

Power Reactor

Event # 51095

Site: BRUNSWICK		Notification Date / Time: 05/28/2015 13:18 (EDT)	
Unit: 1 2	Region: 2	State : NC	Event Date / Time: 05/26/2015 15:36 (EDT)
Reactor Type: [1] GE-4,[2] GE-4		Last Modification: 05/28/2015	
Containment Type: MARK I MARK I			
NRC Notified by: MARK TURKAL		Notifications: KATHLEEN O'DONOHUE R2DO	
HQ Ops Officer: JOHN SHOEMAKER		PART 21/50.55 REACTOREMAIL	
Emergency Class: NON EMERGENCY			
10 CFR Section:			
21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE			

Unit	Scram Code	RX Crit	Init Power	Initial RX Mode	Curr Power	Current RX Mode
1	N	Yes	100	Power Operation	100	Power Operation
2	N	Yes	100	Power Operation	100	Power Operation

PART 21 NOTIFICATION - ALLEN BRADLEY 700RTC RELAY CONFIGURATION

"This is a non-emergency notification, required by 10 CFR 21.21(d)(3)(i).

"Brunswick has determined that Allen Bradley relays, base model 700RTC, contain an unevaluated Complex Programmable Logic Device (CPLD). This was an unpublished design change that was implemented to replace an obsolete integrated circuit chip. The undocumented design change did not result in a part number change from Allen Bradley. There was no change to the external appearance of the relay that would indicate that a design change had been made to the relay configuration. Therefore, qualification/dedication of the modified relays have not included additional testing for the new CPLD component. Testing, performed by Duke Energy, has demonstrated that this CPLD can be affected by electrical noise from operation of nearby relays which can reset the timing of the relay. This condition was discovered as a result of a post-maintenance test of an emergency diesel generator. Additional details associated with the discovery of this condition are contained in Brunswick Licensee Event Report 1-2015-002, dated May 20, 2015.

"Brunswick purchased, as commercial grade, 25 of the modified Allen Bradley 700RTC relays beginning in October, 2008. Duke Energy dedicated these relays for use in safety related applications at Brunswick. The dedicated relays were not provided to any third party customers.

"The NRC Senior Resident Inspector has been notified."

Brunswick has taken applicable compensatory measures to insure no equipment is inoperable because of these relays.

This problem was previously reported in EN #51030.

IE19
NRL

Fax

To: NRC Operations Center

From: Mark Turkal - Brunswick

Fax: 301 816-5151

Pages: 2 (Cover plus 1)

Phone: 301 816-5100

Date: 5/28/15

Re: Part 21 - Allen Bradley Relays

CC: N/A

NRC FORM 361
(12-2000)U.S. NUCLEAR REGULATORY COMMISSION
OPERATIONS CENTERREACTOR PLANT
EVENT NOTIFICATION WORKSHEET

EN #

NRC OPERATION TELEPHONE NUMBER: PRIMARY -- 301-816-5100 or 800-532-3489*, BACKUPS -- [1st] 301-951-0550 or 800-449-3694*,
[2nd] 301-415-0550 and [3rd] 301-415-0553

*Licensees who maintain their own ETS are provided these telephone numbers.

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	NAME OF CALLER	CALL BACK #
	Brunswick	1 & 2	Mark Turkal	(910) 457-3066
EVENT TIME & ZONE	EVENT DATE	POWER/MODE BEFORE	POWER/MODE AFTER	
1536 EDT	05/26/2015	Unit 1 & 2 - 100% / Mode 1	Unit 1 & 2 - 100% / Mode 1	
EVENT CLASSIFICATIONS		1-Hr. Non-Emergency 10 CFR 50.72(b)(1)		
<input type="checkbox"/> GENERAL EMERGENCY	GEN/AAEC	<input type="checkbox"/> TS Deviation	ADEV	<input type="checkbox"/> (v)(A) Safe S/D Capability AINA
<input type="checkbox"/> SITE AREA EMERGENCY	SIT/AAEC	4-Hr. Non-Emergency 10 CFR 50.72(b)(2)		<input type="checkbox"/> (v)(B) RHR Capability AINB
<input type="checkbox"/> ALERT	ALE/AAEC	<input type="checkbox"/> (i) TS Required S/D	ASHU	<input type="checkbox"/> (v)(C) Control of Rad Release AINC
<input type="checkbox"/> UNUSUAL EVENT	UNU/AAEC	<input type="checkbox"/> (iv)(A) ECCS Discharge to RCS	ACCS	<input type="checkbox"/> (v)(D) Accident Mitigation AIND
<input type="checkbox"/> 50.72 NON-EMERGENCY	(see next columns)	<input type="checkbox"/> (iv)(B) RPS Actuation (scream)	ARPS	<input type="checkbox"/> (x)(i) Offsite Medical AMED
<input type="checkbox"/> PHYSICAL SECURITY (73.71)	ODDD	<input type="checkbox"/> (x)(i) Offsite Notification	APRE	<input type="checkbox"/> (x)(ii) Loss Comm/Aasm/Resp ACOM
<input type="checkbox"/> MATERIAL/EXPOSURE	B???	8-Hr. Non-Emergency 10 CFR 50.72(b)(3)		<input type="checkbox"/> 60-Day Optional 10 CFR 50.73(a)(1)
<input type="checkbox"/> FITNESS FOR DUTY	HFIT	<input type="checkbox"/> (ii)(A) Degraded Condition	ADEG	<input type="checkbox"/> Invalid Specified System Actuation AINV
<input type="checkbox"/> OTHER UNSPECIFIED REQMT. (see last column)		<input type="checkbox"/> (ii)(B) Unanalyzed Condition	AUNA	Other Unspecified Requirement (Identify)
<input type="checkbox"/> INFORMATION ONLY	NINF	<input type="checkbox"/> (iv)(A) Specified System Actuation	AESF	<input checked="" type="checkbox"/> 10 CFR 21.21 - Defects & Noncompliance NONR

DESCRIPTION

Include: Systems affected, actuations and their initiating signals, causes, effect of event on plant, actions taken or planned, etc. (Continue on back)

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NOTIFICATIONS	YES	NO	WILL BE	ANYTHING UNUSUAL OR NOT UNDERSTOOD?	<input type="checkbox"/> YES (Explain above)	<input checked="" type="checkbox"/> NO
NRC RESIDENT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
STATE(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DID ALL SYSTEMS FUNCTION AS REQUIRED?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO (Explain above)
LOCAL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
OTHER GOV AGENCIES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MODE OF OPERATION UNTIL CORRECTED:	N/A	ESTIMATED RESTART DATE: N/A
MEDIA/PRESS RELEASE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			ADDITIONAL INFO ON BACK
						<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO