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

August 22, 2007

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Third Ten-Year Inservice Inspection Interval Requests for Relief from ASME Section XI Requirements

REFERENCE: (a) Letter from C. H. Cruse (BGE) to Document Control Desk (NRC), dated June 1, 1999, Submittal of Third Ten-Year Interval Inservice Inspection Program Plan

In Reference (a), Calvert Cliffs Nuclear Power Plant submitted the Third Ten-Year Interval Inservice Inspection Program Plan. Requests for alternatives and relief related to the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code (Code), Section XI requirements were embedded within this Plan; however, timely Nuclear Regulatory Commission (NRC) approvals were not obtained.

A number of the requested reliefs and alternatives were subsequently approved via routine regulatory processes (i.e., Regulatory Guide 1.147, Inservice Inspection Code Case Acceptability, ASME Section XI, Division I) during the Third Ten-Year Interval (see Attachment 1). Two relief requests remain unapproved and are presented herein (see Attachment 2). Written NRC approval of the remaining relief requests is requested prior to the conclusion of the Interval on June 30, 2009.

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

Very truly yours,

JAS/MJY/bjd

Attachments: (1) Request for Alternatives and Relief Request Index
(2) Revised Third Ten-Year Interval Inservice Inspection Program Plan Relief Requests

cc: D. V. Pickett, NRC
S. J. Collins, NRC
Resident Inspector, NRC
R. I. McLean, DNR
Safety Program Manager, State of Maryland

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ATTACHMENT (1)

REQUEST FOR ALTERNATIVES AND RELIEF REQUEST INDEX

Calvert Cliffs Nuclear Power Plant, Inc.
August 22, 2007

ATTACHMENT (1)

REQUEST FOR ALTERNATIVES AND RELIEF REQUEST INDEX

Section 5.0 of the Third Ten-Year Interval Inservice Inspection Program (Program), as revised on April 24, 2007, contains the following summary listing and revision status of all Requests for Alternatives and Relief Requests related to the Program at Calvert Cliffs Nuclear Power Plant, Units 1 and 2. The unapproved Requests for Alternatives and Relief Requests are contained in Section 6.0 of the Program and are provided as Attachment (2) of this letter.

Some of these requests were originally submitted with the Program to the Nuclear Regulatory Commission (NRC) on June 1, 1999. However, review and approval for use of these relief requests was not specifically requested as part of the submittal of the Third Ten-Year Interval Inservice Inspection Program Plan.

Since the original submittal, many of the relief requests in Table 5.1 have been incorporated into later revisions of Regulatory Guide 1.147 as Code Cases, absorbed into the RI - ISI program scope, or are no longer required due to component replacements.

Therefore all of the relief requests in Table 5.1 that have been incorporated into Regulatory Guide 1.147, absorbed into the RI-ISI program scope, or are no longer applicable due to component replacements may be withdrawn. Those relief requests remain listed for tracking and historical purposes and are annotated as "WITHDRAWN".

TABLE 5.1
INSERVICE INSPECTION REQUEST FOR ALTERNATIVES AND RELIEF REQUEST INDEX

REQUEST NO.	NRC APPROVAL STATUS	PAGES	REV.	DATE	TOPIC
WITHDRAWN ISI-01	N/A	6-2 to 6-5	N/A	N/A	Withdrawn during the Third Interval as part of RI-ISI application. Approved as RR-RI-ISI-2.
WITHDRAWN ISI-02	**N/A**	6-6 to 6-8	0	7/1/99	Alternative Surface Examination Criteria for Control Rod Drive Housing Welds. Withdrawn during the Third Interval as a result of the replacement of both Unit 1 and Unit 2 reactor pressure vessel closure heads.
WITHDRAWN ISI-03	N/A	6-9 to 6-10	0		N-307-3 incorporated into RG 1.147 Revision 14. Alternative Examination Criteria for Reactor Vessel Closure Studs and Reactor Coolant Pump Studs.

TABLE 5.1
INSERVICE INSPECTION REQUEST FOR ALTERNATIVES AND RELIEF REQUEST INDEX

REQUEST NO.	NRC APPROVAL STATUS	PAGES	REV.	DATE	TOPIC
WITHDRAWN ISI-04	N/A	6-11 to 6-14	0	7/1/99	N-416-1 incorporated into RG 1.147 Revision 12 Alternative Pressure Test Requirement for Welded Repairs or Installation of Replacement Items by Welding, Class 1, 2 and 3.
WITHDRAWN ISI-05	N/A	6-15 to 6-17	0	7/1/99	N-498-3 incorporated into RG 1.147 Revision 14. Alternative Rules for 10-Year System Hydrostatic Testing for Class 3 Systems.
WITHDRAWN ISI-06	N/A	6-18 to 6-20	0	7/1/99	N-532-1 incorporated into RG 1.147 Revision 14 Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report.
WITHDRAWN ISI-07	N/A	6-21 to 6-23	0	7/1/99	N-533-1 incorporated into RG 1.147 Revision 14. Alternative Requirements for Insulation Removal During Class 1, 2, or 3 Pressure Tests at Bolted Connections in Systems Borated for the Purpose of Controlling Reactivity.
ISI-08	**Not Approved as of 3/1/2007**	6-24 to 6-25	0	7/1/99	Use of ASME Section II, V, and IX Code Cases.
WITHDRAWN ISI-09	N/A	6-26 to 6-27	0	7/1/99	N-566-2 incorporated into RG 1.147 Revision 14. Alternative Corrective Actions for Leakage Identified at Bolted Connections.

ATTACHMENT (1)

REQUEST FOR ALTERNATIVES AND RELIEF REQUEST INDEX

TABLE 5.1
INSERVICE INSPECTION REQUEST FOR ALTERNATIVES AND RELIEF REQUEST INDEX

REQUEST NO.	NRC APPROVAL STATUS	PAGES	REV.	DATE	TOPIC
WITHDRAWN ISI-10	N/A	6-28	0	7/1/99	N592 incorporated into RG 1.147 Revision 14. Use of ASNT Central Certification Program.
WITHDRAWN ISI-11	N/A	6-29 to 6-33	0	7/1/99	N-616 incorporated into RG 1.147 Revision 14. Alternative Requirements for Insulation Removal During Class 1, 2, or 3 Pressure Tests at Corrosion Resistant Bolted Connections in Systems Borated for the Purpose of Controlling Reactivity.
WITHDRAWN ISI-12	N/A	6-34 to 6-37	0	N/A	Withdrawn during the Third Interval as part of RI-ISI application. Approved as RR-RI-ISI-2.
WITHDRAWN ISI-13	N/A	6-38 to 6-40	0	N/A	Withdrawn during the Third Interval as part of RI-ISI application. Approved as RR-RI-ISI-2.
ISI-14	**Not Approved as of 3/1/2007**	6-41 to 6-44	0	7/1/99	Alternative Pressure Testing Requirements for RPV Flange Leak Detector Piping
WITHDRAWN ISI-15	N/A	N/A	0	N/A	Code Case N-623 incorporated into RG 1.147 Revision 14.
ISI-16	APPROVED June 21, 1999	N/A	0	N/A	Request to Enter Third Interval using the 1983 Edition of ASME Section XI.
ISI-17	APPROVED March 21, 2001	N/A	0	N/A	Deferral of Completion percentages.

TABLE 5.1
INSERVICE INSPECTION REQUEST FOR ALTERNATIVES AND RELIEF REQUEST INDEX

REQUEST NO.	NRC APPROVAL STATUS	PAGES	REV.	DATE	TOPIC
ISI-18	APPROVED April 5, 2000	N/A	0	N/A	Approval to use the 1998 Edition of ASME Section XI.
ISI-19	APPROVED March 6, 2003	N/A	0	N/A	Replacement Steam Generator Girth Welds.
RR-RI-ISI-1	APPROVED March 21, 2001	6-45 to 6-47	0	10/27/00	Relief from Period Percentage Requirements for Class 1 and 2 Piping Weld Examinations.
RR-RI-ISI-2	APPROVED April 16, 2003	6-48 to 6-50	0	11/12/02	Relief to Implement a RI-ISI Program Based on Code Case N-578.

ATTACHMENT (2)

REVISED THIRD TEN-YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN RELIEF REQUESTS

Calvert Cliffs Nuclear Power Plant, Inc.
August 22, 2007

REQUEST NUMBER: ISI-08

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COMPONENT IDENTIFICATION

Code Classes:	1, 2, and 3
References:	IWA-2440 Code Case N-555
Examination Categories:	Not Applicable
Item Numbers:	Not Applicable
Description:	Use of ASME Section II, V, and IX Code Cases
Component Numbers:	All Class 1, 2, and 3 Components Subject to Inservice Inspection, Inservice Testing, or Repair/Replacement Activities

CODE REQUIREMENT

Section XI does not allow generic use of Section II, V, and IX Code Cases.

ASME Section XI, IWA-2440 establishes the criteria for the application of code cases.

ASME Section XI, IWA-2443 states that the rules for application of code cases from Code Sections other than Section XI are in the course of preparation.

BASIS FOR ALTERNATIVE

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested on the basis that the proposed alternatives provide an acceptable level of quality and safety.

ASME, Section XI, has prepared the rules for application of code cases from other Code Sections. These rules appear in Code Case N-555, but have not been incorporated into ASME Section XI.

Section XI has evaluated the code cases of ASME Sections II, V, and IX and determined that if they were used in the construction of a component, then they are appropriate for use during repair/replacement activities on that component. In addition, Section XI has evaluated additional code cases for use during Section XI activities, and has determined that several are suitable for use because they provide an acceptable level of safety. Code Case N-555 lists the specific code cases that may be used for inservice inspection, inservice testing, or repair/replacement activities in accordance with Section XI.

PROPOSED ALTERNATIVE

ASME Section II, V, and IX code cases that were used in the construction of a component may be used at CCNPP, Units 1 and 2, for repair/replacement activities on that component. Also, the code cases specified in Code Case N-555 may be used at CCNPP, Units 1 and 2, for inservice inspection, inservice testing, or repair/replacement activities in accordance with Section XI. If a specific code case is going to be applied, CCNPP will inform the regulatory authorities having jurisdiction at the site of their intention.

APPLICABLE TIME PERIOD

Application of the alternative criteria is requested for the third interval of the Inservice Inspection Program at the Calvert Cliffs Nuclear Power Plant, Units 1 and 2, which began on July 1, 1999.

REQUEST NUMBER: ISI-14

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COMPONENT IDENTIFICATION

Code Class:	2
References:	IWC-2500, Table IWC-2500-1
Examination Category:	C-H
Item Number:	C7.10
Description:	Alternative Pressure Testing Requirements for RPV Flange Leak Detector Piping
Component Numbers:	Lines CC-9-1009 and CC-9-2002

CODE REQUIREMENT

ASME Section XI, Table IWC-2500-1, Examination Category C-H, Code Item No. C7.10 requires the performance of a system leakage test each inspection period on Class 2 piping up to the first normally closed valve, or valve capable of automatic closure.

BASIS FOR ALTERNATIVE

Pursuant to 10 CFR 50.55a(a)(3)(ii), relief is requested on the basis that compliance with Section XI requirements would result in hardship without a compensating increase in the levels of quality and safety.

The Reactor Vessel Head Flange Leak Detector Piping is separated from the reactor pressure boundary by one passive membrane, which is an O-ring located on the vessel flange. A second O-ring is located on the opposite side of the tap in the vessel flange (see Figures ISI-14-1 and ISI-14-2). This piping is required during plant operation in order to indicate failure of the inner flange seal O-ring. Failure of the O-ring would result in the annunciation of a High Level Alarm in the Control Room. Failure of the inner O-ring is the only condition under which this piping is pressurized.

The configuration of this piping precludes system testing while the vessel head is removed because the odd configuration of the vessel tap (see Figure ISI-14-2) coupled with the high test pressure requirement prevents the tap in the flange from being temporarily plugged or connected to other piping. The opening in the flange is only 3/16 of an inch in diameter and is smooth walled, making the effectiveness of a temporary seal very limited. Failure of this seal could possibly cause ejection of the device used for plugging or connecting to the vessel.

The configuration also precludes pressure testing with the vessel head installed because the seal prevents complete filling of the piping, which has no vent available. Additionally, a pneumatic test performed with the head installed is precluded due to the configuration of the top head. The top head of the vessel contains two grooves that hold the O-rings. The O-rings are held in place by a series of retainer clips that are housed in recessed cavities in the flange face. If a pressure test was performed with the head on, the inner O-ring would be pressurized in a direction opposite to what it would see in normal operation. This test pressure would result in a net inward force on the inner O-ring that would tend to push it into the recessed cavities that house the retainer clips. The thin O-ring material would very likely be damaged by this inward force.

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In addition to the problems associated with the O-ring design that preclude this testing, it is also questionable whether a pneumatic test is appropriate for this piping. The use of a pneumatic test performed at RPV nominal operating pressure would represent an unnecessary safety risk to personnel in the unlikely event of a test failure, due to the large amount of stored energy contained in pressurized air.

Operational testing of this piping is precluded because it will only be pressurized in the event of a failure of the inner O-ring. It is extremely impractical to purposely fail the inner O-ring in order to perform a test.

Based on the above, CCNPP, Units 1 and 2, requests the following alternative examination be performed on the Reactor Vessel Head Flange Leak Detector Piping.

PROPOSED ALTERNATIVE EXAMINATION

A VT-2 visual examination will be performed on the Reactor Vessel Head Flange Leak Detector Piping during flood-up of refueling pool during a refueling outage. The hydrostatic head developed due to the water above the vessel flange during flood-up will allow for the detection of any gross indications in the piping. This examination will be performed with the frequency specified by Table IWC-2500-1 for an IWC-5220 test (once each inspection period).

APPLICABLE TIME PERIOD

Application of the alternative criteria is requested for the third interval of the Inservice Inspection Program at the Calvert Cliffs Nuclear Power Plant, Units 1 and 2, which began on July 1, 1999.

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FIGURE ISI-14-1

**REACTOR PRESSURE VESSEL HEAD FLANGE
LEAK DETECTOR PIPING**

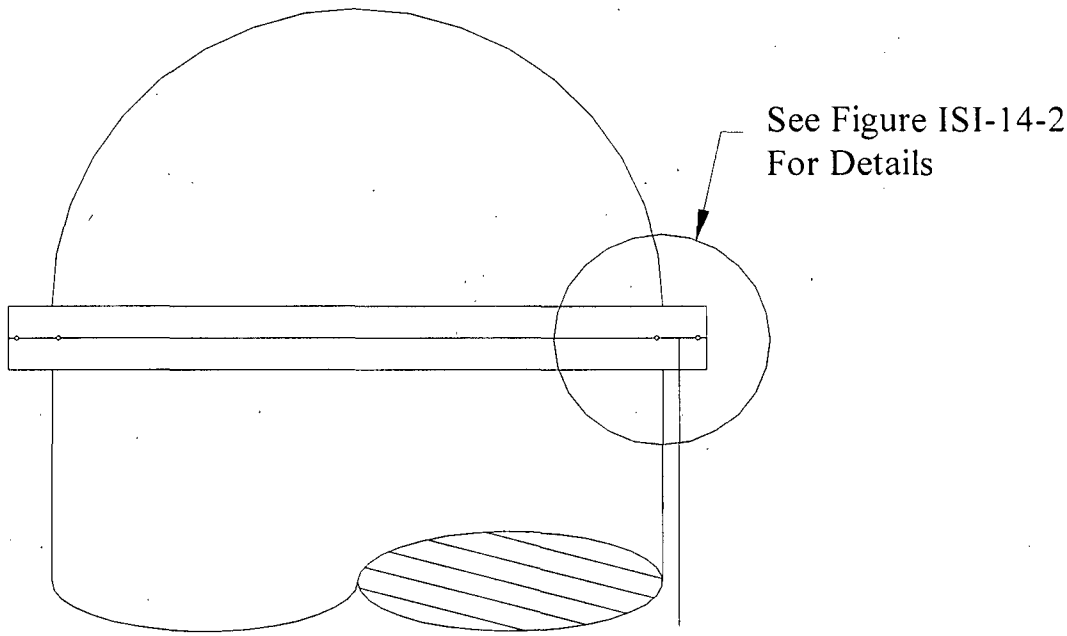

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FIGURE ISI-14-2

REACTOR PRESSURE VESSEL HEAD FLANGE AND LEAK DETECTOR LINE DETAILS