

August 5, 2016

Mr. Larry Friedman, Quality Assurance Manager  
Electroswitch Corporation  
180 King Avenue  
Weymouth, MA 02188

SUBJECT: ELECTROSWITCH'S RESPONSE TO THE U.S. NUCLEAR REGULATORY  
COMMISSION INSPECTION REPORT NO. 99900833/2016-201, AND NOTICE  
OF NONCONFORMANCE

Dear Mr. Friedman:

Thank you for your documents received on July 8, 2016, and July 14, 2016, in response to the Notice of Nonconformances (NON) that were discussed in the subject U.S. Nuclear Regulatory Commission (NRC) inspection report.

We have reviewed your documents and have questions related to your responses to NONs 99900833/2016-201-01 and 99900833/2016-201-02. Specifically:

1. Your documents that correspond to NON 99900833/2016-201-01 show differing test numbers on the product tags that do not seem to match the original test reports. Four of the six samples are tagged from being from Test 2392-XX, but are tied to differing numbered reports:
  - a. Series 24 I&C – tag 2392-21 with report 2983-2
  - b. Series 24 LOR – tag 2392-21 with report 2983-3
  - c. Series 24 LOR/ER – tag 2392-5 with report 2983-3
  - d. Series 24 CSR and LSR – tag 2983-1 with report 2983-3
  - e. Series 31 I&C – tag 2392-7 with report 2392-6A
  - f. Series 20 CAM and 20M – tag 2392-12 with report 2970-2

Please clarify or provide documentation that supports or correlates the test specimens to their corresponding test reports.

2. Your documents that correspond to NON 99900833/2016-201-01 seems to be missing Series 31 TR/LSR in Appendix B of your documents. Please provide the supporting documentation for Series 31 TR/LSR.
3. Your documents that correspond to NON 99900833/2016-201-01 shows Series 20 CAM test documentation with a test specimen date code in 1977 (code 7740), but the picture in the tag shows 12/7/1978. Please verify this information is correct and corresponds to the correct documentation. If correct, please explain why they differ.

4. Your documents that correspond to NON 99900833/2016-201-01 have test specimen date codes around 1977 or early 1980s. The reports are all from the late 1984, 1985 timeframe. Please expound on the significant time gap between specimens and reports. Also, please verify which IEEE standards were used on the test specimens and which IEEE standards are referenced in the reports and ensure the required IEEE documents, either via licensee purchase orders or via your certificate of conformance, were all met.
5. Your documents that correspond to NON 99900833/2016-201-02 have not addressed the services that were listed in the NON that were used to support the qualification testing that was done. The NRC report listed three commercial testing services used without supporting documentation: Acton Environmental Testing Corp. (radiation aging), Arnold Greene Testing Lab (radiation aging), and ASL (seismic). Please summarize the supporting documentation, verification, and/or justification for acceptance of the services used at the time of qualification testing. We are particularly interested in evidence that establishes that the services had the capability and traceability to support the qualification testing of Electroswitch's control switches and relays to ensure intended safety function performance at end of life and following a design basis event. Additionally, are there other commercial services that were used to support original qualification testing that were not evaluated?
6. Your documents corresponding to NON 99900833/2016-201-02 do not address the failure to adequately dedicate or verify acceptability of past components that have been shipped. Rather, it explains reliance on historical performance of a commercial vendor (commonly described as commercial-grade dedication method 4 acceptance), which the NRC has explained its usage and acceptability in Generic Letter 89-02. Your response detailing periodic Class II testing and Statistical Process Control is what the NRC understood during the inspection and is insufficient in terms of meeting 10 CFR 50 Appendix B requirements. Please provide any additional evaluation you have completed on safety-related product that has been shipped and how the inadequate dedication/verification of material/chemical composition and dimensions/thickness cited in the finding would not prevent products from performing their intended safety function in a reliable manner and under all potential operating conditions.
7. Your documents corresponding to NON 99900833/2016-201-02 do not mention your use of various commercial suppliers for small sub-components used in some safety related components, such as commercial solenoids and relays, which were not dedicated or verified. Please provide any additional evaluation you have completed on safety-related product that has been shipped and how the lack of dedication/verification of commercial solenoids and relays would not prevent products from performing their safety function in a reliable manner and under all potential operating conditions.

The NRC understands that Electroswitch has discontinued their Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 Appendix B program but will continue to process and sell items commercially. However, the focus of these questions is to ensure that the shipped safety related products meet the requirements of 10 CFR Part 50 Appendix B, can be relied upon to perform their intended safety function at end of life following a design basis event, and that they are all equivalent to the originally qualified components.

In accordance with 10 CFR 2.390 "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System, accessible from the NRC

Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21 "Protection of Safeguards Information: Performance Requirements."

Please contact Mr. Eugene Huang at 301-415-4140, or via electronic mail at [Eugene.Huang@nrc.gov](mailto:Eugene.Huang@nrc.gov), if you have any questions or need assistance regarding this matter.

Sincerely,

*/RA/*

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

Docket No.: 99900833

Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21 "Protection of Safeguards Information: Performance Requirements."

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

Docket No.: 99900833

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