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No. of Pages:

Including cover page

To: NRC Operations Center

Fax Number: (301) 816-5151

Company:

Date: Monday, July 12th, 2010

From: Duyen Pham, Quality
Manager

Phone: (952) 949-5363

E-Mail: Duyen.Pham@Emerson.com

Subject:

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

Sincerely,



Duyen Pham
Quality Manager
Rosemount Nuclear Instruments, Inc.

IE19
NRR

12 July 2010

U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attn: Document Control Desk

Re: Notification under 10 CFR Part 21 for certain Model 3051N Pressure Transmitters

Pursuant to 10 CFR Part 21, section 21.21(b), Rosemount Nuclear Instruments, Inc. (RNII) is writing to inform you that a limited number of Model 3051N pressure transmitters listed in the attachment may exhibit non-linear and non-repeatable performance. The affected transmitters were shipped from RNII between August 12, 2002 and September 27, 2006.

1.0 Name and address of the individual providing the information:

Mr. Marc D. Bumgarner
Vice President & General Manager
Rosemount Nuclear Instruments, Inc.
8200 Market Boulevard
Chanhassen, MN 55317

2.0 Identification of items supplied:

Certain Model 3051N pressure transmitters identified in the attachment.

3.0 Identification of firm supplying the item:

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

4.0 Nature of the failure and potential safety hazard:

The Model 3051N Smart Pressure Transmitter is dedicated for nuclear use consistent with the requirements of 10 CFR Part 21. It is qualified for use in safety related applications per IEEE 323-1983 (mild environment) and IEEE 344-1987 for seismic applications as documented in its associated qualification reports.

Procurement and production records indicate that 53 Model 3051N pressure transmitters (Ranges 1, 2 and 3) manufactured between August 2002 and September 2006 have sensor module castings that were not solution annealed, and therefore may contain elevated levels of hydrogen in the sensor module fill fluid. Solution annealing is a heat treatment process for castings. It is used to homogenize the casting by reducing any segregated elements that include carbon, which can greatly reduce corrosion resistance. This process also reduces the level of mobile hydrogen in the casting to a point where out gassing is no longer a reliability concern.

Elevated levels of hydrogen in the sensor module casting can create a reliability concern because mobile hydrogen can diffuse through the metal into the sensor module fill fluid and may eventually reach gas solubility limits of the fill fluid. When this occurs, gas vapor bubbles may form, primarily under vacuum process conditions, resulting in a sensor output shift. A transmitter with hydrogen bubbles in the sensor module fill fluid will annunciate itself by exhibiting non-linear and non-repeatable performance.

To date, RNII has not received any 3051N field returns for this issue. However, there have been two confirmed failures related to this issue on a commercially available Rosemount product using the identical sensor module casting. Additionally, there have been other confirmed failures related to this issue on a commercially available Rosemount product using a similar, but not identical casting. These commercial grade product returns prompted additional internal testing and analysis that indicated a potential reliability concern on 3051N transmitters that were manufactured with non-solution annealed module castings.

As a result, a thorough evaluation was completed and a notification about the potential substantial safety hazard identified on 7/1/10 is being made in accordance with 10 CFR Part 21 to customers that purchased a 3051N pressure transmitter from the potentially affected population.

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


- The last shipment of a 3051N transmitter with a non-solution annealed sensor module casting was September 2006.
- Following September 2006, all sensor module castings utilized on the 3051N have been solution annealed.
- Procurement drawings for the module castings have been reviewed and the requirement to solution anneal all module castings for a model 3051N transmitter has been verified.
- Model 3051N pressure transmitters affected by this notification may be returned to RNII for replacement at no charge.

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

The end user is advised to determine the impact of this potential reliability issue upon its plant's operation and safety, and take action as deemed necessary. Affected transmitters may be returned to RNII for replacement at no charge.

Rosemount Nuclear Instruments, Inc. is committed to the nuclear industry and remains dedicated to the supply of high quality products to our customers. If you have any questions, or 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,



Marc D. Bumgarner
Vice President & General Manager
Rosemount Nuclear Instruments, Inc.

ATTACHMENT: 10 CFR Part 21 Notification - 12 July 2010.

Entergy Corp

Sales Order	Purchase Order Number	Model Number	Serial Number	Ship Date	Site
1061163	VY014098	3051ND2A02A1AH2BS	1243742	12-Aug-02	VERMONT YANKEE
1061163	VY014098	3051ND2A02A1AH2BS	1243743	12-Aug-02	VERMONT YANKEE
1061163	VY014098	3051ND2A02A1AH2BS	1243741	12-Aug-02	VERMONT YANKEE
1083248	VY014098	3051ND2A02B1AH2BS	1260592	18-Sep-02	VERMONT YANKEE
1083248	VY014098	3051ND2A02B1AH2BS	1260594	18-Sep-02	VERMONT YANKEE
1083248	VY014098	3051ND2A02B1AH2BS	1260593	18-Sep-02	VERMONT YANKEE
1084239	VY014552	3051ND3A02B1AH2BS	1263277	20-Sep-02	VERMONT YANKEE
1084239	VY014552	3051ND3A02B1AH2BS	1263276	20-Sep-02	VERMONT YANKEE

ATTACHMENT: 10 CFR Part 21 Notification - 12 July 2010.
Emerson Process Management AG

Sales Order	Purchase Order Number	Model Number	Serial Number	Ship Date	Site
1170729	41607157	3051NG3A02A1JM6H2BS	1336295	15-Apr-03	KRSKO
1170729	41607157	3051NG3A02A1JM6H2BS	1336296	15-Apr-03	KRSKO
1170801	41607158	3051ND3A02A1JH2BS	1336290	17-Apr-03	KRSKO
1170801	41607158	3051ND3A02A1JH2BS	1336289	17-Apr-03	KRSKO

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EMERSON PROCESS MANAGEMENT SL

Sales Order	Purchase Order Number	Model Number	Serial Number	Ship Date	Site
1094472	34989553	3051ND1A02A1AH2M5B2	1277316	24-Oct-02	SANTA MARIE DE GARONA
1094472	34989553	3051ND1A02A1AH2M5B2	1277313	24-Oct-02	SANTA MARIE DE GARONA
1094472	34989553	3051ND1A02A1AH2M5B2	1277317	24-Oct-02	SANTA MARIE DE GARONA
1094472	34989553	3051ND1A02A1AH2M5B2	1277314	24-Oct-02	SANTA MARIE DE GARONA
1094472	34989553	3051ND1A02A1AH2M5B2	1277315	24-Oct-02	SANTA MARIE DE GARONA
1094472	34989553	3051ND1A02A1AH2M5B2	1277312	24-Oct-02	SANTA MARIE DE GARONA

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U Shun Enterprise Co LTD

Sales Order	Purchase Order Number	Model Number	Serial Number	Ship Date	Site
1766706	F-119-95 (351-950159023Y)	3051ND3A02A1AB2H2	1710273	27-Sep-06	Kuosheng Nuclear Power Station

ATTACHMENT: 10 CFR Part 21 Notification - 12 July 2010.
Korea Hydro and Nuclear Power Co

Sales Order	Purchase Order Number	Model Number	Serial Number	Ship Date	Site
894002	PUC-P-9J230A	3051ND1A02A1AH2B2	1240830	16-Aug-02	Ulchin 5
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1316121	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315786	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315787	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315780	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315777	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315778	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1316127	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315775	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315779	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315791	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1316126	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315783	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1316119	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1316120	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315794	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315785	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315781	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1316122	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1316123	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315793	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315788	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1316124	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315782	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315789	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1316125	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1316128	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315784	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315790	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1315792	1-Apr-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1365414	3-Sep-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1365413	3-Sep-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1365411	3-Sep-03	Ulchin 6
894205	PUC-P-9J230A	3051ND1A02A1AH2B2	1365410	3-Sep-03	Ulchin 6