

Part 21 (PAR)

Event # 48862

Rep Org: ATC NUCLEAR	Notification Date / Time: 03/28/2013 15:29 (EDT)		
Supplier: ATC NUCLEAR	Event Date / Time: 01/21/2013 (EDT)		
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Region: 1	Docket #:		
City: OAK RIDGE	Agreement State:		Yes
County:	License #:		
State: TN			
NRC Notified by: R. A. CHALIFOUX	Notifications:	PAUL KROHN	R1DO
HQ Ops Officer: STEVE SANDIN		DEBORAH SEYMOUR	R2DO
Emergency Class: NON EMERGENCY		JULIO LARA	R3DO
10 CFR Section:		GREG PICK	R4DO
21.21(a)(2) INTERIM EVAL OF DEVIATION		NRR PART 21 GROUP	EMAIL

INTERIM PART 21 REPORT INVOLVING REVIEW OF SEISMIC TESTING METHODOLOGY

The following information was received via fax:

"ATC Nuclear in Oak Ridge, TN is making an initial notification of a Potential Part 21 Defect in accordance with 10 CFR 21.21(a)(2).

"A recent review performed January 21, 2013 of seismic Test Response Spectra (TRS) for seismic qualification activities identified that Required Response Spectra (RRS) may not have been completely enveloped for portions of the required frequency range during test performance of the Operational Basis Events (OBE's) and the Safe Shutdown Earthquake(s) (SSEs) for some customers. Specifically, some TRS results may have been below the provided RRS in the 10-25 Hz range in certain circumstances and thus not fully meeting the RRS and required acceptance criteria of IEEE 344 1975/1987/2004. The condition is the result of the instrumentation methodology and inherent tri-axial table characteristics where vibrational energy is not fully transmitted to the unit under test in all test conditions. The safety significance is that the Basic Component may not perform its intended safety function during or following a seismic event exceeding the as-tested vibration frequencies. ATC has demonstrated through actual testing to date that this probability is very low. Many customers provide RRS that include conservatism; however, this also has not been credited in the ATC Nuclear evaluation methodology discussed below. The affected customers, purchase orders, and relevant information have been provided as Attachment 1 [not attached to this report - customers notified were XCEL Energy, Bechtel Power Corporation, TVA for Watts Bar 2 (Projected Operation 12/2015) and Preferred Metal Technologies, Inc.] to this interim notification.

"ATC Nuclear developed a systematic evaluation methodology which has been independently corroborated by industry experts to evaluate the seismic tri-axial test programs of concern conducted by ATC Nuclear. The systematic evaluation involves review of the TRS to determine if adequate test margin exists within the test data

IE19
NRR

Part 21 (PAR)

Event # 48862

when compared to the RRS, evaluation of the table test acceleration versus fixture acceleration as necessary, and when required, retesting of the component. For all program reviews completed to date (~70% of all programs) for operating licensees, all re-evaluation and re-testing has resulted in no reduction in seismic withstand capabilities and no failures. The evaluation included prioritization of operating reactors early in the process to the extent possible to ensure minimal impact to those facilities.

"Based on the successful completion of evaluations to date, ATC Nuclear is confident this issue will be resolved through the methodology established and worst-case may result in the submittal of an addenda to existing qualification reports in situations where retesting has been required for a basic component.

"ATC Nuclear will need until May 15, 2013 to conclude the evaluation process. Should, during any re-testing, a condition arise warranting notification, that notification will be immediately made at the time of discovery to the affected customer. All orders since the point of discovery have been addressed through corrective actions to prevent recurrence and are unaffected.

"The below contact information should be utilized regarding any questions.

R.A. Chalifoux
Vice-President QA, ATC Nuclear
Tel: (865) 384-0124
email: rchalifoux@argoturbo.com

March 28, 2013

NRC Operations Center
FAX (301) 816-5151

Subject: POTENTIAL 10 CFR PART 21 INTERIM REPORT

ATC Nuclear
777 Emory Valley Road
Oak Ridge, TN 37830
Information Contact: Ray Chalifoux - ATC Nuclear (contact information below)

ATC Nuclear in Oak Ridge, TN is making an initial notification of a Potential Part 21 Defect in accordance with 10 CFR 21.21(a) (2).

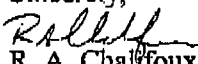
A recent review performed January 21, 2013 of seismic test response spectra for seismic qualification activities identified that Required Response Spectra may not have been completely enveloped for portions of the required frequency range during test performance of the Operational Basis Events (OBE's) and the Safe Shutdown Earthquake(s) (SSEs) for some customers. Specifically, some TRS results may have been below the provided RRS in the 10-25 Hz range in certain circumstances and thus not fully meeting the RRS and required acceptance criteria of IEEE 344 1975/1987/2004. The condition is the result of the instrumentation methodology and inherent tri-axial table characteristics where vibrational energy is not fully transmitted to the unit under test in all test conditions. The safety significance is that the Basic Component may not perform its intended safety function during or following a seismic event exceeding the as-tested vibration frequencies. ATC has demonstrated through actual testing to date that this probability is very low. Many customers provide RRS that include conservatism; however, this also has not been credited in the ATC-Nuclear evaluation methodology discussed below. The affected customers, purchase orders, and relevant information have been provided as Attachment 1 to this interim notification.

ATC Nuclear developed a systematic evaluation methodology which has been independently corroborated by industry experts to evaluate the seismic tri-axial test programs of concern conducted by ATC-Nuclear. The systematic evaluation involves review of the TRS to determine if adequate test margin exists within the test data when compared to the RRS, evaluation of the table test acceleration versus fixture acceleration as necessary, and when required, retesting of the component. For all program reviews completed to date (~70% of all programs) for operating licensees, all re-evaluation and re-testing has resulted in no reduction in seismic withstand capabilities and no failures. The evaluation included prioritization of operating reactors early in the process to the extent possible to ensure minimal impact to those facilities.

Based on the successful completion of evaluations to date, ATC Nuclear is confident this issue will be resolved through the methodology established and worse-case may result in the submittal of an addenda to existing qualification reports in situations where retesting has been required for a basic component.

ATC Nuclear will need until May 15, 2013 to conclude the evaluation process. Should, during any re-testing, a condition arise warranting notification, that notification will be immediately made at the time of discovery to the affected customer. All orders since the point of discovery have been addressed through corrective actions to prevent recurrence and are unaffected.

The below contact information should be utilized regarding any questions.

Sincerely,

R. A. Chalifoux
Vice President QA, ATC Nuclear
(865) 384 0124
rchalifoux@argoturbo.com

ATTACHMENT 1: REMAINING ORDERS UNDER EVALUATION

Customer	PO(s)	Part Number(s)	ATC No.
XCEL ENERGY	00034703	ASCO Solenoid NPK8321A1V	10T7660
BECHTEL POWER CORP TVA FOR WATTS BAR 2 PROJECTED OPERATION 12/2015	87211/105258/ 222593/93603	Struthers Dunn Relay/Socket 219BBX-115/125 DC	10T1930/10T3220/ 11T1210/10T2320
	93459	Relay Time Delay 328D200F10XX	10T2330
	130266	Switch, Temperature 40PN-ESN15W/TA- 1A	10T4810
	130629-1	PZR Heater Breaker Panel	10T4840
	135233-1	Emerson Controller, Pneumatic 545310G3670170003	10T5270
	175554-1	Transmitter, 4-20 mA DC, Ultrasonic Level 345-0442-100/385-5K10-003	10T7320
	179891-2	Moore Industries International, Isolator SCT/4-20MA/4-20MA/117VAC/RF-TX(AB)	10T7590
	180160/233018	GE Transfer Switch 16SB1RB2A11LSM2V	10T7610/11T1910
	187528/242339	Vertical, Edgewise Meter, Type VX-252 606B419A09	10T8160/11T2780
	242815	Woodward Governor Signal Generator Ramp 9903-091	11N2790
	208817-1	Kurz Flow Elements 1361D0004 1361D0003	11T0300
	339491-3	Automatic Timing Controls Relay Socket 000-825-89-00	11T10910
	220869	Square D Electrical Light 9001KP38R9 9001KP38G9	11T1140
	262924-1	Allen Bradley Limit Switch 802R-H1C	11T7240
	286116	Tyco Auxiliary Switch E7012PAL004	11T7630
	294621	Pump, Transfer Oil 78028B09	11T8190
PREFERRED METAL TECHNOLOGIES INC	5782	FCI Flowswitch Dynatorque Gear Operator Electrical Enclosure FLT93B-AC00 DT7 WITH HWCR-10 HANDWHEEL DWG- NI758-778C01-SUB	12T0010
	5498	Bray Operator and Topworx Go Switch w/ Magnet 932104-11320532, AND TOPWORX GO SWITCH MODEL 7313528- A2 WITH MAGNET MODEL AMS7	11T8130
	5006	Bray Series 05 80:1 Declutchable Handwheel Gear Electrical Disconnect Switch and Enclosure 050800-21202536	10T6060