



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

December 27, 2017

Mr. Doug Sample
Manager, Technical Services (QA/QC)
Newport News Industrial Corporation
182 Enterprise Dr.
Newport News, VA 23606

SUBJECT: NUCLEAR REGULATORY COMMISSION INSPECTION OF NEWPORT NEWS
INDUSTRIAL CORPORATION, REPORT NO. 99901433/2017-201

Dear Mr. Sample:

On November 13-17, 2017, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at the Newport News Industrial Corporation's (hereafter referred to as NNI) facility in Newport News, VA. The purpose of this limited-scope routine inspection was to assess NNI's compliance with provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," and selected portions of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities."

The enclosed report presents the results of the inspection. This technically-focused inspection specifically evaluated NNI's implementation of the quality activities associated with the design, fabrication, and testing of the air inlet panels and tension ring panels for the Shield Building of the Westinghouse Electric Company AP1000 reactor design for the domestic reactors being supplied to Vogtle Electric Generating Station, Units 3 & 4. During this inspection, the NRC staff looked at records and construction activities associated with inspections, tests, analyses, and acceptance criteria (ITAAC) from Revision 19 of the approved AP1000 Design Control Document. Specifically, these activities were associated with the ITAAC Number 3.3.00.02a.i.b (761). The NRC inspection team did not identify any findings associated with the ITAAC contained in Section 4 of the attachment to this report. This NRC inspection report does not constitute NRC endorsement of NNI's overall quality assurance (QA) or Part 21 programs.

Within the scope of this inspection, no violations or nonconformances were identified.

Based on the results of this inspection, the NRC inspection team found the implementation of your QA program met the requirements imposed on you by your customers or NRC licensees. No findings of significance were identified.

In accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," the NRC will make available electronically for public inspection a copy of this letter and its enclosure through the NRC Public Document Room or from the

D. Sample

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NRC's Agencywide Documents Access and Management System, which is accessible at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

/RA/ Terry Jackson Acting for

John P. Burke, Chief
Quality Assurance Vendor Inspection Branch-2
Division of Construction Inspection
and Operational Programs
Office of New Reactors

Docket No.: 99901433

EPID: 99901433/I-2017-201-0037

Enclosure:
Inspection Report No. 99901433/2017-201
and Attachment

SUBJECT: NUCLEAR REGULATORY COMMISSION INSPECTION OF NEWPORT NEWS INDUSTRIAL CORPORATION, REPORT NO. 99901433/2017-201

Dated: December 27, 2017

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**U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NEW REACTORS
DIVISION OF CONSTRUCTION INSPECTION AND OPERATIONAL PROGRAMS
VENDOR INSPECTION REPORT**

Docket No.: 99901433

Report No.: 99901433/2017-201

Vendor: Newport News Industrial Corporation
182 Enterprise Dr.
Newport News, VA 23606

Vendor Contact: Mr. Doug Sample
Manager, Technical Services (QA/QC)
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Nuclear Industry Activity: Newport News Industrial Corporation (NNI) is an American Society of Mechanical Engineers (ASME) Boiler & Pressure Vessel (B&PV) Code Certificate Holder holding an N, NS, and NPT stamp. NNI's scope of supply includes, but is not limited to, design, fabrication, and assembly of structural steel panels for the shield building to the American Welding Society (AWS) D1.1, Structural Welding Code–Steel, AWS D1.4, Structural Welding Code–Reinforcing Steel and, American Institute of Steel Construction (AISC) N690.

Inspection Dates: November 13-17, 2017

Inspectors: Jonathan Ortega-Luciano NRO/DCIP/QVIB-2, Team Leader
Thomas Herrity NRO/DCIP/QVIB-2
Andrea Keim NRO/DCIP/QVIB-3
Jonathan Lizardi R-II/DCO/IB4
Robert Roche-Rivera NRO/DEI/SEB
Pravin Patel NRO/DEI/SEB

Approved by: John P. Burke, Chief
Quality Assurance Vendor Inspection Branch-2
Division of Construction Inspection
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Office of New Reactors

Enclosure

EXECUTIVE SUMMARY

Newport News Industrial Corporation
99901433/2017-201

The U.S. Nuclear Regulatory Commission (NRC) staff conducted a routine vendor inspection at the Newport News Industrial Corporation's (hereafter referred to as NNI) facility in Newport News, VA, to verify that it had implemented an adequate quality assurance (QA) program that complies with the requirements of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities" and that NNI implemented a program under 10 CFR Part 21, "Reporting of Defects and Noncompliance." Additionally, the NRC inspection team reviewed NNI records and construction activities associated with the Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Number 3.3.00.02a.i.b (761) from Revision 19 of the approved Design Control Document for the Westinghouse Electric Corporation's AP1000 design; as detailed in Sections 2 and 6 of this report. This was the second NRC inspection of NNI's facility in Newport News, Virginia. The last NRC inspection was conducted in September 2013 and the results are documented in Inspection Report (IR) No. 99901433/2013-201, dated November 8, 2013.

This technically-focused inspection specifically evaluated NNI's implementation of quality activities associated with the design, fabrication, and testing of the safety-related air inlet panels and tension ring panels for the Shield Building for the Westinghouse Electric Company AP1000 reactor design being supplied to Vogtle Electric Generating Plant, Units 3 & 4. Specific activities observed by the NRC inspection team included:

- Ultrasonic inspection tests (UT) of Structural Weld Number TR01-0026-R1 on Vogtle Unit 3 Shield Building Tension Ring Submodule TR01 (i.e. SV3-TR01).
- Installation of the initial 10 production shear studs (i.e. 12G-B18 thru -B27) for Vogtle Unit 4 Shield Building Panels SV4-12D and SV4-12G, respectively.
- Attended a corrective action review meeting
- Visual examination tests (VT) of Weld Numbers 07M-3972 and 07M-3973 on Vogtle Unit 4 Shield Building Panel 07M (i.e. SV4-07M).
- Weld filler material issuance and filler material control activities
- Calibration of a Fluke meter
- Calibration of Epoch XT equipment for ultrasonic flaw detection

In addition to observing these activities, the NRC inspection team verified that measurement and test equipment (M&TE) was properly identified, marked, calibrated, and used within its calibrated range.

These regulations served as the bases for the NRC inspection:

- Appendix B to 10 CFR Part 50
- 10 CFR Part 21

During the course of this inspection, the NRC inspection team implemented:

- Inspection Procedure (IP) 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated February 13, 2012;
- IP 43002, "Routine Inspections of Nuclear Vendors," dated January 27, 2017;
- IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated January 27, 2017;
- IP 65001.01, "Inspection of ITAAC-Related Foundations & Buildings," dated April 18, 2014;
- IP 65001.02, "Inspection of ITAAC-Related Installation of Structural Concrete," dated November 22, 2011;
- IP 65001.A, "Inspection of the As-Built Attributes for Structures, Systems, and Components (SSCs) Associated with ITAAC," dated September 25, 2013;
- IP 65001.B, "Inspection of the ITAAC-Related Welding Program," dated September 25, 2013;
- IP 65001.F, "Inspection of the ITAAC-Related Design and Fabrication Requirements," dated September 20, 2013.

The results of this inspection are summarized below.

Corrective Action

The NRC inspection team reviewed the corrective actions that NNI had taken to address nonconformances documented in IR No. 99901433/2013-201 dated November 8, 2013. The NRC inspection team reviewed the documentation that provided objective evidence that all corrective actions were completed and adequately implemented. Based on this review, the NRC inspection team closed all of the nonconformances documented in the 2013 IR.

Inspection Areas

The NRC inspection team determined that NNI is implementing its programs for commercial-grade dedication; training and qualification of personnel; manufacturing control; special process; inspection; M&TE, nonconformance of material, parts or components; corrective action; and audits in accordance with the applicable regulatory requirements of Appendix B to 10 CFR Part 50. Also, the NRC inspection team concluded that NNI is implementing its 10 CFR Part 21 program in accordance with the regulatory requirements. Based on the limited sample of documents reviewed and activities observed, the NRC inspection team also determined that NNI is implementing its policies and procedures associated with these programs. No findings of significance were identified.

REPORT DETAILS

1. 10 CFR Part 21 Program

a. Inspection Scope

The NRC inspection team reviewed Newport News Industrial Corporation's (hereafter referred to as NNI) policies and implementing procedures that govern NNI's 10 CFR Part 21 program to verify compliance with the regulatory requirements. In addition, the NRC inspection team evaluated the 10 CFR Part 21 postings, employee training, and a sample of NNI's purchase orders (POs) for compliance with the requirements of 10 CFR 21.21, "Notification of Failure to Comply or Existence of a Defect and its Evaluation," and 10 CFR 21.31, "Procurement Documents." The NRC inspection team also verified that NNI's nonconformance and corrective action procedures provide a link to the 10 CFR Part 21 program.

Furthermore, for a sample of 10 CFR Part 21 evaluations performed by NNI, the NRC inspection team verified that NNI had effectively implemented the requirements for evaluating deviations and failures to comply. The NRC inspection team verified that the notifications were performed in accordance with the requirements of 10 CFR 21.21, as applicable.

The NRC inspection team also discussed the 10 CFR Part 21 program with NNI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that NNI has established its 10 CFR Part 21 program in accordance with the regulatory requirements of 10CFR21. Based on the limited sample of documents reviewed, the NRC inspection team determined that NNI is implementing its policies and procedures associated with the 10 CFR Part 21 program. No findings of significance were identified.

2. Design Control

a. Inspection Scope

The NRC inspection team reviewed NNI's policies and implementing procedures that govern the design control program to verify their compliance with the regulatory requirements of Criterion III, "Design Control," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," American Welding Society (AWS) D1.1, Structural Welding Code—Steel, AWS D1.4, Structural Welding Code-Reinforcing Steel, and American Institute of Steel Construction (AISC) N690.

The NRC inspection team reviewed a sample of design related documentation for the shield building tension ring and air inlet modules for the Westinghouse Electric Corporation's (WEC) AP1000 reactor design that were in various stages of fabrication and being prepared for delivery to Vogtle Units 3 & 4. The NRC inspection team reviewed NNI's procedures, specifications, fabrication drawings, requests for information (RFIs), Engineering & Design Coordination Reports (E&DCRs) and quality assurance practices associated with fabrication of the aforementioned structural sub-modules for the AP1000 shield building to verify that relevant technical requirements associated with fabrication of the structural sub-modules had been correctly translated from the design specification documents into fabrication packages. The NRC inspection team reviewed NNI's process for implementing design changes, initiated by both the customer and by NNI. As part of such process, the customer completes an E&DCR that's subsequently transmitted to NNI for implementation.

The NRC inspection team discussed the design control program with NNI's management and technical staff. This review was conducted in order to support future closure of Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) 3.3.00.02a.i.b (761) for Vogtle Units 3 & 4. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that NNI has established its design control program in accordance with the regulatory requirements of Criterion III of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that NNI is implementing its policies and procedures associated with the design control program. No findings of significance were identified.

3. Commercial-Grade Dedication

a. Inspection Scope

The NRC inspection team reviewed NNI's program for the dedication of commercial-grade items for use in safety-related applications to verify its compliance with the applicable regulatory requirements of Criterion III and Criterion VII, "Control of Purchase Equipment, Materials, and Services" of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed the policies and procedures governing the implementation of commercial-grade dedication (CGD) program, observation of CGD activities, and review of related documentation. Specifically, the NRC inspection team reviewed dedication packages to assess the different elements of the CGD program, including the technical evaluation process, work package instructions, and inspection reports. The NRC inspection team evaluated the criteria for the identification of item functions, credible failure mechanisms/modes, selection of critical characteristics and acceptance criteria, and the identification of verification methods to verify effective implementation of NNI's dedication process.

The NRC inspection team also discussed the CGD program and the process for upgrading material with NNI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that NNI has established its CGD program in accordance with the regulatory requirements of Criterion III and Criterion VII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that NNI is implementing its policies and procedures associated with the CGD program. No findings of significance were identified.

4. Oversight of Contracted Activities

a. Inspection Scope

The NRC inspection team reviewed NNI's policies and implementing procedures that govern the implementation of its oversight of contracted activities to verify compliance with the requirements of Criterion IV, "Procurement Document Control," and Criterion VII of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed a sample of procurement orders (POs) of several safety-related and commercial suppliers on NNI's approved supplier's list (ASL). The NRC inspection team verified that the POs included, as appropriate: the scope of work, right of access to facilities, and extension of contractual requirements to subcontractors. In addition, the NRC inspection team confirmed that the safety-related POs invoked the requirements of Appendix B to 10 CFR Part 50 and 10 CFR Part 21.

The NRC inspection team reviewed a sample of external audit reports for audits performed since the last NRC inspection in 2013. The NRC inspection team verified that: (1) the audits were performed at the required frequency; (2) the audits were performed using approved checklists and procedures; (3) and that the audit reports contained objective evidence of the review of the relevant quality assurance (QA) criteria of Appendix B to 10 CFR Part 50.

The NRC inspection team also reviewed a sample of training and qualification records of quality control inspection personnel and confirmed that inspection personnel had completed the required training and maintained qualification and certification in accordance with NNI's policies and procedures.

The NRC inspection team also discussed the supplier oversight program with NNI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that NNI has established its oversight of contracted activities in accordance with the regulatory requirements of Criterion IV and Criterion VII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that NNI is implementing its policies and procedures associated with the oversight of contracted activities. No findings of significance were identified.

5. Control of Measuring and Test Equipment

a. Inspection Scope

The NRC inspection team reviewed NNI's policies and implementing procedures that govern the measurement and test equipment (M&TE) program to verify compliance with the requirements of Criterion XII, "Control of Measuring and Test Equipment," of Appendix B to 10 CFR Part 50.

For a sample of M&TE reviewed, the NRC inspection team determined that the M&TE had the appropriate calibration stickers and current calibration dates, including the calibration due date. The NRC inspection team also verified that the M&TE had been calibrated, adjusted, and maintained at prescribed intervals prior to use. In addition, the calibration records reviewed by the NRC inspection team indicated the as-found or as-left conditions, accuracy required, calibration results, calibration dates, and the due date for recalibration. The NRC inspection team also verified that the selected M&TE was calibrated using procedures traceable to known industry standards.

The NRC inspection team observed storage of M&TE to verify that NNI's staff properly segregated, documented, and evaluated when M&TE was found out of calibration, lost, or out of service. The NRC inspection team also reviewed applicable procedures and sections of the quality assurance manual (QAM) to verify provisions were in place that required the vendor to (1) perform evaluations to determine whether previous inspection or test results were affected by M&TE found out of calibration, (2) appropriately notify affected customers, and (3) repair or replace devices consistently found out of calibration.

The NRC inspection team also verified that when M&TE equipment is received from the calibration service supplier and the calibration certificate states that it was found to be out of calibration, NNI generates a nonconformance report to identify items that have been accepted using this equipment since the last valid calibration date and to perform an extent of condition review.

The NRC inspection team also discussed the M&TE program with NNI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that NNI has established its M&TE program in accordance with the regulatory requirements of Criterion XII of Appendix B to 10 CFR Part 50. Based on the limited scope of documents reviewed and staff interviewed, the NRC inspection team determined that NNI is adequately implementing its policies and procedures associated with M&TE. No findings of significance were identified.

6. Manufacturing Control/Special Processes

a. Inspection Scope

The NRC inspection team reviewed NNI's policies and implementing procedures that govern the control of special processes to verify compliance with the regulatory requirements of Criterion IX, "Control of Special Processes," of Appendix B to 10 CFR Part 50 and with the requirements of American Welding Society (AWS) D1.1, "Structural Welding Code – Steel," and American Society for Nondestructive Testing (ASNT) SNT-TC-1A, "Personnel Qualification and Certification in Nondestructive Testing"

The NRC inspection team reviewed the fabrication of structural sub-modules, specifically: Vogtle Unit 4 Shield Building Panel 07M (i.e. SV4-07M), Vogtle Unit 3 Shield Building Tension Ring Submodule TR01 (i.e. SV3-TR01), and Unit 3 Air Inlet Submodule 25; to confirm conformance with the approved design and that any deviations from the design are properly identified, evaluated, and documented to provide assurance that these structural components are capable of withstanding design loads without loss of structural integrity and any safety-related functions. This review was conducted in order to support future closure of ITAAC 3.3.00.02a.i.b (761) for Vogtle Units 3 & 4.

The NRC inspection team discussed the special processes program with NNI's management and technical staff, and reviewed a sample of welding and nondestructive examination (NDE) documents associated with the fabrication and testing of shield building panels, air inlet and tension ring submodules (i.e., remain-in-place steel formwork modules for concrete) for the WEC AP1000 reactor design being supplied to Vogtle Units 3 & 4. The NRC inspection team verified that the applicable welding data; such as weld material identification number, welding procedure specification (WPS), inspection procedures used, and the final inspection results were recorded on weld travelers.

The NRC inspection team observed the Visual Examination Test of butt weld numbers 07M-3972 and 07M-3973 on Vogtle Unit 4 shield building panel 07M (i.e. SV4-07M) and verified adequate recording of testing results in Structural Weld History Reports from Work Instruction Number (WIN) 7342-F-122. The NRC inspection team verified that the examinations were performed by qualified personnel using qualified procedures in accordance with the requirements of AWS D1.1 and ASNT SNT-TC-1A.

The NRC inspection team also observed the ultrasonic examination test of Weld Number TR01-0026-R1 on Vogtle Unit 3 Shield Building Tension Ring Submodule TR01 (i.e. SV3-TR01) as required in WIN 8224-F-113. The NRC inspection team verified that the Level II Quality Control (QC) inspector performed the examinations in accordance with the NNI procedures and the appropriate acceptance criteria using calibrated instruments. The NRC inspection team also reviewed qualification records for the Level II and Level III NDE inspectors and confirmed that they were qualified in accordance with the requirements in ASNT SNT-TC-1A.

The NRC inspection team observed in-process welding activities for butt welds and shear studs. The team also witnessed the involvement of QC inspectors during these activities. Specifically, the inspectors observed the final weld passes for Weld Number 12D-3117 and installation of the initial 10 production shear studs (i.e. 12G-B18 thru -B27) for Vogtle Unit 4 Shield Building Panels SV4-12D and SV4-12G, respectively. The NRC inspection team verified that these activities were performed by welders currently on the NNI qualified welders list and that the qualification card was current. The qualification for the QC inspector was also checked including the procedure qualification records (PQRs) for the welding tasks. In addition, the NRC inspection team verified that inspection tools used were calibrated and within the applicable inspection range and confirmed that detailed design reference materials were adequately used. The NRC inspection team verified that Work Instruction Packages 7342-F-179-003 and 7342-F-182-002 included the appropriate information as required by NNI procedures, such as the inspection date, type of observation, results of examination and tests, the initials of the QC inspector, mandatory hold points were indicated, and that work did not proceed without appropriate approval.

The NRC inspection team also reviewed NNI's process for controlling weld filler metal and observed NNI's weld filler material control storage area. The NRC inspection team witnessed NNI's process for issuing weld filler metal rod issue to ensure that the weld filler metal was adequately controlled at all times until its consumption, and reviewed records associated with the storage, issuance, and return of weld filler metal. The weld filler metal was kept in containers and the environmental condition of the storage facility was controlled.

The NRC inspection team reviewed a sample of certified material test reports (CMTR) for base materials and welding materials used to fabricate the modules and verified that those materials met all of the applicable American Society for Testing and Material (ASTM), AWS, and design requirements. Specifically, for a sample of materials from Vogtle Unit 3 Air Inlet Submodule 25 and Tension Ring Submodule 01, the NRC inspection team observed that materials were traceable to design and shop drawings, work instruction packages, and CMTRs.

The NRC inspection team independently verified a sample of as-built dimensions from in-process Submodules SV3-AI25 and SV3-TR01 and reviewed their respective drawings, work instruction packages, part numbers, and CMTRs. The NRC inspection team also reviewed documentation and interviewed engineering and surveying personnel associated with the verification of the submodules' critical dimensions. The NRC inspection team observed that calibrated instruments were used by qualified personnel to perform such surveying activities.

The NRC inspection team also interviewed NNI's engineering and production staff to discuss the manufacturing control/special processes program. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observation and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that NNI has established its manufacturing control/special processes program in accordance with the regulatory requirements of Criterion IX of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that NNI is implementing its policies and procedures associated with the control of special processes program. No findings of significance were identified.

7. Internal Audits

a. Inspection Scope

The NRC inspection team reviewed NNI's policies and implementing procedures that govern the internal audits to verify compliance with the requirements of Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. The NRC inspection team reviewed a sample of internal audit reports from 2015 through 2017. The NRC inspection team also reviewed the disposition of audit findings to ensure findings were adequately resolved in a timely manner.

The NRC inspection team confirmed that internal audit reports contained objective evidence of the review of quality assurance criteria of Appendix B to 10 CFR Part 50. The NRC inspection team also verified that internal audits were performed by qualified auditors. The NRC inspection team reviewed a sample of training records of NNI's auditors and confirmed that auditing personnel had the required training and maintained the qualification in accordance with NNI's policies and procedures.

The NRC inspection team discussed the internal audit program with NNI's management and auditors. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified

c. Conclusion

The NRC inspection team concluded that NNI has established its internal audits in accordance with the regulatory requirements of Criterion XVIII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed and interviews conducted, the NRC inspection team determined that NNI is adequately implementing its policies and procedures associated with internal audits. No findings of significance were identified.

8. Traceability

a. Inspection Scope

The NRC inspection team reviewed NNI's policies and implementing procedures that govern material traceability to verify compliance with the regulatory requirements of Criterion VIII, "Identification and Control of Material, Parts, and Components," of Appendix B to 10 CFR Part 50.

The NRC inspection team discussed the handling, storage, and shipping program with NNI's management and technical staff. The NRC inspection team performed a walk-down of NNI's fabrication facility, observed the temporary storage of steel plates in process, and verified that materials, parts, and components were either marked with a part number, material specification, heat number/heat code, or serial number and with a shop traveler identifying their fabrication process status. The NRC inspection team assessed whether materials, components were identified with acceptable tags indicating a part number, material type and grade and were traceable to NNI's purchase order, and the vendor's heat/lot number from which the materials were procured.

The NRC inspection team also discussed the material traceability program with NNI's management and technical staff. The attachment to this inspection report lists the documents reviewed and staff interviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team determined that NNI has established its material traceability program in accordance with the regulatory requirements of Criterion VIII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that NNI is implementing its policies and procedures associated with the material traceability program. No findings of significance were identified.

9. Nonconforming Materials, Parts, or Components and Corrective Action

a. Inspection Scope

The NRC inspection team reviewed NNI's policies and implementing procedures that govern the control of nonconformances to verify compliance with the requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," and Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed a sample of Non-Conformance Reports (NCRs) to verify that NNI: (1) dispositioned the Non-Conformance in accordance with the applicable procedures, (2) documented an appropriate technical justification for the various dispositions, and (3) took adequate corrective action with regard to the

nonconforming items. The NRC inspection team also verified that NNI's NCR process provides a link to the 10 CFR Part 21, "Reporting of Defects and Noncompliance," program.

The NRC inspection team also reviewed a sample of Corrective Action Reports (CARs) to ensure that conditions adverse to quality were promptly identified and corrected. In addition, the NRC inspection team verified that the CARs provided: (1) adequate documentation and description of conditions adverse to quality; (2) an appropriate analysis of the cause of these conditions and the corrective actions taken to prevent recurrence; (3) direction for review and approval by the responsible authority; (4) a description of the current status of the corrective actions; and (5) the follow-up actions taken to verify timely and effective implementation of the corrective actions. In addition, the NRC inspection team verified that NNI's corrective action process provides a link to the 10 CFR Part 21 program.

The NRC inspection team also reviewed the corrective actions that NNI had taken to address the previously identified nonconformance identified in NRC IR No. 99901433/2013-201.

The NRC inspection team discussed the handling of nonconforming materials, parts, or components and the corrective actions or disposal actions with NNI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

b.1 Corrective Action Associated with Nonconformances 99901433/2013-201-01.

Nonconformance 99901433/2013-201-01 was issued for NNI's failure to have adequate measures in place to assure that customer-identified conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances were promptly identified and corrected to preclude repetition. Specifically, NNI failed to enter and evaluate in its corrective-action program the Chicago Bridge & Iron (CB&I) inspectors' notice of unsatisfactory conditions (NOUCs) identified during fabrication of the AP1000 shield building structural modules for potential conditions adverse to quality.

In its response to the NRC dated December 6, 2013, NNI stated several actions to correct Nonconformance 99901433/2013-201-01 were being taken. NNI issued Condition Report #248 into the Corrective Action Program (CAP) to document this finding and the results of the apparent cause evaluation. All the NOUCs were entered into the CAP by generating a Condition Report (CR) for each NOUC and were evaluated for severity and any condition adverse to quality. Thirty-two (32) of the CRs represented Conditions Adverse to Quality (CAQ). None of these were identified as Significant Conditions Adverse to Quality (SCAQ). Responses were provided to the customer, to document the resolution and closure actions taken. Additionally, the Manager of Technical Services provided an informational memo notifying personnel of the requirement to input customer complaints into the CAP. NNI Procedure SI-QA-23, "Corrective Action Program," was updated to provide

guidance for documenting customer complaints within the CAP. NNI personnel were trained on the updates to the procedures and the CAP database for documentation of customer complaints.

The NRC inspection team reviewed a sample of CRs, including CR# 248, and the updated Procedure SI-QA-23 which NNI had modified to address Nonconformance 99901433/2013-201-01. The NRC inspection team reviewed this documentation that provided objective evidence for the completion of the proposed corrective actions. No issues with were identified with the utilization of affected procedures. Based on its review, the NRC inspection team closed Nonconformance 99901433/2013-201-01.

b.2 Corrective Action Associated with Nonconformances 99901433/2013-201-02.

Nonconformance 99901433/2013-201-02 was issued for NNI's failure to have adequate measures in place to assure that requirements, which are necessary to assure adequate quality, are included in the procurement documents for material, equipment, and services and NNI's failure to effectively control the quality of their contractors and subcontractors by regularly assessing them at intervals consistent with the importance, complexity, and quantity of the product or service. Specifically,

- 1) NNI failed to document the restrictions and limitations on the scope of supply as dictated by the results of the audits/survey of DuBose National Energy Services Inc. and Tioga Pipe Supply Co. The results of the audits/survey were placed in NNI's supplier database, "Navision," which generates supplier restrictions and limitations for the ASL and procurement orders. For these two specific suppliers, NNI failed to have adequate controls in place to assure that the restrictions and limitations for the ASL and POs were included when these documents were generated using Navision; and
- 2) NNI failed to perform a supplier performance evaluation of Nelson Stud Welding Inc., which has been an approved supplier since April 30, 2012. During this period, Nelson Stud Welding Inc. provided nonconforming material which was not documented in their performance evaluation to assess the effectiveness of the supplier quality controls.

In its response to the NRC dated December 6, 2013, NNI stated several actions to correct Nonconformance 99901433/2013-201-02 were being taken. NNI issued CR-380 to document this finding and the results of the apparent cause evaluation. NNI performed a verification to ensure restrictions/limitations, placed on approved suppliers by NNI's final audit report of the supplier are properly documented in the Enterprise Resource Planning (ERP) supplier database and that the limitations appear correctly on the supplier's PO. NNI determined that all required restrictions/limitations were carried through to the PO and that duplicate and/or inappropriate restrictions/limitations were not.

Revision "N" to NNI Procedure SI-QA-5, "Supplier Evaluation Program," was completed to provide detail instructions to the audit team for establishing and recording supplier restrictions/limitations and for supplier performance evaluations.

Change Notice "C-2" to NNI QAM-100, "Commercial Nuclear Facility Applications," was completed to remove conflicting information with regard to supplier audit performance.

The NRC inspection team reviewed a sample of POs, CAR-380, and the updated Procedure SI-QA-5 which NNI had modified to address Nonconformance 99901433/2013-201-02. The NRC inspection team reviewed this documentation which provides objective evidence for the completion of the corrective actions. No issues with were identified with the utilization of affected procedures. Based on its review, the NRC inspection team closed Nonconformance 99901433/2013-201-02.

c. Conclusion

The NRC inspection team concluded that NNI has established its nonconforming materials, parts, or components; and its corrective action programs in accordance with the regulatory requirements of Criterion XV and Criterion XVI of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that NNI is implementing its policies and procedures associated with the control of nonconforming materials, parts, or components and corrective action. No findings of significance were identified.

10. Entrance and Exit Meetings

On November 13, 2017, the NRC inspection team discussed the scope of the inspection with Doug Sample, Manager Technical Services, and other members of NNI's management and technical staff. On November 17, 2017, the NRC inspection team presented the inspection results and observations during an exit meeting with Steve Napiecek, NNI's Vice President, and other members of NNI's management and technical staff. The attachment to this report lists the attendees of the entrance and exit meetings, as well as those individuals whom the NRC inspection team interviewed.

ATTACHMENT

1. ENTRANCE/EXIT MEETING ATTENDEES

Name	Title	Affiliation	Entrance	Exit	Interviewed
Jonathan Ortega-Luciano	Inspection Team Leader	NRC	X	X	
Pravin Patel	Inspector	NRC	X	X	
Thomas Herryty	Inspector	NRC	X	X	
Robert Roche-Rivera	Inspector	NRC	X	X	
Andrea Keim	Inspector	NRC	X	X	
Jonathan Lizardi	Inspector	NRC	X	X	
Doug Sample	Manager Technical Services	NNI	X	X	X
Paul Vinyard	Manager Quality	NNI	X	X	X
Ronnie Allen Tong Jr.	Quality Assurance	NNI	X	X	X
Albert M. Kalaskas	Quality Assurance Engineer 4	NNI	X	X	X
DaShana Kemp	Supervisor Records Center	NNI	X		
Wanda Fitzgerald	QA Manager	NNI	X		X
Richard Blount	Strategic Development	NNI	X		
Scott Jones	Operations Manager	NNI	X	X	
Tommy Wheelis	Sr. Engineer	Southern Nuclear Operating Company (SNC)		X	
Derrick Coates	Engineering Manager	NNI	X	X	X
Peter J. Smagula IV	Project Engineer/ Structural Engineer	NNI	X		X

Name	Title	Affiliation	Entrance	Exit	Interviewed
Dave Leste	Structural Engineer	NNI			X
Karl N. Daukss	Principle Engineer Modules Fabrication & Construction Interface	Westinghouse			X
Ronald Blackburn	Application Engineer	Automated Precision Inc.			X
William Mitchell	Mech Tech 3	NNI			X
Arthur Ballew	Mech Tech 3	NNI			X
Leon Parker	Mech Tech 2	NNI			X
Thomas Ferguson	QC	NNI			X
Edward Devlin	QC	NNI			X
Cody Harvey	Tool Room Attendant	NNI			X
Michael Smith	Maintenance	NNI			X
David Martis	Source Inspector	WECTEC			X
Matthew Tally	Quality Control Inspector Level II	NNI			X
James Whitley	Manager – Planning & Production Control	NNI	X	X	X
Corey Beddingfield	Operations General Foreman	NNI	X	X	X
Gary Michaelis	Quality Control Supervisor	Technical Solutions	X	X	X
Chad Clements	Welder,	Technical Solutions			X

Name	Title	Affiliation	Entrance	Exit	Interviewed
Ed Coffin	Quality Control Inspector Level II	Technical Solutions			X
Troy Allen	Quality Control Inspector Level II	Technical Solutions			X
Leon Parker	Welder	Technical Solutions			X
Thomas T.R. Ferguson	Quality Control Inspector Level II	Technical Solutions			X
Ronald Blackburn	Application Engineer	Automated Precision, Inc.			X
Paul Vineyard	Engineering	NNI			X
Josh Frazier	Quality Engineer	NNI			X
Warren Blanco	Quality Engineer	NNI		X	
Keith Meadows	CAP Manager	NNI		X	X
Izaak J. Pruden	General Forman	NNI		X	
Jamie Garreh	Contracts Manager	NNI		X	
Steve Napiecek	Vice President	NNI		X	
Lisa Lindsay	Supervisor	NNI		X	
George Butchur	Lead Source Inspection	WECTEC		X	
Frederick D. Roberts	QA Engineer	NNI		X	
Wade Cara	Level 2 QA Technician	NNI			X
Frederick Whitehead	Level 2 QA Technician	NNI			X

2. INSPECTION PROCEDURES USED

Inspection Procedure (IP) 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated February 13, 2012

IP 43002, "Routine Inspections of Nuclear Vendors," dated January 27, 2017

IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated January 27, 2017

IP 65001.01, "Inspection of ITAAC-Related Foundations & Buildings"

IP 65001.02, "Inspection of ITAAC-Related Installation of Structural Concrete"

IP 65001.A, "Inspection of the As-Built Attributes for Structures, Systems, and Components (SSCs) Associated with ITAAC"

IP 65001.B, "Inspection of the ITAAC-Related Welding Program"

IP 65001.F, "Inspection of the ITAAC-Related Design and Fabrication Requirements"

3. LIST OF ITEMS CLOSED, AND DISCUSSED

Item Number	Status	Type	ITAAC	Description
99901433/2013-201-01	CLOSED	NON		
99901433/2013-201-02	CLOSED	NON		

4. INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (ITAAC)

The U.S. Nuclear Regulatory Commission (NRC) inspection team identified the following inspections, tests, analyses, and acceptance criteria (ITAAC) related to components being fabricated and inspected by NNI. At the time of the inspection, fabrication of the Shield Building panel, air inlet and tension ring sub-modules for Vogtle Electric Generating Station Units 3 and 4 was occurring. For the ITAAC listed below, the NRC inspection team reviewed NNI's quality assurance controls in the areas of design control, inspection, control of special processes, nonconforming materials parts and components, and corrective actions. The ITAAC's design commitments referenced below are for future use by the NRC staff during the ITAAC closure process. The listing of these ITAAC design commitments does not indicate that they have been met and closed. The NRC inspection team did not identify any findings associated with the ITAAC identified below.

<u>Source</u>	<u>ITAAC Sequence Number</u>	<u>ITAAC Number</u>
Appendix C from the Combined License for Vogtle Unit 3 Combined License	No. 761	3.3.00.02a.i.b
Appendix C from the Combined License for Vogtle Unit 4 Combined License	No. 761	3.3.00.02a.i.b

5. DOCUMENTS REVIEWED

Policies and Procedures

- QAM-100, "Commercial Nuclear Facility Applications Quality Assurance Manual," Revision F, dated February 10, 2017
- SI-EN-8, "Reporting of Defects and Non-Compliance," Revision M, dated November 11, 2017
- SI-EN-9, "Standard Instructions for the Preparation and Processing of Welding Procedure Specifications (WPSs) Procedure Qualification Records (PQRs) Welder Performance Qualification Record (WPQRs)," Revision J, dated November 5, 2015
- SI-EN-14, "Visual Examination of Welds and Material Surfaces," Revision V, dated February 22, 2016
- SI-EN-18, "NDE Acceptance Criteria ASME Section VIII Division 1 and 3 American National Standard Structural Welding Codes – AWS B31.3 – Process Piping," Revision R, dated July 5, 2016
- SI-EN-34, "Ultrasonic Examination of Structural Welds per AWS D1.1," Revision A, dated March 18, 2017
- SI-FP-2, "Accountability and Control of Tools," Revision I, dated September 18, 2015
- SI-FP-4, "Planning and Production Control," Revision J, dated August 1, 2013
- SI-FP-7, "Control of Measuring and test Equipment," Revision Q, dated December 31, 2017
- SI-PR-1, "Standard Procurement Procedure," Revision M, dated October 14, 2015
- SI-QA-3, "Qualification of Quality Assurance Audit Personnel," Revision O, dated December 28, 2015
- SI-QA-4, "Control of Suppliers for Commercial and Commercial Nuclear Work," Revision I, dated June 20, 2014
- SI-QA-5, "Supplier Evaluation Program," Revision P, dated October 10, 2017
- SI-QA-6, "Completion of Weld History Records," Revision M, dated January 15, 2014
- SI-QA-7, "Internal Audit Program," Revision O, dated February 16, 2016
- SI-QA-19, "Quality Assurance Requirements for Commercial Grade Items and Services," Revision I, dated January 4, 2016
- SI-QA-20, "Sampling for Inspections," Revision C, dated January 8, 2015
- SI-QA-21 "Counterfeit, Fraudulent and Suspect Items," Revision D, dated April 4, 2016
- SI-QA-22, "Requirements for Issuance and Processing of Non-Conformance Reports (NCR)," Revision G, dated October 31, 2017
- SI-QA-23, "Corrective Action Program," Revision I, dated July 6, 2017
- SI-QA-24, "Material Storage, Segregation, and Identification," Revision D, dated March 17, 2017
- 7340-F-W002, CV&I AP 1000 Shield Building Modules – Shot Studs: Shot Studs (<deleted>), Revision P, dated August 11, 2017
- TMR-GEN-002, "New Employee Orientation, General Introduction and Access, All Facilities," Revision A, not dated.
- TMR-GEN-004, "Commercial Nuclear Quality," Revision A, dated April 21, 2014
- TMR-QVC-008, "Quality Controlled Material Training," Revision C, dated October 24, 2016.

Calibration, Heat Treatment, Non-Destructive Examination (NDE), Inspection and Test Records

- PROTO Torque Wrench, Asset Number 40409, Serial Number 12134101, calibration date July 18, 2018
- Fluke Meter, Asset Number 40901, Serial Number 2570042WS, calibration date June 2, 2017
- Fowler, Dial Caliber, Asset Number NNI-DC-044, Serial Number 6-9.1608113, calibration date November 2, 2017 (6 month calibration interval)
- Epoch XT, UT flaw detector, Asset Number 46329, Calibration Certificate: Olympus Scientific Solutions, dated January 18, 2017
- UT Equipment Calibration Report 41EA94A78253CED9, Dated 1/18/2017
- Inspection Data Report 2014E, QA Dated 4/8/2014
- Inspection Data Report 2016, QA Dated 5/1/2015
- Calibration Certificate V0427342803, Date 1/17/2017, QA Dated 10/6/2017

Purchase Orders, Audit Reports, and Commercial-Grade Dedication

- Purchase order (PO)-027302, for A572 GR50 Various, Revision 3 dated January 30, 2017
- PO-027544, for ¾ L weld Stud with Ferrules, Revision 4, dated February 27, 2017
- PO-027409, for D2S Deformed Bar Revision 4, dated February 12, 2017
- APIS-CGS-SS-01-16, "Commercial grade Survey of <deleted>. Services," Revision A, dated November 2, 2016
- CBI-01, "Commercial Grade Dedication Plan for <deleted>," Revision D, dated February 26, 2016
- CGD-1-342, "Commercial Grade Dedication Plan for <deleted>," Revision 2, date not recorded
- CGD-317380-1, "Commercial Grade Dedication Plan for <deleted>," Revision 3, dated June 28, 2017
- CGD-317380-2, "Commercial Grade Dedication Plan for <deleted>," Revision 1, dated April 27, 2017
- CGD-317380-3, "Commercial Grade Dedication Plan for <deleted>," Revision 2, dated September 6, 2017
- CGD-3-352, "Commercial Grade Dedication Plan for <deleted>," Revision 5, date not recorded
- CGD-Tioga-6, "Commercial Grade Dedication Plan for <deleted>," Revision 1, dated November 17, 2016
- FAR-CGS-SS-01-17, "Commercial Grade Survey of <deleted>," Revision 0, dated January 13, 2017
- LTI-CGS-SS-01-17, "Commercial grade Survey of <deleted>," Revision 0, dated March 17, 2017
- MMI-SS-01-16, "Audit Report of <deleted>," dated May 31, 2016
- PTI-SS-01-14, "Audit Report of <deleted>," dated October 27, 2014
- SIM-CGS-SS-01-16, "Commercial Grade Dedication Plan for <deleted>" Revision B, dated December 9, 2016
- TP-MO-01-17, "Audit Report of <deleted>," dated September 7, 2017
- Q-GE-17-121 "2017 NNI Audit Schedule," 4th Quarter Revision, dated October 26, 2017

- NNI-IN-01-17 Internal Audit Report, dated October 3, 2017
- NNI-IN-02-17 Internal Audit Report, dated May 3, 2017
- NNI-IN-03-17 Internal Audit Report, dated June 27, 2017
- NNI-IN-04-17 Internal Audit Report, dated August 7, 2017
- NNI-IN-03-16 Internal Audit Report, dated February 20, 2017
- NNI-IN-05-15 Internal Audit Report, dated June 16, 2016

Design and Commercial-Grade Dedication Records

- SI-DE-1, Record Center Controlled Distribution of Documents, Revision N, dated June 15, 2017
- SI-DE-2, Drawing and Fabrication Specification Control, Revision I, dated November 17, 2017
- SI-DE-3, Records Management Program, Revision A, dated June 3, 2013
- SI-TR-2, Analysis Phase, Revision A, dated November 25, 2013
- SI-TR-3, Design Phase, Revision A, dated November 27, 2013
- SI-TR-4, Development Phase, Revision B, dated August 10, 2016
- SI-TR-5, Implementation Phase, Revision A, dated November 27, 2013
- E&DCR No. APP-1278-GEF-850055, Shield Building Air Inlet Pipes, Revision 0, dated May 8, 2017
- E&DCR No. APP-GW-GEF-1746, Shield Building Air Inlet Steel Structure. Revision 0, dated October 17, 2016

Nonconformance Reports

NCR 2139, NCR 2697, NCR 3048, NCR 3072, NCR 3094, NCR 3096

Corrective Action Reports Reviewed

CR-234, CR-245, CR-248, CR-249, CR-270, CR-380, CR-9398, CR-9643, CR-9399, CR-9644, CR-9396, CR-9397, CR-12525, CR-12579, CR-13423, CR-13512, CR-15450

Corrective Action Reports Opened During the NRC Inspection

CR-15455, CR-15457, CR-15458, CR-15462, CR-15465, CR-15469, CR-15471, CR-15474, CR-15475, CR-15479, CR-15480, CR-15481, CR-15486

Training Records

- Lead auditor training record for Warren Blanco, dated October 17, 2017
- Lead auditor training record for Ronnie Tong, Jr., dated January 25, 2017
- Lead auditor training record for Joey Chesney, dated February 11, 2017
- Lead auditor training record for Katherine Rawls, dated August 18, 2017

Work Instruction Packages:

- 8224-F-070-001, "Assemble Vogtle 3 Air Inlet 25 (SV3-1278-SC-AI25 "Outer Panel")," dated June 19, 2017
- 8224-F-113-014, "Assemble Vogtle 3 Tension Ring 01 (Group 41)," dated February 28, 2017
- 8224-F-070-003, "Assemble Vogtle 3 Air Inlet 25 (SV3-1278-SC-AI25)," dated June 19, 2017

Shop Drawings:

- NNI-1278-S4-411, "AP1000 Shield BLDG Tension Ring Struct. Steel PNL Group 41 Assembly," Sheets 1 thru 12 of 12, Revision 6, dated 6/13/2017
- NNI-1278-T7-411, "AP1000 Shield BLDG Tension Ring Struct. Steel PNL Group 41 Weld Joint Index Map," Sheets 1 thru 7 of 7, Revision 4, dated 10/05/2017
- NNI-1278-S9-150, "AP1000 Shield BLDG AI & TR General Notes, Tolerances and NDE Requirements" Sheets 1 thru 2 of 2, Revision 6, dated 10/04/2017
- NNI-1278-VH-411, "AP1000 Shield Building Lifting and Handling for Tension Ring Group 41 Assembly," Sheets 1 thru 5 of 5, Revision 6, dated 6/21/2017
- NNI-1278-S4-561, "AP1000 Shield Building Panel Group 56 Assembly," Sheet 6 of 9, Revision 6, dated 6/15/2017
- NNI-1278-S4-111, "AP1000 Shield BLDG Air Inlet Struct. Steel Panels Group 11 Assembly," Sheets 1 thru 8 of 8, Revision 10, dated 9/6/2017
- NNI-1278-T7-111, "AP1000 Shield BLDG Air Inlet Struct. Steel Panels Group 11 Weld Joint Index Map," Sheets 1 thru 7 of 7, Revision 2, dated 1/27/2017
- NNI-1278-VH-111, "AP1000 Shield Building Lifting and Handling for Air Inlet Group 11," Sheets 1 thru 4 of 4, Revision 7, dated 8/24/2017
- NNI-1278-T7-551, "AP1000 Shield BLDG Struct. Steel Panels Group 55 Weld Joint Index Map," Revision 2

Notice of Unsatisfactory Conditions (NOUCs):

- 132175-D100.SB005-NNI-VA-034-N0002, PQR found during routine inspection – one area of non-flash to be 1/8" on stud C22, step 8 of work instruction shows QC inspection had been completed. This discontinuity is not compliant with stud Procedure 7340-F-W002 Revision P, paragraph 7.8.2.2, dated 9/29/2017

AP1000 Nonconformance & Disposition Report:

- APP-1278-GNR-850061, NNI NCR 3048A SV3-1278-SC-AI06 Critical Dimensions Out of Tolerance, Rev. 0, dated 10/20/2017

Personnel Qualification Documents:

- SI-QA-18/32, Qualified Welders List, dated 11/10/2017
- Qualification File Q-GE-17-074, dated 6/1/2017
- 068 Services Gage List for Laser Tracking Systems, dated 10/19/2017
- Qualification 00005190, dated 10/11/2017
- Qualification 00070791, dated 10/11/2017
- Newport News Industrial QC Inspectors, dated 11/14/2017

Miscellaneous:

- Electronic Structural Weld History Record 07M-3172, dated November 7, 2017
- Electronic Structural Weld History Record 07M-3173, dated November 3, 2017
- Electronic Structural Weld History Record 12D-3117, dated November 14, 2017
- NNI QA Accepted Material Report Number 12NNI076, dated August 14, 2012
- NNI QA Accepted Material Report Number 16NNI1024, dated October 11, 2016