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VICE PRESIDENT
ELECTRIC PRODUCTION

February 19, 1982

Docket Nos. 50-277
50-278

Mr. John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Stolz:

Attached you will find a revision to our February 11, 1982 letter which provided additional information to support our September 3, 1981 response to your June 5, 1981 letter transmitting the Safety Evaluation for the Environmental Qualifications of Safety-Related Electrical Equipment at Peach Bottom Atomic Power Station Units 2 and 3.

This revision is being provided as a result of our continuing discussions with your staff concerning the justification for continued operation of our Peach Bottom Atomic Power Station with respect to electrical equipment qualification. It is expected that this revision will resolve particular questions discussed during a February 16, 1982 phone conversation with our project manager. The revision combines categories 2 and 3 and provides additional explanatory statements in the discussions section of categories 1 and 4.

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If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,

Attachment

Revised 2/19/82

Justification for Continued Operation
Peach Bottom Atomic Power Station
Units 2 and 3

This document supplements our September 3, 1981 response to the Safety Evaluation for the Environmental Qualificaiton of Safety-Related Electrical Equipment at Peach Bottom Atomic Power Station, Units 2 and 3. Table 1 of the September 3, 1981 response identifies those equipment items with environmental qualification deficiencies; Table 1 is provided here as Attachment 1. For clarity, the qualification deficiencies have been subdivided into the following categories:

1. Deficiency resolved.

2. Equipment which performs its function prior to exposure to the harsh environment, and the subsequent failure of the equipment or non-essential subcomponents does not degrade other safety functions or mislead the operator.

3. Deficiency restricted to radiation.

4. Exemption from qualification up-grade.

5. Other equipment deficiencies.

Category 1

The following portion of the equipment deficiencies identified in Table 1 have been resolved by analysis:

1.	PS-14-044A,B,C,D	Units 2 and 3
2.	PS-10-120A,B,C,D,E,F,G	Units 2 and 3
3.	EPTB-003	Units 2 and 3
4.	20B10,20B11,20B12,20B13	Units 2 and 3

PS-14-044A,B,C,D and PS-10-120A,B,C,D,E,F,G are pressure switches which were previously reported as deficient because documentation was not available to support their operability during post-LOCA radiation exposure. An analysis (PECo reference 126) which identifies the materials of construction and the

radiation thresholds for the materials has been prepared. This analysis resolves the radiation deficiency previously reported.

EPTB-003 is a terminal block which was previously reported as deficient because documentation was not available to support its operability during post-LOCA radiation exposure. An analysis (PECo reference 128) which identifies the generic material of construction and its radiation threshold has been prepared. This analysis resolves the radiation deficiency previously reported.

20B10,11,12,13 are 480 volt power distribution load centers which were previously reported as deficient because documentation was not available to support their operability post-LOCA or HELB. An environmental qualification report was prepared by the manufacturer for this equipment and it resolves this documentation deficiency.

Category 2

This category applies to that portion of the equipment identified in Table 1 which has either a passive essential safety function or it performs its safety function prior to exposure to the harsh environment. The following equipment has a passive essential safety function:

1.	MO-10-13A,B,C,D	Units 2 and 3
2.	MO-10-154A,B	Units 2 and 3
3.	MO-14-11A,B	Unit 2
4.	MO-10-34A,B	Units 2 and 3
5.	MO-14-26A,B	Units 2 and 3
6.	MO-23-20	Units 2 and 3
7.	MO-23-25	Units 2 and 3

The following equipment has an initial short duration active essential safety function:

1.	MO-10-25A,B	Units 2 and 3
2.	MO-14-12A,B	Unit 2

3.	SV-2671A,B,C,D,E,F,G	Units 2 and 3
4.	SV-2678A,B,C,D,E,F,G	Units 2 and 3
5.	SV-2980	Units 2 and 3

None of the active essential valve actuators identified above would be exposed to post-LOCA environmental effects within the time period that their operation would be required since they are located outside primary containment. In addition, the MO-10-25 actuators are physically separated and on redundant loops; the same is true of the MO-14-12 actuators. Therefore, a HELB is not capable of causing a common mode environment during the time period that the equipment would be required to operate. In addition, the particular deficiency for all motor operated valve actuators (MO) except MO-23-25 involves a subcomponent, the drive motor brakes. Our evaluation of this deficiency reveals that the actuator could perform its safety function despite failure of this subcomponent (Attachment 2). The solenoid valves (SV) use the force developed by process pressure to close, and coil failure would cause the valve to close thereby satisfying its safety function objective to isolate (Attachment 2).

Category 3

The following portion of the equipment identified in Table 1 is exposed to post-LOCA radiation, however, it is not exposed to prolonged temperature changes:

1.	2A,2B,2C,2DP35	Units 2 and 3
2.	LS-23-91A,B	Unit 2
3.	OA,OB,OCV20	Common plant
4.	N3692,N3693,N3772,N3773 N3783,N3784,N3884,N3885 N3994,N3995	Units 2 and 3
5.	DPS-00014,15 DPS-20400-03 thru -20	Units 2 and 3

The RHR pump motors 2A, 2B, 2C and 2DB35 are qualified to 2.1 MR. Although these motors would be expected to survive the postulated 101 day post-LOCA dose of 33 MR, an alternate method of shutdown cooling via the main condensers could be used.

Level switches 23-91A,B automatically transfers HPCI suction from the CST to the torus on high torus level. Alternate redundant torus level indication is available to the operator from LT-8027A and B. In addition, these level transmitters provide the operator with a high level alarm.

0A, 0B, and 0CV20 are the Standby Gas Treatment fan drive motors. Of the three motors which are available, only one is required, therefore, the system would be expected to be operational post-LOCA (Attachment 2).

N3692 thru N3695 are local control switches for the HPCI and ECCS (Emergency Core Cooling System) area coolers. Each ECCS pump room has redundant area coolers and control switches. The control switches perform an essential passive safety function and the organic materials are phenolic. In addition, these switches are a subcomponent of a metallic gasketed control station, and the energized subcomponents of the switch are protected by the control station enclosure.

DPS-20400-03 thru -20 are control components for the HPCI and ECCS area coolers. Each ECCS pump room has redundant area coolers. Each cooler has a differential pressure switch (dps) which monitors the fan operation. Their control function is to initiate the alternate cooler in the event that the preferred fan does not start. The application of these dps is a fail safe design, i.e. failure of the dps to actuate will cause both area coolers to operate simultaneously.

Category 4

The following portion of the equipment identified in Table 1 has been exempted from a qualification up-grade based on our response to SER item 4.2:

1.	MPL 23-1,2	Units 2 and 3
2.	FT-23-82	Units 2 and 3
3.	PS-23-68A,B,C,D	Units 2 and 3
4.	PS-23-84-1	Units 2 and 3
5.	PS-23-97A,B	Units 2 and 3

The equipment in this category is the HPCI pump-turbine and associated instrumentation. The exemption from a qualification upgrade is based on the facts that (1) a fully redundant ADS system and multiple low pressure systems are available to mitigate the accident, and (2) the equipment is protected from an adverse environment with the exception of radiation by redundant local area coolers. The area coolers maintain temperature well below the system specification limit. A qualification up-grade for an apparent radiation deficiency alone is not warranted since the successful operation of the system will prevent radiation exposure, and if core damage of the magnitude associated with the post-LOCA source terms does occur, the system's operation would be either of no benefit or minimal benefit at best.

Category 5

The following additional equipment with qualification deficiencies remains to be covered in this category.

20D11,20D11A

20B36,20B37,20B38,20B39

N210025A,N210025B

Similar motor control centers (MCC) have been tested to temperature and pressure conditions which envelop the PBAPS requirements. This equipment would not be exposed to harsh environmental effects immediately after a LOCA, since the MCC's are located in secondary containment. In addition, the equipment enclosure is of dust tight construction; there are no vents, and compartment doors are gasketed. In the event of a HELB, RCIC can depressurize and provide the required water inventory make-up. Alternatively, ADS is available in combination with the low pressure ECCS systems and conventional plant equipment such as the condensate pumps. This conventional plant equipment is located in mild environment areas.

In summary, we conclude that the continued operation of PBAPS does not constitute an undue risk to public health and safety due to the failure, for environmental causes, of safety related electrical equipment which would be required to mitigate the consequences of a postulated accident.

WJB:kmw