Power Reactor Event # 46681

Site: MCGUIRE **Notification Date / Time:** 03/18/2011 14:40 (EDT)
Unit: 1 2 **Region:** 2 **State :** NC **Event Date / Time:** 03/18/2011 (EDT)
Reactor Type: [1] W-4-LP,[2] W-4-LP **Last Modification:** 03/18/2011
Containment Type: ICE COND ICE COND

NRC Notified by: JIM DAIN **Notifications:** REBECCA NEASE R2DO
HQ Ops Officer: CHARLES TEAL PART 21 GROUP
Emergency Class: NON EMERGENCY
10 CFR Section:
21.21 UNSPECIFIED PARAGRAPH

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	No	0	Refueling	0	Refueling

PAINT CHIPS DISCOVERED IN WOODWARD GOVERNORS

Woodward governors purchased as nuclear safety related items for use in turbine driven auxiliary feedwater pumps and emergency diesel generators, were found to have paint chips on internal surfaces. These governors were manufactured by Woodward Governor Company, Loveland, CO for use at the McGuire Nuclear Station.

The NRC Resident Inspector has been informed.

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IE19
NRR

Enclosure 4.2

NRC Event Notification Worksheet

RP/0/A/5700/010
Page 1 of 2

STATE: "THIS IS THE McGUIRE NUCLEAR SITE IN NRC REGION 2 MAKING AN EVENT NOTIFICATION REPORT"

NOTIFICATION TIME/DATE	UNIT	CALLER'S NAME	CALLBACK TELEPHONE #:	NRC OPERATIONS OFFICER CONTACTED
3/18/11	N/A	Jim Dain	ENS 1-888-270-0173 or (704) - 875-6044	C Teal

EVENT TIME & ZONE	EVENT DATE	POWER/MODE BEFORE	POWER/MODE AFTER
1440 (time) Region II (zone)	3/12/11	N/A	N/A

EVENT CLASSIFICATIONS	
	GENERAL EMERGENCY
	SITE AREA EMERGENCY
	ALERT
	UNUSUAL EVENT
	TRANSPORTATION (10 CFR 20)
	MATERIAL/EXPOSURE (10 CFR 20)
X	OTHER 10CFR Part 21.21

1-Hr Non-Emergency		
	(50.72 b1(a)	TS Deviation
	(70.52) (a) and (b)	Accidental Criticality OR
	(72.74) (a)	Loss or theft of SNM

4-Hr Non-Emergency		
	(50.72 b2 (I))	TS Required S/D
	(50.72 b2 (IV)(A))	ECCS Discharge to RCS
	(50.72 b2 (IV)(B))	RPS Actuation - critical scram
	(50.72 b2 (XI))	Offsite Notification
	(72.75)(b1	Deviation from ISFSI T.S.
	[70.50(a)]	SNM Protective action(s)
	PHYSICAL SECURITY (73.71)	

8-Hr Non-Emergency 10CFR 50.72(b)3		
	(72.75)(c1)	Spent Fuel Storage SSC defect.
	(72.75)(c2)	Spent Fuel Storage degradation.
	(72.75)(c3)	Fuel Storage related offsite medical.
	(50.72 b3 (XII))	Offsite Medical
	(50.72 b3 (II)(A))	Degraded Condition
	(50.72 b3 (II)(B))	Unanalyzed Condition
	(50.72 b3 (IV)(A))	Valid Actuation of System listed in Encl. 4.3.
	(50.72 b3 (V)(A))	Safe S/D Capability
	(50.72 b3 (V)(B))	RHR Capability
	(50.72 b3 (V)(C))	Control of Rad Release
	(50.72 b3 (V)(D))	Accident Mitigation
	(50.72 b3 (X)(III))	Lost ENS
	(50.72 b3 (X)(III))	Lost Other Assess./Comms
	(50.72 b3 (X)(III))	Emergency Siren INOP

24-Hr. Non-Emergency	
	Material/Exposure (10CFR20)
	(72.75)(d1) Fuel Storage equipment failure.
	(73 App G) safeguards vulnerabilities
	26.73 Significant events involving fitness for duty.
	(70.50(b1)) Contamination event restrictions.
	(70.50(b2)) Equipment failure
	(70.50(b3)) Unplanned medical treatment
	(70.50(b4)) Fire/explosion damage to licensed material
	ISFI Certificate of Compliance

EVENT DESCRIPTION

Include: Systems affected, actuation's & their initiating signals, causes, effect of event on plant, actions taken or planned, etc.

SEE ATTACHED "McGuire Nuclear Station Non-Emergency Notification"

Continue on Enclosure 4.2 page 2 of 2 if necessary.

NOTIFICATIONS	YES	NO	WILL BE
NRC RESIDENT	X		
STATE(s)		X	
LOCAL		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 ☐ N/A ☐ NO (Explain above)

MODE OF OPERATION N/A | EST. RESTART DATE: ☐ YES ☐ NO | ADDITIONAL INFOR ON BACK N/A

UNTIL CORRECTED N/A

APPROVED BY: Wayne M Hoyle (Operations Shift Manager/Emergency Coordinator) TIME/DATE: 12:08 (eastern) 03, 18, 11 (mm dd yy)

Enclosure 4.2

NRC Event Notification Worksheet

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 information.

IF the notification is due and the information is not available,
THEN mark "Not Available" and complete the notification.

	Release 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						

RECORD MONITORS IN ALARM	PLANT STACK (EMF 35, 36, 37)	CONDENSER/ AIR EJECTOR (EMF 33)	MAIN STEAM LINE (UNIT 1-EMF 24,25,26,27 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	

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 Xe eq_____mCi/ml Iodine eq. _____mCi/ml	SECONDARY Xe eq_____mCi/ml Iodine eq. _____mCi/ml

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL:

EVENT DESCRIPTION (Continued from Enclosure 4.2 page 1 of 2)

Attachment

McGuire Nuclear Station Non-Emergency Notification
10CFR21.21 Notification of Defect
Woodward Governors

Duke Energy Carolinas, LLC (Duke Energy) herein makes the following notification under 10CFR21.21(d)(3)(i) of defective Woodward governor actuators (Part Numbers 9903-569 and 9903-438-ESI). The governor actuators were purchased as nuclear safety related items for use in turbine driven auxiliary feedwater pumps and emergency diesel generators, respectively, from Engine Systems, Incorporated (ESI), 175 Freight Road, Rocky Mount, NC 27804 and were manufactured by Woodward Governor Company, Loveland, CO.

One of the three new model EGB-35P Woodward governor actuators (Part Number 9903-438-ESI) was removed from storage on March 5, 2011 for installation in the 2B diesel engine, the sealed bag opened, and the Foreign Material Exclusion (FME) plugs removed from the oil cooler adapter plate. Paint chips were found in the threads of the adapter plate, on the FME plug, and at the base of the threads inside the adapter plate. The Nordberg diesel engine uses a remotely mounted governor oil cooler, and an adapter plate attached to the EGB-35P to allow tubing connections for routing governor oil to/from the remotely mounted oil cooler. The two other new governor actuators from the warehouse were removed for inspection and evaluation of extent of condition, paint chips were found in each of them in the same oil connection ports when the FME plugs were removed. These paint chips are large enough to interfere with the proper operation of the actuator, and therefore, the operation of the diesel generator.

The adapter plate (containing the paint chips) on the side of the actuator was removed, cleaned, inspected, and replaced before installation of the actuator on the 2B diesel engine. The new oil cooler supplied with the new actuator, was also disassembled, cleaned, inspected and reassembled before installation and use on the 2B diesel engine. During the 2B engine testing and governor tuning, there were no instances of improper governor actuator operation.

Additionally, two turbine driven auxiliary feedwater pump governors (Part Numbers 9903-569) were visually inspected in the warehouse for loose paint and/or foreign material. The oil fill cap on the top of the governor was examined, and the paint readily flaked off the cap when rubbed through the plastic bag, suggesting that this problem is a generic problem that also applies to these governors. When these paint chips flake off, as would be expected from applying pressure to remove the cap, there is a risk of introduction into the governor housing as the cap is removed, where these paint chips could then challenge the ability of the governor to adequately control the turbine speed.

None of these governor actuators have been sold or transferred to another nuclear facility. The remaining governor actuators in stock have been placed on hold.

The McGuire Senior NRC Resident Inspector was notified of this Part 21 notification on March 18, 2011.