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Your ref: NRC Vendor Inspection Report  
Number 99900005/2019-201

Our ref: CFFF-PA-20-022

March 25, 2020

**Subject:**

**Reply to Notice of Nonconformance Cited in NRC Inspection Report No. 99900005/2019-201 Dated February 26, 2020**

The Westinghouse Electric Company LLC (Westinghouse) Columbia Fuel Fabrication Facility (CFFF) acknowledges receipt of NRC Inspection Report Number 99900005/2019-201 and Notice of Nonconformance (NON), dated February 26, 2020. Westinghouse is taking appropriate actions to resolve the NON, and is committed to compliance with the provisions of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocess Plants," to Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities" and 10 CFR Part 21, "Reporting of Defects and Noncompliance."

Details of the corrective actions associated with this NON are attached to this letter.

Should you have any questions or require additional information, please contact me at (724) 953-5064.

A handwritten signature in blue ink, appearing to read 'Chad Hasychak'.

Chad Hasychak  
Product Assurance Engineering Manager  
Columbia Fuel Fabrication Facility  
Westinghouse Electric Company

cc:	Kerri A. Kavanagh	US NRC	Amanda Spalding	Westinghouse
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**Nonconformance 99900005/2019-201-01**

*Criterion IX “Control of Special Processes,” 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,” states that “Measures shall be established to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.”*

*Paragraph 4.5 of Westinghouse Electric Company’s Quality Management System-A (QMS-A), “Quality Management System,” Revision 7.1, dated December 18, 2019, states that “Procedures are established to specify the methods and extent of identification and traceability of items to ensure that only correct and acceptable items are installed or used in items and services.” In addition, paragraph 4.5.2 of QMS-A states that “Identification of items is maintained, as necessary, to provide confidence that the correct items are used.” Furthermore, paragraph 4.5.3 of QMS-A states that “When regulatory or customer requirements include traceability of items, procedures are established to provide identification, traceability, and records. Items including consumable materials and items identified as having limited calendar, shelf, or operating lives or cycles are traceable and controlled. The loss of identification on traceable items is documented and the items dispositioned in accordance with established procedures.”*

*Section 4.2 of WEC-CFFF procedure No. QA-608, “Identification, Traceability and Control of Materials, Parts and Components,” Revision 12, dated July 18, 2019, states that manufacturing/process/quality engineers shall “Establish procedures and/or routings to establish and verify that identification and control of product materials, parts, components, including final assemblies required by specifications, drawings and specific contract requirements is maintained on the item, and/or by records traceable to the item to preclude use of incorrect or nonconforming items.” In addition, Section 4.3 of procedure No. QA-608 states that operations “are responsible to assure that materials, parts, components, and final assemblies are identified and traced throughout the manufacturing process as indicated in the instructions provided.” Furthermore, Section 5.2 of procedure No. QA-608 states that “When regulatory or customer requirements include traceability of items, procedures are established to provide identification, traceability, and records.” Finally, Section 5.3 of procedure No. QA-608 states that “Identification markings shall be applied using materials and methods that provide a clear and legible identification and do not degrade the function or usability of the item.”*

*Contrary to the above, as of January 16, 2020, WEC-CFFF failed to assure that special processes were controlled and accomplished using qualified procedures in accordance with specifications and acceptance criteria. Specifically, while witnessing gas tungsten arc welding on the top nozzle pins for a 15x15 fuel assembly for Turkey Point Nuclear Generating Station Unit 3, the NRC inspection team noted that there was no shop procedure established for the control of weld filler material and the weld filler material was not being adequately controlled. The NRC inspection team observed weld filler material in two work stations with either no markings or illegible labels. On both work stations, the weld filler material was on a workshop table exposed to the environment. The NRC inspection team also noted that the weld filler material in the work stations was not marked with the heat or lot*

*number and was not the same filler weld material. When asked for the requirements for handling the weld filler material, the welder and his supervisor were not aware of any specific procedure. Proper control of weld filler material is necessary to assure that each heat of material is documented in the associated traveler/routing as well as to avoid contamination and the introduction of detrimental material to the final product which could cause degradation (e.g., cracking) that could potentially result in the component not performing its intended safety function.*

**Westinghouse Response:**

Westinghouse has created issue report IR-2020-644 in its Corrective Action Program to track the issue and completion of corrective actions.

**1) The reason for the noncompliance or, if contested, the basis for disputing the noncompliance:**

Westinghouse's analysis identified the following cause:

Weld filler material was assumed to be effectively controlled because it is infrequently ordered and effectively controlled by the operator. The local operating procedures did not provide guidance on labeling.

A typical supplied lot of weld filler material as used at CFFF contains 30 lbs. and a single order can supply production needs for at least 7 years. Discussions with the operators and area managers indicated this material was thought to be effectively controlled due to the limited quantity, single heat number, lack of additional guidance in the operating procedures the small number of qualified welders and small number of areas in which welding occurs.

**2) The corrective steps that have been and the results achieved:**

An extent of condition was performed on all welding that requires weld filler material and brazing operations at CFFF. Braze material was found to be controlled and labelled in compliance with QA-608 requirements. It was identified that local braze procedures could be strengthened for traceability requirements. One additional area was identified that uses weld filler material in the Combustion Engineering product area which was adequately controlled and labelled in compliance with all requirements, as each weld filler rod was labeled with an individual tag and was stored inside of a bag and the bag stored in a locked box.

New covered stainless storage containers for weld filler material were implemented for both identified work areas. The lot traceability label is attached to the outside of the container via use of a clear plastic protective sleeve. The means of storage and labeling of the weld filler material maintains the cleanliness of the weld filler material and its association to the weld filler lot traceability information. This storage solution meets the requirements set forth in CFFF Administrative procedure QA-608.

Operating procedures were reviewed and revised to ensure clear flowdown of QA-608 and QMS-A requirements. Reinforcement traceability training was given to personnel responsible for filler material control.

The gap in identification/labeling practices relative to weld filler material used in the two identified welding areas did not affect the operator's ability to utilize the correct material for the product being welded and to correctly indicate the lot of material used in the electronic traceability system. The operators recorded the lot number of weld filler material in the production system. The weld filler material in use in these processes were further confirmed to have been correctly procured and released for use and did not have nonconforming conditions previously identified. The two different identified types of weld filler material at the stations are permitted; the qualified process allows for the usage of either diameter, which have identical weld parameters for both diameters. Therefore, in the unlikely event these were inadvertently mixed it would have no impact to the weld.

Regarding environmental exposure of weld filler material, the only potential exposure of contamination or detrimental material is from local dust producing processes of grinding, filing and sanding of the finished welds. This process utilizes a down draft table to minimize/eliminate airborne contamination. Any detrimental materials such as the oxides from abrasives would form an oxide that would solidify on the crater of each weld where it would be removed in the required post weld cleaning process. Per process requirements, welds are inspected at 3x magnification for cracks.

Based on the evaluations of acceptable and released weld filler material, area practices, environmental considerations and welding process above there is no potential for degraded safety function of the affected items due to weld filler material control and storage and this does not represent a condition adverse to nuclear safety.

Corrective Action #1: Revise operating procedures for welding to include weld filler material traceability requirements

Revise manufacturing operating procedures MOP-730804, MOP-730817, and MOP-726805 to ensure that traceability requirements for weld filler material of QA-608 are maintained for weld filler wire. This is documented in CAP IR-2020-644 Activity 5.

Corrective Action #2: Address storage and labelling of spider assembly weld filler material

Weld filler material for spider assembly is now controlled per QA-608 and 10CFR 50 Appendix B requirements. The lot traceability label is attached to the outside of the container via use of a clear plastic sleeve. This means of storage and labeling of the weld filler material maintains the cleanliness of the weld filler material and its association to the weld filler lot traceability information. This is documented in CAP IR-2020-644 Activity 6.

Corrective Action #3: Address storage and labelling of nozzle weld filler material

Weld wire for nozzle welding is now controlled per QA-608 and 10CFR 50 Appendix B requirements. The lot traceability label is attached to the outside of the container via use of a clear plastic sleeve. This means of storage and labeling of the weld filler material maintains the cleanliness of the weld filler material and its association to the weld filler lot traceability information. This is documented in CAP IR-2020-644 Activity 7.

Corrective Action #4: Train responsible personnel on weld filler material traceability requirements

Train personnel who are responsible for controlling weld filler material. Training content is to cover 10 CFR Part 50 Appendix B material traceability requirements, QA-608, why traceability is important to CFFF product, and that if traceability is lost, a nonconformance is required. This is documented in CAP IR-2020-644 Activity 9.

Corrective Action #5: Revise operating procedures for brazing to include braze material traceability requirements

Revise manufacturing operating procedures MOP-710203 and MOP-710212 to include traceability requirements similar to those added in Corrective Action #1. This is documented in CAP IR-2020-644 Activity 10.

**3) The corrective steps that will be taken to avoid further noncompliance:**

All necessary corrective actions to address this NON and avoid further noncompliance have been completed as described in this response.

**4) The date when the corrective action will be completed:**

All corrective actions described above have been completed. The last of these actions were completed on January 22, 2020.