

MAR 18 1993

Docket No. 50-255

Consumers Power Company
ATTN: Mr. Gerald B. Slade
General Manager
Palisades Nuclear Generating Plant
27780 Blue Star Memorial Highway
Covert, MI 49043-9530

Dear Mr. Slade:

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT NO. 50-255/92028(DRS))

This will acknowledge receipt of your letter dated February 22, 1993, in response to our letter dated January 21, 1993, transmitting a Notice of Violation associated with Inspection Report No. 50-255/92028(DRS). This report summarized the results of the inservice testing of pumps and valves established in response to Generic Letter 89-04 at your Palisades Nuclear Plant. We have reviewed your corrective actions and have no further questions at this time. These corrective actions will be examined during future inspections.

Sincerely,

ORIGINAL SIGNED BY GEOFFREY C. WRIGHT

G. C. Wright, Chief
Engineering Branch

See Attached Distribution

RIII

Dunlop/jk
03/17/93

RIII

Huber
03/ /93

RIII

Jacobson
03/18/93

RIII

Jorgensen
03/18/93

RIII

Wright
03/18/93

9303240135 930318
PDR ADDCK 05000255
G PDR

Public - SEO

Consumers Power Company

2

MAR 18 1993

Distribution

cc: David P. Hoffman,
Vice President
Nuclear Operations

cc w/ltr dtd 02/22/93:
OC/LFDCB
Resident Inspector, RIII
James R. Padgett, Michigan
Public Service Commission
Michigan Department of
Public Health
A. Masciantonio, LPM, NRR
SRI, Big Rock Point
J. Norberg, NRR/EMEB
T. Kobetz, TSS, DRP

bcc: PUBLIC-IE01



Consumers
Power

**POWERING
MICHIGAN'S PROGRESS**

Palisades Nuclear Plant: 27780 Blue Star Memorial Highway, Covert, MI 49043

February 22, 1993

G B Slade
General Manager

Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

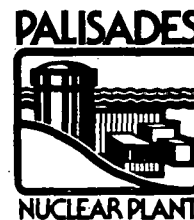
DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT - REPLY TO NOTICE OF
VIOLATION; NRC INSPECTION REPORT No. 92028

NRC Inspection Report No. 92028, dated January 21, 1993, forwarded the results of the NRC inspection conducted from December 7 through 18, 1992. The areas examined during the inspection were primarily a review of the Palisades program for inservice testing of pumps and valves established in response to Generic Letter 89-04 and of the effectiveness of the program for monitoring the performance of check valves. The inspection report identified an apparent violation of NRC requirements pertaining to inadequate acceptance criteria to verify that certain check valves were exercised to their full open position. Our reply to the Notice of Violation is provided in the Attachment to this letter.

Gerald B Slade
General Manager

CC: Administrator, Region III, USNRC
NRC Resident Inspector - Palisades

Attachment



4303020273 A CMS ENERGY COMPANY FEB 26 1993

ATTACHMENT

**Consumers Power Company
Palisades Plant
Docket 50-255**

REPLY TO NOTICE OF VIOLATION

NRC INSPECTION REPORT No. 92028

February 22, 1993

REPLY TO NOTICE OF VIOLATION

Violation

Technical specification 4.0.5.a states "...inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code..." ASME Section XI, IWV-3522, "Exercising Procedure," states, in part, "check valves shall be exercised to the position required to fulfill their function..."

Contrary to the above, inservice test procedure QO-8B, ["ESS Check Valve Operability Test"] dated October 2, 1992 [October 2, 1989], contained inadequate acceptance criteria to verify that the following check valves were exercised to their full open position (50-255/92028-01 (DRS)).

- a. Primary coolant loop check valves CK-ES3101, CK-ES3116, CK-ES3131, and CK-ES3146 required 8000 gpm flow to verify full open, whereas the test acceptance criteria was 1200-1800 gpm.
- b. Low pressure safety injection check valves CK-ES3103, CK-ES3118, CK-ES3133, and CK-ES3148 required 1600 gpm flow to verify full open, whereas the test acceptance criteria was 1200-1800 gpm.

Reason for the Violation

Circumstances leading to this violation appear to have come from the following two sources:

During the initial development of QO-8B for use as a valve test procedure, and when the periodic review for QO-8B was performed on September 4, 1991, the reviewer failed to compare the acceptance criteria in QO-8B with the required full flow rates for the PCS loop and LPSI check valves as specified in the engineering aid, EGAD-EP-01, "Inservice Test Program - Test Table and Valve Reference Flow Rate". EGAD-EP-01, provides information on the required full flow rates for check valves within the Palisades Valve IST Program.

Secondly, EGAD-EP-01 states that the required full flow rate for the LPSI check valves is 1500 gpm instead of 1600 gpm. The 1600 gpm required flow rate was a new value derived when Accident Analysis Report EMF-91-177 was completed in 1991. EGAD-EP-01 had not been updated to include this new flow data and consequently contained incorrect information regarding the LPSI check valves. This incorrect information in EGAD-EP-01 was used to establish acceptance criteria during a previous revision to QO-8B. Evaluation suggests that the root cause was a failure to adequately verify the basis for acceptance criteria for check valve testing.

Corrective Actions Taken and Results Achieved

Based on review of recent flow performance data, as shown in Tables 1 and 2 (attached), for the low pressure safety injection check valves (LPSI) and primary coolant system loop check valves (PCS), we believe that these check valves would be capable of passing their required full flow rate if needed. All recently recorded flow rates, for both the LPSI and PCS loop check valves, were within the QO-8B acceptance range of 1200 to 1800 gpm. Flow rates for the LPSI check valves obtained in QO-8B are considered high enough to provide an adequate level of confidence that the LPSI check valves would be capable of passing the 1600 gpm required full flow rate if needed.

In regard to the PCS loop check valves, it has been determined that the fully open disk position would be achieved at a flow rate of about 1900 to 2100 gpm. Although Section XI discusses valve testing in terms of full flow testing, Generic Letter 89-04, "Guidance on Developing Acceptable Inservice Testing Programs", allows full valve stroke testing in situations where full flow testing is impractical. We believe that flow rates achieved in QO-8B are sufficient to provide an adequate level of confidence that the PCS loop check valves would also pass the 1900 to 2100 gpm flow rate needed to fully open these check valves.

The LPSI and PCS loop check valves are included in the plant preventative maintenance program. The results of the disassembly and inspections performed to date do not identify any concerns with the ability of the PCS loop check valves to pass flow. Overall, we believe that the current part stroke testing of the LPSI and PCS loop check valves along with their inclusion in a disassembly and inspection program provides an adequate level of confidence in the operational readiness of these check valves.

Additionally, the PCS loop check valves are the same make and model as the Safety Injection Tank (SIT) check valves (CK-ES3102, CK-ES3117, CK-ES3132, and CK-ES3147). Both the PCS loop and SIT check valves are 12 inch swing check valves. Palisades has been granted interim relief from performing full flow testing of the SIT check valves through the end of the Palisades 1993 Refueling Outage. The NRC interim relief for the SIT check valves concludes that the current disassembly and inspection provides an adequate level of confidence in the operational readiness of the SIT check valves. Since the PCS loop check valves are part stroke tested via QO-8B, and are included in the valve disassembly and inspection program, and also since the design of the PCS loop check valves is similar to that of the SIT check valves, we believe that the same level of confidence that exists for the operational readiness of the SIT check valves also exists for the PCS check valves. Therefore no additional immediate actions are required.

Corrective Actions to be Taken to Avoid Further Noncompliance

1. QO-8B will be revised to accomplish full flow testing for the LPSI check valves at greater than 1600 gpm each. This revision to QO-8B will be completed prior to the Palisades 1993 Refueling Outage during when the testing will be performed.
2. During the Palisades 1993 Refueling Outage, we will attempt to verify full stroke operation of the PCS loop check valves using non-intrusive instrumentation during Performance of QO-8B.
3. If during performance of QO-8B the results are inconclusive, a relief request will be submitted for disassembly and inspection in accordance with NRC Generic Letter 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," and further evaluation of full stroke testing of the PCS loop check valves will be completed to determine the best long term resolution.
4. A reverification of the required full flow rates specified in EGAD-EP-01 will be conducted to:
 - a. Ensure that all check valves requiring full flow testing are included in the valve testing program;
 - b. Ensure that the correct required full flow rate and basis are listed for each check valve in the valve testing program, and
 - c. Ensure that all test procedures that take credit for full flow testing state the correct flow rates as acceptance criteria.

Date When Full Compliance Will be Achieved

All required full flow or stroke testing of the LPSI and PCS loop check valves will be attempted during the Palisades 1993 Refueling Outage (scheduled to begin in June 1993). Since the testing of these check valves requires injection of borated water into the PCS system through the safety injection headers, testing can only be accomplished while in a cold shutdown condition. Therefore, the Palisades 1993 Refueling will be the first scheduled opportunity to perform such testing. All necessary program changes needed for full compliance will be completed by July 15, 1993.

TABLE 1
Primary Coolant Loop Check Valve
Flow Test Results

Parameter No.		1	3	5	7
Name		CK-3101	CK-3116	CK-3131	CK-3146
Meas. No.	Units Time	FI-0307A	FI-0309A	FI-0311A	FI-0314A
1	Jan 20, 1987	*			
2	Feb 10, 1987	1750	1400	1400	1400
3	Jul 19, 1987	1600	1300	1250	1250
4	Nov 06, 1987	1800	1750	1600	1400
5	Nov 07, 1987	*			
6	Aug 31, 1988	*			
7	Oct 21, 1988	1480	1480	1490	1490
8	Feb 04, 1989	1550	1400	1400	1300
9	Feb 09, 1989	*			
10	Nov 09, 1989	1340	1350	1350	1260
11	May 10, 1990	1400	1350	1350	1300
12	Feb 17, 1991	1220	1220	1450	1400
13	Mar 30, 1992	1400	1400	1350	1300

* This table is taken from the IST data base. Partial tests were performed on these dates for other valves. No data was taken for the subject valves on these dates.

TABLE 2
Low Pressure Safety Injection Check Valves
Flow Test Results

Parameter No.		2	4	6	8
Name		CK-3103	CK-3118	CK-3133	CK-3148
Mess. No.	Units	FI-0307A	FI-0309A	FI-0311A	FI-0314A
	Time				
1	Jan 20, 1987	*			
2	Feb 10, 1987	1750	1400	1400	1400
3	Jul 19, 1987	1600	1300	1250	1250
4	Nov 06, 1987	1800	1750	1600	1400
5	Nov 07, 1987	*			
6	Aug 31, 1988	*			
7	Oct 21, 1988	1480	1480	1490	1490
8	Feb 04, 1989	1550	1400	1400	1300
9	Feb 09, 1989	*			
10	Nov 09, 1989	1340	1350	1350	1260
11	May 10, 1990	1400	1350	1350	1300
12	Feb 17, 1991	1220	1220	1450	1400
13	Mar 30, 1992	1400	1400	1350	1300

* This table is taken from the IST data base. Partial tests were performed on these dates for other valves. No data was taken for the subject valves on these dates.