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

August 9, 2013

Mr. Mark E. Reddemann
Chief Executive Officer
Energy Northwest
P.O. Box 968 (Mail Drop 1023)
Richland, WA 99352-0968

SUBJECT: COLUMBIA GENERATING STATION – RELIEF REQUEST NUMBER 3ISI-13 ALTERNATIVE REPAIR FOR REACTOR WATER CLEANUP SYSTEM PIPING (TAC NO. MF1381)

Dear Mr. Reddemann:

By letter dated April 5, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13108A218), as supplemented by letter dated April 6, 2013 (ADAMS Accession No. ML13109A005), Energy Northwest (the licensee) requested relief from the requirements of IWA-4000 of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) for the repair of Reactor Water Cleanup (RWCU) system piping at the Columbia Generating Station (Columbia).

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(a)(3)(ii), the licensee requested verbal approval from the U.S. Nuclear Regulatory Commission (NRC) to use a non-code repair of ASME Code Class 3 piping to prevent a reactor shutdown until the startup of the next scheduled refueling outage 21, which will begin on May 11, 2013, with a scheduled duration of 40 days, in accordance with Generic Letter 90-05, "Guidance for Performing Temporary Non-Code Repair of ASME Code Class 1, 2, and 3 Piping," dated June 15, 1990. The licensee demonstrated that delaying the repair or shutting down the reactor to affect the repair, consistent with the ASME Code, would result in a hardship without a compensating increase in the level of quality and safety. On April 6, 2013, a conference call was held to discuss the relief request to include the following individuals: A. Javorik, D. Gregoire, L. Williams, et al. (Energy Northwest), and T. Lupold, M. Markley, F. Lyon, et al. (NRC). The licensee was granted verbal authorization to install a patch over a pinhole leak in the RWCU pipe in accordance with ASME Post Construction Committee (PCC)-2, "Repair of Pressure Equipment and Piping," Article 2.12. The verbal approval was documented in a summary dated April 10, 2013 (ADAMS Accession No. ML13098A064), which listed the licensee's commitments for implementing the relief request. The commitments are also listed in the enclosed safety evaluation.

The NRC staff has completed its follow-up review of the relief request. Based on the enclosed safety evaluation, the NRC staff concludes that the proposed alternative provides reasonable assurance of structural integrity and leak tightness of the subject RWCU piping. The NRC staff concludes that complying with the specified ASME Code requirement to repair the degraded RWCU pipe 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 requirements of the ASME Code, Section XI, for which relief was not requested. Therefore, the NRC staff authorizes the use of Relief Request 3ISI-13 at Columbia until startup from refueling outage 21 (which occurred on June 23, 2013).

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

If you have any questions, please contact the Project Manager Fred Lyon at (301) 415-2296 or via e-mail at Fred.Lyon@nrc.gov.

Sincerely,

Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosure:
As stated

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELIEF REQUEST NUMBER 3ISI-13

ALTERNATIVE REPAIR FOR REACTOR WATER CLEANUP SYSTEM PIPING

COLUMBIA GENERATING STATION

ENERGY NORTHWEST

DOCKET NO. 50-397

1.0 INTRODUCTION

By letter dated April 5, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13108A218), as supplemented by letter dated April 6, 2013 (ADAMS Accession No. ML13109A005), Energy Northwest (the licensee) requested relief from the requirements of IWA-4000 of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) for the repair of Reactor Water Cleanup (RWCU) system piping at the Columbia Generating Station (Columbia).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(a)(3)(ii), the licensee requested to use the proposed alternative in Relief Request 3ISI-13 on the basis that compliance with the specified ASME Code requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Relief Request 3ISI-13 proposes a temporary non-ASME Code method to repair a pinhole leak in the RWCU system piping.

On April 1, 2013, the licensee discovered the pinhole leak in the RWCU system piping between regenerative heat exchangers RWCU-HX-1A and RWCU-HX-1B. To repair or replace the leaking pipe, IWA-4412 of the 2001 Edition through the 2003 Addenda of the ASME Code, Section XI, requires that the defect be removed in accordance with the requirements of IWA-4420. The licensee stated that an ASME Code repair cannot be performed during plant operations because the RWCU system needs to be returned to service before reactor water chemistry parameters exceed limits that would necessitate a plant shutdown. In lieu of an ASME Code repair, the licensee proposed to install a temporary welded patch (pad) over the leak until refueling outage 21, which began on May 11, 2013.

On April 6, 2013, the U.S. Nuclear Regulatory Commission (NRC) staff verbally authorized the use of Relief Request 3ISI-13 at Columbia until startup from refueling outage 21 (ADAMS Accession No. ML13098A064). This safety evaluation documents the NRC staff's technical basis for the verbal authorization.

2.0 REGULATORY EVALUATION

Paragraph 10 CFR 50.55a(g)(4) states that ASME Code Class 1, 2 and 3 components (including supports) will meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection (ISI) of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components.

Paragraph 10 CFR 50.55a(a)(3) states, in part, that alternatives to the requirements of paragraph (g) of 10 CFR 50.55a may be authorized by the NRC if the licensee demonstrates that: (i) the proposed alternative provides 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 NRC staff has used Generic Letter (GL) 90-05, "Guidance for Performing Temporary Non-Code Repair of ASME Code Class 1, 2, and 3 Piping," dated June 15, 1990 (ADAMS Accession No. ML031140590), in the review of the proposed alternative.

Based on the above evaluation and subject to the following technical evaluation, the NRC staff concludes that it has the regulatory authority to authorize the alternative proposed by the licensee.

3.0 TECHNICAL EVALUATION

3.1 Relief Request 3ISI-13

3.1.1 ASME Code Component Affected

The licensee stated that the affected component is American Society for Testing and Materials (ASTM) A-106, Grade B, 4-inch Schedule 80 pipe (4.5-inch outer diameter and 0.337-inch wall thickness) of the RWCU system. The licensee noted that the portion of the RWCU system containing the affected piping is treated as ASME Code, Section III, Class 3. The affected portion of RWCU piping is located between regenerative heat exchangers RWCU-HX-1A and RWCU-HX-1B and is physically located in the RWCU heat exchanger room. The licensee explained that this pipe segment is downstream of the reactor coolant pressure boundary (RCPB) portion of the RWCU system and has no safety function. The licensee stated that the RWCU system does not perform a safety function and is not an Engineered Safety Function (ESF) system.

3.1.2 Applicable Code Edition and Addenda

The inservice inspection Code of record for Columbia is the 2001 Edition through 2003 Addenda of the ASME Code, Section XI.

3.1.3 Proposed Alternative and Basis for Use

In lieu of repairing the pinhole leak in accordance with the ASME Code, the licensee proposed a temporary non-code repair until startup from the next refueling outage, refueling outage 21, which will begin on May 11, 2013, with a scheduled duration of 40 days.

The licensee proposed to weld a patch (pad) at the leaking location of the subject pipe. The licensee explained that the patch is fabricated from American Society for Testing and Materials (ASTM) A-234 Grade WPB material and is 3.5-inch long in the pipe axial direction, 5.25-inch wide in the pipe circumferential direction, and 0.5 inches thick. The maximum gap between the pipe and patch is less than or equal to 3/32 inches. The post-modification testing consists of a VT-2 visual examination with the RWCU system piping at normal operating pressure and temperature to verify the absence of leakage. The NRC staff notes that the licensee will perform a surface examination of the weld after the patch is installed as discussed further in this safety evaluation.

The licensee explained that the affected pipe segment is high-energy piping located in a section of the RWCU system that normally experiences flow while the system is in service. In accordance with the guidance in NRC GL 90-05, the licensee will perform an augmented inspection via ultrasonic testing (UT) or radiographic testing (RT) to assess the overall degradation of the affected pipe system. The licensee stated that the inspection of at least 10 susceptible (and accessible) locations for high energy lines will be performed to determine extent of condition. The locations will be examined within 15 days of the discovery of the leak as specified by GL 90-05. The NRC staff notes that the licensee is permitted to delay the extent-of-condition examinations to the next refueling outage as a result of concerns on radiation exposure to examiners as discuss further in this safety evaluation. The licensee stated that it will characterize and evaluate flaws detected in the augmented inspection. The licensee further stated that as required by GL 90-05, if any flaw is detected having a minimum measured wall thickness less than the Code-required minimum wall thickness, it will inspect an additional 10 samples.

3.1.4 Duration of Proposed Alternative

The licensee proposed to weld a patch (pad) over the leak on the outside surface of the RWCU piping until refueling outage 21, which began on May 11, 2013.

3.2 NRC Staff Evaluation

The NRC staff reviewed the licensee's flaw characterization, degradation mechanism, patch design, stress analysis, flooding analysis, examinations, extent of condition, hardship argument, and regulatory commitments in accordance with GL 90-05, relevant ASME Code sections, and NRC guidance as discussed below.

3.2.1 Flaw Characterization

The licensee reported that the diameter of the pinhole is 0.15 inches and is located at the elbow edge of the elbow-to-pipe weld. The leak location is at the one o'clock position when looking

into the elbow from horizontal on the intrados of the elbow. The licensee scanned the area around the pinhole using UT to determine pipe wall thinning. The licensee bounded the degraded (wall thinning) area in a rectangle with dimensions of approximately 1 inch (in the pipe axial direction) by 3 inches (in the pipe circumferential direction) parallel to and immediately downstream from the edge of the elbow-to-pipe weld. The licensee specified the minimum wall thickness value of 0.285 inches as the bounding edge of the damaged area. The rectangle boundary extends 1 inch toward top dead center from the leak and 2 inches past the leak toward three o'clock in the circumferential direction. The rectangle boundary then extends into the elbow base material for a distance of 1 inch. The remaining pipe wall thickness is lowest along the edge of the elbow-to-pipe weld. The thickness of the horizontal pipe is 0.304 to 0.310 inches along the weld edge opposite the damaged area. The thickness of the elbow outer diameter was spot checked in four locations and all were between 0.397 to 0.403 inches. The NRC staff concludes that the licensee has bounded the degraded area adequately based on the required minimum wall thickness which will provide structural support for the welded patch.

3.2.2 Degradation Mechanism

The licensee postulated the leak to be caused by localized flow-accelerated corrosion (FAC) at a weld discontinuity developed from multiple repairs during initial fabrication. The licensee explained that based on the localized nature of the wall thinning and proximity to the elbow-to-pipe weld, the pinhole was most likely caused by localized FAC resulting from a flow disturbance impacting the elbow-to-pipe weld. The licensee postulated the flow disturbance to be the result of an irregularity in the weld root surface, such as excessive weld root reinforcement or inner diameter (ID) mismatch or a combination of both.

The NRC staff cannot verify that FAC is the degradation mechanism without a destructive examination of the leaking pipe. This requires removing the leaking pipe segment which would impose hardship on the licensee without achieving a compensating increase in the level of quality and safety. However, based on the pinhole, wall thinning, and water chemistry in the RWCU system, the NRC staff concludes that FAC is the most likely degradation mechanism.

3.2.3 Patch Design

The patch is designed as a curve plate with a dimension of 3.5-inch long in the axial direction, 5.25-inch wide in the circumferential direction, and 0.5-inch thick. The NRC staff concludes that the patch not only covers the degraded area of 1 inch by 3 inches but also has sufficient area to accommodate potential enlargement of the pinhole and associated wall thinning during the period of the relief request in effect from April 1, 2013, to May 11, 2013. The licensee will use the weld filler material, E70S-2 or E7018, which is compatible with the pipe and fitting material specified. The minimum tensile strength of the fillet weld material is 70,000 pounds per square inch (psi). The licensee specified a minimum fillet weld size of 5/16 inches.

3.2.4 Stress Analysis

The licensee performed a stress analysis of the proposed patch design as shown in Attachments 2 and 3 of the submittal. The licensee calculated stresses in the pipe using the

finite element analysis (FEA) technique to demonstrate compliance with allowable stresses using ANSYS version 14.0, a general-purpose FEA program. In addition, the licensee performed hand calculations to check components not analyzed in the FEA model.

The licensee analyzed the patch with a design pressure and temperature of 1450 psi and 575 degrees Fahrenheit, respectively. The licensee also considered deadweight and seismic loads. The licensee did not take credit for the 1-inch by 3-inch section of the degraded base metal in the stress analysis, assuming the base metal is gone. The licensee assumed that the installed patch will be subjected to all structural loads and pressure-retention functions in their analysis.

The licensee stated that the repair of the degraded pressure retaining component is not covered by the rules of construction codes and that guidance for repair of the pressure components is provided by the ASME Post Construction Code (PCC-2), American Petroleum Institute API 579, the ASME Fitness for Service Code (FFS-1), or ASME Code, Section XI. The leaking RWCU piping is classified as ASME B31.1. The licensee explained that initially the patch plate was analyzed using the rules of ASME PCC-2. The simplified rules of ASME PCC-2 were not met. Thus, the licensee used the detailed fitness-for-service evaluation methods of ASME FFS-1. The licensee stated that ASME FFS-1 allows for detailed analysis utilizing ASME Code, Section VIII, Division 2.

The licensee calculated the maximum membrane stresses and the maximum membrane plus bending stresses in the pipe and patch based on Part 5, Section 5.2.2, *Elastic Stress Analysis Method*, of the ASME Code, Section VIII, Division II, *Alternative Rules, Rules for Construction of Pressure Vessels,* 2011 Addenda, and ASME B31.1, *Power Piping*, 1971 through Winter 1973. The applied stresses satisfy the allowable stresses of ASME B31.1. The NRC staff concludes that the allowable stresses used in the licensee's calculation are consistent with that of the ASME Code, Section III.

The NRC has not approved ASME PCC-2, FFS-1, B31.1, and Section VIII, Division 2. However, the NRC staff notes that licensees may use alternative codes and standards (alternative to those that are approved in 10 CFR 50.55a) to analyze and qualify repair designs so long as their stress analyses are based on a generally accepted methodology and the principles of strength of materials and elasticity.

The NRC staff performed independent calculations to verify the structural integrity of the patch and fillet weld. The NRC staff used the plate formula from Raymond Roark, *Formulas for Stress and Strain*, 4th edition, to calculate stresses on the patch. The NRC staff used the weld formula from Omar Blodgett, *Design of Welded Structures*, 1966 edition and ASME PCC-2 Article 2.12, *Fillet Welded Patches,* to analyze the fillet weld size. Based on its independent analysis, the NRC staff concludes that the patch and associated fillet weld size are acceptable to support the pipe loading. The NRC staff's analysis confirms that the licensee's stress analysis has demonstrated that the welded patch will provide the structural integrity for the subject piping.

The NRC staff notes that the licensee did not consider the corrosion growth of the pinhole and associated wall thinning for the duration of the temporary repair. The intent of a corrosion growth analysis is to assess whether the growth of the pinhole diameter and the surrounding

degraded area would exceed the patch size during the duration of the temporary repair. If the pinhole and surrounding degraded area exceed the patch size, the leak would start and render the temporary repair ineffective.

The licensee has committed to install a camera in the RWCU heat exchanger room to provide leakage monitoring until it performs the ASME Code repair. In addition, the licensee stated that the RWCU system is connected to the RCPB and is equipped with a leakage detection system capable of isolating the system from the RCPB. The isolation instrumentation is subject to Columbia Technical Specification (TS) 3.3.6.1 and includes those functions specified in TS Table 3.3.6.1-1 Functions 4.a through 4.k. The licensee further stated that abnormal conditions within the RWCU system will be detected and the instrumentation will automatically isolate the system from the RCPB. Therefore, if the patch fails and the pipe starts to leak, the operator would be able to take corrective actions. The NRC staff concludes that although the licensee did not analyze for corrosion growth, the licensee will implement a compensatory measure (a camera) and has a leakage detection system to continuously monitor the structural integrity of the temporary repair. In addition, the NRC staff notes that the duration of the proposed patch is relatively short (from April 1, 2013, to May 11, 2013) such that corrosion is not expected to progress to the point to cause the patch to leak prior to the refueling outage when it will be removed.

3.2.5 Flooding Analysis

The NRC staff considers a flooding analysis necessary for a temporary non-code repair to assess the impact to other safety-rated components if the temporary repair fails. For its flooding analysis, the licensee postulated a crack in the 16-inch residual heat removal (RHR) pipe in the RWCU heat exchanger room and does not credit the existing floor drain. The licensee postulated a maximum flow rate through the crack in the 16-inch pipe to be approximately 740 gallons per minute (gpm). The maximum flood height is determined by the height of a weir. According to the licensee, there are no safety-related components in the room below the maximum calculated flood height. The licensee explained that this flooding analysis bounds leakage from the subject 4-inch RWCU pipe, which carries a nominal flow of approximately 265 gpm.

The licensee noted that RWCU is a high-energy system; therefore, it also analyzed the potential for pipe breaks within the RWCU heat exchanger room. The scope of the pipe break analyses address pipe whip, jet impingement, and flooding in the room. The licensee postulated the locations of pipe breaks based on criteria of Branch Technical Position (BTP) ASB 3-1, Rev. 1, 1981. That criteria defines that pipe breaks be considered at high-stress locations and at terminal ends. The licensee stated that the location of the subject RWCU leak and repair is immediately adjacent to the nozzle of heat exchanger RWCU-HX-1A, a terminal end. The licensee concluded that the effects of any leakage at the repaired area have been bounded by existing pipe break analyses in the licensing basis.

The NRC staff has revised BTP ASB 3-1, Revision 1, 1981, which becomes NUREG-0800, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition" (SRP), Chapter 3, BTP 3-3 with the same title, "Protection Against Postulated Piping Failures in Fluid Systems Outside Containment (Former Section 3.6.1 BTP has been

separated into an individual section.)," Revision 3, March 2007 (ADAMS Accession No. ML070800027). The NRC staff notes that the criteria for the pipe break analyses are similar between the two BTP versions. The NRC staff concludes that the licensee has satisfied the guidance in SRP BTP 3-3, Revision 3 and its flooding analysis has demonstrated that should leakage occur safety-related components in the RWCU heat exchanger room will not be affected.

3.2.6 Examinations

As a result of the pinhole leak and before welding the patch to the degraded pipe, the licensee performed pre-installation examination using UT. The licensee examined the surrounding area of the pinhole to determine an area that contains acceptable wall thickness to ensure the patch is installed on the sound base metal. After the patch is welded to the pipe, the licensee stated that it will perform a surface examination on the fillet weld to ensure a sound weld. The licensee further stated that it will perform a VT-2 visual examination as part of post-installation leakage testing of the weld patch. The NRC staff concludes that the surface examination of the fillet weld is acceptable because it is consistent with current examination requirements for similar type welds of ASME Code, Section III for Class 3 components.

3.2.7 Extent of Condition

The NRC asked the licensee to examine additional RWCU pipe locations to determine the extent of condition. The licensee responded that examining additional welds in RWCU piping during power operations to determine the extent of condition would be a hardship in light of the approaching refueling outage and amount of radiation dose that would potentially be received by the workers. However, the licensee has committed to examine additional welds in refueling outage 21 as discussed in its commitment. The licensee has also agreed that the two additional welds in the RWCU system which had extensive repairs during original construction will be examined. The NRC staff concludes that delaying the extent of condition examination for about 1-1/2 months (from April 1, 2013, to May 11, 2013) is acceptable because there is no immediate safety concern. The portion of the RWCU piping system does not provide any safety function and is not part of an ESF system. In addition, the leakage detection systems will be able to detect potential leakage from other portion of the RWCU piping and the operator is required to take corrective actions in accordance with TS 3.3.6.1 as discussed above.

3.2.8 Hardship Argument

The licensee noted that the RWCU system is depicted in Columbia Final Safety Analysis Report (FSAR) Figures 5.4-22 and 5.4-23. The system continuously purifies reactor water during all modes of reactor operation. The system takes suction from the inlet of each reactor main recirculation pump and from the reactor pressure vessel bottom head. Processed water is returned to the reactor pressure vessel. The licensee stated that major equipment of the RWCU system includes the RWCU pumps, the regenerative and non-regenerative heat exchangers, filter-demineralizers, and associated valves and piping. The licensee further stated that performing an ASME Code repair would require continued isolation of the RWCU system from the reactor coolant system. The licensee explained that currently, trending of reactor coolant system chemistry parameters indicate a reactor shutdown will be necessitated on or around

April 8, 2013. According to the licensee, the RWCU system needs to be placed back into service to restore or ensure chemistry parameters remain within limits. The licensee considered that shutting the plant down to perform an ASME Code repair versus using the proposed temporary non-code repair to be a hardship without a compensating increase in the level of quality and safety.

The NRC staff concludes that an ASME Code repair would require an extended RWCU system isolation from the reactor coolant system, which would negatively impact primary chemistry parameters in the reactor coolant system and require plant shutdown. As the subject pipe provides no safety function, the NRC staff determines that an ASME Code repair would impose an unnecessary burden on the licensee without compensating increase in the level of quality and safety.

3.2.9 Regulatory Commitments

The licensee made the following regulatory commitments in its letter dated April 6, 2013:

Commitment	Scheduled Completion Date
The post-maintenance testing will include a VT-2 examination.	Prior to return of RWCU to service
Energy Northwest will perform an augmented inspection via UT or RT to assess the overall degradation of the affected system. The inspection of at least 10 susceptible (and accessible) locations for high energy lines will be performed. Locations that were re-welded during initial fabrication of the RWCU regenerative heat exchanger skid will be included in this augmented inspection.	Prior to startup from Refueling Outage 21 (June 2013)
Energy Northwest will install a camera in the RWCU heat exchanger room to provide leak monitoring until the outage.	April 8, 2013
The non-code repair will be replaced with an ASME Code repair.	Prior to startup from Refueling Outage 21 (June 2013)
Energy Northwest will perform a surface examination of the fillet weld associated with the repair.	Prior to return of RWCU to service
Energy Northwest will obtain additional wall thickness measurements along the circumference of the elbow downstream of the weld.	Prior to return of RWCU to service

The NRC staff concludes that the above commitments are acceptable because they have satisfactorily addressed the NRC staff's concerns regarding the extent of condition, the non-destructive examinations associated with welding of the patch to the degraded pipe, the pipe

wall thickness in the vicinity of the degraded location, and the leakage monitoring. The surface examination of the fillet weld and a VT-2 examination will provide reasonable assurance of a sound fillet weld. The additional pipe wall thickness measurement will ensure that the patch will be welded to the sound base metal. The augmented inspections will determine the extent of condition in other pipe segments of the RWCU system. The camera will provide constant monitoring of the repaired pipe location.

In summary, the NRC staff concludes that the proposed temporary non-code repair is acceptable because the licensee has adequately addressed the topics on the flaw characterization, degradation mechanism, patch design, stress analysis, flooding analysis, examinations, extent of condition, and hardship argument.

4.0 CONCLUSION

Based on the above, the NRC staff determines that the proposed alternative provides reasonable assurance of structural integrity and leak tightness of the subject RWCU piping. The NRC staff concludes that complying with the specified ASME Code requirement to repair the degraded RWCU pipe 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 requirements of the ASME Code, Section XI, for which relief was not requested. Therefore, the NRC staff authorizes the use of Relief Request 3ISI-13 at the Columbia Generating Station until startup from refueling outage 21 (which occurred on June 23, 2013).

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

Principal Contributor: John Tsao

Date: August 9, 2013

is in compliance with the requirements of the ASME Code, Section XI, for which relief was not requested. Therefore, the NRC staff authorizes the use of Relief Request 3ISI-13 at Columbia until startup from refueling outage 21, (which occurred on June 23, 2013).

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

If you have any questions, please contact the Project Manager Fred Lyon at (301) 415-2296 or via e-mail at Fred.Lyon@nrc.gov.

Sincerely,

/ra/

Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-397

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