



MAINE YANKEE ATOMIC POWER COMPANY
ENGINEERING OFFICE

TURNPIKE ROAD (RT. 9)
WESTBORO, MASSACHUSETTS 01581
617-366-9011
WMY 78-5

January 20, 1978



United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Office of Nuclear Reactor Regulation

Reference: (a) License No. DPR-36 (Docket No. 50-309)
(b) USNRC letter dated December 15, 1977, Reliability
of Standby Diesel Generator Units - Questionnaire

Dear Sir:

Subject: Standby Diesel Generator Units Questionnaire

As requested in your letter, Reference (b), we are forwarding to you the completed standby diesel generator units questionnaire. To the best of our knowledge all the information stated within is correct and we trust it will meet your satisfaction. If you have any additional questions or comments pertaining to this questionnaire, please contact Mr. Charles Frizzle, Maine Yankee Atomic Power Company, P.O. Box 11, Wiscasset, Maine, 04578. Telephone Number: (207) 486-1606.

Very truly yours,

MAINE YANKEE ATOMIC POWER COMPANY

R. H. Groce
Licensing Engineer

RTT/kg
Enclosures

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

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

Gases	Volume (ft) ³
_____	_____
_____	_____
_____	_____
_____	_____

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

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

- U. Does the control system automatically override the test mode under emergency conditions? Yes No _____

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

If yes, then which part or subsystem? N/A

How many failures? N/A

Give nature of failure. N/A

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

Give brief reasons for the answer. ENGINE RUN TIME IS NOT SUFFICIENT TO DEVELOP AN "EXPERT" OPERATOR. THE SAME APPLIES TO MAINTENANCE. AN EXPERT CAN OFTEN HEAR AND FEEL WHEN AN ENGINE IS NOT GOING TO FAIL. I DIFFERENTIATE BETWEEN NORMAL AND CRITICAL WEAR.

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

Preoperational test Date 4-21-71

Engine Serial No.	Surv. Testing & Maintenance Hrs. No Load	& Loaded	Emergency and Other Service Hrs.	Total Hours
1388	NONE	288.1	NONE	288.1
1389	NONE	268.2	NONE	268.2

2. Surveillance test load (percent of continuous rating) 0
3. Give the projected or planned time-load operatio for each diesel-generator unit during the next 12 months.

Surveillance & Maintenance Hrs.	Emergency and other Service Hrs.	Total Hours
24	NONE	24

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

- a. Starting date of surveillance testing (OL date) 6-2-72
- b. Periodic test interval MONTHLY
- c. Total number of surveillance tests performed 67/DIESEL
- d. Total number of test failures 1

failure to start NONE failure to accept load 1
 failure to carry load NONE failures due to operator error NONE
 failure due to equipment not being operative during emergency conditions NONE

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

Additional Comments

THE GOOD PERFORMANCE RECORD OF THE MAINE YANKEE DIESEL ENGINES CAN BE ATTRIBUTED TO OUR POLICY OF MINIMIZING THE NUMBER OF FAST STARTS MADE BY THE ENGINES. THE STRESSES ASSOCIATED WITH FAST STARTS ARISING FROM THERMAL IMBALANCES, PARTS GROWING AT AN UNEQUAL RATE WITH THE RISING ENGINE TEMPERATURE, AND CLEARANCES OUT OF THE OPTIMUM RANGE BECAUSE THE ENGINE TEMPERATURE IS NOT AT EQUILIBRIUM ARE THUS ONLY ENCOUNTERED BY MAINE YANKEE DIESEL ENGINES ONCE A YEAR.

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.