Power Reactor Event # 41888

Site: CATAWBA		**Notification Date / Time:**	08/02/2005 21:43 (EDT)
Unit: 1 2 **Region:** 2 **State :** SC		**Event Date / Time:**	08/02/2005 18:00 (EDT)
Reactor Type: [1] W-4-LP,[2] W-4-LP		**Last Modification:**	08/02/2005
Containment Type: ICE COND ICE COND			
NRC Notified by: DAVID JOHNSON		**Notifications:**	KERRY LANDIS R2
HQ Ops Officer: JEFF ROTTON			OMID TABATABAI NRR
Emergency Class: NON EMERGENCY			
10 CFR Section:			
OTHER UNSPEC REQMNT			

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

POTENTIAL PART 21 ISSUE WITH STRUTHERS-DUNN RELAYS

"On 8/21/2005 Duke Energy Corporation was informed by the manufacturer of Struthers-Dunn relay, part number 219BBXP, of a manufacturing defect with the subject relay. Duke contacted the manufacturer as follow up to recent relay failures of this type. There has not been a Part 21 notification to date. The defect is in the relay coil. Some coils that were made in China over an approximate 18-month period did not have their coil core annealed. The annealing step in the manufacturing process was apparently skipped. The missed annealing step results in the relay coil potentially drawing almost twice Its rated current. As a result, the coil can fail after an extended period of time in the energized state. Potentially affected relays of this type were purchased commercial grade and dedicated by Duke Energy Corporation for use in safety related applications. This relay type is utilized in valves in the Catawba Nuclear Service Water System. An investigation is in progress as to whether the relays in service at Catawba have the date code to indicate they have the manufacturing defect. Duke is also investigating if this relay type is in service at the other Duke nuclear units. This manufacturing defect may be reportable under 10 CFR 21 if other utilities purchased identical relays and dedicated them for use in safety related applications.

"The following Is a summary of information obtained from Struthers-Dunn concerning the affected relays:

(1) Relays manufactured between January 2003 and June 2004 (date codes 0301B through 0424B on the cover).
(2) Any 219 series relay with 120 AC and 240 AC coils.
(3) 'Made in China' marked on the cover.
(4) Also 'Made in USA' marked on the cover with a 'B' in the date code could be affected.

" The Catawba NRC senior resident inspector has been notified."

The relays used in the Catawba Nuclear Service Water System are normally energized.

The licensee will be notifying the North Carolina and South Carolina Warning Points and York, Gaston and Mecklenburg County agencies.

IE19

Power Reactor Event # 41888

CONTROL COPY

Rev. 29

Enclosure 4.11

Event Notification Report

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STATE: "THIS IS THE CATAWBA NUCLEAR SITE IN NRC REGION 2 MAKING AN EVENT NOTIFICATION REPORT" EN# 41888

NOTIFICATION TIME/DATE	UNIT	CALLER'S NAME	CALLBACK TELEPHONE #:	NRC OPERATIONS OFFICER CONTACTED
2143/08-02-05	1 & 2	David Johnson	ENS 1-803-831-3920 (C/R) or 1-803-831-2674 (TSC)	

NRC OPERATION TELEPHONE NUMBER: PRIMARY - 1-301-816-5100 or 1-800-532-3469; BACKUPS - [1st] 1-301-951-0550 or 1-800-449-3694; [2nd] 1-301-415-0550; and [3rd] 1-301-415-0553

EVENT TIME & ZONE	EVENT DATE	U1 POWER/MODE BEFORE U2	U1 POWER/MODE AFTER U2
1800 (time) Region II (zone)	08-02-05	100%/Mode 1 100%/Mode 1	100%/Mode 1 100%/Mode 1

EVENT CLASSIFICATIONS	1-HR NON-EMERGENCY 10CFR5072(b)(1)	8-HR NON-EMERGENCY
GENERAL EMERGENCY	TS Deviation pursuant to 10 CFR 50.54(x)	(i)(A) Degraded Condition
SITE AREA EMERGENCY	Accidental Criticality or Loss/Theft of Material	(ii)(B) Unanalyzed Condition
ALERT	Physical Protection of Plant or Materials	(iv)(A) Valid System Actuation
UNUSUAL EVENT		(v)(A) Safe S/D Capability
50.72 NON-EMERGENCY (see next columns)		(v)(B) RHR Capability
PHYSICAL SECURITY (73.71)	4-HR NON-EMERGENCY 10 CFR 50.72(b)(2)	(v)(C) Control of Radiological
TRANSPORTATION (10 CFR 20)	(i) TS Required S/D	(v)(D) Accident Mitigation
MATERIAL/EXPOSURE (10 CFR 20)	(iv)(A) ECCS Discharge to RCS	(vii) Offsite Medical
RETRACTION	(iv)(B) RPS Actuation when Rx is critical	(xiii) Lost ENS
	(xi) Offsite Notification	(xiii) Lost Emergency Assessment
		(xiii) Lost Offsite Communications
		(xiii) Emergency Siren Inoperable
OTHER UNSPECIFIED REQUIREMENT (IDENTIFY)	60-DAY OPTIONAL 10CFR50.73(a)(1) Invalid Specified System Actuation	24 HOUR NON EMERGENCY
		Radiological Exposure 10CFR20.2202
X Courtesy Notification of a Potential Part 21 issue.		Fitness For Duty 10CFR26.73
		Operating License Deviation

EVENT DESCRIPTION (Include: Systems affected, actuations & their initiating signals, causes, effect of event on plant, actions taken or planned, PARs etc.)

CATEGORY	INITIATION SIGNAL
N/A REACTOR TRIP	
N/A ESF ACTUATION	
N/A ECCS ACTUATION	
N/A SI FLOW	
N/A LCO	

See attached sheet

SYSTEM Nuclear Service Water

COMPONENT Struthens-Dunn Relays

CAUSE: ___ MECHANICAL ___ ELECTRICAL

___ PERSONNEL ERROR X OTHER

Continue on Enclosures 4.11 page 2 of 2 if necessary.

NOTIFICATIONS	YES	NO	WILL BE
NRC RESIDENT	X		
STATE(s) NC			X
SC			X
LOCAL York County			X
Gaston County			X
Mecklenburg County			X
OTHER GOV AGENCIES		X	
MEDIA/PRESS RELEASE		X	

ANYTHING UNUSUAL OR NOT UNDERSTOOD? ☐ YES ☒ NO (Explain above)

DID ALL SYSTEMS FUNCTION AS REQUIRED? ☒ YES ☐ NO (Explain above)

MODE OF OPERATION UNTIL CORRECTED: N/A

ESTIMATED RESTART DATE: N/A

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RADIOLOGICAL RELEASES: CHECK OR FILL IN APPLICABLE ITEMS (specific details/explanations should be covered in event description)					
LIQUID RELEASE	GASEOUS RELEASE	UNPLANNED RELEASE	PLANNED RELEASE	ONGOING	TERMINATED
MONITORED	UNMONITORED	OFFSITE RELEASE	T.S. EXCEEDED	RM ALARMS	AREAS EVACUATED
PERSONNEL EXPOSED OR CONTAMINATED		OFFSITE PROTECTIVE ACTIONS RECOMMENDED		State release path in description	

NOTE: Contact Radiation Protection Shift to obtain the following release information.
IF the notification is due and the information is not available, mark "Not Available" and complete the notification.

	Releases Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium & dissolved noble gases)			10 uCi/min			0.1 Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

CIRCLE RAD MONITORS IN ALARM	PLANT STACK (EMF 35, 36, 37)	CONDENSER/ AIR EJECTOR (EMF 33)	MAIN STEAM LINE (UNIT 1-EMF 26,27,28,29 UNIT 2-EMF 10, 11, 12,13)	SG BLOWDOWN (EMF 34)	OTHER
RAD MONITOR READINGS					
ALARM SETPOINTS: TRIP II					
% T.S. LIMIT (if applicable)	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	

RCS OR SG TUBE LEAKS: CHECK OR FILL IN APPLICABLE ITEMS (specific details/explanations should be covered in event description)

LOCATION OF THE LEAK (e.g. SG#, valve, pipe, etc.):

LEAK RATE: gpm/gpd	T.S. LIMITS EXCEEDED:	SUDDEN OR LONG TERM DEVELOPMENT:
LEAK START DATE: TIME	COOLANT ACTIVITY (Last Sample): PRIMARY SECONDARY-	

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL:

EVENT DESCRIPTION (Continued from Enclosure 4.11 Page 1 of 2)

See attached sheet

ADDITIONAL INFORMATION MAY BE ATTACHED.

APPROVED BY: _____ TIME/DATE: 2130 08/02/05
Operations Shift Manager/Emergency Coordinator (eastern) mm dd yy

Courtesy Notification Regarding Potential Manufacturing Defect in Certain Struthers-Dunn Relays:

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