



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

February 9, 2012

Mr. Joseph W. Shea
Manager, Corp. Nuclear Licensing Programs
Tennessee Valley Authority
1101 Market Street, LP 4B-C
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH UNIT 1 - NOTIFICATION OF INSPECTION AND REQUEST FOR
INFORMATION

Dear Mr. Shea:

From March 5 to March 16, 2012, the NRC will perform the baseline inservice inspection (ISI) at the Sequoyah Nuclear Plant, Unit 1 (NRC Inspection Procedure 71111.08). Experience has shown that this inspection is resource intensive for both 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 this Enclosure) identifies information to be provided prior to the inspection to ensure that the inspectors are adequately prepared. The second group (Section B of this 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 Rusty Proffitt 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 Alexandra Rogers at (404) 997-4657 (Alexandra.Rogers@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/

Steven J. Vias, Chief
Engineering Branch 3
Division of Reactor Safety

Docket No. 50-327
License No. DPR-77

Enclosure:
Pre-Inspection Document Request

cc w/encl.: (See page 3)

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cc w/encl.: (See page 3)

Distribution w/encl:

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RIDSNNRRDIRS
PUBLIC
RidsNrrPMSequoyah Resource

☒ PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE ☒ NON-SENSITIVE
ADAMS: ☒ Yes ACCESSION NUMBER: ML12040A111 ☒ SUNSI REVIEW COMPLETE ☒ FORM 665 ATTACHED

OFFICE	RII/DRS: EB3	RII/DRS: EB3	RII:DRP	RII:DRP	RII/DRS: EB3		
SIGNATURE	/RA/	/RA/	/RA/	/RA/	/RA/		
NAME	A. Rogers	S. Shaeffer	J. Hamman	S. Vias	B. Collins		
DATE	2/6/2012	2/6/2012	2/6/2012	2/7/2012	2/6/2012		
E-MAIL COPY	YES NO	YES NO	YES NO	YES NO	YES NO		

OFFICIAL RECORD COPY DOCUMENT NAME: S:\DRS\Eng Branch 3\INSPECTIONS\Working Documents\ISI and TI-182
Request For Information Letters\2012\Sequoyah Unit 1 ISI SG IS March5_9_2012.doc OR
OFFICIAL RECORD COPY DOCUMENT NAME: HTTP://PORTAL.NRC.GOV/EDO/RII/DRS/EB3/INSPECTION
RFI/UNAPPROVED DRAFTS/SEQUOYAH UNIT 1 ISI SG ISI MARCH 5_9_2012.DOC

cc w/encl:

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Ann Harris
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Rockwood, TN 37854

INSERVICE INSPECTION DOCUMENT REQUEST

Inspection Dates: March 5 – March 16, 2012

Inspection Procedures: IP 71111.08 "Inservice Inspection (ISI) Activities"

Inspectors: Alexandra Rogers, Reactor Inspector (Lead Inspector - ISI)
Brendan Collins, Reactor Inspector (Lead Inspector - SG ISI)

A. Information Requested for the In-Office Preparation Week

The following information should be sent to the Region II office in hard copy or electronic format (CD preferred), in care of Alexandra Rogers by February 24, 2012 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 then request from your staff additional documents needed during the onsite inspection week (Section B of this Enclosure). We ask that the specific items selected from the lists be available and ready for review on the first day of inspection. *Please provide requested documentation electronically if possible. If requested documents are large and only hard copy formats are available, please inform the inspectors, and provide subject documentation during the first day of the onsite inspection. If you have any questions regarding this information request, please call the 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 systems and containment, performed as part of your ASME Section XI, Risk Informed (if applicable), and augmented ISI Programs during the upcoming outage.

Provide a status summary of the NDE inspection activities vs. the required inspection period percentages for this Interval by category per ASME Section XI, IWX-2400. (Do not provide separately if other documentation requested contains this information)

- 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. (If applicable)
- iv) Examinations planned as part of your Boric Acid Corrosion Control Program. (Mode 3 walkdowns, bolted connection walkdowns, etc.)
- v) Welding activities that are scheduled to be completed during the upcoming outage. (ASME Class 1, 2, or 3 structures, systems, or components (SSCs))

Enclosure

- b) A copy of ASME Section XI Code Relief Requests and associated NRC Safety Evaluations applicable to the examinations identified above.
- c) A list of NDE reports (ultrasonic, radiography, magnetic particle, and dye penetrant) which have identified surface or volumetric indications that were analytically evaluated and accepted for continued service on Code Class 1, 2, & 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.
- 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. Also, please indicate which of those welds is risk significant.
- e) If reactor vessel shell 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).
- h) Please provide copies of the most recent self assessments for the ISI, Welding, and Alloy 600 Programs.

A.2 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) If you are planning to modify your Technical Specifications (TS) such that they are consistent with Technical Specification Task Force (TSTF)-449 please provide copies of your correspondence with the NRC regarding deviations from the Standard Technical Specifications (STS).
- d) Copy of SG history documentation given to vendors performing eddy current (ET) testing of the SGs during the upcoming outage.
- e) Copy of SG Eddy Current Data Analyst Guidelines, and Site Validated Eddy Current Technique. Additionally, please provide a copy of EPRI Appendix H Eddy Current Technique Qualification Records.
- f) 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.
- g) 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).
- h) Please provide copies of your most recent self-assessments of the SG monitoring, loose parts monitoring, and secondary side water chemistry control programs.
- i) Please also indicate where the primary, secondary, and resolution analyses are scheduled to take place.
- j) 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 Units 1. 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
 Snubbers and Supports
 Repair and Replacement Program Manager
 Licensing Contact
 Site Welding Engineer
 Boric Acid Corrosion Control Program
 SG Inspection Activities (site lead and vendor contact)

B. Information to be provided on-site to the inspector at the entrance meeting (March 5, 2012)

B.1 ISI / Welding Programs and Schedule Information

- a) Updated schedules for ISI/NDE activities, including SG ISI, planned welding activities, and schedule showing contingency repair plans, if available.
- b) For ASME Class 1, 2, and 3 welds selected by the inspector from the lists provided from section A of this enclosure, please provide copies of the following documentation for each subject weld:
 - i) Weld data sheet (traveler)
 - ii) Weld configuration and system location
 - iii) Applicable Code Edition and Addenda for weldment
 - iv) Applicable Code Edition and Addenda for welding procedures
 - v) Applicable weld procedures (WPS) used to fabricate the welds
 - vi) Copies of procedure qualification records (PQRs) supporting the WPS from B.1.b.v
 - vii) Copies of mechanical test reports identified in the PQRs above
 - viii) Copies of the nonconformance reports for the selected welds (If Applicable)
 - ix) Radiographs of the selected welds and access to equipment to allow viewing radiographs (If RT was performed)
 - x) Copies of the pre-service examination records for the selected welds.
 - xi) Copies of welder performance qualifications records applicable to WPS, including documentation that welder maintained proficiency in the applicable welding processes specified in the WPS (At least six months prior to date subject work)
 - xii) Copies of NDE personnel qualifications (VT, PT, UT, RT) *As applicable*

- c) For the ISI related corrective action issues selected by the inspector from section A of this enclosure, provide a copy of the corrective actions and supporting documentation.
- d) For the NDE reports with relevant indications on Code Class 1, 2, & 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.
- e) A copy of (or ready access to) most current revision of the ISI Program Manual and Plan for the current Interval.
- f) 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.

B.2 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 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.
- c) In accordance with NRC inspection procedure 71111.08, the inspector would like to conduct an independent boric acid walk down of the Reactor Building early in the inspection week. Please have knowledgeable BACCP staff available to accompany the inspector during the walkdown.

B.4 Steam Generator (SG) Inspections

- a) A copy of the guidance to be followed if a loose part or foreign material is identified in the SG.
- b) List of corrective action documents generated by the vendor and/or site with respect to SG inspection activities.
- c) A copy of the current schedule and/or plan for the Fall 2012 Unit 2 Steam Generator Replacement. This has no regulatory impact for the ISI/SGISI inspection described herein, but will be used as a rough guide for inspection

planning purposes. As such, it is understood that the information provided will only be as accurate as is known at the time it is provided, and that the information is subject to change.

B.5 Codes and Standards

- a) 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 inservice inspection program and the repair/replacement program.
 - ii) EPRI and industry standards referenced in the procedures used to perform the SG tube eddy current examination.

Inspector Contact Information:

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