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United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Subject: 10CFR21 evaluation extension for 10CFR21 event number: 49155, Linear indications/cracks in pressure transmitter flange forging

Reference: 10CFR21 Interim Report – Linear Indications/Cracks in Flange Forging, Model N-E13DM Pressure Transmitter Event Number: 49155 dated June 26, 2013.

Dear Sirs,

On June 26, 2013, Ultra Electronics, NSPI issued a 10CFR21 Interim Report – Linear Indications/Cracks in Flange Forging, Model N-E13DM Pressure Transmitter Event Number: 49155. Unfortunately, delays in testing at the initial test lab put us behind with the completion of our 10CFR21 evaluation. We have since pulled the work from the initial lab and contracted with a second lab which performed the metallurgical evaluation in a timely manner. Due to this issue, Ultra Electronics, NSPI is formally requesting an extension to complete this evaluation by October 31, 2013. A justification for the extension and new time line are presented in Attachment-1

Regards,

Adam Gaither
Vice President, Engineering
Ultra Electronics-NSPI

Enclosure: Attachment-1



Ultra Electronics,
Nuclear Sensors & Process Instrumentation is
a business name of Weed Instrument Co., Inc.

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Attachment-1

10CFR21 evaluation extension for 10CFR21 event number: 49155,
Linear indications/cracks in pressure transmitter flange forging

Justification for extension

Over the last several weeks, Structural Integrity Associates, an independent metallurgical laboratory, performed a destructive metallurgical evaluation on 3 forging samples that presented 3 different types of indications. The final report with their findings was submitted to Ultra Electronics, NSPI on August 26, 2013. The summary of their findings were:

“Metallurgical evaluations were completed for the indications in Samples 1, 3 and 4. The indications in Samples 1, 3 and 4 are all likely due to impurities from the casting process that separated during the forging process. The flaws in Sample 1 are crack-like and opened along strings of aligned inclusions. The flaws in Samples 3 and 4 contain entrapped surface scale or slag from the casting process and are not cracks.”

The next step in the 10CFR21 evaluation is for Ultra Electronics NSPI to seismically test a forging sample to determine if the crack propagates. To do this, a sample transmitter has been built using one of the flawed forgings that has an indication. This transmitter has completed temperature cycling and is in the process of seismic testing at an external lab. After the seismic testing, the sample will be returned to Structural Integrity Associates to determine if the crack propagated.

Ultra Electronics, NSPI is discussing preliminary test results with the forging vendor. Additional specifications and controls are being put in place for improved control of the forging process and QA acceptance.

Completion of the 10CFR21 evaluation

The 10CFR21 evaluation is expected to be completed on or before October 31, 2013.