copies of the documents associated with the periodic inspection program used to detect protective coating failure, corrosion, and erosion; and
 - f. Copies of the inservice testing 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.
 3. For the review associated with the system walkdown of the service water intake structure:
 - a. Copies of the documents associated with the monitoring, trending, and remediation of silt accumulation at the service water pump bay;
 - b. Copies of surveillance procedures and testing results performed on the service water pump bay water level instruments. 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;
 - c. Copies of procedures associated with operating during adverse weather conditions (e.g., icing, high temperatures, or low level); and
 - d. Copy of the evaluation for the potential effects of low flow/level on underwater weir walls intended to limit silt or sand intake, if applicable.

If the information requested above will not be available, please contact Andrew Dunlop as soon as possible at (630) 829-9726 or email andrew.dunlop@nrc.gov.

TEMPORARY INSTRUCTION 2515-182 INSPECTION DOCUMENT REQUEST

Inspection Report: 05000315/2012005; 05000316/2012005

Inspection Dates: November 26 – 30, 2012

Inspection Procedures: Temporary Instruction 2515-182, “Review of Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks”

Lead Inspector: Andrew Dunlop, Lead Inspector
(630) 829-9726
andrew.dunlop@nrc.gov

Inspector: Elba Sanchez-Santiago
(630) 829-9715
elba.sanchezsantiago@nrc.gov

I. Information Requested By October 22, 2012

No documents to facilitate this portion of the inspection are requested by this date.

II. Information Requested By November 14, 2012

The following documents listed below are requested (electronic copy CD ROM if possible) by November 14, 2012, to facilitate the preparation for the on-site inspection week.

1. Organization list of site individuals responsible for the site’s underground piping and tanks program.
2. Schedule for completion of the following NEI 09-14, Revision 1, “Guideline for the Management of Buried Piping Integrity,” attributes:

Buried Piping

- Procedures and Oversight;
- Risk-Ranking;
- Inspection Plan;
- Plan Implementation; and
- Asset Management Plan.

Underground Piping and Tanks

- Procedures and Oversight;
- Prioritization;

TEMPORARY INSTRUCTION 2515-182 INSPECTION DOCUMENT REQUEST

- Condition Assessment Plan;
- Plan Implementation; and
- Asset Management Plan.

III. Information Requested to be Available on First Day of Inspection, November 26, 2012

1. Copy of EPRI document "Recommendations for an Effective Program to Control the Degradation of Buried Pipe."
2. Copy of Site Underground Piping and Tanks program.
3. Self or third party assessments of the Underground Piping and Tanks Program (if any have been performed).
4. For any of the NEI 09-14, Revision 1, attributes identified below, which have been completed prior to the NRC's onsite inspection, provide written records that demonstrate that the program attribute is complete.

Buried Piping

- Procedures and Oversight;
- Risk-Ranking;
- Inspection Plan;
- Plan Implementation; and
- Asset Management Plan.

Underground Piping and Tanks

- Procedures and Oversight;
- Prioritization;
- Condition Assessment Plan;
- Plan Implementation; and
- Asset Management Plan.

L. Weber

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Sincerely,

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

Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74

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Letter to Mr. Larry Weber from Ms. Ann Marie Stone dated August 21, 2012.

SUBJECT: D. C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2 - NOTIFICATION OF AN NRC TRIENNIAL HEAT SINK PERFORMANCE AND REVIEW OF IMPLEMENTATION OF THE INDUSTRY INITIATIVE TO CONTROL DEGRADATION OF UNDERGROUND PIPING AND TANKS INSPECTION; AND REQUEST FOR INFORMATION INSPECTION REPORT 05000315/2012005; 05000316/2012005

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