



FAX

DATE February 1, 2019
TO US Nuclear Regulatory Commission (301.816.5151)
FROM Melanie Dirks
SUBJECT Notice of Deviation SOR R-Series Housing with Terminal Block
No. Pages 5
(Including Cover)

Please reference the notification of deviation regarding the installation of SOR R-series switches with terminal blocks.

A handwritten signature in cursive script that reads 'Melanie Dirks'.

Melanie Dirks
Director of Quality Assurance
SOR Inc.
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Lenexa, KS 66215-2003
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February 1, 2019

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

Subject: Notification of Deviation SOR R-Series Housing with Terminal Block

SOR is providing this report in accordance with 10CFR Part 21.21(d)(4).

(i) Name and address of individual informing the NRC:

Melanie Dirks
Director of Quality
SOR Inc.
14685 West 105th Street
Lenexa, KS 66215-2003

(ii) Identification of the activity which fails to comply or contains a defect:

Installation or wiring method of SOR R-series nuclear housings with terminal blocks.

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

SOR Inc., 14685 West 105th Street, Lenexa, Kansas 66215.

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

Exelon Limerick generating station notified SOR on December 8, 2018 via email regarding corrective action needed for the R-series housing on two of their emergency diesel engines. Limerick reported that the field wire lugs were in close contact with the switch cover gasket and had degraded the EPR (Ethylene Propylene Rubber) housing cover material enough to short to the cover which, in turn, tripped the 1A control fuse. Limerick reported that the uninsulated terminals and wiring were already available at the switch location during installation and used without modification. Limerick's immediate corrective action was to land the field wiring on the bottom tier of the terminal block and insulate the lugs.

EPR is known to be an effective electrical insulator, and is used as insulation for many electrical cables. For this reason, the EPR cover gasket was used on the SOR R-series nuclear housing to offer sufficient electrical insulation. Due to the failure at the Limerick generating station and subsequent evaluation at SOR, the EPR gasket alone does not provide sufficient electrical insulation between the terminal block connections and the metallic housing cover when uninsulated terminals are installed. This direct connection will cause heating of the gasket and eventual direct short through the EPR material.

(v) The date on which the information of such failure to comply was obtained:

February 1, 2019

Engineered to Order with Off-the-Shelf Speed

Form 1289-08 (2) - 2012-2016

(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, or may be supplied for, manufactured or being manufactured for one or more facilities or activities subject to the regulations in this part.

SOR does not have the capability to perform further evaluations to determine if a safety hazard exists as the specific customer installation practices is unknown. The end user must confirm for each application the wire installation applied with this specific model string.

The following customers are potentially affected by this deviation based on the nuclear qualified models procured. In accordance with the requirements of 10 CFR Part 21.21, the customers listed in the tables on the following pages are in the process of being notified by email and/or postal letter regarding this issue to allow them to evaluate this deviation and its potential safety hazard.

Company	Plant	PO	SOR Order	Model
Ameren	Callaway	847726SR Rev 1	L3891	20XRX-WX125-U9-C7A-TTNQX
Electrabel	Doel, Belgium	P004_9900077799	519607	6RX-WX5-U8-C2A-TTNQX 5RX-WX5-U8-C2A-TTNQX 9RX-WX5-U8-C2A-TTNQX 54RX-WX118-M4-C2A-TTNQX 12RX-WX4-U8-C2A-TTNQX 4RX-WX4-U8-C2A-TTNQX
		P004_9900181246	542843	4RX-WX4-U8-C2A-TTNQX
		P004_9900192746	545647	6RX-WX5-U8-C2A-TTNQX
		P004_9900251618	561044	205RX-WX125-U9-C7A-TTNQX
		P004_9900286032	564553	203RX-WX115-U9-C7A-TTNQX
		P004_9900297113	575293	201RX-BX125-U9-C7A-TTNQ
		9900325190	585651	203RX-BX125-U9-C7A-TTNQ 20XRX-BX125-U9-C7A-TTNQ 6RX-BX5-U8-C2A-TTNQ 9RX-BX45-U1-C2A-TTNQ 201RX-WX12X-U9-C7A-TTNQ 4XRX-BX5-U8-C2A-TTNQ 203RX-BX12X-U9-C7A-TTNQ
		9900378482	606519	205RX-WX125-U9-C7A-TTNQX
		9900377685	606164	6RX-WX5-U8-C2A-TTNQX
		9900384939	609382	201RX-BX125-U9-C7A-TTNQ
		9900386602	609508	4RX-WX4-U8-C2A-TTNQX
		9900413855	619038	54RX-WX118-M4-C2A-TTNQX
		9900417768	620386	5RX-WX5-U8-C2A-TTNQX 9RX-WX5-U8-C2A-TTNQX
		9900424232	622682	6RX-WX5-U8-C2A-TTNQX 4RX-WX4-U8-C2A-TTNQX 201RX-BX125-U9-C7A-TTNQ
		9900428329 Rev 2	624046	205RX-WX125-U9-C7A-TTNQX
		9900441664	629177	6RX-WX5-U8-C2A-TTNQX

(ix) In the case of an early site permit, the entities to whom an early site permit was transferred:

Not Applicable to this Part 21.

Should you have any additional questions regarding this matter, please contact:

For general inquiries:

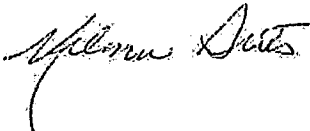
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Sincerely,
SOR, Inc.



Melanie Dirks
Director of Quality
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