ATTACHMENT 71111.08

INSPECTABLE AREA: Inservice Inspection Activities

CORNERSTONES: Initiating Events (45%)
Barrier Integrity (45%)
Mitigating Systems (10%)

INSPECTION BASES: Inservice inspection (ISI) activities can detect precursors to pressure boundary failures in reactor coolant systems (RCS), emergency core cooling systems (ECCS), risk-significant piping and components, and containment systems. Degradation of pressure boundaries of reactor coolant systems, steam generator tubes, emergency feedwater systems, essential service water systems, and containments would result in a significant increase in risk. This inspection is intended to assess the effectiveness of the licensee's program for monitoring degradation of vital system boundaries.

The scope of this inspectable area is limited to the following structures, systems, and components (SSCs):

(1) Reactor coolant system pressure boundaries, including steam generator tubes in pressurized water reactors (PWRs).

(2) Piping connected to the RCS, failure of which could result in an interfacing system loss of coolant accident.

(3) Reactor vessel internals.

(4) Risk-significant piping system boundaries.

(5) Containment system boundaries (including coatings and post-tensioning systems, where applicable).

LEVEL OF EFFORT: Inspections are generally to be performed during each refueling outage at each reactor unit at a site. The level of ISI activities including steam generator inspections at each plant can vary significantly from outage to outage but typically should be as identified in this procedure. Since all activities are subject to outage availability, inspectors must make a reasonable effort to ensure that the inspection effort occurs during the time that the activities are scheduled.

71111.08-01 INSPECTION OBJECTIVE

To assess the effectiveness of the licensee's program for monitoring degradation of the reactor coolant system boundary, risk-significant piping system boundaries, and the containment boundary.

71111.08-02 INSPECTION REQUIREMENTS

02.01 Non-Destructive Examination (NDE) Activities and Welding Activities

a. Review a sample of nondestructive examination (NDE) activities. The review sample should consist of two or three types of NDE activities, including at least one volumetric examination.

b. Order of preference for reviewed NDE activities:
   1. Volumetric examinations
   2. Surface examinations
   3. Visual examinations (VT-1 and/or VT-3 on risk significant components)

c. For each examination reviewed, perform the following through either direct observation (preferred method) or record review:

   1. For ASME Code Required Examinations

      (a) Verify that NDE activities are performed in accordance with ASME Boiler and Pressure Vessel Code requirements.

      (b) Verify that indications and defects, if present, are dispositioned in accordance with the ASME Code or an NRC approved alternative (e.g. approved relief request).

      (c) Verify that relevant indications are compared to previous examinations to determine if any changes have occurred.

   2. For Other Augmented or Industry Initiative Examinations:

      (a) Verify the activities are performed in accordance with the licensee's augmented inspection program and associated examination procedure (e.g., examinations of components such as vessel internals subject to fatigue, intergranular stress corrosion or irradiation assisted stress corrosion, feedwater pipe subject to flow-accelerated corrosion, nickel based weldments subject to primary water stress corrosion cracking etc).

      (b) Verify indications and defects, if present, are dispositioned in accordance with licensee's procedures and NRC requirements.

      (c) Verify the activities are performed in accordance with applicable industry guidance documents and NRC commitments. For deviations with possible safety implications, the inspector should inform the applicable NRR branch, so that they can consider possible discussion with the applicable industry group and provide assistance on whether and how the licensee.

d. If applicable, review at least one volumetric or surface examination from the previous outage with relevant indication(s) that were analytically evaluated and accepted by the licensee for continued service. Verify that the licensee's acceptance was in accordance with the ASME Code or an NRC approved alternative, and confirm the indication(s) were examined for acceptability for continued service.

e. If applicable, for modifications, repairs, or replacements consisting of welding on pressure boundary risk significant systems, verify for one to three welds that the welding activities, and any applicable NDE performed, were performed in accordance with ASME Code requirements, or an NRC approved alternative.

02.02 PWR Vessel Upper Head Penetration (VUHP) Inspection Activities

Section 02.02 is a requirement of the Davis Besse Lesson Learned Task Force (DBLLTF) No. 3.3.4(3): Develop inspection guidance or revise existing guidance to ensure that the vessel head penetration (VHP) nozzles and the reactor pressure vessel (RPV) head area are periodically reviewed by the NRC during licensee ISI activities. [C-1]

a. The inspection requirement steps in 02.02 parallel the inspection requirement steps in 02.01. The inspection of the licensee's reactor VUHP activities under 02.02.a and b may be considered as satisfying the corresponding inspection requirements of 02.01.a and b.

If the licensee is performing a bare metal visual examination (VE) of the VUHPs, review the examination procedure; and either observe portions of this examination, or review the post examination videotape records. Review licensee criteria for confirming visual examination quality and instructions for resolving interference or masking issues to confirm they are consistent with 10 CFR 50.55a(g)(6)(ii)(D).

And/or;

If the licensee is performing non-visual nondestructive examination (NDE) of the reactor vessel head, review a sample of these examinations. In particular, review the NDE examination results and procedures used to confirm that they meet Code Case N-729-1. After September 1, 2009, confirm that the ultrasonic examination procedures and equipment used were qualified by blind demonstration test in accordance with 10 CFR 50.55a(g)(6)(ii)(D).

And

Review the records recording the extent of inspection for each penetration nozzle including documents which resolved interference or masking issues to confirm that the extent of examination meets 10 CFR 50.55a(g)(6)(ii)(D). Specifically, for the penetration locations reviewed:

1. For VEs, confirm the coverage has been achieved and that limitations in coverage are properly recorded.

   And/or;

2. For non-visual NDE, confirm that essentially 100 percent (i.e. greater than or equal to 90 percent) of the required examination volumes and surfaces was achieved. Additionally, confirm that a demonstrated volumetric (i.e. ultrasonic examination - backwall leakage pattern) or surface leakage path examination assessment (i.e. wetted J-groove weld surface eddy current or dye penetrant examination) was completed.

b. For each NDE activity reviewed, perform the following through either direct observation (preferred method) or record review:

   1. Verify that the activities are performed in accordance with the requirements of 10 CFR 50.55a(g)(6)(ii)(D).

2. Verify that indications and defects, if detected, were dispositioned in accordance with 10 CFR 50.55a(g)(6)(ii)(D).

c. If relevant indications have been identified that were accepted for continued service, review a sample of the examination records and associated evaluations accepting these conditions. Verify that the licensee's acceptance for continued service was in accordance with 10 CFR 50.55a(g)(6)(ii)(D) or an NRC approved alternative.

d. If welding repairs have been completed on upper head penetrations, review a sample of these repairs. Verify that the welding process and welding examinations were performed in accordance with ASME Code requirements and 10 CFR 50.55a(g)(6)(ii)(D) or an NRC approved alternative.

02.03 <u>Boric Acid Corrosion Control (BACC) Inspection Activities (PWRs)</u>

Section 02.03 is a requirement of the Davis Besse Lesson Learned Task Force (DBLLTF) No. 3.3.2(1): Develop inspection guidance for the periodic inspection of Pressurized Water Reactors (PWR) plant boric acid corrosion control programs. [C-2]

a. Perform an independent review of plant areas that have recently received a boric acid walkdown by the licensee, through either direct observation (preferred method) or record review. (Reference IP 71111.20)

b. Verify that visual inspections emphasize locations where boric acid leaks can cause degradation of safety significant components.

c. Review one to three engineering evaluations performed for boric acid found on RCS piping and components. Also, verify that degraded or non-conforming conditions are identified properly in licensee's corrective action system.

d. Review one to three corrective actions performed for evidence of boric acid leaks identified. Confirm that these corrective actions were consistent with requirements of the ASME Code and 10 CFR 50, Appendix B, Criterion XVI.

02.04 <u>Steam Generator (SG) Tube Inspection Activities</u>

a. In-situ Pressure Testing (if performed).

1. Assess whether the in-situ screening criteria are in accordance with the EPRI Guidelines. In particular, assess whether assumed NDE flaw sizing accuracy is consistent with data from the EPRI examination technique specification sheet (ETSS) or other applicable performance demonstrations.

2. Assess whether the appropriate tubes are to be In-situ pressure tested (in terms of specific tubes and number of tubes).

3. Review plans for and, if practical, observe in-situ pressure testing activities and assess whether tubes are in-situ tested in accordance with EPRI In-situ Pressure Test Guidelines. Assess test records (e.g., pressure versus time traces, pressure achieved, and hold times).

4. Review in-situ pressure test results for conformance with the performance criteria.

b. Compare the estimated size and number of tube flaws detected during the current outage against the previous outage operational assessment predictions to assess the licensee's prediction capability.

c. Confirm that the SG tube eddy current examination (ET) scope and expansion criteria meet technical specification (TS) requirements, EPRI Guidelines, and commitments made to the NRC.

d. If the licensee has identified new degradation mechanisms, verify that the licensee has fully enveloped the problem in its analysis of extended conditions including operating concerns, and has taken appropriate corrective actions before plant startup (e.g., additional inspections, in-situ pressure testing, preventive tube plugging, etc.).

e. Confirm that all areas of potential degradation (based on site-specific experience and industry experience) are being inspected, especially areas which are known to represent potential ET challenges (e.g., top-of-tubesheet, tube support plates, U-bends).

f. Confirm that all repair processes being used have been approved for use at the site.

g. Repair Criteria:

   1. Confirm that the TS repair criteria are being followed. Typically, the TS repair limit is 40 percent through wall, although most licensees plug (or repair) crack-like indications on detection (unless an alternate to the 40% depth based repair criteria has been approved for use). This "plug on detection" approach is due to the inability to reliably depth size flaws.

   2. Determine whether the depth sizing repair criterion (typically 40 percent through wall) is being applied for indications other than wear or axial primary water stress corrosion cracking (PWSCC) in dented tube support plate intersections.

h. If steam generator leakage greater than 3 gallons per day was identified during operations or during post-shutdown visual inspections of the tubesheet face, assess whether the licensee has identified a reasonable cause for this leakage based on inspection results. In addition, determine whether corrective actions are planned or were taken to address the cause. Additional guidance on this issue is available in Part 9900: Technical Guidance, "Steam Generator Tube Primary-to-Secondary Leakage."

i. Confirm that the ET probes and equipment are qualified for the expected types of tube degradation. Assess the site specific qualification of one or more techniques (e.g., equipment, data quality/noise issues, degradation mode).

j. If the licensee has identified loose parts or foreign material on the secondary side of the steam generator, focus on licensee corrective actions in conjunction with step 02.05 below. Specifically, confirm that the licensee has taken/planned appropriate repairs of affected SG tubes, inspected the secondary side of the SG to remove foreign objects (if possible). If the foreign objects are inaccessible, determine whether the licensee has performed an evaluation of the potential effects of object migration and/or tube fretting damage.

k. Review one to five samples of eddy current data. If adequate expertise for this activity does not reside in the regional office, the Office of Nuclear Reactor

Regulation (NRR) should be contacted via telephone call or e-mail to discuss the need for providing this resource.

02.05 Identification and Resolution of Problems. Verify that the licensee is identifying ISI/SG problems at an appropriate threshold and entering them in the corrective action program. Determine whether the licensee's procedures direct the licensee to perform a root cause evaluation and take corrective actions when appropriate. For a selected sample of problems associated with inservice inspection and steam generator inspection documented by the licensee, verify the appropriateness of the corrective actions. See Inspection Procedure 71152, "Identification and Resolution of Problems," for additional guidance. In addition, a licensee's evaluation of industry operating experience can be critical. Determine whether licensees are assessing the applicability of operating experience to their respective plants.

71111.08-03 INSPECTION GUIDANCE

General Guidance

For PWRs, the effort expended and the level of detail considered in performing these activities will be determined on the basis of review of the previous outage summary report, findings from the previous NRC inspection, and interaction with NRR staff. For inspection planning, determine where to place the emphasis in regard to non-SG ISI activities (Sections 02.01 through 02.03) and SG inspection activities within the estimated resources. Also, note, when applying the requirements of 02.01 through 02.03, if timing does not permit an inspection step to be performed on an activity occurring in the current outage, the step may utilize the activity performed during the previous outage. In other words, these samples may be chosen from current or previous outage.

Specific Guidance

03.01 Non-Destructive Examination (NDE) Activities and Welding Activities

a. Volumetric examinations provide the greatest amount of information when compared to surface and visual examinations. Review a sample of nondestructive examination (NDE) activities. The review sample should consist of two or three types of NDE activities, including at least one volumetric examination. The reviews should be of risk-significant welds.

b. Sections V and XI in the ASME Code provide the requirements/guidance for performance of the applicable NDE method, while the acceptance criteria are defined in IWX-3000 of Section XI.

c. ASME Code Section XI, Article IWX-3130 provides the rules for: (1) acceptance by analytical evaluation of flaws detected by volumetric or surface examinations, without the flaw removal, repair, or replacement, and (2) reexamination requirements.

d. Verify that the NDE procedures used to verify weld acceptance are in accordance with ASME Code Section III, V, IX and XI requirements.

e. For Section XI Code repairs (i.e., welding), observe available welding activities and verify they are performed in accordance with the specified Welding Procedure Specification (WPS). Confirm that the WPS has been appropriately qualified by review of the supporting Procedure Qualification Record(s) (PQRs). Verify that the PQR incorporates all of the ASME Code Section III and IX required variables specified for the particular welding process used.

03.02 PWR Vessel Upper Head Penetration (VUHP) Inspection Activities

As part of the preparation for vessel upper head inspection, the inspector may want to consider reviewing NRC Bulletin 2001-01, Bulletin 2002-01, Bulletin 2002-02, and NRC first revised Order EA-03-009. These documents provide the background behind 10 CFR 50.55a(g)(6)(ii)(D), and may be useful references.

03.03 Boric Acid Corrosion Control (BACC) Inspection Activities (PWRs)

As part of the preparation for inspection of boric acid corrosion control, the inspector should consider reviewing Generic Letter 88-05 and RIS 2003-13. The inspector should review licensee commitments made in response to this generic letter. Appendix B provides a list of typical PWR plant systems containing boric acid.

03.04 Steam Generator (SG) Tube Inspection Activities.

General Guidance

Use the factors discussed below to determine the allocation of the inspection effort for review of the licensee SG inspection activities as described in 02.04. If none of these factors apply, the minimum inspection requirement is to complete steps 02.04a., c., d., g.(1), h., i., and j. If any of the factors apply, this baseline inspection effort should include the inspection of all SG activities identified in 02.04. If the safety significance of the operating experience warrants, then consider increasing the depth of the baseline SG inspection effort beyond the maximum estimated resources if recommended by NRR/DCI and approved by NRR/DIRS/IRIB.

- SGs with mill-annealed or stress relieved Alloy 600 tubes should receive a review as described in this section at least every other outage, or more frequently if other factors discussed below apply. For SGs with thermally-treated Alloy 600 and thermally-treated Alloy 690 tubes this review may not be required unless considerable inservice time (e.g., > 9 yrs since beginning commercial operation and more than 2 operating cycles since the last NRC inspection of the licensee's SG inspection activities) or other factors discussed below apply.

- Deteriorating SG tube material condition as indicated by new degradation mechanism(s), or a large number or significant increase in the number of flaws reported by the licensee during the previous SG tube examinations. This information can be obtained from the licensee's most recent SG inspection summary report.

- SG tube performance criteria (i.e., operational leakage, structural integrity, or accident leakage) were not met during the previous operating cycle.

- PWRs with a history of primary-to-secondary leakage during the previous operating cycle (e.g., > 3 gallons per day).

- Reported potential degraded condition (e.g., NRC and industry information notices) due to SG design, water chemistry, material properties, or newly identified degradation mechanisms.

The inspection should be scheduled towards the end of the SG inspection activities, if possible, because the licensee performs a significant number of evaluations (listed in 02.04) at that time.

Attachment A lists specific situations which, if identified by the inspector, require notification of NRR staff. In addition, the inspector is encouraged to contact NRR staff to discuss any other situations or issues that are identified, that are unexpected based on the inspector's experience.

Prior to an inspection, and as a part of the preparation for SG tube inspections, the inspector should contact NRR staff to determine the existence of issues or concerns that should be considered for review during the SG tube inspection. The inspector should also consider reviewing the licensee's commitments in response to Generic Letters (GLs) 95-03, 95-05, 97-05, and 97-06 (see References Section 06). In addition, the inspector should review the licensee's most recent SG inspection summary report. The inspector should also consider reviewing NRC generic communications, such as relevant information notices and regulatory information summaries. Lastly, the inspector should become familiar with the industry steam generator program guidelines contained in Nuclear Energy Institute (NEI) 97-06 and several related Electric Power Research Institute (EPRI) reports (see References Section 06). The EPRI guidelines referenced do not constitute NRC requirements or commitments and technically acceptable alternative methods may be used by the licensee. Also, the staff has determined that while the guidelines represent an improvement over practices followed in the past, use of the guidelines alone does not ensure that the regulations will be satisfied. However, if the licensee has deviated from the guidelines, the basis for the deviation should be documented by the licensee.

Periodically, for plants that have SGs with active degradation or other SG issues, NRR/DCI staff will conduct a conference call with the licensee to discuss SG tube examination activities. If scheduled by NRR/DCI, the inspector should participate in the conference calls set up between NRC and licensee staff (as the timing of the call permits), during which steam generator tube examination activities are discussed. In addition, the inspector should review summaries from previous similar conference calls and can obtain these from NRR/DCI staff. The information obtained during these calls will be beneficial to the inspector for background information as well as potentially providing direction for inspection activities.

Specific Guidance

a. In-Situ Pressure Testing

   1. The inspector should review the EPRI Guidelines for in-situ screening criteria in order to determine if the licensee's criteria meets that guidance.

   2. The inspector should review test data to determine if the appropriate tube(s) has/have been properly identified for in-situ pressure testing.

   3. The inspector should observe, when possible, the in-situ testing. The inspector should review the test procedure. The inspector should determine that the test was performed in accordance with the procedure and the EPRI In-Situ Pressure Test Guidelines.

   4. The inspector should evaluate the results of the test against the performance criteria identified in the test procedure.

b. The inspector should review the results of the current examinations to determine the ability of the licensee to predict future tube performance through assessment of previous performance.

c. The inspector should review the licensee's examination scope and expansion criteria to determine if both meet the technical specification requirements, commitments made to the NRC, and the EPRI Guidelines.

d. New degradation mechanisms are identified by the licensee based on a comparison of the summary report of the previous outage results to the current outage results. The inspector should notify NRR of the new mechanism. NRR will assist in evaluation of the corrective actions. If the steam generators have been replaced, then the first subsequent outage examination results should be compared to the PSI data. (Wear indications observed during the first inspection following steam generator replacement should not be considered a new degradation mechanism unless a large number of indications (greater than approximately 100 indications per steam generator) are detected or if large through wall extents are observed (greater than 30% through-wall).)

e. Compare the licensee's SG tube inspection plan scope to the previous outage summary report and NRR identified industry issues to verify that all areas of potential degradation have been included.

f. All repair processes being used must be approved. Verify the existence of approval(s) in technical specifications, exemption requests, or other NRC correspondence.

g. Confirm, in the absence of "plug on detection," that the licensee has depth sizing techniques that provide reasonable estimates of the depth of degradation such that the typical TS repair limit of 40 percent through-wall can be implemented without a loss of tube integrity for the period of time between inspections.

   This criteria may be acceptable and in accordance with the licensee's TS, although experience has shown, for example, that many types of IGA/SCC cannot be sized with a sufficient degree of accuracy or reliability. In addition, this may indicate licensee practices that are inconsistent with their response to GL 97-05. If that is the case, contact NRR.

h. It is suggested that the NRC resident inspectors and regional staff use an informal screening criteria of 3 gpd or greater for increased involvement by NRC headquarters staff when steam generator primary to secondary leakage is identified. This is not meant to be an absolute threshold, or requirement, because there may be certain instances where there is something unusual about the circumstances of the leakage, or other reason that the region would want involvement by the headquarters staff before leakage reaches 3 gpd. If a licensee reports levels of primary-to-secondary leakage exceeding 3 gpd to the resident inspector or regional staff, Office of Nuclear Reactor Regulation (NRR) should be informed through the morning phone calls. The following section discusses some of the typical questions that inspectors can pursue with the licensee when leakage is reported.

   When leakage exceeds 3 gpd, parameters that can be considered are the effectiveness of licensee procedures, equipment, and practices for monitoring and responding to primary-to-secondary leakage. For example, the adequacy of procedures and equipment to provide real-time information on leak rate and its rate of change could be assessed. The appropriate setting of alarm setpoints on those radiation monitors that are used for detecting primary-to-secondary leakage (e.g., condenser air ejector, N-16) to alert operators to any increasing leak rate could be assessed. In addition, the adequacy of emergency operating procedures, availability of systems and components, and operator training for response to steam generator tube ruptures could also be assessed.

   The NRR staff often receives notification of extremely low levels of leakage (< 1 gpd), but these levels of leakage don't typically need to result in increased interaction with the licensee. This is because many plants have experienced this level of leakage during a full cycle, and it's difficult to definitively determine the source of the leakage at that level. Often, small levels of leakage will persist for the rest of the operating cycle for some plants.

i. Review the equipment and probes used for the examination(s). For example, review the test configuration (i.e., frequency, coil selection, probe drive, and physical limitations). Verify that the appropriate ET probe (e.g., bobbin, pancake, or multi-coil type) is used to detect the type of flaw that might be expected. Verify that the equipment has been calibrated in accordance with the ET procedure(s) and ASME Code.

j. No specific guidance.

k. No specific guidance.

03.05 No specific guidance.

71111.08-04 RESOURCE ESTIMATE

This inspection procedure is estimated to take, on the average, 16 to 32 hours for each BWR unit, and 80 to 100 hours per PWR unit, respectively, every refueling outage.

Depending on availability, resident staff members may assist the regional ISI inspectors in completing section 02.03, Boric Acid Corrosion Control (BACC) Inspection Activities (PWRs).

71111.08-05 COMPLETION STATUS

Inspection of the minimum sample size will constitute completion of this procedure in the Reactor Program System (RPS). The minimum sample size will consist of 1sample for each refueling outage at the facility. The sample for BWR's consists of all the requirements in Section 02.01, if available. The sample for PWRs consists of all the requirements in sections 02.01, 02.02, 02.03, and 02.04, if available.

If a particular activity is not completed because the licensee was not scheduled to perform this activity in the refuel outage, then document this in the inspection report. However the sample should be reported as complete. For example section 02.04 specifies many activities. If one activity is not completed in section 02.04 because it is not available, then document the sample as complete.

71111.08-06 REFERENCES

Reference documents should be verified to be the current revision prior to use. Most reference documents can be obtained through the Electronic Reading Room on the NRC public website (www.nrc.gov).

10 CFR 50.55a(g)(6)(ii)(D)

ASME Boiler and Pressure Vessel Code Sections III, V, IX, and XI.

Plant-specific ISI program.

GL 88-05, "Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary Components in PWR Plants."

GL 95-03, “Circumferential Cracking of Steam Generator Tubes.”

GL 95-05, “Voltage-Based Repair Criteria for Westinghouse Steam Generator Tubes Affected by Outside Diameter Stress Corrosion Cracking.”

GL 97-05, “Steam Generator Tube Inspection Techniques.”

GL 97-06, “Degradation of steam Generator Internals.”

GL 2004-01, “Requirements for Steam Generator Tube Inspections.”

GL 2006-01, “Steam Generator Tube Integrity and Associated Technical Specifications.”

NRC Bulletin 2002-01, “Reactor Pressure Vessel Head Degradation and Reactor Pressure Boundary Integrity.”

NRC Bulletin 2003-02, “Leakage From Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity.”

NEI 97-06, “Steam Generator Program Guidelines.”

“PWR Steam Generator Examination Guidelines,” EPRI Report TR-107569.

“Steam Generator Integrity Assessment Guidelines,” EPRI Report TR-107621.

“Steam Generator In Situ Pressure Test Guidelines,” EPRI Report TR-107620.

Inspection Procedure 71152, “Identification and Resolution of Problems.”

Inspection Procedure 71111.20, “Refueling and Other Outage Activities”.

Part 9900: Technical Guidance, “Steam Generator Tube Primary-to-Secondary Leakage.”

First Revised Order, EA-03-009, “Issuance of Order Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors,” February 20, 2004.

RIS 2003-13, “NRC Review of Responses to Bulletin 2002-01, “Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity.”“

WCAP-15988-NP, “Generic Guidance for an Effective Boric Acid Inspection Program for Pressurized Water Reactors,” Revision 1 April 2005 (ADAMS Accession No.ML050960532).

NRC Regulatory Issue Summary (RIS) 2007-20, Implementation Of Primary-To-Secondary Leakage Performance Criteria.

END

APPENDIX A

Tube Integrity Issues Requiring Further Evaluation by NRR Staff

If the following situations are identified by the inspector, NRR/Division of Component Integrity (DCI) staff should be promptly contacted. NRR/DCI staff will determine whether NRR involvement is necessary. In addition, the inspector is encouraged to contact NRR/DCI staff to discuss any other situations or issues that are identified, that are unexpected based on the inspector's experience.

1. Selection of tubes to be in-situ pressure tested is not consistent with EPRI guidance (i.e., number of tubes to be tested, or specific tubes to be tested, or NDE uncertainty is not consistent with data from the EPRI examination technique specification sheet (ETSS) or other applicable performance demonstrations).

2. In-situ pressure testing of flawed tubes is not successful in reaching the desired test pressure (e.g., main steam line break for accident induced leakage, 3 times normal operating differential pressure and 1.4 times main steam line break pressure for burst), either due to tube failure/leakage or equipment problems/limitations.

3. Estimated size or number of tube flaws detected during the current outage invalidates bounding assumptions from the previous outage operational assessment predictions.

4. If the licensee's use of depth sizing is inconsistent with their response to NRC Generic Letter 97-05.

5. A tube repair criteria or repair process is being used which has not been reviewed by the NRC for use at this site (e.g., alternate tube repair criteria, or sleeving process).

6. If tube inspections or testing do not identify the source of primary-to-secondary leakage observed during the previous operating cycle or during post-shutdown visual inspections of the tubesheet face.

ATTACHMENT 1

REVISION HISTORY FOR IP 71111.08

Commitment Tracking Number	Issue Date	Description of Change	Training Needed	Training Completion Date	Comment Resolution Accession Number
C-1 Reference: DBLLTF 3.3.4(3)		Revision History Reviewed for last four years. Develop Inspection Guidance for Vessel Head Penetrations and RPV Head Area Inspections.	No	N/A	N/A
C-2 Reference: DBLLTF 3.3.2(1)		Revision history reviewed for last four years. Develop Inspection Guidance For Boric Acid Corrosion Control Programs.	No	N/A	N/A
None	10/04/07 CN 07-031	IP 71111.08 has been revised to incorporate best practices of ISI working group.	No	N/A	ML072400349
None	03/23/09 CN 09-010	IP 71111.08 has been revised to address feedback form 71111.08-1319 by incorporating the changes to 10 CFR 50.55a(g)(6)(ii)(D)	No	N/A	N/A