Power Reactor Event # 42658

Site: CALLAWAY			**Notification Date / Time:**	06/21/2006	10:02 (EDT)
Unit: 1	**Region:** 4	**State :** MO	**Event Date / Time:**	06/19/2006	16:00 (CDT)
Reactor Type: [1] W-4-LP			**Last Modification:**	06/22/2006	
Containment Type: DRY AMB					
NRC Notified by: DENNIS GRIFFITH			**Notifications:**	DAVID GRAVES	R4
HQ Ops Officer: JEFF ROTTON				OMID TABATABAI	NRR
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

INITIAL PART 21 NOTIFICATION - PRIME MEASUREMENT PRODUCTS, MODELS 763 AND 763A GAGE PRESSURE TRANSMITTERS AND MODEL 764 DIFFERENTIAL PRESSURE TRANSMITTERS

"This report is made per 10CFR21.21 Notification of failure to comply or existence of a defect and its evaluation.

"Callaway Plant received a notification dated May 18, 2006, from PRIME Measurement Products (formerly ITT Barton) stating Barton Model 763 and 763A Gage Pressure Transmitters and Model 764 Differential Pressure Transmitters may have defective external lead-wire connectors, which could affect their performance during an accident. The notification provided by PRIME stated the affected transmitters were manufactured after May 1982 and shipped from the factory prior to April 1, 2006.

"The potential defect is characterized as follows: The transmitters' external lead wires enter the electronics enclosure through a hermetic seal called a connector assembly. The external lead wires are soldered to the glass sealed pins of the hermetic seal. Epoxy potting is used to structurally support the soldered wire connections and establish a seal to protect the solder connections from shorting, which could be caused by an electrically conductive accident environment. The defect is that the insulated portions of the wires in the connectors, manufactured after May 1982, may not be embedded deeply enough into the epoxy potting to provide an electrical connection that would not be affected in an accident environment.

"The notification also states that actual transmitter installation may preclude shorting of exposed conductors due to the existence of conduit, conduit seals, and special wire connectors which could protect the exposed wires at a defective connector from conductive moisture.

"Callaway Plant identified thirty applicable Barton transmitters and connector assemblies in warehouse stock. Inspections of these operational spare parts identified three connectors, which had exposed conductors external to their seal. One connector had this defect on one lead wire and two connectors had this defect on both lead wires.

IE19

Power Reactor Event # 42658

"Callaway has also identified that thirty-nine potentially affected transmitters are installed in the plant. An inspection plan has been developed to perform the required inspections, based on safety significance, ALARA considerations, and potential accident environmental conditions. Additional reporting requirements associated with the installed components will be evaluated under 10CFR50.72 as required.

"On 06/19/06, Callaway Plant personnel completed evaluations and determined the defective connections constitute a defect per 10CFR21 require initial NRC notification within two days.

"The NRC resident inspectors have been notified of this issue."

* * * UPDATE FROM LICENSEE (D. GRIFFITH) TO M. RIPLEY 1515 EDT 06/22/06 * * *

"This report is a revision to report EN # 42658 reported on 06/21/2006.

Added statement: "The suppliers of the identified transmitters were Prime Measurement Products and Westinghouse Electric Corporation."

The licensee notified the NRC Resident Inspector. Notified NRR (O. Tabatabai), R4 DO (D. Graves)

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NRC FORM 361
(12-2000)

U.S. NUCLEAR REGULATORY COMMISSION
OPERATIONS CENTER

REACTOR PLANT EVENT NOTIFICATION WORKSHEET

EN # 42658

NRC OPERATION TELEPHONE NUMBER: PRIMARY – 301-816-5100 OR 800-532-3469*, 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 #
10:02 EDT ✓	Callaway Plant ✓	1 ✓	Dennis Wade Griffith ✓	David R. Waller ✓ (573) 676-8595

EVENT TIME & ZONE	EVENT DATE	POWER / MODE BEFORE	POWER / MODE AFTER
16:00 CDT	6/19/2006	100% POWER / MODE 1	100 % POWER / MODE 1

	EVENT CLASSIFICATIONS		1-Hr. Non-Emergency 10 CFR 50.72(b)(1)				(v)(A) Safe S/D Capability	ANSA
	GENERAL EMERGENCY	GEN/AAEC		TS Deviation	ADEV		(v)(B) RHR Capability	ANSB
	SITE AREA EMERGENCY	SIT/AAEC	4-Hr. Non-Emergency 10 CFR 50.72(b)(2)				(v) Control of Rad Release	ANSC
	ALERT	ALE/AAEC	(i)	TS Required S/D	ASHU		(v)(D) Accident Mitigation	ANSD
	UNUSUAL EVENT	UNU/AAEC	(iv)(A)	ECCS Discharge to RCS	ACCS		(xii) Offsite Medical	AMED
	50.72 NON-EMERGENCY	(see next column)	(iv)(B)	RPS Actuation (actual)	ARPS		(xiii) Loss Comm/Assmt/Resp	ACOM
	PHYSICAL SECURITY (73.71)	DDDD	(vi)	Offsite Notification	APHE		60-Day Optional 10 CFR 50.73(a)(1)	
	MATERIAL/EXPOSURE	[illegible]	8-Hr. Non-Emergency 10 CFR 50.72(b)(3)				Invalid Specified System Actuation	AINV
	FITNESS FOR DUTY	HFIT	(ii)(A)	Degraded Condition	ADEG	Other Unspecified Requirement (Identify)		
X	OTHER UNSPECIFIED REQMT	(see last column)	(ii)(B)	Unanalyzed Condition	AUNA	X	10 CFR 21.21 Reporting of Defect/Noncompliance	NONR
	INFORMATION ONLY	NINF	(iv)(A)	Specified System Actuation	ACSP			NONR

DESCRIPTION

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

INITIAL PART 21 NOTIFICATION – PRIME MEASUREMENT PRODUCTS, MODELS 763 AND 763A GAGE PRESSURE TRANSMITTERS AND MODEL 764 DIFFERENTIAL PRESSURE TRANSMITTERS

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Callaway Plant received a notification dated May 18, 2006, from PRIME Measurement Products (formerly ITT Barton) stating Barton Model 763 and 763A Gage Pressure Transmitters and Model 764 Differential Pressure Transmitters may have defective external lead-wire connectors, which could affect their performance during an accident. The notification provided by PRIME stated the affected transmitters were manufactured after May 1982 and shipped from the factory prior to April 1, 2006.

The potential defect is characterized as follows: The transmitters' external lead wires enter the electronics enclosure through a hermetic seal called a connector assembly. The external lead wires are soldered to the glass sealed pins of the hermetic seal. Epoxy potting is used to structurally support the soldered wire connections and establish a seal to protect the solder connections from shorting, which could be caused by an electrically conductive accident environment. The defect is that the insulated portions of the wires in the connectors, manufactured after May 1982, may not be embedded deeply enough into the epoxy potting to provide an electrical connection that would not be affected in an accident environment.

The notification also states that actual transmitter installation may preclude shorting of exposed conductors due to the existence of conduit, conduit seals, and special wire connectors which could protect the exposed wires at a defective connector from conductive moisture.

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 (explain above) ☒ NO

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

MODE OF OPERATION UNTIL CORRECTED: 1

ESTIMATED RESTART DATE: N/A

ADDITIONAL INFO ON BACK? ☒ YES ☐ NO

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ADDITIONAL INFORMATION *PAGE 3 OF 2*

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	P.M. ALARMS	AREAS EVACUATED
PERSONNEL EXPOSED OR CONTAMINATED		OFFSITE PROTECTIVE ACTIONS RECOMMENDED		* Site release path in description	

	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 and dissolved noble gases*)			10 uCi/min			0.1 Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS					
ALARM SETPOINTS					
% T.S. LIMIT (*if 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	UNITS: gpm/gpd	T.S. LIMITS	SUDDEN OR LONG-TERM DEVELOPMENT

LEAK START DATE	TIME	COOLANT ACTIVITY AND UNITS:	PRIMARY	SECONDARY

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL

EVENT DESCRIPTION *(Continued from front)*

Callaway Plant identified thirty applicable Barton transmitters and connector assemblies in warehouse stock. Inspections of these operational spare parts identified three connectors, which had exposed conductors external to their seal. One connector had this defect on one lead wire and two connectors had this defect on both lead wires.

Callaway has also identified that thirty-nine potentially affected transmitters are installed in the plant. An inspection plan has been developed to perform the required inspections, based on safety significance, ALARA considerations, and potential accident environmental conditions. Additional reporting requirements associated with the installed components will be evaluated under 10CFR50.72 as required.

On 06/19/2006, Callaway Plant personnel completed evaluations and determined the defective connectors constitute a defect per 10CFR21 requiring initial NRC notification within two days.

All other affected customers have been notified via the PRIME Nuclear Industry Advisory discussed above.

The NRC resident inspectors have been notified of this issue.

UPDATE TO 42658

NRC FORM 361
(12-2000)

U.S. NUCLEAR REGULATORY COMMISSION
OPERATIONS CENTER

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EN # 42658

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	EVENT CLASSIFICATIONS								
	GENERAL EMERGENCY	GEN/AAEC	1-Hr. Non-Emergency 10 CFR 50.72(b)(1)					(v)(A) Safe S/D Capability	AINA
	SITE AREA EMERGENCY	SIT/AAEC			TS Deviation	ADEV		(v)(B) RHR Capability	AINB
	ALERT	ALP/AAEC	4-Hr. Non-Emergency 10 CFR 50.72(b)(2)					(v) Control of Rad Release	AINC
	UNUSUAL EVENT	UNU/AAEC		(i)	TS Required S/D	ASHU		(v)(D) Accident Mitigation	AIND
	50.73 NON-EMERGENCY	(see next column)		(iv)(A)	ECCS Discharge to RCS	ACCS		(xii) Offsite Medical	AMED
	PHYSICAL SECURITY (73.71)	DDDD		(iv)(B)	RPS Actuation (scram)	ARPS		(xiii) Loss Comm/Asmt/Resp	ACOM
	MATERIAL/EXPOSURE	B777		(xi)	Offsite Notification	APRE		60-Day Optional 10 CFR 50.73(a)(1)	
	FITNESS FOR DUTY	HFIT	8-Hr. Non-Emergency 10 CFR 50.72(b)(3)					Invalid Specified System Actuation	AINV
	OTHER UNSPECIFIED REQMT	(see last column)		(ii)(A)	Degraded Condition	ADEG		Other Unspecified Requirement (Identify)	
X	INFORMATION ONLY	NINF		(ii)(B)	Unanalyzed Condition	AUNA	X	10 CFR 21.21 Reporting of Defect/Noncompliance	NONR
				(iv)(A)	Specified System Actuation	AESF			NONR

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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 (explain above) ☒ NO

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

MODE OF OPERATION UNTIL CORRECTED: 1

ESTIMATED RESTART DATE: N/A

ADDITIONAL INFO ON BACK? ☒ YES ☐ NO

NRC FORM 361 (12-2000)

UPDATE

ADDITIONAL INFORMATION PAGE 2 OF 2

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	PM ALARMS	AREAS EVACUATED
PERSONNEL EXPOSED OR CONTAMINATED		OFFSITE PROTECTIVE ACTIONS RECOMMENDED		* State release path in description	

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Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS					
ALARM SETPOINTS					
% T.S. LIMIT (*if applicable*)					

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LEAK START DATE	TIME	COOLANT ACTIVITY AND UNITS:	PRIMARY	SECONDARY

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UPDATE

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