

Power Reactor

Event # 47872

<b>Site:</b> DIABLO CANYON		<b>Notification Date / Time:</b> 04/29/2012 17:35 (EDT)	
<b>Unit:</b> 1	<b>Region:</b> 4	<b>State :</b> CA	<b>Event Date / Time:</b> 04/29/2012 (PDT)
<b>Reactor Type:</b> [1] W-4-LP,[2] W-4-LP		<b>Last Modification:</b> 04/29/2012	
<b>Containment Type:</b> DRY AMB DRY AMB			
<b>NRC Notified by:</b> DENNIS PETERSEN		<b>Notifications:</b> DAVID PROULX R4DO	
<b>HQ Ops Officer:</b> DONALD NORWOOD		PART 21 GRP BY EMAIL	
<b>Emergency Class:</b> NON EMERGENCY			
<b>10 CFR Section:</b>			
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	No	0	Refueling	0	Refueling

**PART 21 REPORT - CONTROLLERS DID NOT MEET EMI / RFI GUIDELINES**

"This report constitutes a 10 CFR Part 21 notification. On March 23, 2012, Scientech (a business unit of Curtis Wright Flow Control), sent a 10 CFR Part 21 report (Letter Number 12-09-BB) to Pacific Gas & Electric Company. Diablo Canyon Nuclear Plant (DCPP) entered this report into its corrective action program on April 23, 2012. This Part 21 report identified that eight AMS286 and AMS287 hand controllers supplied to DCPP had a deviation from the purchase specification. DCPP specified the controllers to be qualified to meet electromagnetic interference (EMI) / radio frequency interference (RFI) emissions and susceptibility in accordance with NRC Regulatory Guide 1.180, Rev. 1. Contrary to this requirement, Scientech did not perform the EMI / RFI testing on the AMS286 controllers shipped to DCPP with a Certificate of Conformance to DCPP's specification. Scientech tested the AMS287 controllers, which failed some of the required testing, but were shipped to DCPP with a Certificate of Conformance nonetheless. DCPP accepted the controllers based on the Certificates of Conformance, but did not install them. Following acceptance of the controllers, DCPP identified the nonconformance with its specification, and had another vendor modify the controllers to subsequently pass required testing.

"DCPP determined the deviation could have potentially created a substantial safety hazard if the controllers were installed at DCPP. The controllers were intended to control auxiliary feedwater from the Unit 1 control room and the hot shutdown panel as part of an upcoming process control system modification. Following a postulated fire in the control room, plant shutdown would be managed from the hot shutdown panel. In this instance, radios would be used to communicate with operators at the panel. The controllers would be susceptible to EMI/RFI interference and could potentially affect the operators' ability the safely shut down the plant and maintain it in a safe shutdown condition. DCPP notified Scientech of this conclusion on 4/27/12."

The licensee notified the NRC Resident Inspector.

JEI9  
NRK

Power Reactor

Event # 47872

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## HOO Hoc

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**From:** Padovan, Mark [MLPY@pge.com]  
**Sent:** Sunday, April 29, 2012 5:58 PM  
**To:** HOO Hoc  
**Cc:** Baldwin, Thomas (DCPP); Petersen, Dennis  
**Subject:** Diablo Canyon Part 21 Report - EN# 47872  
**Attachments:** NRC Form 361 - 50 72 Report Scientech Flow Controllers.pdf; Scientech Part 21 Report.pdf

HOO (Donald),

Here is a .pdf copy of the Part 21 report (EN# 47872) we telephoned in from Diablo Canyon Nuclear Power Plant. As we discussed, I'm also attaching the Part 21 report that Diablo Canyon received from Scientech. Please let me know if you have any questions.

*L. Mark Padovan*  
Regulatory Services Supervisor  
Diablo Canyon Power Plant  
104/5/22A (805) 545-4540 (w)  
[mark.padovan@pge.com](mailto:mark.padovan@pge.com)

NRC FORM 361  
(12-2000)

U.S. NUCLEAR REGULATORY COMMISSION  
OPERATIONS CENTER

**REACTOR PLANT  
EVENT NOTIFICATION WORKSHEET**

EN # 47872

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 1735 EDT	FACILITY OR ORGANIZATION Diablo Canyon Power Plant	UNIT 1	NAME OF CALLER Dennis Petersen	CALL BACK # (805) 545-4022
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EVENT TIME & ZONE	EVENT DATE 04/29/2012	POWERMODE BEFORE N/A	POWERMODE AFTER N/A
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EVENT CLASSIFICATIONS		1-Hr. Non-Emergency 10 CFR 50.72(b)(1)	(v)(A) Safe S/D Capability	AINA	
GENERAL EMERGENCY	GEN/AAEC	TS Deviation	ADEV	(v)(B) RHR Capability AINB	
SITE AREA EMERGENCY	SIT/AAEC	4-Hr. Non-Emergency 10 CFR 50.72(b)(2)		(v)(C) Control of Rad Release AINC	
ALERT	ALE/AAEC	(i) TS Required S/D	ASHU	(v)(D) Accident Mitigation AIND	
UNUSUAL EVENT	UNU/AAEC	(iv)(A) ECCS Discharge to RCS	ACCS	(xii) Offsite Medical AMED	
50.72 NON-EMERGENCY (see next columns)		(iv)(B) RPS Actuation (scram)	ARPS	(xiii) Loss Comm/Asmt/Resp ACOM	
PHYSICAL SECURITY (73.71)	DDDD	(xi) Offsite Notification	APRE	60-Day Optional 10 CFR 50.73(a)(1)	
MATERIAL/EXPOSURE	B???	8-Hr. Non-Emergency 10 CFR 50.72(b)(3)		Invalid Specified System Actuation AINV	
FITNESS FOR DUTY	HFTT	(ii)(A) Degraded Condition	ADEG	Other Unspecified Requirement (Identify)	
OTHER UNSPECIFIED RECMT. (see last column)		(ii)(B) Unanalyzed Condition	AUNA		
<input checked="" type="checkbox"/> INFORMATION ONLY	NMF	(iv)(A) Specified System Actuation	AESF		

**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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DCPP determined the deviation could have potentially created a substantial safety hazard if the controllers were installed at DCPP. The controllers were intended to control auxiliary feedwater from the Unit 1 control room and the hot shutdown panel as part of an upcoming process control system modification. Following a postulated fire in the control room, plant shutdown would be managed from the hot shutdown panel. In this instance, radios would be used to communicate with operators at the panel. The controllers would be susceptible to EMI/RFI interference and could potentially affect the operators' ability the safely shut down the plant and maintain it in a safe shutdown condition. DCPP notified Scientech of this conclusion on 4/27/12.

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

RADIOLOGICAL RELEASES: CHECK OR FILL IN APPLICABLE ITEMS <i>(specific details/explanations should be covered in event description)</i>							
<input type="checkbox"/> LIQUID RELEASE	<input type="checkbox"/> GASEOUS RELEASE	<input type="checkbox"/> UNPLANNED RELEASE	<input type="checkbox"/> PLANNED RELEASE	<input type="checkbox"/> ONGOING	<input type="checkbox"/> TERMINATED		
<input type="checkbox"/> MONITORED	<input type="checkbox"/> UNMONITORED	<input type="checkbox"/> OFFSITE RELEASE	<input type="checkbox"/> T. S. EXCEEDED	<input type="checkbox"/> RM ALARMS	<input type="checkbox"/> AREAS EVACUATED		
<input type="checkbox"/> PERSONNEL EXPOSED OR CONTAMINATED		<input type="checkbox"/> OFFSITE PROTECTIVE ACTIONS RECOMMENDED		*State 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 <i>(excluding tritium and dissolved noble gases)</i>			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 <i>(if applicable)</i>							
RCS OR SG TUBE LEAKS: CHECK OR FILL IN APPLICABLE ITEMS: <i>(specific details/explanations should be covered in event description)</i>							
LOCATION OF THE LEAK <i>(e.g., SG #, valve, pipe, etc.)</i>							
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 <i>(Continued from front)</i>							

March 23, 2012

Letter Number: 12-09-BB

PG&E – Diablo Canyon Power Plant  
C/O The PG&E Procurement Assessment Supervisor @ DCP  
PO Box 56  
Avila Beach, CA 93424

Mailstop 115/2

SUBJECT: Evaluation of Deviation for 10 CFR Part 21 Reportability

Dear PG&E Procurement Assessment Supervisor:

Scientech opened 10 CFR Part 21 Evaluation 21-12-03 (attached) on January 23, 2012, and has concluded that our organization is unable to determine if the deviation constitutes a defect as defined in 10CFR Part 21. This letter in conjunction with a letter to the Quality Verification Department Manager, formally forwards our Part 21 investigation to Diablo Canyon Power Plant for further evaluation.

Please feel free to contact the Scientech Engineering Manager Jim Saunders, at (208)524-9245, with any technical questions you may have regarding this issue, or Vince Chermak, the Quality Assurance Manager for any quality related questions. You may contact me directly, using the information provided below, for any other issues.

Sincerely,



Brian Braithwaite  
Applications Engineer  
I&C Division  
Scientech, a business unit of Curtiss-Wright Flow Control Company  
Office (208) 524-9337 | Fax (208) 524-9238

**Background**

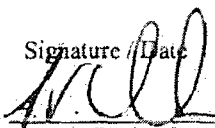
The I&C division of Scientech, a business unit of Curtiss Wright Flow Control Services Corporation, provides safety related instrumentation to commercial nuclear power plants for use in safety related applications.

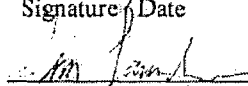
<b>Problem Reported On:</b> 02/02/2012	<b>Problem Documented In:</b> CAR 12-010, NCR 12N-013, NCR 12N-014
<b>Description of Item:</b> (name, manf, model, part no, serial no, function) AMS826 P/N: NUS-A228PA-1 Rev. 0 S/N: 1101685-1101694, 1101715, 1101716 AMS827 P/N: NUS-A276PA-1, Rev. 1101021-1101032	
<b>Description of Problem:</b> The modules did not meet specifications (EMI/RFI Testing) as listed in customer supplied specifications document 10083-J-NPG, Rev. 4.	
<i>10CFR21: <b>Deviation</b> means a departure from the technical requirements included in a procurement document, or specified in early site permit information, a standard design certification or standard design approval.</i>	
Is the problem a <b>deviation</b> ? (include justification for answer)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Justification:</b> Modules did not meet specifications.	
<b>IF NO, PROCEED TO CONCLUSION SECTION IF YES, CONTINUE</b>	
Has an item with the <b>deviation</b> been supplied to a plant as a safety-related item?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>IF NO, PROCEED TO CONCLUSION SECTION IF YES, INCLUDE PLANT INFORMATION AND CONTINUE</b>	
<b>Plants supplied with item:</b> Diablo Canyon	
<i>10CFR21: <b>Defect</b> means:</i> <ol style="list-style-type: none"> <li>(1) A deviation in a basic component delivered to a purchaser for use in a facility or an activity subject to the regulations in this part if, on the basis of an evaluation, the deviation could create a <b>substantial safety hazard</b>;</li> <li>(2) The installation, use, or operation of a basic component containing a defect as defined in this section;</li> <li>(3) A deviation in a portion of a facility subject to the early site permit, standard design certification, standard design approval, construction permit, combined license or manufacturing licensing requirements of part 50 or part 52 of this chapter, provided the deviation could, on the basis of an evaluation, create a substantial safety hazard and the portion of the facility containing the deviation has been offered to the purchaser for acceptance;</li> <li>(4) A condition or circumstance involving a basic component that could contribute to the exceeding of a safety limit, as defined in the technical specifications of a license for operation issued under part 50 or part 52 of this chapter; or</li> <li>(5) An error, omission or other circumstance in a design certification, or standard design approval that, on the basis of an evaluation, could create a <b>substantial safety hazard</b>.</li> </ol>	
<i>10CFR21: <b>Substantial safety hazard</b> means a loss of safety function to the extent that there is a major reduction in the degree of protection provided to public health and safety for any facility or activity licensed or otherwise approved or regulated by the NRC</i>	
Can Scientech determine if the <b>deviation</b> is a <b>defect</b> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<b>IF NO, PROCEED TO CONCLUSION SECTION IF YES, CONTINUE</b>	
Is the <b>deviation</b> a <b>defect</b> ? (include justification for answer)	Yes <input type="checkbox"/> No <input type="checkbox"/>

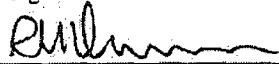
**Justification:**

**CONCLUSION**

- 1 -  There is no deviation. No report is required.
- 2 -  There is a deviation, but it does not exist in any safety-related item delivered to a plant. No report is required.
- 3 -  There is a deviation, but it does not constitute a defect. No report is required.
- 4 -  There is a deviation, but Scientech cannot determine if it is a defect. Forward to plant for evaluation.
- 5 -  There is a defect. Report to the NRC per 10CFR21.

Prepared: Signature / Date  
 3/21/2012  
 Print Name: Vince Chermak  
 Title: QA Manager

Evaluated: Signature / Date  
 3/21/2012  
 Print Name: Jim Saunders  
 Title: Engineering Manager

Approved: Signature / Date  
 3/23/12  
 Print Name: Bob Queenan  
 Title: Division Manager

Approval required for Category 4 and 5 only.

NOTE: For Category 5, a defect is determined upon the signature of the Division Manager or his designee.