

December 29, 2006

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BYRON NUCLEAR POWER STATION - NOTIFICATION OF AN NRC
BIENNIAL HEAT SINK PERFORMANCE INSPECTION AND INFORMATION
REQUEST

Dear Mr Crane:

On February 5, 2007, the NRC will begin the on-site portion of the Biennial Heat Sink Performance Inspection at your Byron Nuclear Station. This inspection will be performed in accordance with NRC baseline inspection procedure (IP) 71111.07. The heat exchangers selected for detailed review during this baseline inspection are the Unit 2A essential service water pump lube oil cooler and the 2B diesel-driven Auxiliary Feed pump closed cycle cooler.

We have enclosed a request for documents needed for the inspection. This information can be sent to the following e-mail address gfo@nrc.gov, no later than January 24, 2007, so that we may start the review of these documents. A hard-copy with the required information is also an acceptable option.

The lead inspector for this inspection is Mr. Gerard O'Dwyer. If there are questions about the material requested, or the inspection, please call Mr. Gerard O'Dwyer at (630) 829-9624.

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

C. Crane

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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. 50-454; 50-455
License Nos. NPF-37; NPF-66

Enclosure: BIENNIAL HEAT SINK INSPECTION
DOCUMENT REQUEST

cc w/encl: Site Vice President - Byron Station
Plant Manager - Byron Station
Regulatory Assurance Manager - Byron Station
Chief Operating Officer
Senior Vice President - Nuclear Services
Vice President - Mid-West Operations Support
Vice President - Licensing and Regulatory Affairs
Director Licensing
Manager Licensing - Braidwood and Byron
Senior Counsel, Nuclear
Document Control Desk - Licensing
Assistant Attorney General
Illinois Emergency Management Agency
State Liaison Officer, State of Illinois
State Liaison Officer, State of Wisconsin
Chairman, Illinois Commerce Commission
B. Quigley, Byron Station

C. Crane

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Chief Operating Officer
Senior Vice President - Nuclear Services
Vice President - Mid-West Operations Support
Vice President - Licensing and Regulatory Affairs
Director Licensing
Manager Licensing - Braidwood and Byron
Senior Counsel, Nuclear
Document Control Desk - Licensing
Assistant Attorney General
Illinois Emergency Management Agency
State Liaison Officer, State of Illinois
State Liaison Officer, State of Wisconsin
Chairman, Illinois Commerce Commission
B. Quigley, Byron Station

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BIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST
Initial Document Request

Inspection Report: 05000454/455/2007002(DRS)

Inspection Dates: February 5 - 9, 2007

Inspection Procedures: IP 71111.07, Biennial "Heat Sink Performance Inspection"

Lead Inspector: G. O'Dwyer
(630) 829-9624, gfo@nrc.gov

I. Information Requested Expediently

The following information is requested to be provided as soon as possible, but no later than January 24, 2007, to support the biennial "Heat Sink Performance Inspection," IP 71111.07. Unless otherwise specified, all the below requests are for the selected heat exchangers (Hxs):

- the Unit 2A essential service water (SX) pump lube oil cooler; and
 - the 2B diesel-driven Auxiliary Feed pump closed cycle cooler.
1. Copies of the procedures used to monitor, inspect, clean or test heat exchanger performance;
 2. A list of corrective action program documents, with a short description associated with heat exchangers, heat sinks, silting, corrosion, fouling, or heat exchanger testing, that are documented in your corrective action system (since the last biennial heat sink inspection), this item is for all the Generic Letter 89-13 Hxs and the ultimate heat sink;
 3. Copy of system description and/or design basis document for the heat exchangers under review (as applicable);
 4. Copy of any operability determinations or other documentation of degradation associated with the heat exchangers or the systems that support the operation of the heat exchangers;
 5. Copy of any self-assessment done within last two years on any of the licensee's heat exchanger programs (e.g., Generic Letter 89-13 program heat exchangers) or on the sample heat exchangers; and
 6. 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.

BIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST
Initial Document Request

II. Information Requested to be Available on First Day of Inspection

The following requests are only for the two HXs selected as samples unless otherwise stated. We request that the following information be available to the inspector once he arrives on-site February 5, 2007:

1. Copies of the two most recently completed tests confirming thermal performance for those heat exchangers which are performance tested. Include documentation and procedures that identify the types, accuracy, and location of any special instrumentation used for these tests. (e.g., high accuracy ultrasonic flow instruments or temperature instruments). Include calibration records for the instruments used during these tests;
2. Copy of the evaluations of data for the two most recent completed tests confirming the thermal performance of each heat exchanger;
3. 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;
4. 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);
5. The clean and inspection maintenance schedule for each heat exchanger for the next five years;
6. Copy of the document describing the inspection results for the last two clean and inspection activities completed on each heat exchanger;
7. 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;
8. Copy of the document establishing the repair criteria (plugging limit) for degraded tubes which are identified in each heat exchanger;
9. Copy of the design specification and heat exchanger data sheets for each heat exchanger;
10. Copy of the vendor/component drawings for each heat exchanger;
11. Copy of the calculations or documents which evaluate the potential for water hammer or excessive tube vibration in the heat exchanger or associated piping;
12. Copy of heat exchanger performance trending data tracked for each heat exchanger; and

BIENNIAL HEAT SINK PERFORMANCE INSPECTION DOCUMENT REQUEST
Initial Document Request

13. Copies of those documents that describe the methods taken to control water chemistry in the heat exchangers.
14. Copies of the documents that verify the following for the ultimate heat sink:
 - sufficient capacity
 - for underwater portions and structures of the UHS, that visual or other inspections have been performed to check for:
 - a. any possible settlement or movement indicating loss of structural integrity and/or capacity; and
 - b. sediment intrusion that may reduce capacity.
15. Copies of last two completed surveillance tests for each of the four SX pumps that verify safety function performance.

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