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

January 24, 2018

Mr. Tom Simril
Site Vice President
Catawba Nuclear Station, Units 1 and 2
Duke Energy Carolinas, LLC
4800 Concord Road
York, SC 29745

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2 – REQUEST FOR RELIEF NO. 17-CN-001, REGARDING CATEGORY B-J PRESSURE RETAINING WELDS FOR THE THIRD 10-YEAR INSERVICE TESTING INTERVAL (CAC NOS. MF9807 AND MF9808; EPID L-2017-LLR-0032)

Dear Mr. Simril:

By letter dated May 25, 2017 (Agencywide Documents and Access Management System (ADAMS) Accession No. ML17150A305), as supplemented by letter dated December 21, 2017 (ADAMS Accession No. ML17362A042), Duke Energy Carolinas (the licensee) requested relief from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section XI, specifically related to requirement to demonstrate and qualify the ultrasonic testing (UT) procedure and personnel, and the requirement to inspect the inner one third volume of the weld. Relief request 17-CN-001 was submitted for ASME Class 1 welds in the branch pipe connection where a forged stainless steel branch piping nozzle is welded to a centrifugally cast austenitic stainless steel main coolant pipe at the Catawba Nuclear Station (Catawba), Units 1 and 2.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(5)(iii), the licensee requested relief from the UT qualification and the inspection of piping welds, and to use alternative requirements, if necessary, for inservice inspection (ISI) on the basis that the ASME BPV Code requirement is impractical.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the subject relief request and found that complying with the specified ASME BPV Code requirements would be impractical. The NRC staff concluded that granting relief pursuant to 10 CFR 50.55a(g)(6)(i) is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility. Accordingly, the NRC staff concluded that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g)(5)(iii). Therefore, in accordance with 10 CFR 50.55a(g)(6)(i), the NRC staff grants relief request 17-CN-001 for the third ISI interval that ended on June 29, 2016, for Catawba, Unit 1, and on October 15, 2016, for Catawba, Unit 2.

All other ASME BPV Code, Section XI, requirements for which relief was not specifically requested and authorized herein by the NRC staff remain applicable, including the third party review by the Authorized Nuclear Inservice Inspector.

The details of the NRC review are provided in the enclosed safety evaluation.

If you have any questions, please contact the Project Manager, Michael Mahoney at 301-415-3867 or via e-mail at Michael.Mahoney@nrc.gov.

Sincerely,

Michael T. Markley, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosure:
Safety Evaluation

cc w/encl: ListServ

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

THIRD 10-YEAR INSERVICE TESTING PROGRAM INTERVAL

RELIEF REQUEST NO. 17-CN-001

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

DUKE ENERGY CAROLINAS, LLC.

DOCKET NOS. 50-413 AND 50-414

1.0 INTRODUCTION

By letter dated May 25, 2017 (Agencywide Documents and Access Management System (ADAMS) Accession No. ML17150A305), as supplemented by letter dated December 21, 2017 (ADAMS Accession No. ML17362A042), Duke Energy Carolinas (the licensee) requested relief from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section XI, specifically related to requirement to demonstrate and qualify the ultrasonic testing (UT) procedure and personnel, and the requirement to inspect the inner one third volume of the weld. Relief request 17-CN-001 was submitted for ASME Class 1 welds in the branch pipe connection where a forged stainless steel branch piping nozzle is welded to a centrifugally cast austenitic stainless steel (CASS) main coolant pipe at the Catawba Nuclear Station (Catawba), Units 1 and 2.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(5)(iii), the licensee requested relief from the UT qualification and the inspection of piping welds, and to use alternative requirements, if necessary, for inservice inspection (ISI) on the basis that the ASME BPV Code requirement is impractical.

2.0 REGULATORY EVALUATION

The ASME BPV Code Class 1, 2, and 3 components must meet the requirements of Section XI of the ASME BPV Code as required by 10 CFR 50.55a(g)(4), which states, in part, that:

> Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports), that are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of editions and addenda of the ASME BPV Code...

The licensee may request relief from portions of the ASME BPV Code as provided in 10 CFR 50.55a(g)(5)(iii), which states, in part, that:

> If the licensee has determined that conformance with a Code requirement is impractical for its facility the licensee must notify the [U.S. Nuclear Regulatory Commission (NRC)] and submit, as specified in §50.4, information to support the determinations. Determinations of impracticality in accordance with this section must be based on the demonstrated limitations experienced when attempting to comply with the Code requirements during the inservice inspection interval for which the request is being submitted.

And, the NRC staff may grant relief from ASME BPV Code requirements as provided in 10 CFR 50.55a(g)(6)(i), which states that:

> The Commission will evaluate determinations under paragraph (g)(5) of this section that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

Based on the above, and subject to the following technical evaluation, the NRC staff finds that regulatory authority exists for the licensee to request and the NRC to grant relief.

3.0 TECHNICAL EVALUATION

3.1 Component Affected

The ASME Code Class 1 piping welds identified as Examination Category B-J, Item B9.31 "Branch Pipe Connection Welds Nominal Pipe Size (NPS) 4 or Larger" in Table IWB-2500-1 are affected. In Section 1.0 of Enclosure 1 to the relief request, the licensee identified the welds as follows:

Catawba, Unit 1 Welds

- Weld No. 1NC22-WN7 (Summary No. C1.B9.31.0001) - 14-inch diameter pressurizer surge line nozzle to reactor coolant loop 1B hot leg pipe
- Weld No. 1NC22-WN8 (Summary No. C1.B9.31.0002) - 12-inch diameter residual heat removal pump 1A line nozzle to reactor coolant loop 1B hot leg pipe
- Weld No. 1NC24-WN9 (Summary No. C1.B9.31.0003) - 6-inch diameter safety injection pump 1B line nozzle to reactor coolant loop 1A hot leg pipe

The licensee stated that the above branch pipe connections consist of the forged stainless steel SA-182 F304N branch piping nozzle welded by the stainless steel weld material to the centrifugally CASS SA-351 CF8A main coolant pipe. The wall thickness for the 14-inch pipe is 1.406 inches, the 12-inch pipe is 1.125 inches, and the 6-inch pipe is 0.718 inch. The above welds are subjected to operating pressure of 2235 pounds per square inch gauge (psig) and temperature of 614.9 degrees Fahrenheit (°F).

Catawba, Unit 2 Welds

- Weld No. 2NC11-WN7 (Summary No. C2.B9.31.0001) - 14-inch diameter pressurizer surge line nozzle to reactor coolant loop 2B hot leg pipe
- Weld No. 2NC11-WN8 (Summary No. C2.B9.31.0002) - 12-inch diameter residual heat removal pump 2A line nozzle to reactor coolant loop 2B hot leg pipe
- Weld No. 2NC13-WN9 (Summary No. C2.B9.31.0003) - 12-inch diameter residual heat removal pump 2B line nozzle to reactor coolant loop 2C hot leg pipe

The licensee stated that the above branch pipe connections consist of the forged stainless steel SA-182 F304N branch piping nozzle welded by the stainless steel weld material to the centrifugally CASS SA-351 CF8A main coolant pipe. The wall thickness for the 14-inch pipe is 1.406 inches and the 12-inch pipes is 1.125 inches. The above welds are subjected to operating pressure of 2235 psig and temperature of 616.7 °F.

3.2 Applicable Code Edition and Addenda

The code of record for the third 10-year ISI interval is the 1998 Edition through 2000 Addenda of the ASME BPV Code.

3.3 Duration of Relief Request

The licensee submitted this relief request for the third 10-year ISI interval of Catawba, Unit 1, which started on June 29, 2005, and ended on June 29, 2016, and for the third 10-year interval of Catawba, Unit 2, which started on October 15, 2005, and ended on October 15, 2016.

The licensee stated that in accordance with IWA-2430, an extension of one year was applied to the third 10-year ISI interval of Catawba, Units 1 and 2, and all applicable requirements in IWA-2430 have been met.

3.4 ASME BPV Code Requirement

The ASME BPV Code requirements applicable to this request originate in Table IWB-2500-1 and IWA-2232 of Section XI. The welds under this relief request categorized as Examination Category B-J, Item B9.31, are required surface and volumetric examinations every 10-year ISI interval, and 100 percent coverage of the required examination area and volume must be achieved. Figure IWB-2500-8 shows volume C-D-E-F that must be subjected to the UT and area A-B that must be subjected to surface examination.

The extent of required coverage (volumetric and surface examination coverage) is reduced from 100 percent to essentially 100 percent by ASME Code Case N-460 "Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1." Code Case N-460 has been incorporated by reference into 10 CFR 50.55a by inclusion in Regulatory Guide (RG) 1.147, Revision 17, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," (ADAMS Accession No. ML13339A689).

The extent of required surface examination coverage is reduced to area susceptible to the outside diameter (OD) surface degradation (e.g., stress corrosion cracking) by ASME Code Case N-663 "Alternative Requirements for Classes 1 and 2 Surface Examinations, Section XI, Division 1." Code Case N-663 has been incorporated by reference into 10 CFR 50.55a by inclusion in RG 1.147, Revision 17.

IWA-2232 requires the UT be conducted according to Appendix I of Section XI. Section I-2220 of Appendix I requires the ultrasonic examination procedures, equipment, and personnel used to detect and size flaws in piping welds be qualified by performance demonstration of Appendix VIII of Section XI, and no other I-2000 requirements apply. Section VIII-3110(c) states that for piping welds whose requirements are in course of preparation, the requirements of Appendix III of Section XI as supplemented by Table I-2000-1 shall be met. In accordance with III-2200(c), in part, the UT qualification shall include demonstrated proficiency in discriminating between flaw indications and indications of geometric or a metallurgical origin.

3.5 Impracticality of Compliance

The licensee requested relief from the requirement to perform a UT procedure demonstration in accordance with I-2220 of mandatory Appendix I (i.e., III-2200(c) of Appendix III), and the requirement to inspect the inner one third volume of the weld (i.e., examination volume C-D-E-F of Figure IWB-2500-8).

The licensee stated that attempts had been made to demonstrate and qualify the UT procedure and personnel on the centrifugally CASS mock-up for inspection from the OD surface. However, the results of the UT demonstration revealed that none of the embedded flaws within the inner one third volume of the weld and the heat affected zone (HAZ) of base materials in the mockup were detectable. Therefore, meeting the UT qualification requirements of III-2200(c) was considered impractical. As such, no effective UT could be performed on the ASME BPV Code required examination volume of the subject welds.

The licensee stated that the weld configurations prevented the UT needed to meet III-4420 and III-4430 of Appendix III, thus obtaining essentially 100 percent coverage of the Code required examination volume is not possible. In order to meet the above requirements, the weld joint would have to be redesigned, which is impractical.

The licensee stated that because the interior of the subject piping is inaccessible, use of the radiographic testing (RT) to meet the ASME BPV Code required volumetric examinations is not possible.

The licensee stated that alternative welds were not selected for inspection because all of the welds that are categorized as Code Item B9.31 welds at Catawba, Units 1 and 2 connect the forged stainless steel branch piping nozzles to the centrifugally CASS main coolant piping. None of these alternative welds provides greater than 20 percent coverage.

The licensee stated that the burden caused by compliance includes major modification of plant components which include redesign and replacement of the welds and associated components.

3.6 Bases for Relief

The licensee stated that the current commercially available UT technologies are not capable of effectively inspecting the ASME BPV Code required volume of the weld from the CASS side. In addition, the UT demonstrations on the CASS mockups have failed to reliably discriminate between the weld's geometrical features and the cracks in the inner one third volume of the weld and the HAZ of base materials.

Furthermore, the licensee stated that the configurations of the welds in this relief request limited the scanning of the ASME BPV Code required examination volume, thus obtaining essentially 100 percent coverage is not possible.

The licensee stated that in the third 10-year ISI interval, the welds in this relief request were inspected by the UT and no unacceptable indications were identified in the volume scanned.

The licensee stated that in the third 10-year ISI interval, three of the welds in this relief request (weld nos. 1NC22-WN7 and 1NC24-WN9 in Unit 1 and weld no. 2NC13-WN9 in Unit 2) were inspected by the liquid penetrant in accordance with Code Item No. B9.31 in Table IWB-2500-1 and no unacceptable surface indications were identified. For the remaining welds in this relief request, the licensee has implemented the requirements of ASME Code Case N-663.

In the table from the December 21, 2017 supplement, the licensee provided the limiting value of cumulative usage factor (CUF) for the piping. The licensee stated that this bounding values of CUFs are based on the total number of design transient events over plant life. All CUFs satisfy the acceptance limits of NB-3600 of Section III with significant margin.

The licensee stated that the welds in this relief request have been subjected to system leakage test and associated VT-2 visual examinations in accordance with Examination Category B-P in Table IWB-2500-1. No through-wall leakage has been identified in any of the subject welds.

The licensee stated that during fabrication, the subject branch pipe connection welds were inspected by RT where access to inside of the pipe was available for placement of the radiographic film. The liquid penetrant examinations of the weld root pass and accessible surfaces of the finished weld were also performed during fabrication.

The licensee stated that during preservice inspection (PSI) prior to initial plant operation and in the first and second 10-year ISI intervals, three of the welds in this relief request (i.e., weld no. 1NC22-WN8 in Unit 1 and weld nos. 2NC11-WN7 and 2NC11-WN8 in Unit 2) were inspected by the UT. No unacceptable indications were detected in the volume examined (i.e., documented in relief request 04-CN-001, Revision 1, dated April 21, 2005 (ADAMS Accession No. ML051230324)), which was approved on July 25, 2005 (ADAMS Accession No. ML051780188).

The licensee stated that if any through wall leakage greater than 1.0 gallon per minute (gpm), as specified in Technical Specification (TS) 3.4.13 "RCS Operational Leakage" and TS 3.4.15 "RCS Leakage Detection Instrumentation," were to occur in these welds, it would be detected by the existing plant leakage monitoring system (e.g., particulate radioactivity, sump, and drain tank monitoring systems).

The licensee stated that in the next inspection interval, it intends to use ASME Code Case N-824, "Ultrasonic Examination of Cast Austenitic Piping Welds from the Outside Surface, Section XI," which provides improved requirements for inspecting pipe welds joining CASS components.

3.7 Alternative Examination

Instead of performing the ASME BPV Code required exanimation, the licensee completed a "best effort" examination that performed UT of the outer two thirds of the weld volume in lieu of examining the required inner one third of the weld volume.

For the "best effort" examinations, the licensee used the 70- and 60-degree refracted longitudinal (RL) waves because Electric Power Research Institute (EPRI) Topical Report (TR)-107481 "Status of the Ultrasonic Examination of Reactor Coolant Loop Cast Stainless Steel Materials" identified the 70- and 60-degree RL wave transducers as having the highest signal to noise ratio when looking for the upper extremities of deep cracks (i.e., scanning of the upper two thirds of a weld volume). The licensee scanned the welds only from the CASS pipe side (single sided) in an axial and two circumferential directions due to weld configuration and access limitations to the branch piping nozzle side. The axial coverage claimed for the subject welds from the "best effort" examination were as low as 77.4 percent to as high as 100 percent (single sided scan from the CASS pipe side). The circumferential coverage claimed were between 0 and 11.7 percent (i.e., clockwise and counterclockwise scanning directions).

Below is the aggregate percent coverage achieved for each weld from the "best effort" examination performed on the outer two thirds of the weld volume.

Catawba, Unit 1 Welds

Weld No. 1NC22-WN7 - 41.1 percent
Weld No. 1NC22-WN8 - 38.8 percent
Weld No. 1NC24-WN9 - 35.9 percent

Catawba, Unit 2 Welds

Weld No. 2NC11-WN7 - 25.8 percent
Weld No. 2NC11-WN8 - 25.8 percent
Weld No. 2NC13-WN9 - 25.8 percent

The licensee stated that the UT equipment used to conduct the "best effort" examinations was calibrated using an existing calibration block made of SA-351 CF8A centrifugally CASS material containing axially and circumferentially oriented side-drilled holes.

3.8 NRC Staff Evaluation

The NRC staff's evaluation focused on: (1) whether a technical justification exists to support the determination that the ASME BPV Code requirement is impractical; (2) that imposition of the ASME BPV Code required inspections would result in a burden to the licensee; and (3) that the licensee's proposed alternative (accepting both the alternative examination volume and the reduced inspection coverage in this case) provides reasonable assurance of structural integrity and leak tightness of the subject welds. The NRC staff finds that if these three criteria are met, then the requirements of 10 CFR 50.55a(g)(6)(i) will also be met.

3.8.1 Impracticality of Compliance

The UT of pipe welds joining the CASS components (i.e., included centrifugally CASS or statically CASS fabrication) is challenging, as the coarse-grained microstructure of the cast austenitic materials strongly affects the propagation of ultrasonic energy by causing high attenuation, velocity variation, high scattering, and beam redirecting. As a result, it is difficult to distinguish scatter from real flaw-induced signal and assure that the ASME BPV Code required volume of weldment is fully examined (e.g., not able to reliably calculate reflector location or examination coverage). Materials noise inherent to CASS results in poor signal-to-noise ratio, thereby making the UT unreliable, and echoes from the inside surface geometries (e.g.,

counterbore) can overshadow responses from real flaws, thereby real flaws could potentially remain undetected.

To assess reliability of the ultrasonic techniques for examination of the pipe welds joining CASS components, the NRC has sponsored various research projects at the Pacific Northwest National Laboratory (PNNL). The results of PNNL's studies are documented in NRC NUREG/CR-6594 "Evaluation of Ultrasonic Inspection Techniques for Coarse-Grained Materials" (ADAMS Accession No. ML14071A001), NUREG/CR-6933 "Assessment of Crack Detection in Heavy-Walled Cast Stainless Steel Piping Welds Using Advanced Low-Frequency Ultrasonic Methods" (ADAMS Accession No. ML071020410), NUREG/CR-6984 "Field Evaluation of Low-Frequency SAFT-UT on Cast Stainless Steel and Dissimilar Metal Weld Components" (ADAMS Accession No. ML090020419), and NUREG/CR-7122 "An Evaluation of Ultrasonic Phased Array Testing for Cast Austenitic Stainless Steel Pressurizer Surge Line Piping Welds" (ADAMS Accession No. ML12087A061). PNNL determined that even by utilizing state-of-the-art ultrasonic techniques, it was unable to reliably detect shallow flaws in the inner one third of weld volume (thick-walled specimens). Moreover, the licensee affirmed that during previous intervals, it attempted to qualify the UT for the examination of the inner one third volume using plant-specific CASS mockup, but the outcome was unsuccessful. Therefore, the NRC staff finds the licensee's assertion for inability to qualify UT procedure and personnel is justified and acceptable.

Furthermore, the configuration of the subject branch connection piping only permitted scanning to be conducted from the CASS pipe side of the weld (single-side scan). The NRC staff notes that use of a sufficiently long examination beam path as required by III-4420 and one-half "V" path, as required by III-4430 were not possible due to the welds and associated components configurations. Therefore, the NRC staff finds that it is impractical to inspect the required examination volume C-D-E-F of Figure IWB-2500-8 effectively.

Based on the above, the NRC staff finds that a technical justification exists to support the determination that the UT qualification and examination of essentially 100 percent coverage of the required volume are impractical.

3.9.2 Burden of compliance

The research studies conducted by PNNL showed difficulties associated with UT of CASS, even using the state-of-the-art ultrasonic techniques. The licensee's attempt to qualify the UT using plant-specific CASS mockup, as well as examine essentially 100 percent of the Code required examination volume, was unsuccessful. Furthermore, making the welds fully accessible for inspection from both sides would require replacement or significant design modification to the welds and their associated components. Therefore, the NRC staff finds that imposing the ASME BPV Code requirements could result in a burden upon the facility.

3.9.3 Structural integrity and leak tightness

The NRC staff considered whether the licensee's proposed alternative provided reasonable assurance of structural integrity and leak tightness of the subject welds based on: (1) the alternative examination volume scanned and the coverage achieved and (2) safety significance of unexamined volumes - unachievable coverage (e.g., the presence or absence of known active degradation mechanisms and essentially 100 coverage achieved for similar welds in similar environments subject to similar degradation mechanisms).

3.9.3.1 Examination of Alternative Volume and Coverage Achieved

In evaluating the licensee's proposed alternative, the NRC staff assessed whether it appeared that the licensee inspected appropriate volume and obtained as much coverage as reasonably possible and the manner in which the licensee reported the coverage achieved. From the review of submittal and the sketches in Enclosure 2 to the relief request:

- The outer two-thirds volume of the welds and adjacent HAZ of the base materials were scanned from the OD as a "best effort" examination. The NRC staff finds the licensee's "best effort" examination acceptable because the probability of detection of deep flaws in the outer two thirds volume is high;
- The welds were examined using the appropriate equipment, ultrasonic modes of propagation, probe angles, frequencies, and scanning directions to obtain maximum coverage;
- The coverage was calculated in a reasonable manner;
- The UT was calibrated on the CASS calibration block with side drill holes of appropriate depths;
- The coverage was limited by physical access (i.e., scanning was only possible from the CASS pipe side); and
- No unacceptable indications were identified.

Therefore, the NRC staff finds that the licensee made every effort to inspect as much volume as the currently available UT is able to inspect effectively and obtain as much coverage as reasonably possible.

3.9.3.2 Safety Significance of Unexamined Volumes - Unachievable Coverage

In addition to the analysis described above, the NRC staff evaluated the safety significance of the unexamined volumes of welds - unachievable coverage. From a review of submittals and the sketches in Enclosure 2 of the relief request:

- The CFU factor provided by the licensee does not exceed the limit of Section III of the ASME BPV Code, thereby providing reasonable assurance that the potential for initiation of fatigue cracks is low;
- During the first and second 10-year ISI intervals of Catawba, Units 1 and 2, the UT did not identify any unacceptable indications in the volume scanned;
- The RT performed during fabrication, as required by Section III of the ASME BPV Code, and the UT performed during PSI did not identify any unacceptable indications;
- The OD surface examinations did not identify any unacceptable OD surface connected indications; and
- To date, operating experience has shown no degradation mechanism found in the CASS components.

Based on the above volumetric examinations, achieved coverage, and bounding CUF, the NRC staff finds that if significant service induced degradation had occurred, evidence of it would have been detected by the licensee-performed examinations.

In its analysis, the NRC staff also found that, in addition to the volumetric examinations, these welds have received the required system leakage test according to Examination Category B-P of Table IWB-2500-1 during each refueling outage. Despite alternative volumetric examination

and a reduced coverage of the examination volume, the NRC staff finds that this test will provide additional assurance that any pattern of degradation, if it were to occur, would be detected and the licensee will take appropriate correction actions.

Therefore, the NRC staff finds that the alternative volumetric examinations performed to the extent possible provide a reasonable assurance of structural integrity and leak tightness of the subject welds.

4.0 CONCLUSION

As set forth above, the NRC staff has determined that it has the regulatory authority to grant the requested relief, that the proposed inspection provides reasonable assurance of structural integrity and leak tightness of the subject welds, imposing the ASME BPV Code requirements could result in a burden upon the facility, and complying with the specified ASME BPV Code requirements would be impractical. The NRC staff concludes that granting relief pursuant to 10 CFR 50.55a(g)(6)(i) is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g)(5)(iii). Therefore, in accordance with 10 CFR 50.55a(g)(6)(i), the NRC staff grants relief request 17-CN-0001 for the third 10-year ISI interval of Catawba, Unit 1, which started on June 29, 2005, and ended on June 29, 2016, and for Unit 2, which started on October 15, 2005, and ended on October 15, 2016.

All other ASME BPV Code, Section XI, requirements for which relief was not specifically requested and authorized herein by the NRC staff remain applicable, including the third party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: A. Rezai, NRR

Date: January 24, 2018

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2 – REQUEST FOR RELIEF NO. 17-CN-001, REGARDING CATEGORY B-J PRESSURE RETAINING WELDS FOR THE THIRD 10-YEAR INSERVICE TESTING INTERVAL (CAC NOS. MF9807 AND MF9808; EPID L-2017-LLR-0032) DATED JANUARY 24, 2018

DISTRIBUTION:
PUBLIC
LPL2-1 R/F
JBowen, EDO
RidsAcrsAcnw_MailCTR Resource
RidsNrrDorlDpr Resource
RidsRgn2MailCenter Resource
RidsNrrDorlLpl2-1 Resource
RidsNrrLAKGoldstein Resource
RidsNrrDeEpnb Resource
ARezai, NRR
RidsNrrPMCatawba Resource

ADAMS Accession No.: ML18016A178 *safety evaluation via e-mail

OFFICE	DORL/LPL2-1/PM	DORL/LPL2-1/PM	DORL/LPL2-1/LA	DE/EPNB/BC*	DORL/LPL2-1/BC
NAME	MOrenak	MMahoney	KGoldstein	DAlley	MMarkley
DATE	01/22/18	01/22/18	01/19/18	01/03/18	01/24/18

OFFICIAL RECORD COPY