

*Southern California Edison Company*

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K. P. BASKIN  
MANAGER, GENERATION ENGINEERING

January 19, 1978

TELEPHONE  
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Director, Office of Nuclear Reactor Regulation  
Attention: Karl R. Goller  
Assistant Director for Operating Reactors  
Division of Operating Reactors  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555



Gentlemen:

Subject: Docket No. 50-206, Provisional Operating  
License No. DPR-13  
Standby Diesel Generator Reliability Questionnaire  
San Onofre Nuclear Generating Station  
Unit 1

In accordance with your letter dated December 15, 1977, submitted herewith is one completed copy of the enclosure forwarded by that letter entitled, "Questionnaire for Nuclear Regulatory Commission Reliability Study of Standby Diesel Generator Units". As requested in your December 15, 1977 letter, the individual at San Onofre Unit 1 responsible for completing the questionnaire and responsible for responding to any follow-up communications concerning the questionnaire or for arranging a site visit is Mr. J. M. Curran, Plant Manager. Mr. Curran can be contacted in writing at the following address:

San Onofre Nuclear Generating Station, Unit 1  
Attention: Mr. J. M. Curran  
Plant Manager  
Post Office Box 128  
San Clemente, California 92670

Mr. Curran can also be contacted by telephone at (714) 492-7700.

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S. Are any foreign gases such as propane, freon, halon, carbon dioxide, etc. stored in the: Diesel Engine room?  
Yes \_\_\_ No X or adjacent buildings? Yes \_\_\_ No X

If yes, (other than hand portable fire extinguishers), then identify gases and give approximate tank size.

Gases	Volume (ft ) <sup>3</sup>
_____	_____
_____	_____
_____	_____
_____	_____

} NA

T. Does control system automatically bypass, in emergency starting, any engine temporarily out of service for maintenance? Yes \_\_\_ No X

If yes, then how many failures to bypass have occurred?  
NA

U. Does the control system automatically override the test mode under emergency conditions? Yes X No \_\_\_

V. Have repetitive mechanical failures occurred in any component part or subsystem of the engine, generator, or switch gear, etc.?  
Yes \_\_\_ No X

If yes, then which part or subsystem? NA

How many failures? NA

Give nature of failure. NA

W. Would periodic (yearly or other) evaluation and/or testing by "outside experts" contribute significantly to the diesel-generator reliability? Yes \_\_\_ No X

Give brief reasons for the answer. Units have been reliable

- X. 1. Give the accumulated time-load operating record for each diesel-generator unit from installation to the present (Running Hours):

Preoperational test Date April 1977

Engine Serial No.	Surv. Testing & Maintenance Hrs. No Load	Testing & Loaded	Emergency and Other Service Hrs.	Total Hours
75041-0238	3	13	222	238
75042-2804	3	12	60	75

2. Surveillance test load (percent of continuous rating) 75

3. Give the projected or planned time-load operation for each diesel-generator unit during the next 12 months.

Surveillance & Maintenance Hrs.	Emergency and other Service Hrs.	Total Hours
25	0	25

4. Provide the following summary of the periodic surveillance testing experience:

- a. Starting date of surveillance testing (OL date) 4/1/77  
 b. Periodic test interval monthly  
 c. Total number of surveillance tests performed 19  
 d. Total number of test failures 0

failure to start \_\_\_\_\_ failure to accept load \_\_\_\_\_  
 failure to carry load \_\_\_\_\_ failures due to operator error \_\_\_\_\_  
 failure due to equipment not being operative during emergency conditions \_\_\_\_\_

} NA

Supply a copy of the surveillance test procedures with this completed questionnaire. Attached

Additional Comments

These units have been in operation for only 9 months and therefore we have limited operating experience with these units.

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Y. General Suggestions

Briefly give constructive criticism or suggestions as to improvement in reliability of the diesel generators. These remarks may cover tests, maintenance, practices, orders, policy, adjustments, etc. } None

Notes:

1. The following relays are provided for diesel-generator protection:  
(all are bypassed during emergency operation)

- high crankcase pressure
- low-low engine lube oil pressure
- high-high water temperature
- high vibration
- low-low turbo oil pressure
- high main bearing temperature
- loss of field excitation
- negative phase sequence
- under frequency
- directional power
- overcurrent
- over voltage
- stator-ground

2. Routine Maintenance is accomplished by a computer controlled system of preventative maintenance orders.