Consumers Power
POWERING MICHIGAN'S PROGRESS
Palisades Nuclear Plant: 27780 Blue Star Memorial Highway, Covert, MI 49043

G B Slade
General Manager

March 6, 1992

Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
INFORMATIONAL LICENSEE EVENT REPORT 92-008; BOTH CONTROL ROOM HVAC TRAINS INOPERABLE DUE TO EQUIPMENT FAILURE.

Informational Licensee Event Report (LER) 92-008 is attached. This event is reported in accordance with plant procedures which require that one control room heating ventilating and air conditioning train be operable.

Gerald B Slade
General Manager

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

PALISADES NUCLEAR PLANT

NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Palisades Plant	0 5 0 0 0 2 5 5	1 OF 0 3

TITLE (4)

BOTH CONTROL ROOM HVAC TRAINS INOPERABLE DUE TO EQUIPMENT FAILURE

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
									N/A	0 5 0 0 0
0 2	0 6	9 2	9 2	— 0 0 8	— 0 0	0 3	0 6	9 2	N/A	0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 3 2	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	X OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
William L Roberts, Licensing Engineer	6 1 6 — 7 6 4 - 8 9 1 3

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
B	V I	C D U									

SUPPLEMENTAL REPORT EXPECTED (14)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

ABSTRACT

On February 6, 1992, at 2144 hrs, the plant was at approximately 32% power and in the process of shutting down. Both trains of control room heating, ventilation, and air conditioning (HVAC)[VI] became inoperable when the operating air conditioning condensing unit VC-11 [VI;CDU], developed a leak in the hot gas bypass line while the redundant train condensing unit, VC-10, was out of service for normal preventative maintenance. An Unusual Event was declared and appropriate notifications made. Maintenance was initiated to repair the leak and VC-11 was returned to service. The Unusual Event was terminated at 0325 hours on February 7, 1992. The control room temperature was observed to reach 81°F at approximately four hours into the event. Within a half-hour of returning VC-11 to service the control room temperature returned to 74°F. The event was caused by a lack of clearance between the VC-11 condensing unit's hot gas bypass line and it's penetration through the flooring.

Maintenance will inspect all the associated piping on each condensing unit and revisions will be made to the preventative maintenance procedures to check the tubing and condensing unit hold down bolting to preclude future occurrences of this kind.

EVENT DESCRIPTION

On February 6, 1992, at 2144 hrs, the plant was at approximately 32% power and in the process of shutting down. Both trains of control room heating, ventilation, and air conditioning (HVAC) became inoperable when the operating air conditioning condensing unit, VC-11, developed a leak in the hot gas bypass line while the redundant condensing unit, VC-10, was out of service for normal preventative maintenance. An unusual event was declared and appropriate notifications made. Maintenance was initiated to repair the leak and VC-11 was returned to service. The unusual event was terminated at 0325 hours on February 7, 1992. The control room temperature was observed to reach 81°F at approximately four hours into the event. Within a half-hour of returning VC-11 to service the control room temperature returned to 74°F.

This event is reportable in accordance with our plant administrative procedures.

CAUSE OF THE EVENT

The event was caused by a lack of clearance between the VC-11 condensing unit's hot gas bypass line and it's penetration through the flooring. During the original installation of the hot gas bypass line adequate care was apparently not taken to assure that this line was not in contact with the floor plate. As a result, the copper line eroded away due to the normally present compressor vibration. The compressor itself is secured rigidly for seismic reasons without the normal vibration isolators found on other non-seismic HVAC compressors.

ANALYSIS OF THE EVENT

The control room HVAC condensing units VC-10 and VC-11 provide safety related cooling to maintain the control room temperature below the Technical Specification 4.2.3 (Standing Order 54) limit of 90°F. These condensing units also provide the operator a conditioned temperature environment for habitability during accident conditions. The units are sized for the heat load of the control room envelope and the available service water temperatures and flow.

The failure of the copper tubing on VC-11 was a result of no clearance between the tubing and the floor plate penetration hole. VC-11 is a freon compressor with normal cyclic vibrations which transmits its vibrations to the VC-11 tubing. Because the tubing was in contact with the floor plate, the softer copper surface eroded away thus allowing the escape of the 80 psi freon. With the entire freon charge lost, the compressor tripped on a low pressure safety switch.

CORRECTIVE ACTION

As a result of this event, the following corrective action will be taken.

- Plant system engineering will evaluate the purge fan (V-94) logic with respect to the starting permissive while one train is out of service.
- Mechanical maintenance will inspect VC-10 and VC-11 tubing for wear, correct clearances and replace tubing support clamps at suspected wear areas.
- Mechanical maintenance will revise the preventative maintenance procedure (PPAC-VAS 294) to check tightness of all component bolting, inspect tubing support areas for clearances and isolation from metal to metal contact.

ADDITIONAL INFORMATION

None