



January 18, 2017

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Subject: Reply to a "Notice of Nonconformance"  
Enercon Services, Inc. Docket No. 99901474  
Vendor Inspection of Enercon Services, Inc. Report No. 99901474/2016-201

Enercon Services, Inc. (ENERCON) is responding to the Notice of Nonconformance 99901474/2016-201-01. The issues identified have been entered into ENERCON's Corrective Action Program as CAR 2016-0423.0.0 and CAR 2016-0424.0.0. The following provides the status and milestones associated with this Notice of Nonconformance as required by the above referenced report:

#### Finding Response:

##### 1. Reason for the Noncompliance

Storm Precipitation Analysis System (SPAS) software Versions 9.5 and 10.0, proprietary software codes developed by Applied Weather Associates (AWA), calculates storm precipitation Depth-Area-Duration (DAD) values for extreme precipitation events. AWA, a well-known industry meteorological subject matter expert (SME) experienced in developing probable maximum precipitation information, was subcontracted by ENERCON to develop site specific data to support flooding analysis work for the Tennessee Valley Authority (TVA). Due to this work being safety-related, the SPAS software required commercial grade dedication (CGD) prior to use. AWA, working under ENERCON's Quality Assurance Program, and ENERCON performed the CGD of the software.

The CGD plans and CGD Acceptance Reports identified the DAD as a critical characteristic. Two types of inputs, Gage Data and Radar Data, may be used by the SPAS software to compute the DAD values. For the CGD of the software, only the Gage Data input was tested because it was concluded by AWA that both types of inputs would be treated equivalently by the computational routines in the SPAS software. The failure to perform testing on the Radar Data input and the lack of testing documentation in the CGD Acceptance Reports resulted in the non-conformance.

The primary reason this non-conformance occurred was ENERCON's over reliance on AWA as the SME to correctly develop the CGD Plan, test the software, and acceptably document the testing in the CGD Acceptance Report. This over reliance was the result of ENERCON's unfamiliarity with the software's specific functionality and an assumption that AWA would complete an effective dedication based on being the software developer and expert. A contributing factor to this noncompliance was AWA lacking familiarity with the rigor required for the CGD of software, as their past work primarily involved non-safety-related analyses.

##### 2. Corrective Actions Taken and Results Achieved

The CGD Plans for SPAS Versions 9.5 and 10.0 have been revised to include the critical characteristic for Radar Data. This critical characteristic was subsequently tested by AWA with the conclusion that both SPAS Versions 9.5 and 10.0 functioned as intended with no impact to the results of the analyses

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performed. The completion of the testing for Radar Data input and revisions to the CGD Plans is documented in CARs 2016-0423.0.0 and 2016-0424.0.0. The CGD Acceptance Reports for both versions of the SPAS software have also been revised to not only include the test data supporting the Radar Data input, but also to include test data performed but not included in the original Acceptance Reports. Revisions to these Acceptance Reports are documented in CAR 2016-0424.0.0.

3. Corrective Actions Taken to Avoid Noncompliance

An Apparent Cause Analysis (ACA) will be completed in accordance with the actions for CARs 2016-0423.0.0 and 0424.0.0. This analysis will determine further actions needed to prevent or minimize recurrence of insufficient CGD of software by a subcontractor.

4. Date When Corrective Actions Will Be Completed

Revisions to the CGD Plans, testing of the Radar Data input, and revisions to the CGD Acceptance Reports to include all testing data supporting the dedication of SPAS software versions 9.5 and 10.0 have been completed. The Apparent Cause Analysis and the identification of any additional actions to be taken as a result of this analysis will be complete by January 31, 2017.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Nick Eggemeyer', written in a cursive style.

Nick Eggemeyer  
Corporate Quality Assurance Manager  
Enercon Services, Inc.

cc: Terry W. Jackson, Chief  
Quality Assurance Vendor Inspection Branch-1  
Division of Construction Inspection and Operational Programs  
Office of New Reactors