



**Reply to a Notice of Violation**

To: United States Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC. 20555-0001  
Re: Docket No. 99900067  
Report No. 99900067/2013-201

August 29, 2013

Subject: Nuclear Regulatory Commission Inspection Report No. 99900067/2013-201, Notice of Violation and Notice of NonConformance.

Violation 99900067-2013-201-01

Section 21.31, "Procurement documents" of Title 10 of the Code of Federal Regulation (10CFR) Part 21, requires that "Each individual, corporation, partnership, dedicating entity, or other party subject to the regulations in this part shall ensure that each procurement document for a facility, or a basic component issued by him, her or it on or after January 6, 1978, specifies, when applicable, that the provisions of 10 CFR Part 21 apply"

Contrary to the above, as of June 6, 2013, BWC failed to specify in procurement documents for safety related material suppliers that the provisions of 10 CFR part 21 apply. Specifically, BWC did not impose the requirements of 10 CFR Part 21 on the safety related purchase orders issued to Bruck GmbH for a base support ring forging and a shroud support ring forging and issued Sheffield Forgemasters Engineering Ltd for an upper tubesheet forging.

Reason for Violation:

BWC imposed the requirements of our customer for 10 CFR Part 21, however BWC also recognized that that the vendors in these cases were not in a position to adequately perform the safety analysis, that BWC understood the function of the material and the basic component such that any defects should be reported to BWC and an analysis could then be performed to determine if there was a risk to the safety function of the component. Vendors of such items such as plate or raw forgings do not totally understand the function of their material in the operation of the basic component, thus cannot adequately determine if the defect will affect the safety function of the basic component. Each of these vendors were audited for a Non Conformance reporting system and were required to post a reporting of defects to the Quality Manager in the Shop and throughout the offices similar to the requirement of 10 CFR part 21. BWC would then analyze the defect reported and make the determination of the defect would affect the safety function of the Basic Component. It was BWCs opinion this was compliant to the requirements of 10 CFR Part 21.

BWC never intended to have vendors solely report to report to BWC and not the NRC if the vendor felt that a substantial safety hazard was present as a result of their activities. BWC recognizes that the wording in communicating the reporting requirement to BWC was not written as effectively as it could have been.

**Corrective Action Steps Taken:**

BWC has raised an Internal Corrective Action (CAR 9076 & 9099) which required revising the Procedures and technical documents such that it is clear that the vendors have the responsibility to perform the 10 CFR Part 21 Analysis and report to the NRC as required under the law. As well (Separate from the vendors responsibilities under Part 21) the vendor shall report all defects whether safety related or not to BWC so that BWC may perform an analysis independent to that of the vendor.

BWC has also performed a Method 1 dedication of the material received from Bruck GmbH for the base support ring and the shroud ring forging, this testing was performed on the archive material that BWC had requested as part of the order. The Base Support Ring and Shroud Support Ring have been successfully dedicated.

BWC has also performed a Method 2 dedication of Sheffield Forgemasters Engineering Ltd. And has dedicated the Tube sheet based on this Method 2 Survey after delivery of the component. Sheffield Forgemasters Engineering Ltd is an ASME QSC holder, as such their program has remained consistent over the years since this purchase. The method 2 survey was completed August 22, 2013. The Tube sheet has been dedicated.

BWC has also performed an extent of condition analysis looking back 5 years, this analysis was of all purchase orders for the three current contracts in house which are for US Jurisdiction. The review included an analysis of all purchase orders for the contract clause that requested the vendor to report defects to BWC when it should have stated that the reporting shall be as required per 10 CFR Part 21, which is now reflected in the new technical requirements of all purchase orders for safety related items. BWC will dedicate all of the vendors that supplied material as described above using either method 1 or method 2 dedication depending on the circumstance.

**Preventive Action:**

BWC will apply the best method of Dedication available at the time of issuance of the purchase order if the vendor is not compliant. BWC has revised the appropriate implementing procedures and Standard Technical Notes and Procurement Clauses such that the vendors are either audited to the requirements of 10 CFR 50 Appendix B, 10 CFR part 21 and fully compliant or are listed as commercial supplier and the appropriate CGD methodology is used.

**Date of Full Compliance:**

BWC is presently fully compliant as of August 28, 2013.

The extent of condition is complete and the process of resolving any issues based on this extent of condition is underway.

**NonConformance 99900067/2013-201-02**

Criteria IV "Procurement Document Control" of Appendix B. "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the Code of Federal Regulations (10CFR) Part 50, "Domestic Licensing of Production and utilization Facilities," states, in part, that "Measures shall be established to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are suitably included or referenced in the documents for procurement of material, equipment, and services, whether by the applicant or by its contractors or subcontractors."

BWC's supplement to its Quality Assurance Manual, "General QA Program Supplement for 10 CFR50 Appendix B and 10CFR21 Requirements," Revision 11, dated November 1, 2011, states, in part, that "if an

item being procured includes both Code and non-Code Safety Related parts, the procurement documents shall include the requirements for both [the American Society of Mechanical Engineers (ASME) Boiler & Pressure Vessel (B&PV)] Code Section III (NCA-4000 or NCA 3800) and 10CFR50 Appendix B quality programs.”

Contrary to the above, as of June 6, 2013, BWC failed to include the applicable regulatory requirements in procurement documents that are necessary to ensure that adequate quality is suitably included or referenced. Specifically, BWC did not impose the requirements of Appendix B to 10 CFR Part 50 in its ASME B&PV Code and non-Code safety related Purchase Orders (POs) For example, the NRC inspection team identified four vendors for where the POs did not include the requirements of Appendix B to 10 CFR Part 50: Valinox Nucleaire SA for tube plug material; Nova Machine Products for base support platform component; Fin-Tech for electro-polishing services; Patriot Forge for a main feedwater header inspection plug bar; and Industeel Belgium for upper shroud support components.

Reason for NonConformance:

BWC was under the belief that including the requirements of an ASME program was equivalent to 10 CFR 50 Appendix B requirements, with that stating both was not necessary on the purchase order based on our interpretation of the NRC position stated in IN86-21. The requirement in the BWC Supplement QA Manual noted in the NRC Nonconformance refers to a special case where an item being procured includes both ASME Code and non-Code safety related components.

Corrective Action Steps Taken:

BWC has raised Corrective Actions (CAR 9085 & 9110) were raised resulting in revision to the implementing procedures to include the requirement of both Quality Assurance standards being stated on the purchase orders.

Preventive Actions Taken:

Revised Engineering Operating Procedure (EOP) 003. The revisions to EOP 003 includes specific wording to ensure the flow down of all customer requirements onto procurement documents. The procedures have been revised and the training of all individuals with the procedure on their training matrix has been completed. The new procedure is currently fully implemented.

NonConformance 99900067/2013-201-03

Criterion VII “Control of Purchased Material, Equipment, and Services,” of Appendix B to 10 CFR Part 50, states in part, that “Measures shall be established to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery. The effectiveness of the control of quality by contractors and subcontractors shall be assessed by the applicant or designee at intervals consistent with the importance, complexity, and quantity of the product services.

Subsection NCA-3842.2, “Evaluation of the Qualified Material Organization’s Program by Certified Material Organizations or Certificate Holders,” of the ASME B&PV Code Section III, states, in part, that “Evaluation of a Material Organization’s Quality System Program by parties other than the Society, as provided by NCA-3820(b), shall be performed in accordance with the requirements of (a) through (i) below. [...] (a) the Quality System Program shall be surveyed, accepted, and audited by the party performing the evaluation on the basis of its compliance with the applicable material requirements of this section and the requirements of NCA-3850.”

Contrary to the above, as of June 6, 2013, BWC failed to adequately qualify a material organization as an approved supplier in accordance with the requirements of NCA-3842.2. Specifically, BWC inadequately qualified Bruck GmbH as a Qualified Material Organization based on Bruck's International Organization for Standardization (ISO) 9001:2008, "Quality Management System (QMS) – Requirements, " Quality Systems Manual.

#### Reason for NonConformance

BWC did evaluate Bruck GmbH per NCA 3842.2. The audit file including the check list used, which was based on the requirements of NCA 3850 as well and auditors qualifications were presented to the Inspection team. BWC feels that there is no Nonconformance in this instance. However, BWC did not have a copy of the Bruck Quality Manual on hand, which is not a nonconformance in itself.

#### Corrective Action Steps Taken

BWC has performed a thorough review of the Approved Suppliers List (ASL) to ensure that there are no instances of Vendors for ASME code items being on the ASL unless they have been audited to the requirements of NCA 3850 or are a holder of an ASME N Type Certificate. This enables a vendor to be on BWC ASL to supply ASME components, All vendors to be used for 10 CFR 50 Appendix B contracts must be audited separately, to the requirements of 10 CFR 50 Appendix B which also includes an audit of their 10 CFR Part 21 program if they in fact have such program. If not then they are listed on the ASL as ASME supplier but Commercial supplier for Appendix B purposes and the appropriate CGD methodology will be performed.



Kirt Richardson D.BA., B.A.Sc., M.Sc., P.Eng  
Quality Program Manager, Nuclear Equipment, Nuclear Services.

CC:  
Edward H Roach, Chief  
Construction Mechanical Vendor Branch,  
Division of Construction Inspection and Operational Programs  
Office of New Reactors