

Part 21 (PAR)

Event # 51454

<b>Rep Org:</b> AZZ/NUCLEAR LOGISTICS INC	<b>Notification Date / Time:</b> 10/05/2015 17:47 (EDT)
<b>Supplier:</b> AZZ/NUCLEAR LOGISTICS, INC.	<b>Event Date / Time:</b> 10/05/2015 (CDT)
	<b>Last Modification:</b> 10/05/2015
<b>Region:</b> 4	<b>Docket #:</b>
<b>City:</b> FORT WORTH	<b>Agreement State:</b> Yes
<b>County:</b>	<b>License #:</b>
<b>State:</b> TX	
<b>NRC Notified by:</b> TRACY BOLT	<b>Notifications:</b> NICK TAYLOR R4DO
<b>HQ Ops Officer:</b> JEFF HERRERA	PART 21/50.55 REACTORS EMAIL
<b>Emergency Class:</b> NON EMERGENCY	
<b>10 CFR Section:</b>	
21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE	

ELECTRONIC POSITION CONTROLLER FAILED INTERNAL COMPONENT

"NLI manufactured the reverse engineered units to replace the existing obsolete electronic position controller NLI Model: NLI-10A-LM-P.

"The failed component within the controller was sized based on the original published ratings of the original components installed. The unit had an internal component that was subjected to a current value that was higher than the rating for the component. The actual applied current value was not originally provided to NLI when the units were being designed. NLI and the affected plant has been in communication regarding the component condition since the first reported failure.

"Electronic Position Controller units, NLI Model NLI-10A-LM-P that have been manufactured and supplied are identified below."

Affected Plant is Callaway.

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JEFF  
NRR



To:  
Fax (301) 816 - 5151  
Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

From:  
Tracy Bolt  
Director of Quality Assurance  
AZZ|NLI Nuclear Logistics, Inc.  
7410 Pebble Drive  
Fort Worth, Texas 76118  
817-284-0077

Pursuant to 10CFR 21.21 (d) (3) (ii), AZZ|NLI is providing in the following letter the written notification of the identification of a deviation.  
Total Pages including this page: 4



Date: October 5, 2015

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Part 21 Report No: P21-10052015

Subject: Electronic Position Controller Model: NLI-10A-LM-P

Pursuant to 10CFR 21.21 (d) (3) (ii), AZZ|NLI is providing written notification of the identification of a deviation.

On the basis of our evaluation, it is determined that AZZ|NLI does not have sufficient information to determine if the subject condition if left uncorrected could have created a Substantial Safety Hazard or could have created a Technical Specification Safety Limit violation as it relates to the subject plant application.

The following information is required per 10CFR 21.21 (d) (4).

**(i) Name and address of the individual or individuals informing the Commission.**

Tracy Bolt, Director of Quality Assurance  
Nuclear Logistics, Inc.  
7410 Pebble Drive  
Ft. Worth, TX 76118

**(ii) Identification of the facility, activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.**

The specific part which contains a deviation:

Electronic Position Controller NLI Model: NLI-10A-LM-P (Revision 0)

**(iii) Identification of the firm constructing or supplying the basic component which fails to comply or contains a defect.**

NLI manufactured the reverse engineered units to replace the existing obsolete equipment.



- (iv) Nature of defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.**

The failed component within the controller was sized based on the original published ratings of the original components installed. The unit had an internal component that was subjected to a current value that was higher than the rating for the component. The actual applied current value was not originally provided to NLI when the units were being designed. NLI and the affected plant has been in communication regarding the component condition since the first reported failure.

- (v) The date on which the information of such defect or failure to comply was obtained.**

On September 29, 2015, enough information was gathered from the evaluations being performed to determine the reportability of the deviation that is the root cause for the event.

- (vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for being supplied for, or may be supplied for, manufactured or being manufactured for one or more facilities or activities subject to the regulations in this part.**

Electronic Position Controller units, NLI Model NLI-10A-LM-P that have been manufactured and supplied are identified below.

Plant Name	Purchase order	Serial Number
Callaway	568677 SR	NLI-10A-LM-P-1003-0, NLI-10A-LM-P-1004-0, NLI-10A-LM-P-1005-0, NLI-10A-LM-P-1006-0, NLI-10A-LM-P-1007-0, NLI-10A-LM-P-1008-0, NLI-10A-LM-P-1009-0 and NLI-10A-LM-P-1010-0 (original version units)



- (vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.**

Three of units that initially failed in the plant have already been returned to NLI for failure analysis and design modifications. These units were modified by installing a larger bridge rectifier and wire wound resistor onto the revision 0 circuit board. The modified versions, quantity of three, S/N: NLI-10A-LM-P-1003-0, NLI-10A-LM-P-1004-0 and NLI-10A-LM-P-1006-0 have been returned to Calloway under purchase orders 689233 SR and 694253 SR and have been accepted and installed into the plant and are working with no reported issues.

The model number NLI-10A-LM-P, has been redesigned with a larger bridge rectifier of a higher rating and wire wound resistor that will withstand the applied current in the intended application. The parent circuit board has also been revised to revision 1 to accept the larger bridge rectifier without impacting other components on the board.

The remaining unmodified revision 0 units that were originally supplied have not yet been returned to NLI for incorporation of the design modification. NLI recommends that at the plant's earliest convenience, the remaining units be returned to NLI to be retrofitted with the latest design configuration (revision 1 circuit board).

- (viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.**

The unmodified units should not be installed into the intended application. The units should be returned to NLI to have the units retrofitted with the latest configuration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tracy Bolt', written over a white background.

Tracy Bolt  
Director of Quality Assurance