**James A. Spina**
Vice President

Calvert Cliffs Nuclear Power Plant, Inc.
1650 Calvert Cliffs Parkway
Lusby, Maryland 20657
410.495.5200
410.495.3500 Fax

**Constellation Energy**
Generation Group

22

**PR 50**
**(72FR16731)**

July 3, 2007

DOCKETED
USNRC

July 5, 2007 (11:05am)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555–0001

**ATTENTION:** Rulemakings and Adjudications Staff

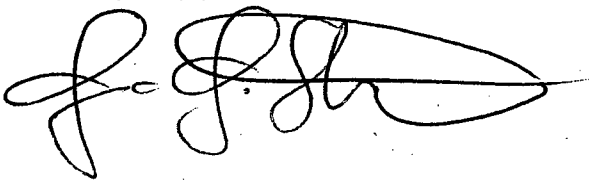
**SUBJECT:** Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Proposed Rule, 10 CFR Part 50, Industry Codes and Standards; Amended Requirements (RIN 3150-AH76)

**REFERENCE:** (a) Federal Register Notice, 72 FR 16731, dated April 5, 2007

Per Reference (a), the Nuclear Regulatory Commission (NRC) requested comments related to RIN 3150-AH76, Request from NRC for Comments on a proposal to amend NRC regulations to incorporate by reference the 2004 Edition of Section III, Division 1 and Section XI, Division 1 of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPV Code) and the 2004 Edition of the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code). The attached comments from Calvert Cliffs Nuclear Power Plant, Inc. are provided for your consideration.

Should you have questions regarding this matter, please contact Mr. Jay S. Gaines at (410) 495-5219 or Mr. Bernard C. Rudell at (410) 495-4815.

Very truly yours,



JAS/MJY/bjd

Attachment: (1) Comments Related to RIN 3150-AH76, Federal Register Notice 72 FR 16731, dated April 5, 2007

cc: Document Control Desk, NRC
D. V. Pickett, NRC
S. J. Collins, NRC
Resident Inspector, NRC
R. I. McLean, DNR

Template=SECY-067

SECY-02

# ATTACHMENT (1)

## COMMENTS RELATED TO RIN 3150-AH76, FEDERAL REGISTER NOTICE 72 FR 16731, DATED APRIL 5, 2007

## ATTACHMENT (1)

## COMMENTS RELATED TO RIN 3150-AH76, FEDERAL REGISTER NOTICE 72 FR 16731, DATED APRIL 5, 2007

| Paragraph ITG | Rule Text | Comment | Proposed Alternative |
|---|---|---|---|
| D (1) All | *Reactor Vessel Head Inspections.*<br>(*1*) All licensees of pressurized water reactors shall augment their inservice inspection program by implementing ASME Code Case N–729–1 subject to the conditions specified in paragraphs (g)(6)(ii)(D)(*2*) through (*6*) of this section. | MRP is developing a qualification program for vessel head penetrations based on ASME Section V, Article 14, intermediate rigor so there is no need for these conditions. | All licensees of pressurized water reactors shall augment their inservice inspection program by implementing ASME Code Case N–729–1 except that the qualification program shall meet the intermediate rigor requirements of ASME, Section V, Article 14. |
| (2) Assessment | Item B4.40 of Table 1 must be inspected at least every fourth refueling outage or at least every seven calendar years, whichever occurs first, after the first ten-year inspection interval. | This is an unwarranted disadvantage to plants on a 24 month refueling outage. | A condition of not more than 8 years, should be applied. |
| (3) Assessment Primarily<br><br>Inspection Secondary | Instead of fulfilling the specified 'examination method' requirements for volumetric and surface examinations of Note 6 in Table 1, the licensee shall perform a volumetric or surface examination or both of essentially 100 percent of the required volume or equivalent surfaces of the nozzle tube, as identified by Fig. 2 of ASME Code Case N–729–1. A surface examination must be performed on all J-groove welds. If a surface examination is substituted for a volumetric examination on a portion of a penetration nozzle that is below the toe of the J-groove weld (Point E on Fig. 2 of ASME Code Case N–729–1), the surface examination must be of the inside and outside wetted surfaces of the penetration nozzle not examined volumetrically. | A surface examination of the J-groove weld is not necessary as this is not a safety issue. It is estimated that these examinations will increase the duration of the examinations by 7-21 days and result in a personnel dose rate of 5-20 Rem. Experience since the issuance of the Order has shown a low frequency of leaks. This is a new requirement that should receive a backfit analysis.<br><br>The proposed change does not recognize leak path ultrasonic examination in lieu of surface examination of the reactor vessel head penetration as was permitted when Calvert Cliffs Nuclear Power Plant, Inc. performed the examinations under Revised Order EA-03-009. This will add | Delete: A surface examination must be performed on all J-groove welds.<br><br>Performance of this exam should be allowed as an alternative to performing a surface exam of the wetted portions of the reactor vessel head penetrations when volumetric examination is performed on the nozzle tube. The condition paragraph (g)(6)(ii)(D)(3) should be |

| Paragraph ITG | Rule Text | Comment | Proposed Alternative |
|---|---|---|---|
| | | substantial unwarranted dose, cost, and time to the examination. The ultrasonic leak path exam has been demonstrated and was previously accepted by the Nuclear Regulatory Commission.<br><br>Reactor vessel head replacement designs which have leak pathway designs that permit leakage passage through the nozzle interference fit zone for external detection should be exempt from performing surface examination of the wetted portions of the reactor vessel head penetrations when volumetric examination and the external leakage detection at these leak pathways is performed on the nozzle tube. | modified as such.<br><br>The condition paragraph (g)(6)(ii)(D)(3) should be modified as such. |
| (4) Inspection | Ultrasonic examinations must be performed using personnel, procedures and equipment that have been qualified by blind demonstration on representative mockups using a methodology that meets the conditions specified in paragraphs (g)(6)(ii)(D)(4)(*i*) through (*iv*) of this section instead of using a methodology that satisfies the conditions specified by the qualification requirements of Paragraph–2500 of ASME Code Case N–729–1. | MRP is developing a qualification program for vessel head penetrations based on ASME Section V, Article 14, intermediate rigor so there is no need for these conditions. | **** using a methodology that meets the (Insert) intermediate rigor requirements of ASME Section V, Article 14.<br><br>Delete the rest of the paragraph beginning with "conditions" |
| (i) Inspection | The diameters of pipes in the specimen set shall be within 1/2 in. (13 mm) of the nominal diameter of the qualification pipe size and a thickness tolerance of □25 percent of the nominal through-wall depth of the qualification | No comment. | |

| Paragraph ITG | Rule Text | Comment | Proposed Alternative |
|---|---|---|---|
| | pipe thickness. The specimen set must contain geometric and material indications that normally require discrimination from primary water stress corrosion cracking (PWSCC) flaws. | | |
| (ii) Inspection | The specimen set must have a minimum of ten (10) flaws that provide an acoustic response similar to that of PWSCC indications. All flaw depths in the specimen set must be greater than 10 percent of the nominal pipe wall thickness. A minimum number of 30 percent of the total flaws must be connected to the outside diameter and 30 percent of the total flaws must be connected to the inside diameter. Further, at least 30 percent of the total flaws must measure from a depth of 10 to 30 percent of the wall thickness and at least 30 percent of the total flaws must measure from a depth of 31 to 50 percent of the wall thickness and be connected to the inside or outside diameter, as applicable. At least 30 percent, but no more than 60 percent, of the flaws must be oriented axially. | The current set of mockups that have been in use for over 10 years do not meet all of these conditions. New mockups would be necessary to meet these conditions. | Replace after 2nd sentence with - A minimum of 20% of the total flaws shall initiate from the inside surface and 20% from the outside surface. At least 20% of the flaws shall be in the depth ranges of 10%-30% and 31% -50%. At least 20% and no more than X% (TBD) of the flaws shall be oriented axially. Mockups do not meet all the conditions in the proposed rule. |
| (iii) Inspection | The procedures must identify the equipment and essential variable settings used to qualify the procedures. An essential variable is defined as any variable that affects the results of the examination. The procedure must be requalified when an essential variable is changed to fall outside the demonstration range. A procedure must be qualified using the equivalent of at least three test sets that are used to demonstrate personnel performance. Procedure qualification must require at least one successful personnel performance demonstration. | MRP is evaluating requalification and will provide recommendations based on Art. 14; for example use of Technical Justifications, modeling, hierarchical approach and non-blind demonstrations and PDI strategies could be used to effectively use resources to meet this condition.<br><br>The MRP Program Description for penetration qualifications already includes the requirement to use the equivalent of three test sets for | |

| Paragraph ITG | Rule Text | Comment | Proposed Alternative |
|---|---|---|---|
| | | procedure qualification. | |
| (iv) Inspection Primarily<br><br>Assessment Secondary for acceptance criteria | Examination procedures, equipment, and personnel must be considered qualified for depth sizing only if the root mean square (RMS) error of the flaw depth measurements, as compared to the true flaw depths, does not exceed 1/32-inch (0.8 mm). Examination procedures, equipment, and personnel must be considered qualified for length sizing if the RMS error of the flaw length measurements, as compared to the true flaw lengths, does not exceed 1/ 16-inch (1.6 mm). | The condition of flaw sizing tolerance is generally less than the accuracy of the flaw fabrication and a significant number of current techniques cannot meet this. | Insert – The RMS error of the flaw depths shall not exceed .125 inch and the length sizing error shall not exceed .375 inch, respectively. (These values are based on probabilistic and deterministic calculations.) |
| (5) Assessment | If flaws attributed to PWSCC have been identified, whether acceptable or not for continued service under Paragraphs -3130 or -3140 of ASME Code Case N–729–1, the reinspection interval must be each refueling outage instead of the reinspection intervals required by Table 1, Note (8) of ASME Code Case N–729–1. | No comment. | |
| (6) Assessment | Appendix I of ASME Code Case N–729–1 must not be implemented without prior NRC approval. | No comment. | |
| E (1) Assessment | *Reactor Coolant Pressure Boundary Visual Inspections.* (*1*) All licensees of pressurized water reactors shall augment their inservice inspection program by implementing ASME Code Case N–722 subject to the conditions specified in paragraphs (g)(6)(ii)(E)(*2*) through (*4*) of this section. The inspection requirements of ASME Code Case N–722 only apply to components fabricated with Alloy 600/82/182 materials not mitigated by weld overlay or stress improvement. | No comment. | |

| Paragraph ITG | Rule Text | Comment | Proposed Alternative |
|---|---|---|---|
| (2) All | If a visual examination determines that leakage is occurring from a specific item listed in Table 1 of ASME Code Case N–722 that is not exempted by the ASME Code, Section XI, IWB–1220(b)(1), additional actions must be performed to characterize the location, orientation, and length of crack(s) in Alloy 600 nozzle wrought material and location, orientation, and length of crack(s) in Alloy 82/182 butt welds. Alternatively, licensees may replace the Alloy 600/82/182 materials in all the components under the item number of the leaking component. | It should be sufficient to demonstrate the ability to characterize the location, orientation and length of cracks with calibration blocks or mockups containing a notch in the axial and circumferential orientation. | |
| (3) Assessment | If the actions in paragraph (g)(6)(ii)(E)(*2*) of this section determine that a flaw is circumferentially oriented and potentially a result of primary water stress corrosion cracking, licensees shall perform non-visual NDE inspections of components that fall under that ASME Code Case N–722 item number. The number of components inspected must equal or exceed the number of components found to be leaking under that item number. If circumferential cracking is identified in the sample, non-visual NDE must be performed in the remaining components under that item number. | No comment. | |
| (4) Inspection Primarily<br><br>Assessment Secondary | If ultrasonic examinations of butt welds are used to meet the NDE requirements in paragraphs (g)(6)(ii)(E)(*2*) or (g)(6)(ii)(E)(*3*) *of this section, they* must be performed using the appropriate supplement of Section XI, Appendix VIII of the ASME Boiler and Pressure Vessel Code. | No comment. | |