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

January 19, 1996

U S Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

**DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT**  
**LICENSEE EVENT REPORT 95-016 - PRIMARY COOLANT SAMPLES NOT**  
**ANALYZED WITHIN 72 HOURS**

Licensee Event Report (LER) 95-016 is attached. This event is reportable to the NRC per 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by the plant's Technical Specifications.

**SUMMARY OF COMMITMENTS**

This letter contains no new commitments and no revisions to existing commitments.

Richard W Smedley  
Manager, Licensing

CC Administrator, Region III, USNRC  
Project Manager, NRR, USNRC  
NRC Resident Inspector - Palisades

Attachment

9601260201 960119  
PDR ADOCK 05000255  
S PDR

260047

A CMS ENERGY COMPANY

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## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>Palisades Plant</b>										DOCKET NUMBER (2) <b>0 5 0 0 0 2 5 5</b>					PAGE (3) <b>1 OF 0 3</b>		
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TITLE (4) LICENSEE EVENT REPORT 95-016 - PRIMARY COOLANT SAMPLES NOT ANALYZED WITHIN 72 HOURS

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (6)			OTHER FACILITIES INVOLVED (8)																	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES																	
									N/A			0 5 0 0 0														
1	2	2	6	9	5	9	5	-	0	1	6	-	0	0	0	1	1	9	9	6	N/A			0 5 0 0 0		

OPERATING MODE (9) <b>N</b>		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																	
POWER LEVEL (10) <b>1 0 0</b>	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)		OTHER (Specify in Abstract												
	20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		below and in Text,												
	20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		NRC Form 366A)												
20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)															

LICENSEE CONTACT FOR THIS LER (12)

NAME <b>Philip D Flenner, Licensing Engineer</b>										TELEPHONE NUMBER				
										AREA CODE <b>6 1 6</b>				
										<b>7 6 4</b>		<b>- 8 9 1 3</b>		

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

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)		<input checked="" type="checkbox"/> NO		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

The Palisades Technical Specifications, Table 4.2.1, require the chemistry of the primary coolant to be tested for chloride and oxygen concentration with a maximum of 72 hours between samples (with  $T_{ave} > 210^{\circ}\text{F}$ ).

On December 26, 1995 at 0909 hours, with the Plant at 100% power, the 72 hour time requirement between primary coolant chloride analyses was exceeded. The last chloride analysis of the primary coolant had been the morning of December 23, 1995. A sample of the primary coolant was collected December 25, 1995, and when the chloride analysis was attempted it was found that two components of the test equipment failed to function. The analysis for chloride concentration was not completed until approximately 1230 hours on December 28, 1995, at which time the chloride concentration was determined to be acceptable.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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Palisades Plant	0   5   0   0   0   2   5   5						

**EVENT DESCRIPTION**

Between December 23, 1995 and the morning of December 25, 1995, two components of the hot laboratory Ion Chromatograph (IC) experienced an electronic failure. These components were an advanced computer interface (ACI) and an autosampler. Both these components are electrically connected and it is likely that a failure in one caused the failure in the other. These failures rendered the hot lab IC inoperable for analysis of chloride, fluoride and sulfate. They did not affect the accuracy of any chloride, fluoride or sulfate analysis previously completed. The chemistry technician on shift the morning of December 25, 1995 discovered the problem when attempting to perform analyses using the IC.

Chemistry Department technicians had received guidance under past management that it was acceptable to perform the chloride analysis of the primary coolant after the 72 hour time limit established by the Technical Specifications. This was based on the interpretation that the samples were required to be taken within the 72 hours but that the analysis could be delayed. The normal practice was to perform both the sampling and the analysis within the 72 hours. The failure of the IC and the past guidance contributed to the failure to perform the chloride analysis of the primary coolant 72 hours from the previous analysis. The chemistry technicians believed that no violation existed as long as the primary coolant was sampled more frequently than 72 hours.

On December 26, 1995, the Chemistry Supervisor was made aware of the problems with the chloride analysis. Discussion took place within the Chemistry Department concerning the wording and intent of the Technical Specifications for chloride analysis. It was concluded that the intent of the Technical Specifications was to have both sampling and analysis completed every 72 hours.

The hot laboratory IC was returned to service at approximately 0930 hours on December 28, 1995. It was then calibrated and the chloride analysis was completed on the primary coolant sample within approximately three hours.

**EVENT ANALYSIS**

The basis of the frequency requirements for the chloride and oxygen concentration chemical analyses is to protect the primary coolant system against potential stress corrosion cracking. Due to the time-dependent nature of any adverse effects arising from excessive concentrations, early detection allows corrective measures to be taken to prevent potential problems. Subsequent chloride analysis results have shown that acceptable concentrations were maintained.

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**SAFETY SIGNIFICANCE**

The chloride concentration in the primary coolant is a concern because of the potential for stress corrosion cracking of Primary Coolant System components. In order for cracking to occur, three factors have to be present. These factors are: stress, environment (including both high oxygen levels and high chloride concentrations), and susceptible material condition. The oxygen analysis of the primary coolant, during the time period when the chloride analysis was not performed, showed essentially no oxygen present. The samples of the primary coolant that were taken when no chloride analysis could be performed were later analyzed, showing the normal very low levels of chloride present in the primary coolant. Based on the fact that no oxygen was present during this event, and the later determination that the chloride content of the primary coolant was also very low, this event has a low safety significance.

**CAUSE OF THE EVENT**

Aggressive corrective actions were not carried out to repair the IC or obtain alternate analyses offsite because of a belief that it was acceptable to save PCS samples for chloride analysis past 72 hours from the previous analysis. This was the result of an incorrect interpretation of the Technical Specifications by the former Chemistry Supervisor when a similar event occurred in 1991.

**CORRECTIVE ACTIONS**

The following actions are being taken to prevent this event from recurring:

1. A memo will be distributed to the Chemistry Department personnel stating the Technical Specification sampling and analysis requirements and the expectations for meeting those requirements. This memo will be included in the Chemistry and Radiological Services Policies and Practices Manual.
2. A "Lessons Learned" memo will be issued to all supervisors describing the root cause of the misinterpretation of the Technical Specifications.
3. Chemistry Supervision will be counseled on the importance of taking aggressive corrective action in situations where the Technical Specifications are or may be violated.

**PREVIOUS EVENTS**

PCS samples for chloride analysis had been saved in the past (last done in August 1991) and considered acceptable by the former Chemistry Supervisor. No corrective action was initiated at that time because of an incorrect interpretation of the Technical Specifications.