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Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
LICENSEE EVENT REPORT 89-014 - (FAILURE TO MAINTAIN
NECESSARY DIESEL FUEL OIL CAPACITY)

Licensee Event Report (LER) 89-014 (Failure to Maintain Necessary Diesel Fuel Oil Capacity) is attached. This event is reportable to the NRC per 10CFR50.73(a)(2)(ii).

Brian D Johnson
Staff Licensing Engineer

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

Attachment

IE22
1/1

OC0789-0156-NL04

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 NUCLEAR PLANT	0 5 0 0 0 2 5 5	1 OF 0 3

TITLE (4)
FAILURE TO MAINTAIN NECESSARY DIESEL FUEL OIL CAPACITY

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 6	2 0	8 9	8 9	— 0 1 4	— 0 0	0 7	2 0	8 9	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)	8 0	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 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)	X 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
C S Kozup, Technical Engineer, Palisades	AREA CODE 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	D C	T K		No					

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

While performing Technical Specification (TS) Surveillance Procedure DWO-1 "Operators Daily/Weekly/Bi-Weekly Items" on June 20, 1989, Operations personnel identified that the underground diesel fuel oil storage tank T-10 [DC;TK] did not contain the 23,000 gallons required to ensure a seven day fuel oil supply. When identified, T-10 contained approximately 22,250 gallons. Prior to performance of DWO-1, TS Surveillance Procedure MO-7A-1, "Emergency Diesel Generator 1-1" was performed twice, resulting in the decrease from the approximately 25,200 gallons contained in T-10 prior to the test. The reactor was critical with the Plant operating at 80 percent of rated power when the condition was identified.

The second performance of MO-7A-1 was completed at approximately 0100. After completion, Operations personnel performed DWO-1 and at approximately 0120, T-10 volume was determined to be 22,250 gallons. At 0140 an order for fuel oil was expedited and at 1209 the delivery was received. This condition has been attributed to no guidance being provided in the diesel generator surveillance procedures regarding fuel inventory maintenance and insufficient margin between tank capacity and volume to meet consumption demands.

Description

While performing Technical Specification (TS) Surveillance Procedure DWO-1 "Operators Daily/Weekly/Bi-Weekly Items" on June 20, 1989, Operations personnel identified that the underground diesel fuel oil storage tank T-10 [DC;TK] did not contain the 23,000 gallons required to ensure a seven day fuel oil supply. When identified, T-10 contained approximately 22,250 gallons. Prior to performance of DWO-1, TS Surveillance Procedure MO-7A-1, "Emergency Diesel Generator 1-1" was performed twice, resulting in the decrease from the approximately 25,200 gallons contained in T-10 prior to the test. The reactor was critical with the Plant operating at 80 percent of rated power when the condition was identified.

On June 19, 1989, TS Surveillance Procedure MO-7A-1 was performed, however, due to diesel exhaust temperatures being within the required action range, the test was reperformed starting at approximately 1635 on June 19, 1989. At approximately 0100 on June 20, 1989 this second MO-7A-1 was completed and diesel generator 1-1 secured. Subsequently, DWO-1 was performed at 0120 and T-10 volume determined to be approximately 22,250 gallons. At 0140 an order for 5,000 gallons of diesel fuel was expedited and at 1209 the delivery was received.

As presented in Licensee Event Report 89-005 the basis for TS 3.7 states that "the 16,000 gallons in the storage tank in addition to the day tank will provide a diesel operation under required loading conditions for a minimum period of seven days". The day tank [EK;TK] capacity of each diesel generator [EK;DG] is 2,700 gallons. In addition to fuel oil storage capacity provided by the underground storage tank T-10 [DC;TK] and the day tanks, a connection is available to pump fuel oil directly into the day tanks from a tanker truck.

The Palisades Final Safety Analysis Report states that Palisades is committed to IEEE 308-1978 which requires maintenance of a seven day fuel oil supply. As the 1968 calculation which determined the 16,000 gallon TS fuel oil capacity contains equipment loading and operating times which differ from current requirements, a preliminary calculation was performed to determine the adequacy of the required reserve capacity. These preliminary calculations revealed that 23,000 gallons of fuel oil would be required to meet current equipment loading and operating times.

Cause Of The Event

This condition has been attributed to no guidance being provided in the diesel generator surveillance procedures regarding fuel inventory maintenance and to insufficient margin between tank capacity and the required volume to meet current fuel oil consumption demands.

Corrective Action

The capability of the underground fuel oil storage tank is being evaluated as part of the fuel oil system upgrade item within the Palisades Five Year Plan. Diesel generator surveillance procedures are being revised to include information on fuel oil consumption at no load, 50 percent load and full load conditions. Additionally, the revisions will include the verification that sufficient fuel oil is available prior to starting the surveillance tests.

Analysis Of The Event

Although current TS specify a 16,000 gallon fuel oil capacity be maintained, an administrative limit of 23,000 gallons existed with direction to operators to reorder fuel oil to preclude going below the 23,000 gallon limit. Further, as recognized in the basis for TS 3.7, "it is considered incredible not to be able to secure fuel oil from one of several sources within a radius of 70 miles in less than three days under the worst of weather conditions". Therefore, even though fuel oil onsite dropped below the required seven day fuel oil supply, no threat to the public health and safety existed.

This event is being reported per 10CFR50.73(a)(2)(ii)(B) as a condition that was outside the design basis of the Plant.

Additional Information

For additional information regarding diesel generator fuel oil capacity, reference Licensee Event Reports 89-005, 87-040 and 86-012.