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Trojan Nuclear Plant
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WRR-192-91
August 12, 1991

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

Gentlemen:

Licensee Event Report No. 91-25 is attached. This report discusses an event in which a Technical Specification Surveillance on the Emergency Diesel Generators was inadequate.

Sincerely,

W. R. Robinson
General Manager
Trojan Nuclear Plant

c: Mr. John B. Martin
Regional Administrator, Region V
U.S. Nuclear Regulatory Commission

Mr. David Stewart-Smith
State of Oregon
Department of Energy

Mr. R. C. Barr
USNRC Resident Inspector
Trojan Nuclear Plant

LER Distribution

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Trojan Nuclear Plant	0 5 0 0 0 3 4 4	1 OF 0 4

TITLE (4) Inadequate Technical Specification Surveillance on the Emergency Diesel Generators

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)
0 5	0 8	9 1	9 1	- 0 2 5	- 0 0	0 8	1 2	9 1	NA	0 5 0 0 0
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OPERATING MODE (9)	6	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)					
POWER LEVEL (10)	0 0 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)	X	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
Larry D. Byrum	5 0 3 5 5 6 - 7 4 8 6

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)

		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)

On May 8, 1991, the Plant was in Mode 6 (Refueling). During a review of Emergency Diesel Generator (EDG) load ratings, it was determined that the surveillance performed in accordance with the Trojan surveillance procedure did not adequately meet the intent of the Trojan Technical Specifications (TTS). The TTS requires that each EDG be demonstrated operable by verifying that the auto-connected loads to each diesel generator unit do not exceed the 2,000-hour rating of 4,752 kW. As performed by the surveillance procedure, the EDG loads were not representative of accident condition loads. For example, the Engineered Safety Features pumps were on recirculation in lieu of injecting into the Reactor Coolant System (RCS) at the higher accident flows and loads. The event resulted from the failure of personnel to adequately implement a TTS surveillance requirement.

An operability determination was performed which verified that the EDG loads were within the TTS limits. Other corrective and preventive actions include: establishment of a Surveillance Compliance Improvement Program, and training of personnel involved in procedure development and review. In addition, an engineering calculation which verifies that EDG TTS load requirements are not exceeded will be added to the surveillance program. This event had no effect on the health and safety of the public.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

EVENT DESCRIPTION

On May 8, 1991, the Plant was in Mode 6 (Refueling). In response to a concern about Emergency Diesel Generator (EDG) capability ratings, Trojan Nuclear Plant Engineering personnel performed a review of Trojan Technical Specification (TTS) surveillance requirements related to the EDGs. During the review, it was determined that the surveillance performed in accordance with Trojan surveillance procedure; Periodic Engineering Test 12-2, "Emergency Diesel Generator Performance, Loss of Off-Site Power, Diesel Automatic Start, and Auxiliary Feedwater Valve Actuation Test", did not adequately meet the intent of TTS Surveillance Requirement 4.8.1.1.2.d.2, "A.C. Sources". TTS 4.8.1.1.2.d.2 requires that each diesel generator set shall be demonstrated operable at least once per 18 months by verifying that the auto-connected loads to each diesel generator unit do not exceed the 2,000-hour rating of 4,752 kW.

As performed by the surveillance procedure, the EDG loads were not representative of accident condition loads. For example, the Engineered Safety Features pumps were on recirculation in lieu of injecting into the Reactor Coolant System (RCS) at the higher accident flows and loads.

This event was evaluated on May 8, 1991 for reportability to the NRC and determined not to be reportable; however, the event was reevaluated on July 11, 1991 and was determined to be reportable as a failure to adequately perform a TTS surveillance requirement. The event is being reported as a condition prohibited by the TTS in accordance with the requirements of Title 10 to the Code of Federal Regulations, Part 50.73(a)(2)(i)(B) [10 CFR 50.73(a)(2)(i)(B)].

CAUSE OF OCCURRENCE

The cause of this event was the failure of personnel to adequately incorporate a TTS surveillance requirement into surveillance procedures. A contributing cause was that technical reviews did not ensure regulatory requirements were met.

CORRECTIVE ACTIONS

Corrective actions that have been or are being taken:

It is not practical to perform a full functional test that would accurately reflect actual accident condition EDG loads such as pump flows (i.e., injecting into the RCS) and elevated temperatures (i.e., switchgear rooms and Containment Building). Therefore, to ensure that EDG loads specified in TTS Surveillance Requirement 4.8.1.1.2.d.2 are not exceeded, an engineering calculation which includes a determination of worst-case accident condition EDG loads will be verified as an 18-month surveillance.

An Operability Determination was conducted which verified the EDG maximum accident loads were within the TTS limit and the EDGs were operable.

A Surveillance Compliance Improvement Program was established in 1990. The mission of the program is to assure that Trojan is operated in compliance with the TTS surveillance requirements. The program provides single-point accountability for all mandatory Technical Specification surveillance procedures, includes the verification and maintenance of a cross-reference listing of surveillance test requirements to surveillance procedures along with respective test frequencies and responsible implementing departments, and includes the developement and maintenance of the technical bases for surveillance procedures and their methods.

In 1990, the Trojan Training Department developed self-study Training Module TI-A-04-SG, "Activity and Record Reviews". A terminal objective of this training is to improve the skills of personnel involved in the development and technical review of procedures. Skills addressed in the training module include performing technical reviews, reporting deficiencies, and recommending corrective actions. This training module has been incorporated into the Technical Staff/Technical Manager Training Program.

The Trojan Training Department is also conducting training of appropriate personnel to enhance their knowledge of the TTS. Personnel involved with the Surveillance Compliance Improvement Program have received the TTS training.

Corrective action that will be taken:

Verification of Trojan Engineering Calculation TE-124, "Emergency Diesel Generator Load Calculations", which determines worst-case loading for the EDGs will be added to Trojan Surveillance Procedure Periodic Engineering Test (PET) 12-2 as an 18-month TTS surveillance requirement. This will be completed, including performance of the surveillance, prior to entering Mode 4 from the 1991 Refueling Outage.

The nine Personnel involved with the Surveillance Compliance Improvement Program or with writing surveillance procedures, have completed or will complete self-study Training Module TI-A-04-SG, "Activity and Records Reviews". This action is scheduled to be completed September 1991.

SAFETY SIGNIFICANCE

This event did not affect the health and safety of the public. Upon discovery of the inadequate surveillance, an operability determination was performed which verified that the EDGs were operable and that the maximum accident condition auto-connected loads were within the 2,000-hour rating of 4,752 kW required by TTS. The calculated loading was 4,107 kW, allowing a margin of 645 kW. Significant margin would have existed with a conservative methodology of calculation. The operability determination was based on a current (performed within the previous 18 months) engineering calculation for EDG loads.

PREVIOUS SIMILAR EVENTS

Nine Trojan Licensee Event Reports (LERs) were identified which reported events related to surveillance procedures not being adequate to accomplish TTS surveillance requirements. The LERs are listed below.

LER	Title
87-03	Deficient Procedure Resulted in Inadequate Response Time Testing
88-13	Component Cooling Water Valve Positions Not Verified as Required by Technical Specification Requirements
89-32	Incomplete Surveillance of Power Operated Relief Valve Due to an Inadequate Procedure Review Upon Issuance of a License Amendment
90-21	Incomplete Surveillance Test on EDG Decouple Circuitry Due to an Inadequate Surveillance Procedure
90-23	Inadequate Temporary Procedure Revision Leads to Failure to Document Verification of Reactor Coolant Flow During Boron Dilution
90-24	Improper Technical Specification Interpretation Leads to Inadequate Procedure Revision and Incorrectly Performed Surveillance
90-31	Inadequate Test Procedure Results in Failure to Document Status of Component Cooling Water Valves for Technical Specification Surveillance
90-32	Personnel Error in Development of Surveillance Procedure Results in Inadequate Surveillance of Post Accident Effluent Iodine Samplers
90-38	Incomplete Performance of Surveillances Due to Personnel Errors in Interpretation of Technical Specifications and in Developing Procedure Revision