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Mr. Edward G. Bauer, Jr.
Vice President and General Counsel
Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101

Dear Mr. Bauer:

SUBJECT: EMERGENCY DIESEL GENERATOR FUEL OIL QUALITY TECHNICAL SPECIFICATION
CHANGES - PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3

By letter dated January 7, 1984 to all operating power reactors, the staff requested that fuel oil quality surveillance requirements be updated to conform with the guidance provided in Regulatory Guide 1.137 (FUEL-OIL SYSTEMS FOR STANDBY DIESEL GENERATORS). We have reviewed your proposed Technical Specification changes as they pertained to Sections C.2.a through C.2.g of Reg. Guide 1.137 and conclude that we require additional information in order to complete our review. Enclosure 1 contains our request for additional information. We would appreciate your responses to this request within 45 days from the receipt of this letter.

If you have any questions concerning this request, please contact your NRC Project Manager (Gerald E. Gears at 301-596-6058).

The information requested in this letter affects fewer than 10 respondents; therefore, OMB clearance is not required under P. L. 96-511.

Sincerely,

"ORIGINAL SIGNED BY
JOHN F. STOLZ"

John F. Stolz, Chief
Operating Reactors Branch No. 4
Division of Licensing

Enclosure:
As stated

cc w/enclosure:
R. Giardina

ORB#4:DL
GGears;ef
09/14/84

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09/14/84

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REQUEST FOR ADDITIONAL INFORMATION
PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3
EMERGENCY DIESEL FUEL OIL QUALITY

1. In a letter to all Power Reactor Licensees from Darrell G. Eisenhut, Director, Division of Licensing, dated January 7, 1980, the NRC recommended that the diesel fuel oil quality assurance program specified in Regulatory Guide 1.137 positions C.2.a through C.2.g be implemented. The implementation of these guidelines would result in an initial and continuing quality of fuel oil and provide assurance that the emergency diesel generator will be available to perform its design function. In a letter dated October 1, 1981, you proposed a technical specification change to bring your fuel oil quality assurance program "in conformance with Regulatory Guide 1.137..." The staff has reviewed your proposed technical specification change and finds that it meets R.G. 1.137 position C.2.c with regards to the sampling procedure and only those portions of positions C.2.a and C.2.b with regards to water, sediment and viscosity limits. It does not address the other properties specified in R.G. 1.137, ASTM D975 Table 1, and ANSI N195 Appendix B. The current technical specifications for Peach Bottom appear to be more in conformance with Positions C.2.a and C.2.b of R.G. 1.137 than the proposed technical specifications. Therefore, to complete our review additional information is required as follows:

- a. Provide detail justification to show that your proposed and/or current technical specifications will result in the maintenance of quality fuel oil stored in the fuel oil storage tanks as being equivalent to fuel oil that is sampled and analyzed in accordance with the guidelines of R.G. 1.137 Positions C.2.a through C.2.c.
- b. Provide clarifications as to why positions C.2.d through C.2.f (removal of accumulated water from the fuel oil tanks and periodic fuel oil tank cleaning) were not included in your proposed technical specifications.

If the operation of a diesel generator were to be required for a prolonged period resulting in the replenishment of fuel oil without interrupting operation of the diesel generator, what provisions have been made in the design of the fuel oil storage fill system and what operating procedures are in place to minimize the creation of turbulence of the sediment in the bottom of the storage tank. Stirring of this sediment during addition of new fuel appears to have the potential of causing the overall quality of the fuel to become unacceptable and could potentially lead to the degradation or failure of the diesel generator. Considering your system design, provide your intended mode of operation to preclude the above from occurring. (R.G. 1.137 Position C.2.g)

2. The proposed technical specification includes a deviation from the guidance in R.G. 1.137. The deviation involves a condition when the fuel oil in a storage tank has been found to be unacceptable; however, the associated diesel generator would not be declared inoperable. The following justification was submitted for this deviation:

"The fuel oil system at Peach Bottom has four separate fuel oil tanks, one for each diesel, with the capability to isolate any tank and feed a diesel from an alternate tank. The capacity of three diesel fuel tanks is greater than the Technical Specifications requirement for the minimum onsite volume of diesel fuel oil. Therefore, should the oil in a tank not meet the above requirement, the diesel would not be considered inoperable. The tank could be isolated and the oil replaced or brought within acceptable limits while the generator was fed from an alternate source. With one oil tank unavailable for use, the operability of the diesel generators would be governed by the Technical Specification minimum allowable volume of onsite diesel fuel oil [104,000 gallons]."

Section 8.5.3, Table 8.5.3 and Figure 8.5.1 of the Final Safety Analysis Report (FSAR) describe and show the emergency diesel generator fuel oil system design. Figure 8.5.1 of the FSAR shows a fuel oil transfer system cross-tie connecting the four (4) fuel oil storage tanks. The cross-tie connections are located at the suction end of the fuel oil transfer pumps. Based on your proposed technical specifications, if a fuel oil storage tank was found to contain unacceptable fuel, the tank would be isolated, and the normally closed cross-tie valves would be opened so that the four emergency diesel generators would be supplied fuel oil from the three remaining fuel oil storage tanks. This condition would last until the unacceptable fuel oil is replaced. Based on your proposed technical specification, it appears that fuel replacement could be prolonged to an indefinite period

of time. It is the staff's position that unacceptable fuel should be removed from the affected tank as soon as possible to restore the system to the as intended design status. We believe this area should be further expanded and clarified. In addition, from the system arrangement information available to the staff, it appears that operation of four diesels from three fuel oil storage tanks may violate the independence requirement of GDC-17 for onsite ac power system.

From data provided in the FSAR it would also appear that the three remaining fuel oil storage tanks containing a minimum of 104,000 gallons of fuel may not permit operation of the four diesel generators at full load for a period of seven days.

To complete our evaluation of this aspect of the proposed technical specification changes, we require the following:

- a. Provide an up-to-date fuel oil storage system piping diagram and describe how you comply with GDC-17 independence requirement for onsite ac power systems when operating four diesels from three storage tanks containing a minimum of 104,000 gallons of fuel.
- b. Describe and provide the results of an analysis to show how the minimum stored fuel of 104,000 gallons meets the technical specification requirement for operation of the four diesels for a period of seven days.