



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

April 25, 2013

Mr. Joseph W. Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
1101 Market Street, LP 3D-C
Chattanooga, TN 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT UNIT 2 – NRC POST-APPROVAL SITE
INSPECTION FOR LICENSE RENEWAL, INSPECTION REPORT
05000260/2013008

Dear Mr. Shea:

On April 4, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed a Post-Approval Site Inspection for License Renewal at your Browns Ferry Nuclear Plant Unit 2. The enclosed report documents the inspection results, which were discussed on April 4, 2013, with Scott Hunnewell, Engineering Director, and members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules, regulations, and conditions of your license. The inspectors reviewed selected procedures, records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified. An observation in the area of One-Time inspection was identified which is subject to follow-up during the NRC Post Approval Site Inspection currently scheduled to be performed in August 2013.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its Enclosure, and your response (if any), 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 Nos. 50-260
License Nos. DPR-52

Enclosure:
NRC Inspection Report 05000260/2013008
w/Attachment: Supplemental Information

cc: (See Page 3)

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).

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cc: (See Page 3)

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X ☐ NON-SENSITIVE

ADAMS: ☐ Yes

ACCESSION NUMBER: _____

X ☐ SUNSI REVIEW COMPLETE ☐ FORM 665 ATTACHED

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SIGNATURE	RA	RA	RA	RA			
NAME	L. Lake	P. Cooper	J. Rivera	S. Vias			
DATE	4/ /2013	4/ /2013	4/ /2013	4/ /2013	4/ /2013	4/ /2013	4/ /2013
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cc:

K. J. Polson
Site Vice President
Browns Ferry Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

S. M. Bono
Plant Manager
Browns Ferry Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

James E. Emens
Manager, Licensing
Browns Ferry Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

E. W. Cobey
Manager, Corporate Licensing
Browns Ferry Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

T. A. Hess
Program Manager
Corporate Licensing
Tennessee Valley Authority
Electronic Mail Distribution

Edward J. Vigluicci
Associate General Counsel, Nuclear
Tennessee Valley Authority
Electronic Mail Distribution

Chairman
Limestone County Commission
310 West Washington Street
Athens, AL 35611

State Health Officer
Alabama Dept. of Public Health
P.O. Box 303017
Montgomery, AL 36130-3017

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
Browns Ferry Nuclear Plant
10833 Shaw Road
Athens, AL 35611-6970

Letter to Joseph W. Shea from Steven J. Vias dated, April 25, 2013.

SUBJECT: BROWNS FERRY NUCLEAR PLANT UNIT 2 – NRC POST-APPROVAL SITE
INSPECTION FOR LICENSE RENEWAL, INSPECTION REPORT
05000260/2013008

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-260

License Nos: DPR-52

Report No: 05000260/2013008

Licensee: Tennessee Valley Authority

Facility: Browns Ferry Nuclear Plant, Unit 2

Location: Athens, AL 35611

Dates: April 1 – 4, 2013

Inspectors: L. Lake, Senior Reactor Inspector (Lead Inspector)
P. Cooper, Reactor Inspector

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

Enclosure

SUMMARY OF FINDINGS

IR 05000260/2013008; April 1 – 4, 2013; Browns Ferry Nuclear Plant Unit 2; Post-Approval Site Inspection for License Renewal.

The report covers an inspection conducted by regional inspectors in accordance with Nuclear Regulatory Commission (NRC) Inspector Manual Chapter (IMC) 2515 and NRC Inspection Procedure 71003, Post-Approval Site Inspection for License Renewal, dated February 25, 2013.

Based on the sample selected for review, the inspectors determined that commitments, license conditions, and regulatory requirements associated with the renewed facility operating license were either being met, or where commitment actions had not been completed, that the licensee had administrative controls in place to ensure completion before the period of extended operation.

The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

No findings were identified during this inspection.

REPORT DETAILS

4. OTHER ACTIVITIES

4OA5 Other Activities

.1 Post-Approval Site Inspection for License Renewal (Phase 1)

a. Inspection Scope

Implementation of License Conditions and Commitments, including Aging Management Programs: The inspectors reviewed a sample of license renewal activities scheduled for the Unit 2 spring 2013 refueling outage, which was the last outage prior to the period of extended operation (PEO). The objective of the inspection was to maximize observations of the actual implementation of license renewal activities before the beginning of the PEO (June 28, 2014), and verify that the licensee completed the necessary actions to: (a) comply with the conditions stipulated in the renewed facility operating license; (b) meet the license renewal commitments described in NUREG-1843, "Safety Evaluation Report (SER) Related to the License Renewal of the Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3; (ADAMS Accession Number ML060120453) and (c) meet the future activities, including Aging Management Programs (AMPs), described in the Updated Final Safety Analysis Report (UFSAR) supplement submitted pursuant to 10 CFR 54.21(d).

The inspectors performed a walk-down of the Unit 2 Drywell on the 555' level to assess general conditions of civil engineering structures and components with regards to age related issues. The inspectors also observed visual examinations being performed on the Reactor Pressure Vessel (RPV) Head Vent.

The inspectors reviewed supporting documents; conducted interviews with licensee staff; observed in-process outage activities; and performed visual inspection of structures, systems, and components (SSCs) including those not accessible during power operation. The commitment items and AMPs selected for the inspection sample are summarized below based on their description in Appendix A of the License Renewal Application (LRA). The specific inspection activities conducted for each AMP are also described below. Specific documents reviewed are also listed in the report attachment.

BFN One-Time Inspection Program/ RPV Head Vent Piping

The One-Time Inspection Program at BFN is a new program described in the BFN UFSAR (section O.1.26) as a program which includes measures to verify that unacceptable degradation is not occurring: thereby validating the effectiveness of existing programs or confirming that there is no need to manage aging related degradation for the period of extended operation. The One-Time inspection Program is to be completed prior to entering the PEO. The elements of the One-Time Inspection Program include:

- Determination of the sample size based on an assessment of materials of fabrication, environment, plausible aging effects, and operating experience.
- Identification of the inspection locations in structures or components based on the aging effect. Determination of the examination technique, including acceptance criteria that would be effective in detecting the age related effect for which the component is examined. Non-destructive techniques will generally be used.
- Evaluation of the need for follow up examinations to monitor the progression of any aging degradation. When one-time inspections fail to meet the established acceptance criteria, the corrective action program will be used to schedule, trace, and trend the appropriate corrective actions and follow up inspections.

The inspectors reviewed work order (WO) 11307070 and observed the onetime visual inspections activities of the RPV head vent. An observation for this AMP is described in the "Findings and Observation" section of this report.

ASME Code Section XI Subsections IWB, IWC, and IWD Inservice Inspection Program

As identified in the BFN License Renewal Program and the Code of Federal Regulations, 10 CFR 50.55a, the BFN Inservice Inspection (ISI) Program will meet the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section XI for Class 1, 2, and 3 pressure-retaining components and their integral attachments in light-water cooled power plants. The ISI Program manages loss of material, cracking, thermal embrittlement, flaw growth, and loss of fracture toughness for these components. The program consists of periodic volumetric, surface, and/or visual examination and leakage tests, including welds, pump casings, valve bodies, integral attachments, and pressure-retaining bolting for assessment, and signs of degradation.

As identified in commitment No.4 of the NRC SER, implementing documents will include license renewal references. The inspectors reviewed the surveillance instruction below to verify that the license renewal references had been incorporated.

- Browns Ferry Nuclear Plant, Unit 2. Surveillance Instruction, 2-SI-4.6.G, Inservice Inspection and Risk – Informed Inservice Inspection Program Unit 2, Revision 0050, Effective Date: 10-18-2012

ASME Code Section XI Subsection IWE Program

As identified in the BFN License Renewal Program and the Code of Federal Regulations, 10 CFR 50.55a, the inservice inspection (ISI) requirements for inspection of the Unit 2 containment will meet the requirements of the ASME Boiler and Pressure Vessel (B&PV) Code, Section XI, Subsection IWE, for steel containments (Class MC). The ASME Section XI Subsection IWE Inservice Inspection program includes visual examination and augmented inspection (visual and/or volumetric examinations) for steel containments (class MC). Subsection IWE inspections are performed in order to identify and manage containment aging effects that could result in loss of intended function. Inspections or testing are conducted on the steel containment shells and their integral attachments; containment hatches and airlocks; seals, gaskets, and moisture barriers; and pressure retaining bolting. As part of the license renewal review, BFN committed to

revising implementation documents, under commitment No.28 of the SER, to include license renewal references.

The inspectors conducted a walkdown of the inside of the Unit 2 containment and observed the visual examination of the moisture seal located on the lowest elevation of the containment and reviewed the resulting work order #113110153 to repair unacceptable areas. The inspectors also reviewed work order 07-714079, the results of ultrasonic (UT) thickness measurements in the sand cushion region and evaluation of areas below minimum wall thickness. The inspectors reviewed problem evaluation report (PER) 707750 to verify that the licensee initiated appropriate corrective actions to revise the acceptance criteria in procedure 0-TI-417, "Inspection of Level I, II, III Protective Coating Moisture Seal Barrier, Condensate Storage Tanks," and locate the acceptance criteria for thickness of the metal containment in the appropriate acceptance criteria step in the procedure.

The inspectors interviewed program personnel and reviewed the following documents to verify that the implementation of the program was in accordance with the established procedures and consistent with the program attributes described in the licensing basis documents;

- Browns Ferry Nuclear Plant, Unit 0, Technical Instruction, 0-TI-417, "Inspection of Service Level I, II, III Protective Coatings, Moisture Seal Barrier, Condensate Storage Tanks, and ECCS Suction Strainers," Revision 0019, dated 03-14-2013
- Inspection and Examination Procedure, "Qualification and Certification Requirements for TVA Inspection Services Organization (ISO) Nondestructive Examination (NDE) Personnel," W47121015001, IEP-200, Rev. 0012, dated 10-18-2012
- NGP Nondestructive Examination Procedure, "Visual Examination to detect erosion/corrosion damage," W47-080812-008, N-VT-14, Rev 003, Quality Related, dated 08-26-2008
- Browns Ferry Nuclear Plant, Unit 0, Technical Instruction, 0-TI-376, "ASME Section XI Containments Inservice Inspection Program Unit 1, 2, and 3," Revision 0017, dated 09-11-2012
- Browns Ferry Nuclear Plant, Unit 0, Technical Instruction, 0-TI-417, "Inspection of Service Level I, II, III Protective Coatings, Moisture Seal Barrier, Condensate Storage Tanks, and ECCS Suction Strainers," Revision 0019, dated 03-14-2013

ASME Code Section XI Subsection IWF Program

As identified in the BFN License Renewal Program and the Code of Federal Regulations, 10 CFR 50.55a, the inservice inspection (ISI) requirements for inspection of the Unit 2 component supports will meet the requirements of the ASME B&PV Code Section XI for Class 1, 2, and 3 piping and component supports. The ASME B&PV Code, Section XI, Subsection IWF. The Inservice Inspection Program includes periodic visual examination of a sample of Class 1, 2, 3 and MC supports. Bolting for supports is also included with these components and inspected for loss of material and for loss of preload by inspecting for missing, detached, or loosened bolts and nuts. The ASME

Section XI, Subsection IWF aging management program utilizes inspections that detect degradation before loss of intended function.

As identified in commitment No.29 of the SER, BFN committed to revising implementation documents to include references to the license renewal program and to enhance the program to manage the aging effects of ASME equivalent Class MC supports. The inspectors reviewed the documents listed below to verify that the implementation of the program was in accordance with the established procedures and consistent with the program attributes described in the licensing basis documents.

- Browns Ferry Nuclear Plant, Unit 0, Technical Instruction, 0-TI-565, "One-Time Inspection Procedure," Revision 0005, dated 08-17-2012
- PER Number: 89791, "Summary of Corrective Actions for License Renewal"

Buried Piping and Tanks Inspection Program

The BNP License Renewal Program identified that the Buried Piping and Tanks Inspection Program is performed as part of the 10 CFR 50.65 Maintenance Rule program. The buried pipes at BFN have external coatings and wrapping as preventative measures to mitigate corrosion. The inspections provide for determination of degradation due to the loss of, or damage to, the protective coatings and wraps used for corrosion control on buried pipe external surfaces. The inspections also include connections and joints for signs of separation; signs of environmental degradation; signs of leakage and; appreciable settlement between piping segments. The program states that Browns Ferry does not have buried tanks that would be applicable to this inspection program.

As part of the license renewal review, BFN committed to the following under Commitment No.27 of the SER.

- Revise implementing documents to include license renewal reference.
- Add a trigger to the excavation permit document to require notification of engineering to perform a piping inspection when piping is excavated.
- Determine (via engineering evaluation) if sufficient inspections have been performed to draw conclusion regarding ability of underground coating to protect piping. If required, conduct a focused inspection to draw conclusion concerning the coating.
- Revise implementing documents to inspect buried piping when it is excavated.

The inspectors interviewed program personnel and reviewed the technical instruction listed below to verify that the implementation of the program was in accordance with the established procedures and consistent with the program attributes described in the licensing basis documents;

- Browns Ferry Nuclear Plant, Unit 0, Technical Instruction, 0-TI-561, Underground Piping and Tanks Integrity Program (UPTI) Revision 0013, Effective Date: 03-27-2013. NCO040006070

Inaccessible Medium Voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program

The Inaccessible Medium Voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program is a program manages the aging effects of inaccessible medium-voltage cables that are not subject to the environmental qualification requirements of 10 CFR 50.49 and are exposed to adverse localized environments caused by moisture while energized. The Inaccessible Medium Voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program is a condition monitoring program in which medium voltage cables that are installed in underground conduit duct banks and that perform an intended function within the scope of license renewal (such as the medium-voltage cables to the Residual Heat Removal Service Water pumps) will be tested to provide an indication of the condition of the conductor insulation.

As part of the license renewal review, BFN committed to developing and implementing a new program to manage the medium-voltage cables to the Residual Heat Removal Service Water pumps, under commitment No.3 of the SER.

The inspectors reviewed the documents listed below to verify that the implementation of the program was in accordance with the established procedures and consistent with the program attributes described in the licensing basis documents. The inspectors reviewed PER 707755 to verify that a Self Assessment of the Inaccessible Medium Voltage Cable program will be performed prior to the period of extended operation. The inspectors also reviewed PER 707749 to verify that the licensee initiated appropriate corrective actions to revise the portion of the Preventive Maintenance Program that implements an NRC commitment to annually inspect the manholes for water collection to also identify any cable found to be wetted.

- Work Order# 112988609, WO Description: Perform Check of Plant Sump Pumps for listed manholes, handhelds, valve pits and tunnels. Equipment Description: 500KV switchyard cable tunnel sump pump. Work Week: 2012/07/09
- Work Order# 113946691. WO Description: Manhole C Near Radwaste Evaporator Building Sump Pump. Equipment Description: Manhole C Sump Pump. Work Week: 2013/04/15
- Work Order# 113946695, WO Description: Manhole D East of the Stack, Equipment Description: Manhole D Sump Pump. Work Week: 2013/04/15
- Work Order# 113946698, WO Description: 500KV Transformer Yard Pit B, Equipment Description: 500KV XFMR Yard Valve Pit B Sump Pump. Work Week: 2013/04/15
- The Inaccessible Medium Voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program Notebook

Boiling Water Reactor Vessel and Internals Inspection Project (BWRVIP)/Stress Relaxation of the Core Plate Hold-Down Bolts

In their License Renewal Program, BFN committed to perform a plant-specific analysis consistent with BWRVIP-25, "BWR Core Plate Inspection and Flaw Evaluation Guidelines," to demonstrate that the core plate hold-down bolts can withstand required loads, also considering the effects of stress relaxation until the end of the period of extended operation. The program identifies that the core plate hold-down bolts connect the core plate to the core shroud. These bolts are subject to stress relaxation due to thermal and irradiation effects. The core plate hold-down bolts connecting the core plate to core shroud are initially preloaded during installation.

The loss of preload over time due to stress relaxation is considered a TLAA and evaluated accordingly. Since BFN has not installed core plate wedges, the loss of preload must be considered in the TLAA evaluation. If the analysis does not satisfy the specified criteria BFN committed to take appropriate corrective action. BWRVIP-25 identifies the installation of core plate wedges to eliminate the need for the enhanced inspections of the core plate hold-down bolts an acceptable corrective action.

BFN committed to submit the analysis or the corrective action taken to resolve the core plate hold down bolt issue to the NRC for review two years prior to the period of extended operation.

The inspectors interviewed program personnel and reviewed the documents listed below to verify that BFN was on track to completing the commitment as described in the licensing basis documents;

- Letter from F. E. Saba, NRC to J. W. Shea, Tennessee Valley Authority, "Browns Ferry Nuclear Plant, Units 1, 2 and 3- Draft Review of Tennessee Valley Authority Commitment Related to Core Plate Bolt Stress Analysis (TAC Nos. ME6615, ME6616, and ME6617)" dated April 8, 2013 (ADAMS Accession No. ML13088A259).
- Letter from J. W. Shea, Tennessee Valley Authority to NRC Document Control Desk, "Response to Request for Additional Information Regarding BWRVIP-25 Core Plate Bolt Stress Analysis for BFN Units 1, 2, and 3 (T AC Nos. ME6615, ME6616, ME6617), dated February 19, 2013 (ADAMS Accession No. ML 13052A741).
- Letter from J. W. Shea, Tennessee Valley Authority, to NRC Document Control Desk, "Response to Request for Additional Information Regarding BWRVIP-25 Core Plate Bolt Stress Analysis for BFN Units 1, 2, and 3," dated October 25, 2012 (ADAMS Accession No. ML12307A225).
- Letter from R. M. Krich, Tennessee Valley Authority, to NRC Document Control Desk, "BWRVIP-25 Core Plate Bolt Stress Analysis," dated June 15, 2011 (ADAMS Accession No. ML 111710054).

The inspectors also reviewed PER 707752 to verify that the licensee initiated appropriate corrective actions to revise the BWRVIP-25 Core Plate Program Notebook, Section 1, to include the commitment to perform an evaluation on the hold down bolt stress calculations and submit it to the NRC two years prior to the PEO.

Enclosure

Review of Newly-Identified SSCs: This inspection requirement is expected to be completed during the Phase 2 implementation of inspection procedure 71003.

Descriptions of AMPs and Time-Limited Aging Analysis (TLAA) in the UFSAR Supplement: The review of the description of AMPs and TLAA in the UFSAR supplement submitted pursuant 10 CFR 54.21(d) is expected to be completed during the Phase 2 implementation of inspection procedure 71003.

Review of License Renewal Commitment Changes: This inspection requirement is expected to be completed during the Phase 2 implementation of inspection procedure 71003.

b. Findings and Observations

No findings were identified. The inspectors determined that the licensee met the license renewal commitments, license conditions, and applicable regulatory requirements for the inspection samples selected for review.

The following observation in the area of the One-Time inspection program was identified and is subject to follow-up inspection during the NRC Post Approval Site Inspection currently scheduled for August, 2013.

- The inspectors identified an indication in the form of a shadow during the review of the one-time inspection conducted on the inside diameter of the RPV head vent line. Images in the inspection record show up as a shadowy area that could be indication of the transition from the pipe flange to pipe weld or socket weld fit-up. The licensee entered this into their corrective action program as PER 707747 to further evaluate the indication and determine the identity and safety significance. The inspectors did not identify any immediate concerns with the structural integrity of the reactor coolant system pressure boundary.

4OA6 Management Meetings

.1 Exit Meeting Summary

On April 4, 2013, the inspectors presented the inspection results to Scott Hunnewell, Engineering Director, and other members of station staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel:

T. Rogers, License Renewal Project Engineer
S. Austin, Licensing Engineer

NRC:

D. Dumbacher, Senior Resident Inspector
L. Pressley, Resident Inspector

LIST OF REPORT ITEMS

Opened

None

Opened and Closed

None

Closed

None

LIST OF DOCUMENTS REVIEWED

Procedures

- 0-TI-376 - Browns Ferry Nuclear Plant, Unit 0, Technical Instruction, ASME Section XI Containments Inservice Inspection Program Unit 1, 2, and 3, Revision 0017, Effective Date: 09-11-2012
- 0-TI-417 - Browns Ferry Nuclear Plant, Unit 0, Technical Instruction, Inspection of Service Level I, II, III Protective Coatings, Moisture Seal Barrier, Condensate Storage Tanks, and ECCS Suction Strainers. Revision 0019. Effective Date: 03-14-2013
- 0-TI-561 - Browns Ferry Nuclear Plant, Unit 0, Technical Instruction, Underground Piping and Tanks Integrity Program (UPTI) Revision 0013, Effective Date: 03-27-2013.
- 0-TI-565 - Browns Ferry Nuclear Plant, Unit 0, Technical Instruction, One-Time Inspection Procedure, Revision 0005, Effective Date: 08-17-2012
- 0-TI-567 - Browns Ferry Nuclear Plant, Unit 0, Technical Instruction, Selective Leaching Program Inspections, Revision 0005, Effective Date: 07-12-2012
- 54-ISI-30-017 – AREVA Written Practice for Qualification and Certification of Personnel, Issue Date January, 25, 2012
- IEP-200 - Qualification and Certification Requirements for TVA Inspection Services Organization (ISO) Nondestructive Examination (NDE) Personnel, Rev. 0012, Effective Date” 10-18-2012
- NGP-SPP-06.5 - NGP Standard Program and Processes. Foreign Material Control, Rev. 0001, Effective Date: 12-09-2011.
- N-VT-1 - NGP Nondestructive Examination Procedure. Visual Examination Procedure for ASME Section XI Preservice and Inservice. W47-130308-008, Rev 0045, Effective Date:03-11-2013
- N-VT-14 - NGP Nondestructive Examination Procedure. Visual Examination to detect erosion/corrosion damage. W47-080812-008, Rev 003, Quality Related, Effective Date: 08-26-2008
- N-VT-15 – Visual Examination of Class MC and Metallic Liners of Class CC Components of Light Water Cooled Plants, Rev. 011, Dated 03/13/2013
- N-VT-16 – General Visual Examination Containment Vessel Integrity Verification, Rev. 0005, dated 03/13/2013

Work Orders

- Work Order #07-714079-000. WO Description: License Renewal One-Time UT Inspection of the Cylindrical section of the Drywell Liner. Equipment Description: Containment Vessel Outside Steel Liner.
- Work Order #07-714083-000. WO Description: License Renewal One-Time Inspection by performing a UT Inspection of the sand bed area of the drywell.
- Work Order #112988609, WO Description: Perform Check of Plant Sump Pumps for listed Manholes, Handhelds, valve pits and tunnels. Equipment Description: 500KV switchyard cable tunnel sump pump. Work Week: 2012/07/09
- Work Order #11307070, One time inspections of the RPV head
- Work Order #11310153, Repair unacceptable areas in moisture barrier
- Work Order #113946691. WO Description: Manhole C Near Radwaste Evaporator Building Sump Pump. Equipment Description: Manhole C Sump Pump. Work Week: 2013/04/15
- Work Order #113946695, WO Description: Manhole D East of the Stack, Equipment Description: Manhole D Sump Pump. Work Week: 2013/04/15

Work Order #113946698, WO Description: 500KV Transformer Yard Pit B, Equipment Description: 500KV XFMR Yard Valve Pit B Sump Pump. Work Week: 2013/04/15
Work Order #114307070, License Renewal One-Time TW2 and TW3 Inspection, Inspection of the Reactor Vessel Head Vent.
Work Order #114329000. WO Description: License Renewal One Time Inspection AG1 and AG2 of BFN-2-CLR-064-0068, RX Bldg RHR Pump Room A CLR. Equipment Description: Reactor Bldg RHR Pump A Room Cooler.

Corrective Action Documents

PER 89791 - PER Summary of Corrective Actions for License Renewal Commitment Tracking.
PER 707747 – Photograph of flanged end of RPV head vent piping appeared to show an indication about 2 inches inboard of the flange face. Mechanical design to verify that it is the socket weld fit-up.
PER 707749 – PM program that implements an NRC commitment to annually inspect the manholes for water collection for the Inaccessible Medium Voltage Cable program needs to identify any cables found to be wetted.
PER 707750 – procedure 0-TI-417 acceptance criteria wasn't specified in acceptance criteria step.
PER 707752 – BWR Reactor Vessel Program Notebook LRA table does not include commitment to submit BERVIP-25 two year prior to extended period of operation
PER 707755 – Self Assessment of the Inaccessible Medium Voltage Cable Program

Other Documents

Browns Ferry Nuclear Plant, Unit 2, Surveillance Instruction, 2-SI-4.6.G, Inservice Inspection and Risk – Informed Inservice Inspection Program Unit 2, Revision 0050, Effective Date: 10-18-2012
Commitment Completion Form, Tracking Number: NCO 040006053. Commitment Statement: For the inaccessible Medium Voltage Cables not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program, Annually Inspect for water collection for in-scope cable manholes and conduit. Commitment completion date: 06/06/2011
Letter from F. E. Saba, NRC to J. W. Shea, Tennessee Valley Authority, "Browns Ferry Nuclear Plant, Units 1, 2 and 3- Draft Review of Tennessee Valley Authority Commitment Related to Core Plate Bolt Stress Analysis (TAC Nos. ME6615, ME6616, and ME6617)" dated April 8, 2013 (ADAMS Accession No. ML13088A259)
Letter from J. W. Shea, Tennessee Valley Authority, to NRC Document Control Desk, "Response to Request for Additional Information Regarding BWRVIP-25 Core Plate Bolt Stress Analysis for BFN Units 1, 2, and 3," dated October 25, 2012 (ADAMS Accession No. ML12307A225).
Letter from J. W. Shea, Tennessee Valley Authority, to NRC Document Control Desk, "Response to Request for Additional Information Regarding BWRVIP-25 Core Plate Bolt Stress Analysis for BFN Units 1, 2, and 3 (TAC Nos. ME6615, ME6616, ME6617)," dated February 19, 2013 (ADAMS Accession No. ML13052A741).
Letter from R. M. Krich, Tennessee Valley Authority, to NRC Document Control Desk, "BWRVIP-25 Core Plate Bolt Stress Analysis," dated June 15, 2011 (ADAMS Accession No. ML 111710054).
Notebook for the Inaccessible Medium Voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program

Tennessee Valley Authority Record of Visual Examination. Exam Date: 04-03-2013, Procedure: 0-TI-565, Rev 0005, Report Number: 2-1000-13. Work Order: 114307070. Examiner James Price, Level: II, 04-03-2013. Reviewer: Dan Langenfeld Level:III, 04-03-2013

Tennessee Valley Authority Record of Visual Examination. Exam Date: 04-03-2013, Procedure: 0-TI-564, Rev 005, Report Number: 2-0068-13. Work Order: 114329000. Examiner: Wolfgang Blank, Level:II, Date: 04-03-2013, Reviewer: Dan Langenfeld, Level: III, Date: 04-03-2013.

NOI No. U2RF17-005. Plant/Unit: BFN/2, ISI Dwg No. BFN-CISI-015, Component ID: MSB-2-1, Examination Report No: VT-13-053.

NUREG-1843, "Safety Evaluation Report (SER) Related to the License Renewal of the Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3; (ADAMS Accession Number ML060120453) Browns Ferry Updated Final Safety Analysis Report (UFSAR), Section O

W78-060106-015 - Engineering Work Request for an evaluation of maximum reduction in thickness of Drywell shell which will not have to be reported to Engineering for individual evaluation and disposition. Date: 1/4/06