General Information or Other (PAR) Event # 43853

Rep Org:	INVENSYS PROCESS SYSTEMS	**Notification Date / Time:**	12/19/2007 14:41 (EST)
Supplier:	INVENSYS PROCESS SYSTEMS	**Event Date / Time:**	11/02/2007 (EST)
		Last Modification:	12/19/2007
Region:	1	**Docket #:**	
City:	FOXBORO	**Agreement State:**	Yes
County:		**License #:**	
State:	MA		
NRC Notified by:	DAVID GOLDEN	**Notifications:**	JAMES TRAPP R1
HQ Ops Officer:	JASON KOZAL		ERIC DUNCAN R3
Emergency Class:	NON EMERGENCY		THOMAS FARNHOLTZ R4
10 CFR Section:			PART 21 GROUP
21.21	UNSPECIFIED PARAGRAPH		SCOTT SHAEFFER R2
			VERN HODGE E-MAIL

PART 21 NOTIFICATION - FAILURE TO FULLY COMPLY WITH THE REQUIREMENTS FOR DEDICATION OF COMMERCIAL GRADE ITEMS

"In accordance with 10CFR21, this letter is to inform you that Invensys Systems, Inc. (d/b/a Invensys Process Systems (IPS)) has identified a failure to fully comply with the requirements for Dedication of Commercial Grade Items (e.g. fuses, resistors, capacitors, etc.) provided to some of our nuclear customers. These parts, certified as safety-related basic components, were not subject to verification of functional performance characteristics as part of the Dedication process and therefore if not installed and tested in their intended application could represent a potential safety hazard.

"This condition was identified during the NUPIC (Nuclear Procurement Issues Committee) joint audit of our Foxboro Massachusetts facility and immediate notification was provided to the member utilities through their web-based system. This Failure to Comply was confirmed on 11/2/07 and, based on our records, has been determined to be limited to the customers, orders and parts identified in [the report].

"Invensys has taken immediate corrective action to rectify the situation in that these parts are no longer provided as safety- related and we will be providing separate notification to each of the nuclear customers listed in [the report]. It should be noted that the subject materials were all controlled and provided in accordance with the approved IPS procedures which include requirements for inspections verifying the appropriate manufacturer, part number, markings and other physical characteristics. If these items have been properly installed in the intended Foxboro equipment, functional performance is typically verified through subsequent component or system-level testing."

The following customers are effected by this issue: American Electric Power, Arizona Public Service, Dominion Nuclear, Entergy, Exelon, First Energy, Indiana Michigan Power Co., NPPD, OPPD, Constellation, Union Electric, and Wolf Creek.

IE19
NRR

General Information or Other (PAR) Event # 43853

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33 Commercial Street
Foxboro, MA 02035
Work # 508-549-2352
Cell # 508-446-2288
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Invensys Process Systems

Fax

To:	NRC Operations Center	**From:**	David Golden, Global Director of Quality
Fax:	(301) 816-5151	**Pages:**	7
Phone:	(301) 816-5100	**Date:**	December 19, 2007
Re:	Notification of Failure to Comply	**cc:**	

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

Please review attached documents.

invensys.
Process Systems

Invensys Process Systems
33 Commercial Street
Foxboro, MA 02035

December 19, 2007

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

SUBJECT: Notification of Failure to Comply

Dear Sirs,

In accordance with 10CFR21, this letter is to inform you that Invensys Systems, Inc. [d/b/a Invensys Process Systems (IPS)] has identified a failure to fully comply with the requirements for Dedication of Commercial Grade Items (e.g. fuses, resistors, capacitors, etc.) provided to some of our nuclear customers. These parts, certified as safety-related basic components, were not subject to verification of functional performance characteristics as part of the Dedication process and therefore if not installed and tested in their intended application could represent a potential safety hazard.

As described in Attachment 1, this condition was identified during the NUPIC joint audit of our Foxboro Massachusetts facility and immediate notification was provided to the member utilities through their web-based system. This Failure to Comply was confirmed on 11/2/07 and, based on our records, has been determined to be limited to the customers, orders and parts identified in Attachment 2.

Invensys has taken immediate corrective action to rectify the situation in that these parts are no longer provided as safety-related and we will be providing separate notification to each of the nuclear customers listed in Attachment 2. It should be noted that the subject materials were all controlled and provided in accordance with the approved IPS procedures which include requirements for inspections verifying the appropriate manufacturer, part number, markings and other physical characteristics. If these items have been properly installed in the intended Foxboro equipment, functional performance is typically verified through subsequent component or system-level testing.

If there are any further questions regarding this notification, contact Jeff Larson, IPS Nuclear QA Director at 949-885-0716 or jeff.larson@ips.invensys.com.

Sincerely,

David Golden
Director, Global Quality Assurance
Invensys Process Systems

Attachments

Attachment 1

10CFR21 Notification
December 19, 2007

NUPIC Industry Notification – 11/9/07
Audit #19778

"**Criteria:**
10CFR21, Section 21.3 - Definitions

"Critical characteristics. When applied to nuclear power plants licensed pursuant to 10 CFR Part 50, critical characteristics are those important design, material, and **performance characteristics** of a commercial grade item that, once verified, will provide reasonable assurance that the item will perform its intended safety function."

"Dedication. When applied to nuclear power plants licensed pursuant to 10 CFR Part 30, 40, 50, 60, dedication is an acceptance process undertaken to provide reasonable assurance that a commercial grade item to be used as a basic component will perform its intended safety function and, in this respect, is deemed equivalent to an item designed and manufactured under a 10 CFR Part 50, appendix B, quality assurance program. This **assurance is achieved by identifying the critical characteristics of the item and verifying their acceptability by inspections, tests, or analyses** performed by the purchaser or third-party dedicating entity after delivery, supplemented as necessary by one or more of the following: commercial grade surveys; product inspections or witness at holdpoints at the manufacturer's facility, and analysis of historical records for acceptable performance. In all cases, the dedication process must be conducted in accordance with the applicable provisions of 10 CFR Part 50, appendix B. The process is considered complete when the item is designated for use as a basic component."

"Dedicating entity. When applied to nuclear power plants licensed pursuant to 10 CFR Part 50, dedicating entity means the organization that performs the dedication process. Dedication may be performed by the manufacturer of the item, a third-party dedicating entity, or the licensee itself. The dedicating entity, pursuant to § 21.21(c) of this part, is responsible for identifying and evaluating deviations, reporting defects and failures to comply for the dedicated item, and maintaining auditable records of the dedication process."

Finding:
Contrary to the above, it was identified that the Invensys Foxboro Quality Manual (QMS-2), Section 7.4.4.3 does not require the identification and verification of critical characteristics of individually certified commercial piece parts (items without "N -"part numbers) as part of the acceptance process. Items have been provided to nuclear customers certified as "safety-related" under this process with only the verification of dimensions and/or markings. The verification of dimensions and/or markings does not in most cases include the "performance characteristics" necessary to reasonably ensure the item will perform its intended safety function

Discussion:
This programmatic failure is due to a misunderstanding of Invensys and previous NUPIC Audit Teams as to who the DEDICATING ENTITY is and what are the responsibilities of the

DEDICATING ENTITY. The Invensys Quality Program permitted commercial grade items to be sold under Safety Related Purchase Orders as long as they were "inspected" and "certified" for use in a specific basic component with the expectation that the utility would perform the functional testing necessary to complete the dedication. In cases where the utility completes the dedication by performing functional testing, the utility would be the DEDICATING ENTITY and Invensys would be the supplier of a commercial item. Several NUPIC Audit Teams over the past seven plus years have accepted an Invensys "white paper" by stating that the Invensys (Foxboro at the time) process of supplying piece parts meets the following requirement from 10CFR21:

> "An acceptance process undertaken to provide reasonable assurance that a commercial grade item to be used as a basic component will perform its intended safety function and in this respect is deemed equivalent to an item designed and manufactured under a 10 CFR Part 50, Appendix B, quality assurance program."

This is in spite of these evaluations recognizing that "Foxboro is adamant about stating that it does not have a commercial grade dedication program", these utility evaluations stated that Invensys has an acceptable dedication process. This conclusion is faulty because it was based on extracting the above sentence out of context from the 10CFR21 definition of DEDICATION. The paragraph in question continues to state:

> "This **assurance is achieved by identifying the critical characteristics of the item and verifying their acceptability by inspections, tests, or analyses** performed by the purchaser or third-party dedicating entity after delivery..."

The Invensys acceptance process does not **identify the critical characteristics of the item and verify their acceptability by inspections, tests, or analyses.** Therefore, the Invensys acceptance process can not be considered a "dedication" as defined in 10CFR21.

In the last NUPIC Joint Audit perform in 2005, the audit's Technical Specialist came to the following conclusion regarding Invensys providing Non "N -" parts:

> "If Invensys were to provide a part for an "N" designated assembly to a utility it would be up to the utility to define the critical characteristics, perform the dedication and the utility would assume deficiency reporting."

This conclusion was not included in the audit summary and may have been overlooked by utility audit reviewers and as a result appropriate restrictions or Invensys program changes were not made.

Due to the recent changes in the Invensys quality management, several quality programs improvements have been made. One of these improvements is the creation of an INVENSYS PROCESS SYSTEMS NUCLEAR QUALITYASSURANCE MANUAL, IPS-Q2. This manual establishes the quality assurance program for all Invensys Process System (IPS) facilities where Nuclear Safety Related activities are performed; i.e., Shanghai, China; Foxboro, MA and Irvine, CA. Invensys Process Systems is a subdivision of Invensys Systems that specializes as the

name implies in process system controls. This manual makes the following policy statement regarding the dedication of commercial grade items and services:

> "Where required for safety related applications, commercial grade items and services shall be dedicated for nuclear service by processes consistent with US NRC Generic Letter 89-02, which endorses the guidelines contained in Electric Power Research Institute (EPRI) Guideline NP-5652 (NCIG-07).

Because this manual was just recently implemented, the lower tier quality manuals and procedures at all IPS location have not been revised to reflect this commitment. However, this policy has been effectively implemented at the IPS facility in Irvine, CA for several years. As a result of the identification of this dedication issue at the Foxboro, MA facility; it is expected that the implementation of this policy will be expedited. Until a fully compliant dedication program has been established for the subject parts, Invensys will no longer be accepting "safety-related" purchase orders (10CFR50 App. B & 10CFR21) for these materials.

Summary:

- Type of Equipment Affected:
  - Individual components and parts for the Foxboro "SPEC 200" and "SPEC 200 Micro" lines with a part numbers that do NOT start with "N –" that were shipped to the customers . This excludes the "SPEC 200" and "SPEC 200 Micro" components with part numbers that start with "N –".
  - Individual components and parts for the Foxboro "Safety Related N-227S and N-E27R Series Recorder Lines with a part numbers that do NOT start with "N –" that were shipped to the customers . This excludes the components with part numbers that start with "N –".
  - This notice includes part numbers beginning with just an "N" and no dash.

- Invensys is reviewing this issue for potential 10CFR21 reportability.

- Each utility using this line of Foxboro equipment in Safety Related applications should review their Purchase Orders and records of commercial grade dedication for compliance with their respective quality program.

Invensys Contact: Jeff Larson, Director, Nuclear Quality Assurance, Phone 949-885-0716, Email jeff.larson@ips.invensys.com"

Attachment 2

10CFR21 Notification
December 19, 2007

CUSTOMER	CUSTOMER P.O. #	FOXBORO PART #	QTY	DESCRIPTION	INVENSYS SO #
American Electric Power	190-0000038714	X0170DA	5	Fan	516605
Arizona Public Service	500236637	EO286ED	12	Resistor	183640
Arizona Public Service	500234929	G0114HD	6	Ribbon Indicator (Red)	171436
Arizona Public Service	500234929	G0114HE	3	Ribbon Indicator (Green)	171436
Arizona Public Service	500236637	G0114PP	6	Drive Cable Assy (Red)	183640
Arizona Public Service	500234929	G0114PQ	6	Drive Cable (Green)	171436
Arizona Public Service	500236637	G0114PR	4	Drive Cable Assy (Red)	183640
Arizona Public Service	500234929	G0114PU	7	Drive Cable (Green)	171436
Arizona Public Service	500234929	G0115KB	6	Ribbon Spring	171436
Arizona Public Service	500217132	H0183AC	6	Capacitor	6000588
Arizona Public Service	500212577	N0262AB	5	Fuse	6000586
Dominion Nuclear - CT	45434854	N0306AY	2	Relay	645530
Dominion Nuclear - CT	45486830	N0306AY	2	Relay	699119
Entergy - Arkansas Nuclear 1	10126647	G0114PQ	2	Drive Cable Assy (Green)	651610
Entergy - Arkansas Nuclear 1	10126647	G0114PU	2	Drive Cable Assy (Green)	651610
Entergy - Fitzpatrick	4500525261	P0162AX	6	Battery	428423
Entergy - Fitzpatrick	4500538361	P0162AX	5	Battery	544929
Exelon	401044	N0268BP	2	Lamp	590791
Exelon	403395	N0310WA	2	Pushbutton	602612
Exelon	80 021724	P0162AX	4	Battery	701329
Exelon - Peachbottom	90 184823	N0286AX	1	Lamp	309093
Exelon - Peachbottom	90 000721	G0114HG	2	Pen Servo Assy	371482
Exelon - Peachbottom	90 011312	P0162AX	8	Battery	532487
Exelon - Peachbottom	90 012422	G0114DX	1	Motor Support	546363
Exelon - Peachbottom	90 012422	G0114HE	1	Ribbon, Green Indicator	546363
Exelon - Peachbottom	90 021158	G0114NK	2	Chart Drive Motor	696271
Exelon - Peachbottom	90 014617	P0162AX	1	Battery	574328
Exelon - Peachbottom	90 021466	P0162AX	2	Battery	703157
First Energy - Beaver Valley	103940	H0183DS	5	Capacitor	127881
First Energy - Beaver Valley	103940	H0183GT	5	Capacitor	127881
First Energy - Beaver Valley	103940	H0183GU	5	Capacitor	127881
First Energy - Beaver Valley	103940	K0120RE	5	Capacitor	127881
First Energy - Beaver Valley	D166194	A3304BV	50'	Wire	6000429
First Energy - Davis Besse	45177887	H0183AC	4	Capacitor	616177
First Energy - Davis Besse	45177887	K0120RE	50	Capacitor	616177
First Energy - Davis Besse	45177887	N0110AM	4	Capacitor	616177

Attachment 2

10CFR21 Notification
December 19, 2007

CUSTOMER	CUSTOMER P.O. #	FOXBORO PART #	QTY	DESCRIPTION	INVENSYS SO #
Indiana Michigan Power Co	1522491	P0151XU	8	Edge Connector (2CCA)	728001
NPPD	4500037394	G0114PR	3	Pen Servo Assy	467826
OPPD	8029	E0307TE	10	Resistor	296651
OPPD	47466	E0278FG	8	Resistor	321735
OPPD	55506	X0168FQ	1	Lock, Flush Handle	376801
OPPD	55506	X0171PX	1	Key	376801
Constellation - RG&E	4500008196	AG100VE	2	B0138QZ, B0138QU, Kit	183225
Union Electric	171494	C0152QT	5	Jumper Assy	171494
Union Electric	96374	C3510LG	25	Fuse, 3A	186286
Union Electric	96333	E0285VX	5	Potentiometer	177085
Union Electric	768589	G0114AE	1	Back Panel	227800
Union Electric	768589	G0114DW	1	Cable Assy	227800
Union Electric	96065	N0279CT	1	Relay	170049
Union Electric	95286	N0280NJ	6	Switch Button	42917
Union Electric	96350	P0170BR	1000'	Wire	177492
Wolf Creek	73281	N0311HU	2	Jumper Cable Assy	614924
Wolf Creek	712320	N0310WA	13	Pushbutton	234678
Wolf Creek	730820	N0310WB	1	Pushbutton Assy	569983