

September 5, 2007

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

SUBJECT: BRAIDWOOD NUCLEAR POWER PLANT UNIT 1  
NOTIFICATION OF NRC INSPECTION AND REQUEST FOR INFORMATION

Dear Mr. Crane:

On October 9, 2007, the NRC will begin the baseline in-service inspection (NRC Inspection Procedure 71111.08) at the Braidwood Nuclear Power Plant Unit 1. This onsite inspection is scheduled to be performed October 9 - October 19, 2007.

Experience has shown that this inspection is resource intensive both for the NRC inspector and your staff. In order to minimize the impact to your onsite resources, and to ensure a productive inspection for both sides, we have enclosed a request for documents needed for this inspection. These documents have been divided into two groups. The first group identifies information necessary to ensure that the inspector is adequately prepared. The second group identifies the information the inspector will need upon arrival at the site. It is important that all of these documents are up-to-date, and complete, in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Mr. J. Petty, of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector Mr. T. Bilik at (630) 829-9744.

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). Room or from the Publicly Available Records (PARS)

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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 by A. M. Stone Acting For/**

David E. Hills, Chief  
Engineering Branch 1  
Division of Reactor Safety

Docket No. 50-456  
License No. NPF-72

Enclosure: INSERVICE INSPECTION DOCUMENT REQUEST

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

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

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DATE	08/31/07		09/04/07		09/05/07			

**OFFICIAL RECORD COPY**

Letter to Mr. C. Crane from Mr. D. E. Hills dated August , 2007

SUBJECT: BRAIDWOOD NUCLEAR POWER PLANT UNIT 1  
NOTIFICATION OF NRC INSPECTION AND REQUEST FOR INFORMATION

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[ROPreports@nrc.gov](mailto:ROPreports@nrc.gov)

## INSERVICE INSPECTION DOCUMENT REQUEST

**Inspection Dates:** October 9 - October 19, 2007

**Inspection Procedures:** IP 71111.08, "Inservice Inspection"

**Inspectors:** Tom Bilik (630) 829-9744  
[txb@nrc.gov](mailto:txb@nrc.gov)

### **A. Information Requested for the In-Office Preparation Week**

The following information (electronic copy CD ROM if possible) is requested by September 28, 2007, to facilitate the selection of specific items that will be reviewed during the onsite inspection week. The inspector will select specific items from the information requested below and request a list of additional documents needed onsite to your staff. We request that the specific items selected from the lists be available and ready for review on the first day of inspection. If you have any questions regarding this information, please call the inspector as soon as possible.

1. A detailed schedule and description of:
  - a. non-destructive examinations (NDE) planned for Class 1 and 2 systems and containment, performed as part of your ASME Code ISI Program, and NDE examinations planned for other systems performed as part of a Risk Informed RI-ISI Program, or other programs committed to as part of an industry initiative such as Alloy 600 inspections, during the scheduled inspection weeks, including the weld identification number, description of weld (component name), category, class, type of exam and procedure number, and date of exam, to include:
    - System Identification
    - Component Identification
    - Class
    - Examination Category
    - Examination Item Number
    - Weld Number
    - Exam Type (VT, UT, MT, etc.)
    - NDE Procedure Number for Each Exam
    - Date and Time of Exam
    - Code Edition and Addenda Committed to
  - b. steam generator (SG) tube inspection and repair activities for the upcoming outage; and
  - c. any training required to observe these examinations; e.g., confined space, scaffolding, fall protection.

## INSERVICE INSPECTION DOCUMENT REQUEST

2. A copy of the NDE procedures used to perform the examinations identified in A.1 (including calibration and flaw characterization/sizing procedures). For ultrasonic examination procedures qualified in accordance with Appendix VIII, of Section XI of the ASME Code, provide documentation supporting the procedure qualification (e.g., the EPRI performance demonstration qualification summary sheets). Also, include documentation of the specific equipment to be used (e.g., ultrasonic unit, cables, and transducers including serial numbers).
3. A copy of ASME Section XI, Code Relief Requests applicable to the examinations identified in A(1).
4. A copy of the ten-year ISI program showing those required exams scheduled to be performed this outage, and those which have been completed.
5. A list identifying NDE reports (ultrasonic, radiography, magnetic particle, dye penetrant, visual (VT-1, VT-2, VT-3), which have identified relevant indications on Code Class 1 and 2 systems since the beginning of the last refueling outage. Also, identify the NDE examinations with recorded indications in the vessel head penetration nozzles which have been accepted for continued service.
6. List with short description of the welds in Code Class 1 and 2 systems, which have been fabricated due to component repair/replacement activities since the beginning of the last refueling outage and identify the system, weld number and reference applicable documentation.
7. If reactor vessel weld examinations required by the ASME Code are scheduled to occur during the inspection period, provide a detailed description of the welds to be examined, and the extent of the planned examination.
8. List with description of ISI **and** SG related issues (e.g., piping/SG tube degradation or damage or errors in piping/SG tube examinations) entered into your corrective action system since the beginning of the last refueling outage.
9. Copy of any 10 CFR Part 21 reports applicable to your structures systems or components within the scope of Section XI of the ASME Code, that have been identified since the beginning of the last refueling outage.
10. Copy of SG history documentation given to vendors performing eddy current (ET) testing of the SGs during the upcoming outage.
11. Copy of procedure containing screening criteria used for selecting tubes for in-situ-pressure testing and the procedure to be used for in-situ pressure testing.
12. Copy of previous outage SG tube operational assessment completed following ET of the SGs.

## INSERVICE INSPECTION DOCUMENT REQUEST

13. Copy of the document defining the planned ET scope for the SGs and the scope expansion criteria which will be used. Also, identify and describe any deviations in this scope or expansion criteria from the EPRI Guidelines.
14. Copy of the document describing the ET probe types, ETTS documents, and ET acquisition equipment to be used, including which areas of the SG (e.g., top of tube sheet, U-bends) each probe will be used in. Also, provide your response letter(s) to Generic Letters 95-03, 95-05, 97-05, 97-06, and 04-01.
15. Identify and quantify any SG tube leakage experienced during the previous operating cycle. Also provide documentation identifying which SG was leaking and corrective actions completed or planned for this condition.

**B. Information to be provided onsite to the inspector following the entrance meeting (October 9, 2007):**

1. For welds selected by the inspector from A.6 above, provide copies of the following documents:
  - a. Document of the weld number and location (e.g., system, train, branch);
  - b. Document with a detail of the weld construction;
  - c. Applicable Code Edition and Addenda for weldment;
  - d. Applicable Code Edition and Addenda for welding procedures;
  - e. Applicable weld procedures (WPS) used to fabricate the welds;
  - f. Copies of procedure qualification records (PQRs) supporting the WPS on selected welds;
  - g. Copies of welders' performance qualification records (WPQ);
  - h. Copies of mechanical test reports identified in the PQRs above;
  - i. Copies of the nonconformance reports for the selected welds;
  - j. Radiographs of the selected welds and access to equipment to allow viewing radiographs; and
  - k. Copies of the preservice examination records for the selected welds.
2. For the ISI related corrective action issues selected by the inspector from A.8 above, provide a copy of the corrective actions and supporting documentation.

## INSERVICE INSPECTION DOCUMENT REQUEST

3. For the nondestructive examination reports with relevant indications on Code Class 1 and 2 systems selected by the inspector from A.5 above, provide a copy of the examination records and associated corrective action documents.
4. Updated schedules for item A.1 (including schedule showing contingency repair plans if available).
5. Copy of documentation including nondestructive examination reports for the last upper vessel head examination.
6. Copy of evaluation or calculation demonstrating the scope of the visual examination of the upper head will meet the 95 percent minimum coverage required by NRC Order EA-03-009 (if a visual examination is planned).
7. Provide the susceptibility ranking calculation for the vessel head operating time and temperature. Also, provide the plant specific records (or vendor information) used to determine the inputs for this calculation.
8. Copy of the procedures which govern the scope, equipment used and implementation of the inspections required to identify boric acid leakage from systems and components above the vessel head.
9. Copy of any documentation of:
  - a. engineering evaluations/assessments of boric acid related deposits and associated wastage or corrosion for safety significant components; and
  - b. corrective actions for coolant leakage including boric acid deposits on safety related components identified since the beginning of the last refueling outage.
10. Copy of the plant procedures used to perform inspections to identify reactor coolant system leaks or boric acid deposits and the procedures for resolution of leaks or boric acid deposits.
11. Provide a copy of the EPRI Technique Specification Sheets which support qualification of the ET probes to be used during the upcoming SG tube inspections.
12. Provide a copy of the guidance to be followed if a loose part or foreign material is identified in the SGs.
13. Copy of document describing actions to be taken if a new SG tube degradation mechanism is identified.
14. Identify the types of SG tube repair processes which will be implemented for defective SG tubes (including any NRC reviews/evaluation/approval of this repair process). Provide the flaw depth sizing criteria to be applied for ET indications identified in the SG tubes.



## INSERVICE INSPECTION DOCUMENT REQUEST

15. Ready access to the Editions of the ASME Code (Sections V, IX and XI) applicable to the inservice inspection program and the repair/replacement program. Ready access to the EPRI and industry standards referenced in the procedures used to perform the SG tube eddy current examination which includes EPRI documents: TR-107621-R1, "Steam Generator Integrity Assessment Guidelines, Revision 1"; TR-107620-R1, "Steam Generator In-Situ Pressure Test Guidelines, Revision 1"; and 1003138, "Pressurized Water Reactor Steam Generator Examination Guidelines: Revision 6." (Or latest revisions).

These copies are provided to the inspector to use for the duration of the inspection at the onsite inspection location and will be returned at the end of the inspection.