



# PENTAS CONTROLS, LLC

Phoenix, Arizona

July 29, 2015

United States Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-001

Subject: Request For Additional Information  
Reference: Nuclear Regulatory Commission Inspection Report For Pentas Controls, LLC No. 99901456/2015201 and Notice of Nonconformance

In the letter received from you dated June 29, 2015, it was indicated that PCI's initial response was not adequate and that additional information was required. This response provides the additional information requested.

Pentas Controls, LLC understands and accepts the NON received from the NRC as a result of the inspection, and in the published Inspection Report. We take this NON seriously and are committed to correcting the identified issues. Actions have been initiated, and in some cases completed, to remedy the specific findings provided and to avoid future noncompliance.

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

Sincerely,

Robert Prigmore  
Quality Assurance Director  
Pentas Controls, LLC

RRP/rrp

Enclosure: Reply to NRC Notice of Nonconformance Docket: 99901456 Inspection Report: 2015-201

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

*Mark as Original.  
A SUNSI Review has  
been completed.*



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1. The response to NON 99901456/2015-201-01 discussed several completed and planned corrective actions but did not address the apparent Pentas Controls failures related to: 1) the disposition of the nonconformance reports (NCRs) cited in this NON and 2) the failure to initiate an NCR at the time the technician returned the defective Fluke meter to the logistics manager. Please describe the actions taken by Pentas Controls to disposition the NCRs cited in this NON, addressing the extent-of-condition determination. Please describe if any repairs or corrective action activities not resulting in Pentas Controls issuing an NCR or CAR due to those activities being documented in a travelers. Additionally, please explain why an NCR was not generated at the time the technician returned the defective Fluke meter. Please, describe the actions taken by Pentas Controls to address the noncompliance and describe the measures that will be put in place to preclude repetition.

As part of the proposed corrective action Pentas Controls established the Corrective Action Review Group, which will be performing activities affecting quality. Please describe the roles and responsibilities and frequency of these reviews and where Pentas Controls plans to document the process to be followed by the Corrective Action Review Group.

### ADDITIONAL INFORMATION:

#### NCR Dispositions.

NCR 1203-01: Was initiated March 14, 2012. A customer's procurement engineer reported a missed hold step. The item was repaired, functionally tested and tagged as nonconforming due to a missed source inspection. The NCR was printed out and faxed to the customer representative. The customer added hand written notes on the NCR hard copy, then faxed back to PCI. PCI updated the hand written NCR, performed verification and closure via the hard copy. The NCR was closed (hard copy) on March 15, 2012. Unit was shipped to customer March 16, 2012. A copy of the NCR was included in shipping documentation. A copy was also retained by PCI. The NCR/CAR log was not updated to reflect the closure. The log was corrected on March 15, 2015.

NCR 1207-01: Was initiated July 19, 2012. Power Supply failed bench test conducted at customer's facility, and returned to PCI. VIAs were found intermittent and replaced, functionally tested satisfactorily. Component was shipped to customer September 7, 2012. The NCR was closed August 6, 2013. It should be noted that this NCR was overlooked during a transition between QA Directors. PCI has confirmed that the traveler for the Power Supply did contain all corrective actions for repair.

NCR 1403-01: Was initiated March 4, 2014. A Power Supply was found to have damaged insulation by a customer, and was received by PCI February 24, 2014. With customer approval, a transformer was replaced for repair. Component shipped back to customer March 12, 2014. There were inappropriate comments entered in this NCR. It was not considered for closure until these comments were corrected. PCI has confirmed that all corrective actions performed during the repair of the Power Supply were documented within the traveler. NCR was closed May 4, 2015.



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NCR 1408-01: Was initiated August 6, 2014. A Purchase Order specification was not performed as required. A request was made of the customer to have the unit returned to PCI for corrective action. The NCR was open for an extended period awaiting the return. However, the unit has not been returned. As a result, the NCR was updated to reflect non-response and closed May 4, 2015 with the caveat that the NCR will be re-opened in the event the component is returned.

### NCR CAR Extent of Condition

PCI randomly selected 50 completed project travelers out of 595 that were generated between January 1, 2013 and June 23, 2015. A review of these travelers was conducted to determine if any repairs or corrective actions, that should have resulted in the initiation of an NCR as specified in Quality Assurance Procedure (QAP) 15.0, "Nonconformance Reporting and Corrective Action", did not include initiation of an NCR. The result of this review found no instances in which an NCR should have been initiated, and was not. The results of this review have been documented in Corrective Action Request (CAR) C1507-01.

### Fluke Meter NCR.

This occurred as the result of personal error, lack of effective communication. The need to assure an NCR is initiated for any instrument related deficiency has been discussed with all parties. Following NCR initiation, the Fluke Meter was sent to the approved Calibration Facility for repair. Repair was performed, as found calibration was within all tolerances, instrument was calibrated and returned. This was documented in N1503-05.

### Measures to Preclude Repetition.

If an NCR is initiated, as required by QAP 15.0, that is directly related to an in process project, a printed copy of the NCR will be inserted in the front of the project traveler. The purpose will be to provide additional assurance that the issues are resolved and NCR closed prior to shipping. All personnel have been notified of this process change. QAP 15.0, and some of its sub-parts, will be revised to reflect this requirement by August 18, 2015. Completion of this action will be documented in CAR C1503-01.

### Actions for Corrective Action Review Group Implementation.

The QA Director chairs the Corrective Action Review Group (CARG). Additionally, the QA Director documents the results of the review of each NCR, along with actions to be taken, and the responsible person for actions. The Logistics Manager participates in the review of each NCR, provides any updates for NCR's he is responsible for. The Engineering Director participates in the review of each NCR, providing any updates for NCR's he or his subordinates are responsible for.

The roles, responsibilities, frequency and process to be followed will be documented in new procedure, QAP 15.2, "Corrective Action Review Group". Frequency will be set initially at no more than every 60 days. This procedure will be in effect by August 18, 2015. Completion of this action will be documented in CAR C1503-01.



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2. The response to NON 99901456/2015-201-02 is not fully responsive. The response did not clearly describe the reason for the noncompliance and the actions taken by Pentas Controls to correct these issues. Please clarify the actions taken by Pentas Controls to address the noncompliance and describe the measures that will be put in place to preclude repetition. Please describe the extent-of-condition review to determine if similar issues exist where CARs and NCRs have been open with no actions taken, for an extended period of time, e.g. greater than 10 months.

### ADDITIONAL INFORMATION

#### CAR Actions.

The Corrective Action Review Group will review each open CAR and NCR in accordance with the new "Corrective Action Review Group" procedure, QAP 15.1, at a frequency not more than 60 days, to assure corrective actions are completed in a timely manner.

CARs C1311-01 and C1311-03 continue to track projects, and are updated during each CARG to reflect progress toward, and until, completion.

PCI made the determination to retain procedure QAP 7.5, "Commercial Grade Surveys", in the event a Commercial Grade Survey is deemed necessary. As a result of this decision, CAR C1402-07 was closed on 3/18/2015.

#### CAR/NCR Timeliness Extent of Condition

An extent of condition review will be conducted of open and closed CARs and NCRs over the past 3 years to identify any that may have been open for an extended period of time, e.g., greater than 10 months. This action will be completed by September 15, 2015. Results of this review will be documented in CAR 1503-01.



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3. The response to NON 99901456/2015-201-03 is not fully responsive. Please explain the reason(s) why Pentas Controls failed to perform an adequate commercial grade dedication of an NLI 913189-A Firing Board with Terminal strip. Also, clarify the actions taken by Pentas Controls to address the noncompliance and describe the measures that will be put in place to preclude repetition. Additionally, please describe the extent-of-condition review to determine if similar issues exist in other Equivalency Evaluation documents, i.e. used for commercial grade dedication.

### ADDITIONAL INFORMATION

#### Reason for Inadequate Dedication.

The failure resulted from specifying FR4 as the circuit board material as a critical characteristic. When the board was received, the verification could only assure that the board was manufactured to PCI specifications and that it was laminate material.

Pentas Controls utilized an approved circuit board manufacturer from 1994 through 2010. Subsequent to 2010, the supplier was no longer approved. As a result of this, a change to the Commodity Test Dedication Evaluation M02 mistakenly included FR4 as a critical characteristic.

The critical characteristics should have been identified as circuit path, trace width (configuration), dielectric strength, and continuity with no mention of FR4. The bases for these characteristics are contained in IPC-A-600H-2010.

#### Actions to address Noncompliance.

Each of the Licensee's that had been in receipt of the eleven circuit boards manufactured between 2010 and 2015 were contacted to verify their current status. It was verified through contact that none of these circuit boards were considered Environmentally Qualified (EQ), nor were any installed in environments that could be considered potentially hazardous or harsh.

The Engineering Director has completed an evaluation concluding that no substantial safety hazard exists with respect to the circuit boards in question. The Engineering Director documented the evaluation in CAR C1507-02. Based on the results of the evaluation, the deviation did not constitute a defect, thus no 10CFR Part 21 notification was required. This evaluation was provided to the applicable licensees.

Component Specification Number M02 has been revised to reflect the appropriate critical characteristics, as specified above. The completion of this revision was documented in CAR C1503-07.

#### Extent of Condition.

The review will be conducted of all Equivalency Evaluations, in comparison with all Commodity Test Dedication Evaluations and Commodity Test Dedication Evaluation Data



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Forms, to verify or determine that all critical characteristics are identified, and that proper testing is specified for each critical characteristic. If any deviations are identified during this review, they will be documented in separate NCRs.

This review will be completed by October 18, 2015 with the results documented in CAR C1311-03