



ROSEMOUNT
Nuclear

Facsimile

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To: NRC Operations Center
Company:
Fax Number: (301) 816-5151
Date: 4/6/07
From: David Roberts, Quality Manager
No. of Pages: 21, *Including cover page*

Rosemount Nuclear Instruments is submitting the attached notification as required by 10 CFR Part 21. Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink that reads 'David T Roberts'.

David T. Roberts
Quality Manager
Rosemount Nuclear Instruments, Inc.

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6 April, 2007

U.S. Nuclear Regulatory Commission
Washington, DC 20555-001
Attn: Document Control Desk**Re: Notification under 10 CFR Part 21 for Certain Model 1152 Pressure Transmitters**

Pursuant to 10 CFR Part 21, section 21.21(b), Rosemount Nuclear Instruments, Inc. (RNII) is writing to inform you that Model 1152 pressure transmitters listed in the attached Appendix and shipped to your facility between June 12, 2006 and December 20, 2006 may exhibit leakage from the threaded connection interface between the flange and the vent/drain valve seat if subjected to process pressure greater than 2000 psi (13.78 MPa). Consequently, conformance to published hydrostatic test specifications, or sealing at maximum working pressures above 2000 psi (13.78 MPa) cannot be assured.

1.0 Name and address of the individual providing the information:

Mr. Jeffrey W. Schmitt
Vice President & General Manager
Rosemount Nuclear Instruments, Inc.
8200 Market Blvd
Chanhassen, MN 55317

2.0 Identification of items supplied:

Model 1152 pressure transmitters identified in attached Appendix.

3.0 Identification of firm supplying the item:

Rosemount Nuclear Instruments, Inc.
8200 Market Blvd
Chanhassen, MN 55317

4.0 Nature of the failure and potential safety hazard:

All Model 1152 pressure transmitters listed in the attached Appendix passed final acceptance testing, including a hydrostatic pressure test. However, during final acceptance testing of Model 1152 pressure transmitters in the November time frame, a number of hydrostatic pressure test failures on Model 1152 pressure transmitters were observed. The failures manifested as a very small amount of leakage (typically on the order of several drops/minute or less) from the threaded connection interface between the flange and vent/drain valve seat.

The threaded connection interface in question is made up of three elements: the threaded flange (thread type 1/4-18 ANPT), the threaded vent/drain valve seat (thread type 1/4-18 ANPT), and Loctite® 571™ which is a commercially available product dedicated by RNII for use in this application as a thread sealant. In normal production, a bead of the sealant is applied to the valve seat threads, which is threaded into the flange

and torqued. The basic process and thread sealant material have been used on this threaded connection interface for a significant number of years with no prior identified failures in production or in the field.

When standard rework efforts were not effective in resolving this discrepancy, intensive evaluation and root cause analysis of the threaded connection interface and associated production processes was undertaken to identify and understand the root cause of the failures. The results of this analysis and testing suggested a subtle change in the Loctite® 571™ formulation that, while not directly representing a non-conformance to the manufacturer's published specifications, resulted in degraded sealing capability in this threaded connection interface at pressures above 2000 psi (13.78 MPa).

The affected population was bounded by review of empirical manufacturing and transmitter audit test data, which showed that the last known Model 1152 transmitters to pass multiple hydrostatic pressure tests and high static pressure tests without any leakage were associated with a specific lot of Loctite® 571™ that was in use until May 12, 2006. Therefore, we have identified the affected population as including all Model 1152 pressure transmitters whose flanges were assembled after this date using subsequent lots of thread sealant. While it is not expected that all Model 1152 pressure transmitter types and range codes would typically be exposed to working pressures greater than 2000 psi (13.78 MPa), all Model 1152 transmitter types (GP, AP, DP, HP) and all range codes (3,4,5,6,7,8,9,0) have been conservatively included in the affected population listed in the attached Appendix. Additionally, thread sealant from subsequent lots, shipped as spare parts kits, are also included in the Appendix (if shipped to your facility) since its sealing capability at this threaded connection interface can not be reasonably assured.

Internal testing found no leaks at test pressures at or below 2000 psi (13.78 MPa). Therefore, no leakage is expected from the threaded connection interface for Model 1152 pressure transmitters installed on applications with process pressures of 2000 (13.78 MPa) or less. Since RNII is not aware of the actual application details or operational history of each Model 1152 transmitter shipped to your facility (process pressures, static pressures, field rework, etc.), for conservatism all Model 1152 pressure transmitters shipped to your facility in the time interval indicated in the first paragraph of this letter are included in the Appendix.

The table below indicates the maximum working pressure and hydrostatic test pressure specified for Model 1152 pressure transmitters by pressure measuring type and range code. Additionally, the attached Appendix indicating the potentially affected Model 1152 pressure transmitters shipped to your facility includes columns for each unit indicating whether the maximum working pressure and/or the hydrostatic test pressure exceeds 2000 psi (13.78 MPa) as we believe they present the greatest potential to exhibit leakage.

Pressure Measurement Type	Range Code							
	3 URL: 30 inH ₂ O	4 URL: 150 inH ₂ O	5 URL: 750 inH ₂ O	6 URL: 100 psi	7 URL: 300 psi	8 URL: 1000 psi	9 URL: 3000 psi	10 URL: 6000 psi
DP Maximum Working Pressure	2000 psi	2000 psi	2000 psi	2000 psi	2000 psi	2000 psi	NA	NA
DP Hydrostatic Test Pressure	3000 psi	3000 psi	3000 psi	3000 psi	3000 psi	3000 psi	NA	NA
AP Maximum Working Pressure	NA	NA	750 inH ₂ O	100 psi	300 psi	1000 psi	NA	NA
AP Hydrostatic Test Pressure	NA	NA	2000 psi	2000 psi	2000 psi	2000 psi	NA	NA
GP Maximum Working Pressure	30 inH ₂ O	150 inH ₂ O	750 inH ₂ O	100 psi	300 psi	1000 psi	3000 psi	6000 psi
GP Hydrostatic Test Pressure	2000 psi	2000 psi	2000 psi	2000 psi	2000 psi	2000 psi	4500 psi	7500 psi
HP Maximum Working Pressure	NA	4500 psi	4500 psi	4500 psi	4500 psi	NA	NA	NA
HP Hydrostatic Test Pressure	NA	6750 psi	6750 psi	6750 psi	6750 psi	NA	NA	NA

5.0 The corrective action which has been taken; the name of the individual or organization responsible for that action; and the length of time taken to complete that action:

- (a) An internal corrective action request was initiated. RNII placed a hold on all Model 1152 transmitter shipments while root cause was under investigation. (Complete: 3/11/2007)
- (b) RNII performed extensive analysis of multiple test samples and finished goods in an attempt to ascertain the root cause of the leakage and reasonably concluded the failures observed were due to the subtle changes in the Loctite® 571™ thread sealant. As a result, RNII has very conservatively elected to discontinue providing the threaded vent/drain valve seat as an installed/assembled flange option. Additionally, RNII has discontinued its use of Loctite® 571™ and will no longer offer it as a spare part. (Complete: 3/11/2007)
- (c) A welded flange vent/drain valve connection interface identical to that used on Model 1153 Series B and Model 1154 pressure transmitters will be the standard configuration going forward on Model 1152 pressure transmitters. The Model 1152 Qualification Report (Report 117415) was updated to Revision G to include

justification for the configuration change. Copies of the revised Model 1152 Qualification Report are available upon request. (Complete: 3/9/2007)

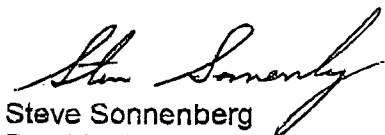
- (d) Per individual customer agreement via an Advance Deviation Request (ADR) or approval of Model 1152 Qualification Report 117415 Revision G, potentially affected transmitters not yet shipped were or are being reworked either by using a welded flange vent/drain valve connection (see (c) above), or by providing the threaded flange on the Model 1152 transmitter as before, but with the vent/drain valve supplied in the transmitter box un-installed. (Ongoing)
- (e) RNII will supply welded vent/drain valve flange at no charge to customers that request them for field rework. The flange part number for ordering is 01153-0175-0002 (per the applicable section of the Model 1152 Operating Manual, note that process o-rings will also require replacement in the course of field rework, and will also be supplied free of charge if requested). Alternatively, RNII will rework returned transmitters using the welded flange configuration at no charge. See further guidance in section 6.0 below.

6.0 Any advice related to the potential failure of the Item:

The end user is advised to determine the impact of this potential non-conformance on its plant operations and safety and take action as deemed necessary. The vent/drain valve seat can be removed and re-installed with a plant approved sealant, a welded vent/drain valve flange(s) can be shipped to the customer for replacement in the field, or the transmitter can be returned to RNII for rework with a welded vent/drain valve flange. If it is determined that return of a pressure transmitter is required, RNII should be contacted to facilitate the return process.

Rosemount Nuclear Instruments, Inc. is committed to the nuclear industry and we assure you that we are dedicated to the supply of high quality products and services to our customers. If there are any questions, or you require additional information related to this issue, please contact: Mike Dougherty (208) 865-1112, Gerard Hanson (952) 949-5233, Bob Cleveland (952) 949-5206, or Matt Doyle (952) 949-5204.

Sincerely,


Steve Sonnenberg
President
Rosemount Nuclear Instruments, Inc.

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

AMEREN-UE

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1766331	268327 SR REV 1	1152HP6N22PB	533532	19-Oct-06	Y - 4500	Y - 6750

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

ALABAMA POWER CO

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1771396	QP060737	1152DP5N22PB	533627	3-Nov-06	N	Y - 3000

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

DETROIT EDISON CO

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1737851	NM-416383	1152DP8L22T1805PB	0533018	29-Aug-06	N	Y - 3000

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

DOMINION

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1703630	45432891	1152DP5L22T1805PB	0532708	27-Jun-06	N	Y - 3000
1729026	45443186	1152DP3N22PB	0533203	30-Aug-06	N	Y - 3000
1787157	45465873	1152GP7N92PB	533787	30-Nov-06	N	N
1747213	45450382	1152HP5L22T1805PM	0533012	29-Aug-06	Y - 4500	Y - 6750
1747213	45450382	1152HP5L22T1805PM	0533013	29-Aug-06	Y - 4500	Y - 6750

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

ENERGY

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1724739	VY021338	1152DP4L22T1805PM	0532573	28-Jun-06	N	Y - 3000
1760393	10131740	1152DP4N22PB	0533294	5-Sep-06	N	Y - 3000

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification - 6 April 2007.

EXELON GENERATION CO LLC

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1682679	00076959 REV 001 REL 00072	1152DP4N92PB	0532536	26-Jun-06	N	Y - 3000
1682679	00076959 REV 001 REL 00072	1152DP4N92PB	0532537	26-Jun-06	N	Y - 3000
1706116	00076959 REV 001 REL 00079	1152DP6L22T1805PB	0532572	27-Jun-06	N	Y - 3000
1736127	00076959 REV 001 REL 00091	1152GP5N22PB	0532859	31-Jul-06	N	N

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

FIRST ENERGY CORP

Sales Order	Purchase Order	Model Number	S/N	Shlp Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1813259	45212820	1152DP3N92PB	533672	13-Nov-06	N	Y - 3000

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

FPL ENERGY DUANE ARNOLD LLC

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1706383	P111857 REV 1	1152GP9N22PB	533601	27-Oct-06	Y - 3000	Y - 4500

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

GEORGIA POWER CO

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1689459	7071224	1152HP5N22PB	0532430	12-Jun-06	Y - 4500	Y - 6750
1689459	7071224	1152HP5N22PB	0532431	12-Jun-06	Y - 4500	Y - 6750
1689459	7071224	1152HP6N22PB	0532432	12-Jun-06	Y - 4500	Y - 6750
1689459	7071224	1152GP9N22PB	0532435	12-Jun-06	Y - 3000	Y - 4500
1689462	7071225	1152HP5N22PB	0532433	12-Jun-06	Y - 4500	Y - 6750
1689462	7071225	1152HP5N22PB	0532434	12-Jun-06	Y - 4500	Y - 6750
1689462	7071225	1152HP6N22PB	0532436	12-Jun-06	Y - 4500	Y - 6750
1689462	7071225	1152GP9N22PB	0532437	12-Jun-06	Y - 3000	Y - 4500
1683321	7071285	1152HP5N22PB	533372	18-Sep-06	Y - 4500	Y - 6750
1683321	7071285	1152HP5N22PB	533373	18-Sep-06	Y - 4500	Y - 6750
1683321	7071285	1152HP6N22PB	533374	18-Sep-06	Y - 4500	Y - 6750
1683321	7071285	1152GP9N22PB	533375	18-Sep-06	Y - 3000	Y - 4500
1734102	7072387	1152HP5N22PB	0533064	24-Aug-06	Y - 4500	Y - 6750

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

NUCLEAR MANAGEMENT CO LLC

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1796935	00004475 REV 001	1152DP5L92T1805PM	533545	20-Oct-06	N	Y - 3000

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

OMAHA PUBLIC POWER DISTRICT

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1696108	92470	1152DP4L92T1805PM	0532503	19-Jun-06	N	Y - 3000

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

PACIFIC GAS AND ELECTRIC CO

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1732406	130124	1152DP5N92PB	533286	18-Sep-06	N	Y - 3000
1732406	130124	1152DP5N92PB	533287	18-Sep-06	N	Y - 3000
1732406	130124	1152DP5N92PB	533288	18-Sep-06	N	Y - 3000
1732406	130124	1152DP5N92PB	533289	18-Sep-06	N	Y - 3000
1732406	130124	1152DP5N92PB	533290	18-Sep-06	N	Y - 3000

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

PENNSYLVANIA POWER AND LIGHT CO

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1760591	355248	1152DP5N22	533526	6-Nov-06	N	Y - 3000
1760591	355248	1152DP5N22	533527	6-Nov-06	N	Y - 3000
1760591	355248	1152DP5N22	533528	6-Nov-06	N	Y - 3000
1760591	355248	1152DP5N22	533529	6-Nov-06	N	Y - 3000
1760591	355248	1152DP5N22	533530	6-Nov-06	N	Y - 3000
1760591	355248	1152DP5N22	533531	6-Nov-06	N	Y - 3000
1760591	355248	1152DP5N22	533524	6-Nov-06	N	Y - 3000
1760591	355248	1152DP5N22	533525	6-Nov-06	N	Y - 3000

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

PROGRESS ENERGY FLORIDA INC

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1758328	281986	1152GP9L82T1805PM	0533073	30-Aug-06	Y - 3000	Y - 4500

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification – 6 April 2007.

SOUTH CAROLINA ELECTRIC AND GAS

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1795925	NU-02SR727891	1152DP5N92PB	533788	5-Dec-06	N	Y - 3000

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No

APPENDIX: 10 CFR Part 21 Notification - 6 April 2007.

TVA

Sales Order	Purchase Order	Model Number	S/N	Ship Date	MWP above 2000 psi?	Hydro Test Pressure above 2000 psi?
1718560	00000151 REL 00210	1152DP6L22T1805PB	0532504	25-Jun-06	N	Y - 3000
1726653	00000151 REL 00215	1152GP9L22T1805PB	533086	29-Sep-06	Y - 3000	Y - 4500
1742540	00000151 REL 00220	1152DP3N22PB	533205	29-Sep-06	N	Y - 3000
1742540	00000151 REL 00220	1152GP6L22T1805PB	533266	29-Sep-06	N	N
1742540	00000151 REL 00220	1152GP8L22T1805PB	533087	29-Sep-06	N	N
1784890	00000151 REL 00228	1152DP3L22T1805PB	533410	29-Sep-06	N	Y - 3000

NOTES

MWP: Maximum Working Pressure

Y/N: Yes/No