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U.S. Nuclear Regulatory Commissions  
Attn: Document Control Desk  
Washington, DC 20555-0001

Cc: Chief, Quality Assurance Vendor Inspection Branch-2  
Division of Construction Inspection and Operational Programs,  
Office of New Reactors

Subject: Reply to a Notice of Violation

Reference: Nuclear Regulatory Commission Inspection Report No. 99900060/2017-202-01

Enclosed please find the Curtiss-Wright Flow Control Company, Target Rock Division reply to A Nonconformance 99900060/2017-202-01. This response is documented on the enclosed Target Rock (TR) internal Corrective Action Report No.17-039.

Please contact me if you have any questions or require any additional information.

Sincerely,

John DeBonis  
TR Quality Assurance Manager  
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6313964429

Enclosure:

TR Corrective Action Report CAR 17-039

IED09  
NRD

<b>TARGET ROCK CORRECTIVE ACTION REQUEST</b>	<b>CAR NO.: 17-039</b>
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<b>To: Joe Simonetti/ B. Maher</b>  <b>Cc:</b>  <b>Originator / Date: J. DeBonis 3/9/17</b>	<b>Project / Part / Serial No. TRP 5041, QMP1017</b>  <b>Response Due Date: 5/19/17</b> <b>Reviewed by: J. DeBonis 4/24/17</b>
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**Description of the Nonconformance:**

Reference: NRC issued Nonconformance NON 99900060/2017-202-01.

The reference NON states:

“TR failed to establish measures that 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, or examination of products upon delivery. Specifically, TR failed to conduct commercial grade surveys or use another verification method to verify critical characteristics, that, when verified, provide reasonable assurance that the items and services will perform their intended safety function. This issue was identified as inadequate dedication of items and services procured from the following commercial suppliers:

- Skovira Machine   Machining services
- Bennet Heat Treating and Brazing                                 Heat treating and brazing services
- Suhm Spring Works   Purchased springs”

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**Immediate Action Taken to Correct the Identified Nonconformance**

As stated in the NRC Inspection Report Details, “... due to other issues previously identified by them (TR), they (TR) initiated a corrective action to review all CCAVs to ensure correct CCs, as identified by 10 CFR Part 21, were properly identified”. These actions and reviews referenced above are documented in TR Project Charter CI-17-014.

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**Root Cause of the Identified Nonconformance**

**Reason for noncompliance:**

As discussed in the NRC Inspection Report Details, most of the critical characteristics (CCs) listed in the critical characteristic attribute verification (CAAV) sheets provided reference to Target Rock generated procurement specifications (PRS). The PRS document contains the necessary technical requirements and methods to perform tests and or inspections. The PRS is specific to the service or item being procured and is imposed on the approved Target Rock supplier via the purchase order. The service or component supplier was required to perform the necessary tests/inspections, as identified in the PRS, as a quality control function.

The engineering intent was to capture the details important to the safety function of the item in the procurement specification. In addition, engineering imposed “Method 2” via the CCAV sheet for the service, requiring TR QA lead auditor verification during the conduct of the CG survey.

- Therefore, the CCAV sheets were not clearly formatted to identify and align the critical characteristic with the attribute requiring verification. The details regarding the attribute’s verification method was not directly aligned on the CCAV sheet. In some cases the CCAV sheet did not contain adequate critical characteristics associated with the specific safety function of the item.

Most TR suppliers are common to both the TR Energy Products program and the TR Nuclear Defense industry program. Although these CG/Defense suppliers do not maintain 10CFR50 App B programs, they do implement ISO or other industry quality programs. The parts or services these suppliers have produced also comply with MIL-STD specifications. TR CG surveys are typically conducted in conjunction with Defense program audits, which emphasize the witness of in-process activities and ensure verbatim compliance with TR imposed requirements. In addition, emphasis is placed on traceability including XRF alloy verification at the supplier facility. Cleanliness (MIL-STD-767) and detrimental material controls (MIL-STD-2041) are also verified in accordance Navy Nuclear Program requirements. The TR QA lead auditor, who was the previous TR QC Manager, has a long history with

these TR suppliers and is very knowledgeable of each of the supplier's processes and controls. TR's lead auditor did witness supplier activities to verifying conformance to technical requirements imposed and compliance with the methods utilized by the supplier to perform tests and or inspections, as required by the TR PRS.

- Therefore, the format and content of the CG survey records / checklists (which were titled as "Audit Reports") did not provide the specific requirements for documenting the objective evidence reviewed. The checklist did not stress CG survey performance, but rather program audit performance.

**Root Cause Corrective Action**  
**Corrective steps that will be taken to avoid noncompliances and date when corrective action will be completed:**

- Engineering will review each CCAV sheet Method 2 critical characteristic. This review shall ensure each critical characteristic is related to the safety function of the item, is aligned with a specific attribute(s) requiring verification, and clearly identifies the method for verification. All CCAV sheets will be reviewed by a second engineer to ensure all the item's critical characteristics are now identified on the CCAV sheet. All Method 2 CCAV sheets will be reviewed and revised by 8/31/17.
- Quality Assurance will revise the commercial grade survey plans to include checklists based on the revised Method 2 characteristics / verification methods identified on the CCAV sheets. The revised checklists shall emphasize the identification and documentation of the objective evidence reviewed and will emphasize survey performance (in lieu of program audit performance). This action will be completed by 9/15/17.

**Other Hardware / Product Affected** **Problem Report Required** Yes  No

No hardware or product was specifically affected by the finding identified. The previous surveys performed along with the verifications of PRS technical requirements and methods to perform tests and or inspections, the performance of quality program audits, and the military oversight conducted provide reasonable assurance that related items or services will perform the intended safety functions. The revised critical characteristics, methods of verification and survey checklists will be implemented for all future TR Method 2 CG supplier surveys.

*J. Smith 5/22/17*  
**Response Provided by:** *J. DeBouris 5/22/17*  
**Date**

*A. D. Maw 5/22/2017*  
**QA Manager Approval:** *A. D. Maw 5/22/2017*  
**Date**