

ATTACHMENT 1

PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3

Docket Nos. 50-277
50-278

License Nos. DPR-44
DPR-56

TECHNICAL SPECIFICATION CHANGE REQUEST
88-08, Supplement 2

"Clarification of Initial Voltage Values for Reject Testing"

Supporting Information for Changes 3 Pages

Philadelphia Electric Company (PECo), Licensee under Facility Operating Licenses DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station (PBAPS) Unit No. 2 and Unit No. 3, respectively, requests that the Technical Specifications contained in Appendix A to the Operating Licenses be amended. Proposed changes to the Technical Specifications (TS) are indicated by bold face type below and by vertical bars in the margin of page 218d and 224. The proposed revised pages 218d and 224 for each unit are included in Attachment 2. An additional revised page 218d is also included in Attachment 2, because in our September 28, 1992 submittal on converting to a 24 month surveillance schedule we proposed a revision to these sections.

Description of Changes

- (1) The originally proposed TS 4.9.A.1.2.f.2 stated: "Verifying the diesel generator capability to reject a load of greater than or equal to that of the RHR Pump Motor for each diesel generator while maintaining voltage within $\pm 10\%$ of the initial value and frequency at 60 ± 1.2 hz. The new proposed TS 4.9.A.1.2.f.2 would state: "Verifying the diesel generator capability to reject a load of greater than or equal to that of the RHR Pump Motor for each diesel generator while maintaining voltage within **4160 ± 410 volts**; and frequency at 60 ± 1.2 hz. (emphasis added)
- (2) The originally proposed TS 4.9.A.1.2.f.3 stated: "Verifying the diesel generator capability to reject a load of 2600 kW without tripping. The generator voltage shall not exceed $+15\%$ of the initial value during and following the load rejection." The new proposed TS 4.9.A.1.2.f.3 would state: "Verifying the diesel generator capability to reject an indicated load of 2400 kW-2600 kW without tripping. The generator voltage shall not exceed the initial value (**4160 ± 410 volts**) by more than 660 volts, during and following the load rejection." (emphasis added)
- (3) A change to the bases is also being proposed. The change in the bases is as shown on the attached page 224. The proposed bases will clearly state the rationale for the load reject test and the generator voltage.

Safety Discussion

The proposed changes merely clarify the originally proposed TS, and no change to either the intent or method of the testing is being proposed by this submittal. Change (1) defines the initial voltage that must be maintained as 4160 volts. By adding this value, rather than relying merely on the "initial value" phrase, the testing requirement is clearer without changing either the intent or method of testing. The test will be performed, as

committed to in our Jan. 31, 1992 submittal with the Diesel Generators (DG) not synchronized to the grid.

Change (2) clarifies the load rejected during the continuous load reject test, the initial voltage and the maximum transient voltage. By providing a range of load to be rejected during the test, the TS will be consistent with other requested loads in the Jan. 31, 1992 submittal. Further, PECO in better defining the test is providing an increased measure of clarity. It had never been the intent to reject exactly 2600 kW during this test. The intent was to demonstrate the DG load response characteristics and capability to reject the largest single load without exceeding predetermined voltage and frequency while maintaining a specified margin to the overspeed trip. For the second change in TS 4.9.A.1.2.f.3, the initial voltage is measured at the 4 kV Bus, nominally 4400 volts. As stated in our Jan. 31, 1992 letter, the only components potentially exposed to the post-rejection higher voltage are the generator and voltage regulator, the cables and the DG output breaker. All of these components have been subjected to Hi Potential testing for one minute at approximately twice the voltage expected during the load rejection transient. The higher voltage will decay from its maximum value to the nominal voltage in less than three seconds.

Change (3) merely provides the rationale for the changes proposed in change 2; therefore, there is no affect on the plant by this change.

No Significant Hazards Consideration

The change proposed in this Application does not constitute a significant hazards consideration in that:

- i) The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated because the probability of a Loss of Off Site Power (LOOP) event is independent of the testing or availability of any of the Diesel Generators. The DGs are designed to mitigate the consequences of an accident; therefore, by increasing the assurances that a DG will be available the consequences of an accident will remain as previously evaluated.
- ii) The proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated because this change does not add any accident initiators or make any modifications which could create the possibility of a new or different type of accident. The only change proposed in this request is the clarifying of testing requirements.

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- iii) The proposed changes do not involve a significant reduction in a margin of safety because the margin of safety remains the same. The current ST program provides a high degree of assurance that the DGs will operate when required and by improving the test program greater assurance is provided.

Environmental Assessment

An environmental impact assessment is not required for the changes proposed by this Application because the changes conform to the criteria for "actions eligible for categorical exclusion" as specified in 10 CFR 51.22(c)(9).

Conclusion

The Plant Operations Review Committee and the Nuclear Review Board have reviewed these proposed changes and have concluded that they do not involve an unreviewed safety question and are not a threat to the health and safety of the public.

ATTACHMENT 2

PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3

Docket Nos. 50-277
50-278

License Nos. DPR-44
DPR-56

TECHNICAL SPECIFICATION CHANGES

List of Attached Pages

<u>Unit 2</u>	<u>Unit 3</u>
218d	218d
224	224

PBAPS

LIMITING CONDITION FOR OPERATIONSURVEILLANCE REQUIREMENTS

4.9.A.1.2 (Continued)

- e. At least once every 31 days by obtaining a sample of fuel oil from the storage tank in accordance with ASTM D2276-78, and verifying that total particulate contamination is less than 10mg/liter when checked in accordance with ASTM D2276-78, Method A, except that the filters specified in ASTM D2276-78, Sections 5.1.6 and 5.1.7, may have a nominal pore size of up to three (3) microns.
- f. At least once per 18 months by:
 - 1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
- g. At least once per 24 months by:
 - 1. Verifying the diesel generator capability to reject a load of greater than or equal to that of the RHR Pump Motor for each diesel generator while maintaining voltage within 4160 ± 410 volts and frequency at 60 ± 1.2 hz.
 - 2. Verifying the diesel generator capability to reject an indicated load of 2400 kW-2600 kW without tripping. The generator voltage shall not exceed the initial value (4160 ± 410 volts) by more than 660 volts during and following the load rejection.

PBAPS

LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENTS

4.9.A.1.2 (Continued)

- e. At least once every 31 days by obtaining a sample of fuel oil from the storage tank in accordance with ASTM D2276-78, and verifying that total particulate contamination is less than 10mg/liter when checked in accordance with ASTM D2276-78, Method A, except that the filters specified in ASTM D2276-78, Sections 5.1.6 and 5.1.7, may have a nominal pore size of up to three (3) microns.
- f. At least once per 18 months by:
 - 1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
- g. At least once per 24 months by:
 - 2. Verifying the diesel generator capability to reject a load of greater than or equal to that of the RHR Pump Motor for each diesel generator while maintaining voltage within 4160 ± 410 volts and frequency at 60 ± 1.2 hz.
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PBAPS

LIMITING CONDITION FOR OPERATIONSURVEILLANCE REQUIREMENTS

4.9.A.1.2 (Continued)

- e. At least once every 31 days by obtaining a sample of fuel oil from the storage tank in accordance with ASTM D2276-78, and verifying that total particulate contamination is less than 10mg/liter when checked in accordance with ASTM D2276-78, Method A, except that the filters specified in ASTM D2276-78, Sections 5.1.6 and 5.1.7, may have a nominal pore size of up to three (3) microns.
- f. At least once per 18 months by:
 - 1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
 - 2. Verifying the diesel generator capability to reject a load of greater than or equal to that of the RHR Pump Motor for each diesel generator while maintaining voltage within 4160 ± 410 volts and frequency at $60 \pm 1.2\text{hz}$.
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PBAPS

LIMITING CONDITION FOR OPERATIONSURVEILLANCE REQUIREMENTS

4.9.A.1.2 (Continued)

- e. At least once every 31 days by obtaining a sample of fuel oil from the storage tank in accordance with ASTM D2276-78, and verifying that total particulate contamination is less than 10mg/liter when checked in accordance with ASTM D2276-78, Method A, except that the filters specified in ASTM D2276-78, Sections 5.1.6 and 5.1.7, may have a nominal pore size of up to three (3) microns.
- f. At least once per 18 months by:
 - 1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
 - 2. Verifying the diesel generator capability to reject a load of greater than or equal to that of the RHR Pump Motor for each diesel generator while maintaining voltage within 4160 ± 410 volts and frequency at 60 ± 1.2 hz.
 - 3. Verifying the diesel generator capability to reject an indicated load of 2400 kW-2600 kW without tripping. The generator voltage shall not exceed the initial value (4160 ± 410 volts) by more than 660 volts during and following the load rejection.

4.9 BASES (Cont'd)

The diesel generator voltage may decrease to 59% of nominal when the 2000 HP RHR pump motor is started. The load rejection test of the largest single load will be conducted with the EDG governor in isochronous mode using the Residual Heat Removal Pump in full flow test as the rejected load. The load rejection test of 2400-2600 kW may be conducted with the EDG governor and voltage regulator in droop mode parallel to the offsite grid. The EDG voltage will be matched to the bus voltage (4160 ± 410 volts) and the overshoot upon load removal will be limited to 660 volts which is 15% of this nominal value.

The term permanent and auto-connected loads means those loads which the diesel would normally be expected to supply in the scenario being tested. Verification of load shedding from the emergency busses will include only those normally powered from the emergency bus during plant operations. The loads described by the term emergency loads are a Residual Heat Removal Pump, a High Pressure Service Water Pump and the 480 Volt emergency bus load center.

The diesel fuel oil quality must be checked to ensure proper operation of the diesel generators. Water content should be minimized because water in the fuel could contribute to excessive damage to the diesel engine. Amendment No. 134 centralized commitments related to Position C.2 of Regulatory Guide 1.137, Revision 1 (October, 1979) "Fuel Oil Systems for Standby Diesel Generators."

Although station batteries will deteriorate with time, utility experience indicates there is almost no possibility of precipitous failure. The type of surveillance described in this specification is that which has been demonstrated over the years to provide an indication of a cell becoming irregular or unserviceable long before it becomes a failure. In addition, the checks described also provide adequate indication that the batteries have the specified ampere hour capability.

The station batteries shall be subjected to a performance test every third refueling outage and a service test during the other refueling outages. This testing frequency complies with the testing requirements of the Institute of Electrical and Electronics Engineers (IEEE) Standard 450 (1975), "Recommended Practice for Maintenance, Testing and Replacement of Large Lead Storage Batteries," and Regulatory Guide 1.129, Revision 1 (February 1978), "Maintenance, Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants."

A performance test determines the ability of the battery to meet a specified discharge rate and duration based on the manufacturer's rating. A service test proves the capability of the battery to deliver the design requirements of the dc systems; i.e., supply and maintain in operable status all of the actual emergency loads for the design basis accident. A performance test is the most severe test because the cycling on the battery at manufacturer's rating shortens the service life of the battery. A service test is performed at design load instead of manufacturer's ratings.

The test interval for the Emergency Service Water system, and pump room fans associated with the ESW pumps is deemed adequate to provide assurance that the equipment will be operable based on good engineering judgment and system redundancy, plus the additional testing accomplished when the diesel generators are tested. Pump flow tests during normal operation will be performed by measuring the head and flow in the system using suitable flow equipment and pressure instrumentation.

4.9 BASES (Cont'd)

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