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January 16, 1984

Docket Nos. 50-277
50-278

Mr. Darrell G. Eisenhut
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Peach Bottom Atomic Power Station
Fire Protection Modifications Progress Report

REFERENCES: 1) Letter from J. W. Gallagher to
D. G. Eisenhut, dated February 25, 1983
2) Letter from V. S. Boyer to D. G. Eisenhut,
dated December 2, 1983

Dear Mr. Eisenhut:

Philadelphia Electric Company, in the Reference 1 letter, proposed to submit Peach Bottom's Fire Protection Modifications Progress Report every four months, starting in May, 1983. We also proposed, in the Reference 2 letter, to include confirmation of the specific status of safe shutdown system cabling requiring encapsulation or re-routing schedule extensions beyond our December 31, 1983, commitment date.

This letter provides the Third Progress Report transmitted to you to date. Included in this report are the specific cable encapsulation and reroute work which were not completed by December 31, 1983. We did, however, complete a substantial portion of the encapsulation work during 1983, per our commitment in the Reference 1 letter. A summary of the work items in the progress report would show 1470 linear feet complete out of 2860 linear feet total.

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The following paragraphs are to clarify two categories added to the Modification Progress Report:

1. Single Asterisk

There are two new modifications included on the Modification Progress Report. The first modification was identified on Table 4-1 of the September 16, 1983, submittal entitled, "Alternative Shutdown Capability Assessment". The modification was referred to as "Implementation of permanent plant fix to enable powering of two MCC's from Unit 3 load centers" (pg. 6, Fire Area 7). Several approaches to accomplish this modification were investigated. However, the most effective solution is to permanently relocate the feeds to the "B" and "D" diesel generator motor control centers from the Unit 3 load centers instead of the Unit 2 load centers. This will minimize the impact on normal plant operations and will not require any switching operations to provide diesel auxiliaries during post fire shutdown operations. The relocation of these feeds will insure that at least two diesel generators motor control centers will be available following a fire on elevation 165 of either Unit. An attempt will be made to complete this modification by the end of the next Unit 2 refueling outage.

The second modification was identified during the outlining of the procedures necessary for the various shutdown scenarios. The battery chargers for the HPCI and RCIC systems must be re-established, respectively, depending upon the systems being used for shutdown. The feeds to the battery chargers were to be provided by temporary feeds to the appropriate battery chargers. Since the feeds are required in support of hot shutdown, these feeds must be installed permanently so as not to be considered as repair procedures. Backup feeds, along with bypass and isolation switches, will be provided for the 2B and 2D battery chargers from a Unit 3, B-channel motor control center, and for the 3A and 3C battery chargers from a Unit 2, A-channel motor control center. There are four encapsulations required in support of these battery charger cross-tie feeds. These four are identified on the Modification Progress Report immediately following the battery charger cross-tie feed item. This will permit the appropriate battery chargers to be re-energized following a fire in the various Fire Areas, i.e., a fire on elevation 165 of the Unit 2 Reactor building would disable all Unit 2 battery charging; the 2B and 2D battery chargers would be fed from Unit 3, thus allowing extended use of the Unit 2 HPCI system. An attempt will be made to complete this work by the end of the next Unit 2 refueling outage depending upon equipment availability.

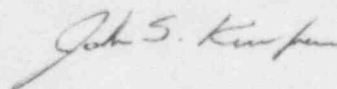
There are also three 125V DC feeds that need encapsulation. These cables were deferred to Alternative Shutdown, since it was thought that these cables would be modified as part of alternative shutdown. Since they are not being modified, they are now being included in the list. An attempt will be made to complete this work by the end of the next Unit 2 refueling outage.

2. Double Asterisk

This denotes approximately 100 feet of cable and raceway that may not be complete by 3/15/84, due to exceptional interference problems requiring unique support designs.

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

Very truly yours,



Attachment

cc: A. R. Blough

PBAPS Fire Protection Mod Progress Report

Revised to Account for Proposed Alternative Shutdown System
(Does not Include Alt. SS Mods)

(This Report Supersedes the September 16, 1983, Report)

Key: 2-EOO means "Unit 2 - End of Next Refueling Outage"
N/A - Not Applicable

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Reroute ZD2Q1024K and ZD2Q1027B then encapsulate in Fire Zone 4-4C.	Design complete for reroutes. Outage work. No encapsulation necessary.	2-EOO	1029B
Encapsulate 4 raceways in Fire Zone 4B.	Raceways are now defined for ADS/CS and no encapsulation is necessary.	N/A	
Raceways defined for- ADS/CS - Encapsulate 3 raceways in Fire Zone 4-4C - ZAZD855 ZA2M001, ZA2M417.**	Encapsulation in progress.	3/15/84 (As per Ref. 2)	1029A
Reroute ZD2Q1024K in Fire Zones 6-5E and 6-5G.	Design complete. Outage work.	2-EOO	1029B
One tray and 3 conduits need to be encapsulated in Fire Zone 11-12B.	Raceways are now defined for ADS/CS and no encapsulation is necessary.	N/A	
Fix ZA3Q1827A (reroute in Fire Zone 11-12C).	Complete	Completed	1029B

**As identified in the body of the letter.

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Raceway defined - encapsulate ZB3M002 in Fire Zone 11-12C.	Encapsulation in progress.	3/15/84 (As per Ref. 2)	1029A
Encapsulate ZB3Q1794A, B in Fire Zones 13-13D and 13-13G.	Encapsulation of cable not necessary due to alternative shutdown system and exemption request for torus area.	N/A	
Encapsulate 7 cables in Fire Zones 11-60 and 11-63.	Raceways are now defined for ADS/CS, and no encapsulation is necessary.	N/A	
Encapsulate cables ZA3Q1018B, C in Fire Zone 2-62.	Raceways are now defined for ADS/CS - and no encapsulation is necessary.	N/A	
Encapsulate 4 cables in Fire Zones 11-65A, B, C and 72D.	Raceways are now defined for ADS/CS and no encapsulation is necessary.	N/A	
Raceways defined - encapsulate ZA2M417; ZB3D002 in Fire Zone 11-75.	Encapsulation in progress.	3/15/84 (As per Ref. 2)	1029A
Encapsulate several 4kV power feeds in Fire Zones 78A, B, E and Fire zone 114.	Conduits are installed within permanent plant walls in this area. No encapsulation is necessary.	N/A	
Encapsulate conduits ZA2B1249, ZC2B1247 and ZA2B143 in Fire Zone 50-78A	Encapsulation in progress.	3/15/84 (As per Ref. 2)	1029A
Encapsulate conduits ZC3B137, ZC3B150 and Junction Box J17 in Fire Zone 50-78A.	Complete	Completed	1029A

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Encapsulation 1/2 SSA raceways in Fire Zone 50-78B.	Encapsulation in progress.	3/15/84 (As per Ref. 2)	1029A
Encapsulate several 4kV conduits in Fire Zone 50-82	No longer necessary due to safe shutdown strategy change.	N/A	
Encapsulate conduit ZA3D001 in Fire Zone 30-117.	No longer necessary due to safe shutdown progress.	N/A	
Encapsulate ZB3D1802A, B and ZD3DD01E in Fire Zone 31-118.	Encapsulation in progress	3/15/84 (As per Ref. 2)	1029A
Encapsulate ZD3DD01E in Fire Zone 32-119.	Complete	Completed	1029A
Relocate battery chargers 3BD03 & 3DD03, then encapsulate ZB3BD01E in Fire Zone 32-120.	Complete	Completed	1029C 1029A
Encapsulate ZB3B1114A and ZD3DD01E in Fire Zone 33-120.	Encapsulation of cables not required due to new safe shutdown strategy and field survey results.	N/A	
Encapsulate cable OG05H in Fire Zone 11-147.	Encapsulation no longer necessary due to safe shutdown strategy change.	N/A	
Encapsulate OG03H and ZA2AG121B** in Fire Zone 35-122.	Encapsulation in progress.	3/15/84 (As per Ref. 2)	1029A
Redesign 2A1706R - encapsulate OG03H and ZA2AG121B** in Fire Zone 37-124.	Outage work complete. Encapsulation in progress.	Outage work completed. 3/15/84 (As per Ref. 2)	1029A

**As identified in the body of the letter.

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Redesign 2A1603R - encapsulate ZB2BD01E in Fire Zone 32-125.	Complete	Completed	1029D 1029A
Relocate battery charger 2DD03, then encapsulate related cables in Fire Zone 39-126.	Design complete. Outage work. Field survey in progress for encapsulation.	2-EOO	1029C 1029A
Encapsulate ZB2BD01E, ZB0B6143C and ZB2B1122A in Fire Zone 39-126.	Encapsulation unnecessary due to new safe shutdown strategy and field survey results.	N/A	
Encapsulate ZA2A15C5A in Fire Zone 40-127.	Encapsulation in progress.	3/15/84 (As per Ref. 2)	1029A
Encapsulate ZB2D1802A, B and ZB2BD01E in Fire Zone 41-128.	Complete	Completed	1029A
Encapsulate ZA2B1249, ZA2B143 and ZC2B1247 in Fire Zone 50-130.	Field survey complete. Design in progress.	2-EOO (Due to the high level of radiation during operation in Fire Zone 130 and the lengths of the runs of ZA2B1249 and ZC2B1247 (250 feet), this modification must be done during an outage.)	1029A
Redesign cables 2A1603J, K, L, 2A1706J, K, L - in Fire Zones 43-132, 44-133, 45-134 and 46-135 as required.	Work complete.	Completed	1029D

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Encapsulate ADS/CS raceways in Fire Zone 11-147.	Encapsulation in progress.	3/15/84 (As per Ref. 2)	1029A
Upgrade penetration seals to required ratings as previously committed in correspondence from J. W. Gallagher to D. G. Eisenhower, dated 10/14/81.	Concentrating on Unit 3 outage work. 3700 seals of 6300 estimated complete.	3/1/84	1110
Change the settings on the following 4kV circuit breakers: Unit 2-152-1505, 152-1705, 152-1806; Unit 3-152-1505 ... 152-1806.	Complete in Unit 3. Awaiting Unit 2 outage. Unit 2 design complete.	3-Completed 2-EOO	2-1029G 3-1029H
Change the settings on the 480V load center circuit breakers: Unit 2-1013 ... 1322; Unit 3-1212 ... 1114.	Complete in Unit 3. Awaiting Unit 2 outage. Design complete.	3-Completed 2-EOO	3-1029H 2-1029G
Replace the following 480V motor control center magnetic-only circuit breakers with thermal magnetic circuit breakers: Unit 2-3671 ... 2851; Common-4955, 5055, 6131, Unit 3-3851 ... 6033. (As previously committed to in correspondence from S. L. Daltroff to D. G. Eisenhower, dated January 12, 1983.)	Qualified breakers not currently available. Qualification process in progress, expected to be complete by 2/1/84.	First refueling outage or planned outage that lasts at least 60 days, commencing after 6/1/84. Breakers still not qualified. Schedule change due to outage change caused by Unit 2 forced outage.	2-1029J, Common- 1029K, 3-1029L
Add new ground overcurrent relays to the following 4kV circuit breakers: Unit 2-152-1606 and 152-1709.	Design complete. Relays available. Awaiting Unit 2 outage.	2-EOO	1029M

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Replace the existing ground overcurrent relays for the following 4kV circuit breakers: Unit 2; 152-1606 and 152-1704.	Design complete. Relays ordered. Awaiting Unit 2 outage.	2-EOO	1029N
Add eight-hour battery power supply capability to the Emergency Lighting System in the following locations: Main Control Room, Remote Shutdown Panels, Cable Spreading Room (selected locations), Four Emergency Switchgear Rooms, HPSW Pump bays and the fifth bay in the DG Building.	Complete (Alternative shutdown system design will add additional areas.)	Complete, startup problems resolved.	1029R
Provide a water curtain in the west corridors of reactor building, elev. 135; Units 2 and 3.	Complete	Completed	1029U
Isolate the corridor behind the emergency switchgear rooms.	Complete	Completed	1029S
Provide dikes for Emergency Load Centers on elevation 165, Units 2 and 3.	Complete	Completed	1029T
Provide smoke detectors in Fire Zones 50-78A and 50-82 since the zones have a fixed combustible loading and no existing smoke detection system.	Complete	Completed	1029W

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Provide smoke detectors in Fire Zones 2-70, 11-72E, 11-72F, and 11-74 since the zones have a fixed combustible loading and no existing smoke detection system.	Complete	Completed	1029W
Provide line type heat detectors in cable tray in Fire Zone 29-108 since the area has a fixed combustible loading and no existing fire detection system.	Complete	Completed	1029W
Provide smoke detectors in Fire Zones 26-76 and 22-77 due to the possibility of transient combustibles in these zones.	Complete	Completed	1029W
Reroute conduit ZB2D785 outside of Fire Zones 50-78B and 50-78W.	Design complete.	2-EOO (administrative controls will be provided after July 1, 1983, until completed)	1029B
Encapsulate ZA2A1506A in Fire Zone 50-131.	Complete	Completed	1029A
Encapsulate raceways ZA2M165 and ZA2M166 in the north half of Fire Zone 6-5H.	Encapsulation in progress.	3/15/84 (As per Ref. 2)	1029A
Encapsulate raceway ZB3P315 in the south half of the Fire Zone 13-13H.	Design in progress.	3/15/83 (As per Ref. 2)	1029A
Reroute 2Q1019B, F and encapsulate new Zone 5-5H.	Design in progress	2-EOO (As per Ref. 2)	1029B

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Encapsulate ZC2A1705A in Fire Zone 11-12C.	No longer necessary due to change in safe shutdown strategy.	N/A	
Reroute ZB2Q2074A, and encapsulate new raceway in Fire Zone 4-4C.	Design in progress. (part of CS/ADS)	2-EOO (As per Ref. 2)	1029B
Reroute ZAB5944A from Fire Zone 11-72B.	Design in progress.	2 months from material availability	1029B
Install a single smoke detector in the drywell access hatch areas of both units, Fire Zones 6-22 and 13-28. The detectors are to be tied into existing loops on 135' of the Rx Bldgs.	Complete	Completed	1029W
Encapsulate ZD2P219 in Fire Zone 4-6.	Complete	Completed	1029A
Encapsulate ZA2L075 in Fire Zone 5-7.	Complete	Completed	1029A
Encapsulate ZD3L004 in Fire Zone 12-15.	Complete	Completed	1029A
Install a single smoke detector in Fire Zone 11-65C. The detector is to be tied into the existing loop on 91'-6" of the Radwaste Bldg.	Complete	Completed	1029W

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Install 97 3-hour rated fire dampers in HVAC ducts penetrating fire barriers.	75 dampers ordered as of 12/23/83. 38 received. Design is 70% complete.	6/1/84	1309

Modifications Identified after the September 16, 1983,
Alternative Shutdown Submittal

Install battery charger cross-tie feeds as identified in the body of the letter. These cross-tie feeds will be encapsulated as required.	Design being investigated.	2-EOO dependent upon equipment delivery.	1029B
Encapsulate ZA2M416 in Fire Zone 6-5H.*	Field survey required.	2-EOO	1029A
Encapsulate cable ZD2B3983A in Fire Zone 38-125.*	Cable location dependent on battery charger 2DD03 relocation, requires an outage.	2-EOO	1029A
Encapsulate ZB3M149 and ZD3D489 in Fire Zone 32-119.*	Field survey required (conduit numbers dependent on field work for 1029C).	2-EOO	1029A
Encapsulate ZB3M149 in Fire Zone 33-120.*	Field survey required.	2-EOO	1029A

*As identified in the body of the letter.

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Relocate B and D Diesel Generator MCC feeds as identified in the body of the letter. These feeds will be encapsulated as required.	Design being investigated.	2-EOO	1029B
Encapsulate ZC3D481 and ZC3D482 in Fire Zone 34-121.*	Field surveys in progress.	2-EOO	1029A
Encapsulate ZA2D841 in Fire Zone 35-122.*	Field surveys in progress.	2-EOO	1029A
Encapsulate ZC3D481 and ZC3D482 in Fire Zone 36-123.*	Field surveys in progress.	2-EOO	1029A
Encapsulate ZA2D841 in Fire Zone 37-124.*	Field Survey in progress.	2-EOO	1029A
Encapsulate ZC2A484** in Fire Zone 48-144.	Field survey in progress.	3/15/83 (As per Ref. 2)	1029A
Reroute 5 cables in Fire Zone 6-5H - ZC2B3814A; ZC2Q1228A, B; ZC2Q1230B, C.	Design in progress.	2-EOO (As per Ref. 2)	1029B
Reroute ZC2Q1228B and ZC2Q1230B in Fire Zone 6-5J.	Design in progress	2-EOO (As per Ref. 2)	1029B
Reroute 4 cables in Fire Zone 25-72A - ZC2Q1221B; ZC2Q1230B ZD3Q1227B; ZD3Q1229B	Design in progress.	2-EOO 3 - 3/15/84 (As per Ref. 2)	1029B
Reroute 5 cables in Fire Zone 6-13H ZD3B3952A; ZD3Q1227A, B; ZD3Q1229B, C.	Design in progress.	3/15/84 (As per Ref. 2)	1029B

* As identified in the body of the letter.

**As identified in the body of the letter.

<u>Mod Description</u>	<u>Status</u>	<u>Expected Completion Dates</u>	<u>Mod. No.</u>
Reroute ZD3Q1227B and ZD3Q1229B in Fire Zone 6-13J	Design in progress	3/15/84 (As per Ref. 2)	1029B
Reroute 12 cables in Fire Zone 28-78H (Cable Spreading Room)	Design in progress	2-EOO 3 - 3/15/84 (As per Ref. 2)	1029B
Reroute 6 cables in Fire Zone 29-108 (Main Control Room)	Design in progress	2-EOO 3- 3/15/84 (As per Ref. 2)	1029B
Install 2 addi- tional smoke detectors in Fire Zone 50-78A to provide area coverage.	Design complete.	3/5/84	1029W