

Part 21 (PAR)

Event # 51363

<b>Rep Org:</b> SOR MEASUREMENT AND CONTROL	<b>Notification Date / Time:</b> 09/02/2015 15:31 (EDT)
<b>Supplier:</b> SOR MEASUREMENT AND CONTROL	<b>Event Date / Time:</b> 09/02/2015 (CDT)
	<b>Last Modification:</b> 09/21/2015
<b>Region:</b> 4	<b>Docket #:</b>
<b>City:</b> LENEXA	<b>Agreement State:</b> Yes
<b>County:</b>	<b>License #:</b>
<b>State:</b> KS	
<b>NRC Notified by:</b> MELANIE DIRKS	<b>Notifications:</b> GREG WARNICK R4DO
<b>HQ Ops Officer:</b> MARK ABRAMOVITZ	PART 21 MATERIALS EMAIL
<b>Emergency Class:</b> NON EMERGENCY	NMSS_EVENTS_NOTIFICATI EMAIL
<b>10 CFR Section:</b> 21.21(a)(2) INTERIM EVAL OF DEVIATION	

## PART-21 REPORT - NUTHERM IRRADIATION CERTIFICATION WITH INSUFFICIENT MARGIN

The following report was received via fax:

"SOR Inc. was notified by Nutherm International, Inc. that irradiation certification performed by Steris Isomedix did not meet the additional 10 percent margin to meet the requirements of IEEE 323 due to measuring and test equipment uncertainties.

"This issue was originally identified by STERIS Isomedix Services, Whippany, New Jersey as part of NRC Inspection Report No. 99901445/2014-201. Nutherm International, Inc. has completed their evaluation of work performed for SOR, Inc. and has identified a potential impact to the conclusions of equipment qualification testing under SOR Inc. purchase order number 166984. Nutherm International, Inc. has reported this potential issue and forwarded an update to the NRC per Event Notification Report Number 50359.

"SOR Inc. is conducting an evaluation of projects to determine whether a defect or failure to comply exists as defined by 10 CFR Part 21. At the conclusion of the evaluation, any customer impacted by this issue will be notified and the U.S Nuclear Regulatory Commission will be notified in accordance with 10.CFR Part 21.21.

"If you have any questions regarding this issue, please contact Mike Bequette, Vice President of-Engineering at (913) 888-2630 or email mbequette@sorinc.com."

\*\*\* UPDATE FROM MELANIE DIRKS TO JOHN SHOEMAKER AT 1729 EST ON 9/21/15 \*\*\*

The following updated information was excerpted from a SOR, Inc. report received via email:

JE19  
NRR

"As a result, corrections were made to test report SOR-12043R revision 1, approved 9/8/2015. The uncertainty calculations by the radiation lab used for the qualification program reduced the qualification level from 35 Mrad to 33.8 Mrad.

"SOR found that there were three switches potentially affected as shown [on table I provided with this report]. While these switches were shipped before completion of the of test report SOR-12043R, revision 0, it has been established that there was a contractual agreement between SOR and Xcel Energy-Monticello Nuclear Generating Plant that these switches would be equivalent to those to be qualified in the new test report. Also listed are recipients of the original test report SOR-12043R revision 0 [on table II provided with this report].

"In either Case, SOR does not have the capability to perform further evaluations to determine if a safety hazard exists as the specific customer application and end use is not known by SOR. Since the release of revision 0 of the test report, SOR has not provided certificate of conformance to any 141 series product shipped citing the 12043R test report other than qualification units for Excel Energy - Monticello Nuclear Generating Plant.

Recipients, Customer, Utility Names;

- Xcel Energy - Monticello Nuclear
- Progress Energy - Brunswick
- Entergy Corporation - Pilgrim

"In accordance with the requirements of 10 CFR Part 21.21, the customers listed have been notified regarding this issue to allow them to evaluate this deviation or failure to comply and its potential safety hazard."

If you have any questions regarding this matter, please contact;

For technical issues;  
 Joe Modig  
 SOR Inc.  
 14685 W. 105th Street  
 Lenexa, KS 66215-2003  
 Ph: (913) 956-3046  
 jmodig@sorjnc.com

And for any other questions;  
 Melanie Dirks  
 Director of Quality Assurance  
 SOR Inc.  
 14685 W. 105th Street  
 Lenexa, KS 66215-2003  
 Ph: (913) 956-3160  
 Email: mdirks@sorinc.com

Notified R1DO ( Welling), R2DO (Sykes), R3DO (Dickson), R4DO (Pick), and Part 21 Reactors and Part 21 Materials via email.

\*\*\*\*\*



14685 WEST 105TH STREET, LENEXA, KANSAS 66215-2003  
913-888-2630 | 800-676-6794

sorInc.com

September 21, 2015

Attn: Document Control Desk  
US Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: Notification of Deviation - ML15251A212 Irradiation Certification with Insufficient Margin

The notification from Nutherm International on September 1, 2015 regarding irradiation measuring and test equipment uncertainties affects the SOR 141 series of switches that were re-qualified to higher levels of radiation and HELB conditions per test report SOR-12043R revision 0, approved 9/14/2011.

The source of Nutherm's notification was a notification by STERIS Isomedix Services, Whippany, New Jersey that the applied radiation dose reported on their Component Irradiation Certificates did not account for all uncertainties involved (i.e. density of unrelated products in carriers, off-carrier location within the irradiator and Cobalt-60 source decay). This issue was originally identified as part of NRC Inspection Report No. 99901445/2014-201.

As a result, corrections were made to test report SOR-12043R revision 1, approved 9/8/2015. The uncertainty calculations by the radiation lab used for the qualification program reduced the qualification level from 35Mrad to 33.8Mrad.

SOR found that there were three switches potentially affected as shown table I below. While these switches were shipped before completion of the of test report SOR-12043R, revision 0, it has been established that there was a contractual agreement between SOR and Xcel Energy-Monticello Nuclear Generating Plant that these switches would be equivalent to those to be qualified in the new test report. Also listed are recipients of the original test report SOR-12043R revision 0 as noted in table II.

In either case, SOR does not have the capability to perform further evaluations to determine if a safety hazard exists as the specific customer application and end use is not known by SOR. Since the release of revision 0 of the test report, SOR has not provided certificate of conformance to any 141 series product shipped citing the 12043R test report other than qualification units for Excel Energy - Monticello Nuclear Generating Plant.

Table I

Date Shipped	Customer, Utility Name	Contact	Customer P.O. / Contract	Serial Numbers	SOR Model Number	SOR SO
2/21/11	Xcel Energy - Monticello Nuclear	Melissa Limbeck / Greg Gardner (contract)	00035760 / 00036588	110108046 110108047 110108048	141N6-BB43-M9-C1A-JTTNQ	530986

Engineered to Order with Off-the-Shelf Speed

**FAX**

DATE September 21, 2015

TO US Nuclear Regulatory Commission (301.816.5151)

FROM Melanie Dirks

SUBJECT Notification of Deviation - ML15251A212 Irradiation Certification with Insufficient Margin

No. Pages 3  
(Including Cover)



Please reference the attached update to event number ML15251A212/2015-64-00.

Melanie Dirks  
Director of Quality Assurance  
SOR Inc.  
14685 W. 105<sup>th</sup> Street  
Lenexa, KS 66215-2003

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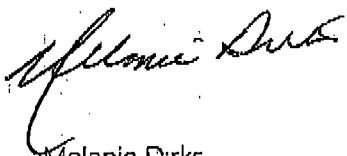
Table II

Correspondence	Customer, Utility Name	Contact	Customer RFQ	Test Report Controlled Copy No.	SOR Model Number	SOR Quotation
4/30/12	Progress Energy – Brunswick	Keith Lloyd	N/A	2	N/A	N/A
6/29/12	Progress Energy – Brunswick	Bill Hicks Michael LeBlanc	1299267	N/A	141N6-BB7- M9-C1A- JJTTNQ	61466
1/18/13	Entergy Corporation Pilgrim Nuclear Power Station	Roland Ho	N/A	N/A	N/A	N/A
8/15/14	Entergy Corporation Pilgrim Nuclear Power Station	George Perry	N/A	N/A	N/A	N/A

In accordance with the requirements of 10 CFR Part 21.21, the customers listed in the tables above have been notified regarding this issue to allow them to evaluate this deviation or failure to comply and its potential safety hazard.

If you have any questions regarding this matter, please contact Joe Modig (913) 956-3046 ([jmodig@sorinc.com](mailto:jmodig@sorinc.com)) for any technical issues and Melanie Dirks 913-956-3160 ([mdirks@sorinc.com](mailto:mdirks@sorinc.com)) for any other questions.

Sincerely,  
SOR, Inc.



Melanie Dirks  
Director of Quality  
Email: [mdirks@sorinc.com](mailto:mdirks@sorinc.com)

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