UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 28, 2010

Mr. Charles G. Pardee
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BYRON STATION, UNIT NO. 2 - RELIEF REQUEST I3R-16 FOR REACTOR PRESSURE VESSEL HEAD PENETRATION EXAMINATION FREQUENCY (TAC NO. ME1066)

Dear Mr. Pardee:

By letter to the Nuclear Regulatory Commission (NRC) dated April 2, 2009 (Agencywide Documents Access and Management System (ADAMS) Package No. ML091030449), as supplemented by letters dated October 14 and December 17, 2009 (ADAMS Accession Nos. ML092880510 and ML093520172, respectively), Exelon Generation Company, LLC (the licensee) submitted Relief Request (RR) I3R-16. RR I3R-16 requested relief from the requirement of Title 10 of the *Code of Federal Regulations*, Section 50.55a, "Codes and standards," paragraph (g)(6)(ii)(D)(*5*), related to the frequency of non-visual non-destructive examinations of reactor pressure vessel (RPV) head penetration nozzles and associated welds for the remainder of the third 10-year inservice inspection (ISI) interval at Byron Station, Unit No. 2 (Byron 2). The request proposed an alternative examination frequency consistent with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Case N-729-1.

The NRC staff has reviewed the licensee's submittals and determined that compliance with 10 CFR 50.55a(g)(6)(ii)(D)(*5*) would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety and that the alternative proposed in RR I3R-16, as supplemented, will provide reasonable assurance of structural integrity of the reactor coolant pressure vessel upper head at Byron 2. Therefore, pursuant to 10 CFR 50.55a(a)(3)(ii), the NRC staff authorizes the use of the proposed alternative for the remainder of the third 10-year ISI interval at Byron 2, or until any additional indications of primary water stress-corrosion cracking are found in the Byron 2 RPV head penetration nozzles or associated J-groove welds. All other ASME Code, Section XI requirements, for which relief was not specifically requested and approved, remain applicable, including third party review by the Authorized Nuclear Inservice Inspector. The NRC staff's safety evaluation is enclosed.

Please contact Mr. Marshall David at (301) 415-1547 if you have any questions on this action.

Sincerely,

Stephen J. Campbell

Stephen J. Campbell, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. STN 50-455

Enclosure:
Safety Evaluation

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UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELIEF REQUEST NO. I3R-16

EXELON GENERATION COMPANY, LLC.

BYRON STATION, UNIT NO. 2

DOCKET NO. STN 50-455

1.0 INTRODUCTION

By letter to the Nuclear Regulatory Commission (NRC, the Commission) dated April 2, 2009 (Agencywide Documents Access and Management System (ADAMS) Package No. ML091030449), as supplemented by letters dated October 14 and December 17, 2009 (ADAMS Accession Nos. ML092880510 and ML093520172, respectively), Exelon Generation Company, LLC (EGC, the licensee) submitted Relief Request (RR) I3R-16. RR I3R-16 requested NRC staff authorization for relief from the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(6)(ii)(D) for the remainder of the third 10-year inservice inspection (ISI) interval at Byron Station, Unit No. 2 (Byron 2). Specifically, the submittal requested relief from the frequency of non-visual non-destructive examination as defined by 10 CFR 50.55a(g)(6)(ii)(D)(*5*). The relief request proposed an alternative examination frequency consistent with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Case N-729-1, "Alternative Examination Requirements for PWR Reactor Vessel Upper Heads with Nozzles Having Pressure-Retaining Partial-Penetration Welds, Section XI, Division 1."

2.0 REGULATORY EVALUATION

The ISI of ASME Code Class 1, 2 and 3 components is to be performed in accordance with Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME Code and applicable editions and addenda as required by 10 CFR 50.55a(g), "Inservice inspection requirements," except where specific written relief has been granted by the Commission.

Pursuant to 10 CFR 50.55a(g)(4), throughout the service life of a pressurized water-cooled nuclear power facility, components that are classified ASME Code Class 1, 2 and 3 must meet the requirements, except the design and access provisions and preservice examination requirements, set forth in the ASME Code, Section XI, to the extent practical within the limitations of design, geometry and materials of construction of the components. Further, these regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in paragraph (b) of 10 CFR 50.55a on the date 12 months prior to the start of the 120 month interval, subject to the limitations and modifications listed therein. At Byron 2, the Section XI ASME Code of record for the facility's current third 10-year ISI interval, which began in 2006 and is scheduled to conclude in 2016, is the 2001 Edition through the 2003 Addenda.

In addition, 10 CFR 50.55a(g)(6)(ii) states that the Commission may require the licensee to follow an augmented ISI program for systems and components for which the Commission deems that added assurance of structural reliability is necessary. Under this section, 10 CFR 50.55a(g)(6)(ii)(D) defines the requirements for reactor vessel head inspections. The regulation at 10 CFR 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC if: (i) the proposed alternatives would provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The licensee, in accordance with 10 CFR 50.55a(a)(3)(i), requested relief from the volumetric and/or surface inspection frequency requirements of 10 CFR 50.55a(g)(6)(ii)(D)(*5*). However, as discussed below in Section 3.5, the NRC staff's review of this request was based on 10 CFR 50.55a(a)(3)(ii).

3.0 TECHNICAL EVALUATION

3.1 Component for which Relief was Requested

All Byron 2 ASME Code Class 1 vessel head penetration nozzles and associated welds identified by item number B4.20 of Code Case N-729-1, Table 1, "Examination Categories," except penetration nozzle number 68 and its associated J-groove weld. (A J-groove weld is shown in Figures 1 and 2 in Attachment 1 of the licensee's April 2, 2009, and October 14, 2009, submittals).

3.2 Regulatory Requirement

The regulation at 10 CFR 50.55a(g)(6)(ii)(D)(*5*) requires, if flaws attributed to primary water stress-corrosion cracking (PWSCC) have been identified, whether acceptable or not for continued service under Paragraphs –3130 or –3140 of ASME Code Case N-729-1, the re-inspection interval must be each refueling outage instead of the re-inspection intervals required by Table 1, Note (8) of ASME Code Case N-729-1.

3.3 Proposed Alternative

The licensee's proposed alternative is to perform volumetric and/or surface examinations of all penetrations as identified by Table 1 of ASME Code Case N-729-1 at a frequency of once every second refueling outage or four calendar years, whichever is less, except for penetration 68, which will be volumetrically, surface, and visually examined each refueling outage.

3.4 Licensee's Basis

During the Byron 2 refueling outage in spring 2007 (B2R13), a PWSCC flaw was identified in penetration nozzle number 68 and its associated J-groove weld. Due to this finding, the First Revised NRC Order EA-03-009 (Order), February 20, 2004 (ADAMS Accession No. ML040220181), which established interim inspection requirements for reactor pressure vessel (RPV) heads at pressurized-water reactors, required the licensee to change its inspection frequency from the Low Susceptibility Category to the High Susceptibility Category requiring volumetric inspection of all penetration nozzles at Byron 2 each refueling outage. In September 2008, ASME Code Case N-729-1 was incorporated into 10 CFR 50.55a as an augmented ISI program that replaced the Order for RPV head inspections. Note (8) of ASME Code Case N-729-1, Table 1, states:

> If flaws have previously been detected that were unacceptable for continued service in accordance with –3132.3 or that were corrected by a repair/replacement activity of –3132.2 or –3142.3(b), the reexamination frequency is the more frequent of the normal reexamination frequency (before RIY [reinspection years] = 2.25) or every second refueling outage, and [Note (9)] does not apply. Additionally, repaired areas shall be examined during the next refueling outage following the repair.

For Byron 2, the statement of Note (8) would require volumetric or surface examination of the unflawed RPV head penetration nozzles and associated welds every second refueling outage. However, as identified in a final rule action published in the Federal Register (FR) at 73 FR 52730, dated September 10, 2008, 10 CFR 50.55a(g)(6)(ii)(D)(*5*) has added the following condition modifying ASME Code Case 729-1, Note (8):

> 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 re-inspection interval must be each refueling outage instead of the re-inspection intervals required by Table 1, Note (8) of ASME Code Case N-729-1.

During the Byron 2 refueling outage in fall 2008 (B2R14), volumetric and/or surface examination was performed on each penetration nozzle and found no new indications of PWSCC. Further, baseline inspections at Braidwood Station, Units 1 and 2 (Braidwood 1 and 2), and Byron Station, Unit No. 1 (Byron 1), all very similar plants in design and some sharing the same material heats for the construction of penetration nozzles, found no indications of PWSCC. Each of these heads, including Byron 2's, are considered Cold Heads, in that their operating temperature is approximately 553 °F. At such a temperature, PWSCC initiation is much less likely than the previous history of PWSCC in RPV head penetration nozzles and associated welds at approximately 590 to 600 °F. Over 1400 similar Cold Head penetration nozzles have been volumetrically inspected at US pressurized-water reactors and, with the exception of penetration 68 at Byron 2, no indications of PWSCC have been found.

The licensee also provided additional basis in their April 2, 2009, submittal, which included an explanation of the results of a boat sample examination, use of Zinc addition as a chemical mitigation method against PWSCC initiation, a probabilistic fracture mechanics study, and a crack growth analysis. On September 2, 2009, the licensee participated in a public meeting at NRC Headquarters in Rockville, MD (meeting summary is ADAMS Accession No. ML092510065) to discuss these additional basis items with the NRC staff. While each of these items was considered by the NRC staff in the review of the licensee's proposed alternative, the NRC staff found they did not provide additional basis beyond the licensee's operational experience and inspection history detailed above. Therefore, an in-depth discussion of these additional basis items is not included in this section.

3.5 NRC Staff Evaluation

From February 20, 2004, through December 31, 2008, the NRC regulatory requirement for RPV head inspections was contained under the Order. Under the Order, a plant's particular susceptibility to PWSCC was measured and ranked into High, Moderate, Low or Replaced categories. The Replaced category was for those plants that replaced their heads. The other three categories were mainly based on a calculation of the head's time at temperature. While many different factors can contribute to an item's susceptibility to PWSCC, operational experience had shown that ranking heads based on time at temperature provided reasonable assurance of an effective inspection program. However, there was one deviation from this process. A plant's head was considered to be in the High susceptibility category regardless of time at temperature if that head had experienced cracking due to PWSCC in a penetration nozzle or J-groove weld. High susceptibility heads were required to be inspected with a volumetric and/or surface examination each refueling outage. The position was based upon operating experience and the fact that several elements of PWSCC susceptibility are not fully included in the susceptibility and probabilistic models of the ASME Code Case. Currently, at least nine plants have identified additional or increased occurrence of PWSCC after the first inspection that identified the degradation mechanism. One plant identified at least four new flaws greater than 50 percent through-wall in one operational cycle of crack growth. Given the unknowns about PWSCC initiation and growth and that it is a very active degradation mechanism, it was conservatively considered that once a head demonstrated the environmental and material susceptibility conditions to initiate PWSCC, and giving consideration to the fact that non-destructive examination techniques are not infallible, re-inspection of such a head each outage was necessary to provide reasonable assurance of structural integrity. The operational experience used to develop this position was based on PWSCC found in High and Moderate susceptibility plants. At the time, no Low susceptibly plant had performed a volumetric and/or surface examination.

On August 6, 2004, the Commission, through a Staff Requirements Memorandum issued on the July 7, 2004, SECY-04-115, "Rulemaking Plan to Incorporate First Revised Order EA-03-009 Requirements into 10 CFR 50.55a," directed the NRC staff to evaluate anticipated ASME Code RPV inspection requirements for incorporation into 10 CFR 50.55a. Thereafter, NRC staff participated in the development of ASME Code Case N-729. ASME Code Case N-729-1, Revision 1 to the original Code Case N-729, was developed as the ASME Code consensus standard for the long-term inspection program of RPV heads and their associated penetration nozzles. The regulation at 10 CFR 50.55a(g)(6)(ii)(D), effective by the December 31, 2008, required the use of ASME Code Case N-729-1, as conditioned by the NRC, in lieu of the Order to define the requirements for reactor vessel head inspections. One condition in 10 CFR 50.55a(g)(6)(ii)(D)(*5*) requires that if flaws attributed to PWSCC have been identified in a plant's head, then volumetric and/or surface examination of that head will be performed each refueling outage. The basis for this condition was a continuation of the requirement under the Order. The NRC staff discussed this condition and others as it participated in the development of ASME Code Case N-729. NRC staff participated in working-level ASME Code meetings as well as at the standards committee-level meetings where the code case was approved by ASME Code Section XI. The condition and its basis were discussed in detail with industry during these meetings and in additional formal letters from the NRC staff to Mr. Gary C. Park, dated April 26, 2005 (ADAMS Accession No. ML051110358), and to Mr. James H. Riley, dated August 9, 2006 (ADAMS Accession No. ML062220594).

In the spring of 2007, during refueling outage B2R13, the licensee identified a PWSCC flaw in penetration nozzle number 68 and its associated J-groove weld. At the time, the requirements of the Order were in place. This was the first finding of PWSCC in a Low susceptibility head in the United States. The licensee obtained a material sample of part of the flawed area to verify in destructive analysis if PWSCC was present. Through the analysis, PWSCC was verified in the weld and penetration nozzle material. The licensee attempted to draw several additional conclusions regarding the findings of the destructive analysis, however, the NRC staff does not find sufficient basis to substantiate any conclusion beyond the fact the PWSCC was observed in the material sample and it appeared to have initiated in the J-groove weld material. Under the requirements of the Order, the Byron 2 RPV head was increased in susceptibility category from Low to High, and re-inspection was required during the next refueling outage.

The Low susceptibility inspection category, under the time at temperature PWSCC susceptibility model used by the Order, essentially encompassed all heads operating at a temperature 30°F to 50°F colder than those heads that had previously identified cracking in the High susceptibility or initially Moderate susceptibility categories. The effect of temperature on PWSCC initiation and growth is well established. Under the Order, all Low susceptibility category plants were required to have baseline volumetric and/or surface examinations of each penetration nozzle by February 11, 2008. Through this requirement, over 1400 Low susceptibility category penetration nozzles were inspected at US pressurized-water reactors with the only identified PWSCC being found in the Byron 2 penetration number 68. The licensee provided additional information regarding these inspections at Byron 2's sister plants Byron 1 and Braidwood 1 and 2. Each of these plant's RPV heads operate under very similar conditions to Byron 2 with no indications of PWSCC. Further, some of these plants' penetration nozzles are made from the same alloy 600 material heat used to construct penetration nozzle number 68 at Byron 2.

On February 13, 2008, the NRC staff held a public meeting to discuss the licensee's status as a High susceptibility category plant under the Order (Meeting Summary ADAMS Accession No. ML080630371). The licensee proposed an inspection frequency to perform a volumetric examination every fourth refueling outage and a bare metal visual examination every third refueling outage. These proposed examinations were consistent with the Order requirements for plants with a Low susceptibility RPV head. The NRC staff raised several considerations with regard to any potential submittal to formally request approval for such exam frequencies. The NRC staff explained that operational experience in other components and international experience with upper RPV heads had found PWSCC in alloy 600 materials at similar reactor coolant temperatures as found in the Byron 2 RPV head location. The NRC staff noted that the inspection frequency for Low susceptibility plants in accordance with the Order was based on no previous cracking identified by the licensee. The NRC staff explained to the licensee that the deterministic basis for this generic inspection frequency was based on limitations in the scope of the susceptibility methodology and the established crack growth rates for alloy 600 and its weld materials being based on an average result rather than a bounding rate for all data. The NRC staff explained that the licensee would need to provide plant-specific information on crack growth rates for these materials to support a deterministic flaw analysis approach. Further, additional inspections to confirm no additional PWSCC flaws may provide some support for a potential submittal. The NRC staff also noted that, because the licensee's conclusion was of a weld defect being the cause of the indications, ensuring that no similar weld defects exist may aid in a potential submittal. No commitments or regulatory decisions were made by the NRC staff during the February 13, 2008, meeting.

In the fall of 2008, during refueling outage B2R14, the licensee performed a volumetric and/or surface examination of each penetration nozzle in the Byron 2 RPV head. No indications of PWSCC were identified. However, the licensee did not perform a surface examination of each J-groove weld. Because the NRC staff finds that the PWSCC in penetration nozzle 68 was found to initiate from the J-groove weld from either the wetted surface or a surface breaking weld flaw, a surface examination of each J-groove weld would be necessary to provide high confidence that no PWSCC remains in the Byron 2 RPV head penetration welds.

On April 2, 2009, the licensee submitted the original request for relief from the requirements of 10 CFR 50.55a(g)(6)(ii)(D) such that the licensee proposed an alternative inspection frequency to perform a volumetric and/or surface examination every fourth refueling outage and a bare metal visual examination every third refueling outage. As stated previously, the licensee participated in a September 2, 2009, public meeting with the NRC staff to discuss the technical justification for the its proposed alternative. The basis did not differ significantly from that presented in the February 13, 2008, public meeting discussed above, with the exception of the additional inspection experience from the B2R14 outage. On September 24, 2009, the NRC staff held a teleconference with the licensee to provide feedback regarding the licensee's proposed alternative. On October 14, 2009, the licensee submitted a supplement to the proposed alternative requesting relief to perform volumetric and surface examinations of all penetrations as identified by Table 1 of ASME Code Case N-729-1 at a frequency of once every second refueling outage or four calendar years, whichever is less, except for penetration 68, which will be volumetrically, surface, and visually examined each refueling outage. On December 17, 2009, the licensee submitted a supplement to the request stating that, in lieu of volumetric and surface examinations being performed on each penetration nozzle, volumetric and/or surface examinations would be performed, consistent with the inspection technique described in ASME Code Case N-729-1.

Although the licensee requested relief from the volumetric and/or surface inspection frequency requirements of 10 CFR 50.55a(g)(6)(ii)(D)(*5*), in accordance with 10 CFR 50.55a(a)(3)(i), the NRC staff's review of this request was based on 10 CFR 50.55a(a)(3)(ii), which states that:

> Compliance with the specified requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The NRC staff notes that a volumetric and/or surface examination of each penetration nozzle and associated J-groove weld is a significant evolution. The inspection, while performed with remotely controlled equipment, does require significant setup, alignment and maintenance, including probe replacement, in a very high radiological dose area. Additionally, an effective surface examination of each J-groove weld would be a significant evolution within a very high radiological dose area requiring significant person-hours of manual scanning. Further, as any surface breaking indication, even those found acceptable during initial construction, would need to be removed to verify no subsurface linear cracking existed in the weld material, the NRC staff considers that an effective surface examination of each penetration J-groove weld would be a significant radiological hardship on the licensee. Therefore, the NRC staff finds that requiring a volumetric and/or surface examination of each penetration nozzle each outage and surface examination of each J-groove weld would result in a hardship.

Given this hardship, the NRC staff considered the licensee's proposed alternative to the requirements of 10 CFR 50.55a(g)(6)(ii)(D)(*5*). The licensee's technical justification for the proposed alternative was based in part on both a deterministic and probabilistic approach. The NRC staff continues to find that the basis for these approaches is inadequate to justify an extension of the inspection frequency beyond the current requirements. Both models rely on a basis that would not have allowed for or predicted the PWSCC identified in penetration nozzle number 68 and its associated J-groove weld. Further, the NRC staff basis, discussed during the February 13, 2008, public meetings and stated in the letters to Mr. Park and Mr. Riley, remains the NRC staff basis for the generic condition stated in 10 CFR 50.55a(g)(6)(ii)(D)(*5*). However, the additional plant-specific information provided by the licensee does support some relaxation from the conservative position required in the generic requirements to provide reasonable assurance of structural integrity of the Byron 2 RPV head.

The NRC staff finds that the operational experience of no additional PWSCC findings through the inspection history of Byron 2 and similar shared penetration nozzle materials in Byron 1 and Braidwood 1 and 2 provides reasonable assurance of the structural integrity of the penetration nozzles at Bryon 2. Further, the finding of only one indication in over 1400 similar nozzles at similar temperatures in US pressurized-water reactor RPV upper heads supports this conclusion. Given the hardship of compliance identified above, the NRC staff finds that volumetric and/or surface inspection of all penetration nozzles every two refueling outages, or every four years whichever is less, would be sufficient to provide reasonable assurance of the structural integrity of the Byron 2 penetration nozzles for the remainder of the third 10-year ISI period at Byron 2. This finding is based on no detection, through leakage or inspection, of any additional PWSCC in the Byron 2 RPV head penetrations or welds.

Due to the finding that PWSCC in the J-groove weld may have been caused by a weld defect, and no surface examination of each penetration J-groove weld is proposed by the licensee, the uncertainty of the existence of PWSCC in any J-groove weld at Byron 2 is unknown and its probability of existence cannot be reliably calculated. Due to non-destructive inspection limitations, the only effective method to verify that no PWSCC exists at all in each weld would be to perform a surface examination that has an acceptance criterion of no indications. As identified above, this inspection would result in a significant radiological hardship on the licensee. However, given that the licensee will perform a bare metal visual examination of the head each refueling outage and a volumetric and/or surface examination every other outage or four calendar years, whichever is less, the NRC staff finds reasonable assurance that any potentially existing PWSCC in the Byron 2 RPV head penetration welds will be identified before it can cause significant degradation through the ejection of a penetration nozzle or significant degradation of the low alloy steel head through boric acid corrosion. This finding is based on no detection, through leakage or inspection, of any additional PWSCC in the Byron 2 RPV head penetrations or welds.

Therefore, based on the discussion above and that there is no detection through leakage or inspection of any additional PWSCC in the Byron 2 RPV head penetrations or welds, the NRC staff finds that the licensee's alternative proposed in relief request I3R-16, as supplemented, provides reasonable assurance of structural integrity of the reactor coolant pressure vessel upper head at Byron 2 for the remainder of the third 10-year ISI interval or until additional indications of PWSCC are found in the Byron 2 RPV head penetration nozzles or associated J-groove welds. Further, the NRC staff finds that compliance with 10 CFR 50.55a(g)(6)(ii)(D)(*5*) would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The NRC staff notes, as stated above, that the finding of a PWSCC indication either through a bare metal visual inspection or a volumetric and/or surface examination of the penetration nozzles and associated welds would invalidate the basis for the NRC staff authorization of this relief request. Under those conditions, the relief request authorization would be rescinded and the licensee would be required, during the current outage of the PWSCC indication finding, to meet all requirements of CFR 50.55a(g)(6)(ii)(D)(*5*).

4.0 CONCLUSION

As discussed above, the NRC staff finds that compliance with 10 CFR 50.55a(g)(6)(ii)(D)(*5*) would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(a)(3)(ii), and is in compliance with the ASME Code's requirements. Therefore, the NRC staff authorizes the alternative proposed in relief request I3R-16, as supplemented, at Byron 2 until the end of the third 10-year ISI interval or until additional indications of PWSCC are found in the Byron 2 RPV head penetration nozzles or associated J-groove welds.

All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in this relief request remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: J. Collins, NRR

Date: January 28, 2010

Please contact Mr. Marshall David at (301) 415-1547 if you have any questions on this action.

Sincerely,

/RA/

Stephen J. Campbell, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. STN 50-455

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Safety Evaluation

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