



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

March 11, 2008

Mr. David A. Christian
Senior Vice President and Chief Nuclear Officer
Virginia Electric and Power Company
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

SUBJECT: SURRY UNIT 2 - NOTIFICATION OF INSPECTION AND REQUEST FOR INFORMATION

Dear Mr. Christian:

From May 5 to 16, 2008, the NRC will perform the baseline in-service inspection (ISI) at the Surry Power Station, Unit 2 in accordance with NRC Inspection Procedure 71111.08. Experience has shown that this inspection is resource intensive both for the NRC inspectors and your staff. In order to minimize the impact to your on-site resources and to ensure a productive inspection, we have enclosed a request for documents needed for this inspection. These documents have been divided into two groups. The first group (section A of the enclosure) identifies information to be provided prior to the inspection to ensure that the inspectors are adequately prepared. The second group (section B of the enclosure) identifies the information the inspectors 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 Barry Garber of your organization. Our inspection dates are subject to change based on your updated schedule of outage activities. If there are any questions about this inspection or the material requested, please contact the lead inspector Joel Rivera-Ortiz at (404)562-4825 (jer6@nrc.gov).

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). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

George T. Hopper, Chief
Engineering Branch 3
Division of Reactor Safety

Docket No. 50-281
License No. DPR-37
Enclosure (cc w/encl – See page 2)

(cc w/encl cont'd)
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X PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE X NON-SENSITIVE

ADAMS: Yes ACCESSION NUMBER: _____

OFFICE	RII-DRS	RII-DRS	RII-DRP				
SIGNATURE	/RA/	/RA/	/RA/				
NAME	Joel Rivera-Ortiz	George Hopper	Eugene Guthrie				
DATE	03/11/2008	/03/11/2008	03/11/2008				
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

INSERVICE INSPECTION DOCUMENT REQUEST

Inspection Dates: May 5 -16, 2008

Inspection Procedures: IP 71111.08 "In-service Inspection (ISI) Activities"

Inspectors: Joel Rivera-Ortiz, Reactor Inspector (Lead Inspector)
Michael Coursey, Reactor Inspector

A. Information Requested for the In-Office Preparation Week

The following information should be sent to the Region II office in care of Joel Rivera-Ortiz by April 21, 2008 to facilitate the selection of specific items that will be reviewed during the onsite inspection week. Please provide the documentation requested below electronically if possible. If requested documents are large and only hard copy formats are available, please notify the inspector(s), and provide subject documentation during the first day of the onsite inspection. The inspector will select specific items from the information requested below and then request from your staff the additional documents described in section B of this enclosure, which will be needed for the onsite inspection week. We ask that the specific items requested in section B be available and ready for review on the first day of inspection. If the inspector does not request specific documentation for section B prior to the onsite inspection week, then please provide the requested information as soon as practical after the request has been made during the onsite inspection. If you have any questions regarding this information request, please call the lead inspector as soon as possible.

A.1 ISI / Welding Programs and Schedule Information

- a) A detailed schedule (including preliminary dates) of:
- i) Nondestructive examinations (NDEs) planned for Class 1, 2, and 3 systems and containment, performed as part of your ASME Section XI (and/or Risk Informed Program) during the upcoming outage.

Provide a status summary of the NDE inspection activities performed versus the required inspection period percentages for this Interval by category per ASME Section XI, IWX-2400. **Do not provide these documents separately if already included in other information requested.*
 - ii) Reactor pressure vessel head (RPVH) examinations planned for the upcoming outage.
 - iii) Examinations planned for Alloy 82/182/600 components that are not included in the Section XI scope (MRP-126 and MRP-139).
 - iv) Examinations planned as part of your Boric Acid Corrosion Control Program (Mode 3 walkdowns, bolted connection walkdowns, etc.).

Enclosure

- v) Welding activities that are scheduled to be completed during the upcoming outage (ASME Class 1, 2, or 3 structures, systems, and components [SSCs]).
- b) A copy of ASME Section XI Code Relief Requests and associated NRC Safety Evaluations applicable to the examinations and welding activities identified above.
- c) A list of NDE reports (ultrasonic, radiography, magnetic particle, liquid penetrant, visual VT-1, VT-2, and VT-3) which have identified recordable indications (geometric or flaw) on Code Class 1, 2, and 3 systems since the beginning of the last refueling outage. This should include the previous Section XI pressure test(s) conducted during start up and any evaluations associated with the results of the pressure tests. Also, include in the list the NDE reports with recorded indications in the RPVH penetration nozzles which have been accepted for continued service. The list of NDE reports should include a brief description of the SSC where the recordable indication was identified.
- d) A list with a brief description (e.g. system, material, pipe size, weld number, and NDE performed) of the welds in Code Class 1, 2, and 3 systems which have been fabricated due to component repair/replacement activities since the beginning of the last refueling outage, or are planned to be fabricated this refueling outage.
- e) If reactor vessel weld examinations required by the ASME Code are scheduled to occur during the upcoming outage, provide a detailed description of the welds to be examined, and the extent of the planned examination. Please also provide reference numbers for applicable procedures that will be used to conduct these examinations.
- f) Copy of any 10 CFR Part 21 reports applicable to your SSCs within the scope of Section XI of the ASME Code that have been identified since the beginning of the last refueling outage.
- g) A list of any temporary non-code repairs in service (e.g. pinhole leaks repaired under code case N-513-2 or Generic Letter 90-05).
- h) Please provide copies of the most recent self assessments for the ISI, Welding, and Alloy 600 Programs.

A.2 Reactor Pressure Vessel Head (RPVH) (If Applicable)

- a) Provide the detailed scope of the planned NDE of the reactor vessel head which identifies the types of NDE methods to be used on each specific part of the vessel head to fulfill NRC commitments made in response to NRC Bulletin 2002-02 and NRC Order EA-03-009.

- b) A list of the standards and/or requirements that will be used to evaluate indications identified during NDE of the reactor vessel head (e.g. the specific industry or procedural standards which will be used to evaluate potential leakage and/or flaw indications).

A.3 Boric Acid Corrosion Control Program (BACCP)

- a) Copy of the procedures that govern the scope, equipment and implementation of the inspections required to identify boric acid leakage and the procedures for boric acid leakage/corrosion evaluation.
- b) Please provide a list of leaks (including code class of the components) that have been identified since the last refueling outage and associated corrective action documentation. If during the last cycle, the Unit was shutdown, please provide documentation of containment walk-down inspections performed as part of the BACCP.
- c) Please provide a copy of the most recent self-assessment performed for the BACCP.

A.4 Steam Generator (SG) Inspections

- a) A detailed schedule of:
 - i) SG tube inspection, data analyses, and repair activities for the upcoming outage. (If occurring)
 - ii) SG secondary side inspection activities for the upcoming outage. (If occurring)
- b) Please provide a copy of your SG ISI Inspection Program and Plan. Please include a copy of the Operational Assessment from last outage, and a copy of the following documents as they become available:
 - i) Degradation Assessment
 - ii) Condition Monitoring Assessment
- c) Copy of SG's condition history documentation given to vendors performing eddy current testing (ECT) of the SGs during the upcoming outage. **Do not provide these documents separately if already included in other information requested.*
- d) 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. (If applicable)
- e) Provide past history of the condition and issues pertaining to the secondary side of the steam generators (including items such as loose parts, fouling, top of tube sheet condition, crud removal amounts, etc.) **Do not provide these documents separately if already included in other information requested.*

- f) Please provide copies of your most recent self assessments of the SG monitoring, loose parts monitoring, and secondary side water chemistry control programs.
- g) Please also indicate where the primary, secondary, and resolution analyses are scheduled to take place.
- h) Please provide a summary of the scope of the SG ISI examinations, including examination methods such as Bobbin, Rotating Pancake, or Plus Points, and the percentage of tubes to be examined. **Do not provide these documents separately if already included in other information requested.*

A.5 Additional information related to all ISI activities

- a) A list with a brief description of ISI, BACCP, and SG ISI related issues (e.g., condition reports) entered into your corrective action program since the beginning of the last refueling outage (for Units 1 and 2). For example, a list based upon data base searches using key words related to piping or SG tube degradation such as: ISI, ASME Code, Section XI, NDE, cracks, wear, thinning, leakage, rust, corrosion, boric acid, or errors in piping/SG tube examinations.
- b) Please provide names and phone numbers for the following program leads:
 - ISI contacts (Examination, planning)
 - Containment Exams
 - RPVH Exams
 - Snubbers and Supports
 - Repair and Replacement Program Manager
 - Licensing Contact
 - Site Welding Engineer
 - Boric Acid Corrosion Control Program
 - Alloy 600 Program
 - SG Inspection Activities (site lead and vendor contact)

B. Information to be provided on-site to the inspector at the entrance meeting (May 5, 2008). If the inspector has not requested specific documentation from section A, then please provide as soon as practical after the request has been made during the onsite inspection:

B.1 ISI / Welding Programs and Schedule Information

- a) Updated schedules for ISI/NDE activities, planned welding activities, and schedule showing contingency repair plans, if available.
- b) For the NDEs selected by the inspector from section A of this enclosure, provide copy of the NDE procedures used to perform the examinations (including calibration and flaw characterization/sizing procedures). For ultrasonic examination procedures qualified in accordance with ASME Code, Section XI, Appendix VIII, 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) and NDE personnel qualification records.

- c) For the NDE reports with recordable indications on Code Class 1, 2, and 3 systems selected by the inspector from section A above, provide a copy of the examination records, examiner qualification records, and associated corrective action documents and evaluations.
- d) For ASME Class 1, 2, and 3 welds selected by the inspector from the lists provided in response to section A of this enclosure, please provide copies of the following documentation for each subject weld:
 - i) Weld data sheet
 - ii) Weld traveler
 - iii) Weld configuration and system location
 - iv) Applicable Code Edition and Addenda for weldment
 - v) Applicable Code Edition and Addenda for welding procedures
 - vi) Applicable weld procedures (WPS) used to fabricate the welds
 - vii) Copies of procedure qualification records (PQRs) supporting the WPS above
 - viii) Copies of mechanical test reports identified in the PQRs above
 - ix) Copies of the nonconformance reports for the selected welds (If applicable)
 - x) Radiographs of the selected welds and access to equipment to allow viewing radiographs (if RT was performed)
 - xi) Copies of the pre-service examination records for the selected welds.
 - xii) Copies of welder performance qualifications records, including documentation that welder maintained proficiency in the applicable welding processes specified in the WPS (At least six months prior to date subject work)
 - xiii) Copies of NDE personnel qualifications (VT, PT, UT, and RT), as applicable
- e) A copy of (or ready access to) most current revision of the ISI Program Manual and Plan for the current Interval.

B.2 Reactor Pressure Vessel Head (RPVH) (If Applicable)

- a) Provide the NDE personnel qualification records for the examiners who will perform examinations of the RPVH.
- b) Provide drawings showing the following:
 - i) Top view of the control rod drive mechanism (CRDM) nozzles configuration (drawn to scale)
 - ii) Cross section view of the CRDM nozzles J-groove weld configuration (drawn to scale)
- c) Copy of NDE reports from the last RPVH examination.

- d) Copy of evaluation or calculation demonstrating that the scope of the visual examination of the upper head will meet the 95% minimum coverage required by NRC Order EA-03-009 (If a visual examination is planned for the upcoming refueling outage).
- e) Provide a copy of the procedures that will be used to identify the source of any boric acid deposits identified on the RPVH. If no explicit procedures exist which govern this activity, provide a description of the process to be followed including personnel responsibilities and expectations.
- f) Provide a copy of the updated calculation of effective degradation years (EDY) for the RPVH susceptibility ranking.
- g) Copy of NDE procedures for the planned volumetric and visual examinations.
- h) Provide copy of the vendor qualification report(s) that demonstrates the detection capability of the NDE equipment used for the RPVH examinations. Also, identify any changes in equipment configurations used for the RPVH examinations which differ from that used in the vendor qualification report(s).

B.3 Boric Acid Corrosion Control Program (BACCP)

- a) Please provide boric acid walk down inspection results, an updated list of boric acid leaks identified so far during this outage, associated corrective action documentation, and overall status of planned boric acid inspections.
- b) Please provide any engineering evaluations completed for boric acid leaks identified since the end of the last refueling outage. Please include a status of corrective actions to repair and/or clean these boric acid leaks. Please specify which known leaks, if any, have remained in service or will remain in service as active leaks.

B.4 Steam Generator (SG) Inspections

- a) Updated schedule of SG tube ECT and secondary side inspections.
- b) Copy of SG Eddy Current Data Analyst Guidelines, site specific ECT technique validation, and Examination Technique Specification Sheets (ETSS). Additionally, please provide a copy of EPRI Appendix H Eddy Current Technique Qualification Records and associated justification for any revisions.
- c) Copy of the guidance to be followed if a loose part or foreign material is identified in the SGs.
- d) Please provide a copy of the ECT procedures for the planned SG ISI (specifically calibration and flaw characterization/sizing procedures, etc.). Also include documentation for the specific equipment to be used.
- e) List of corrective action documents generated by the vendor and/or site with respect to SG inspection activities.

B.5 Additional Information

- a) For the ISI related corrective action issues selected by the inspector from section A of this enclosure, provide a copy of the corrective action documents and supporting documentation.
- b) Ready access to: (i.e. copies provided to the inspector to use for the duration of the inspection at the on-site inspection location, or room number and location where available)
 - i) Applicable editions of the ASME Code (Sections V, IX, and XI) for the in-service inspection program and the repair/replacement program
 - ii) EPRI and industry standards referenced in your procedures

Inspector Contact Information:

Joel Rivera-Ortiz
Reactor Inspector
404-562-4825
jer6@nrc.gov

Mailing Address:

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