

PEACH BOTTOM ATOMIC POWER STATION

UNIT NOS. 2 AND 3

ANNUAL PLANT MODIFICATION REPORT

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This report for Peach Bottom Atomic Power Station Units No. 2 and 3, License Nos. DPR-44 and DPR-56, is issued in fulfillment of the reporting requirements of 10 CFR 50.59. It describes changes made to the facility as the facility is described in the safety analysis report. The report covers modifications that were complete in 1981.

For each of the modifications, tests or experiments included in this report, the safety evaluation performed indicated that an unreviewed safety question as defined in 10 CFR 50.59(a)(2) was not created; in that (i) the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report was not increased, or (ii) a possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report was not created, or (iii) the margin of safety as defined in the basis for any technical specification was not reduced.

Common

Control Room Interior Doors

Changes were made to doors 321, 322, 326 which include self-closing mechanisms for the doors and louvers and edge seals. The purpose of this modification is to prevent smoke infiltration into the main control room in the event of a fire in one of the adjacent rooms.

Recombiner Sample Connection

A sample connection has been installed in the suction line of the recombiner sample pump in order that manual samples of the recombiner discharge can be gathered for chemical analysis.

Seismic Upgrading of Miscellaneous Fans

Modifications were undertaken to provide assurance that the fans (17 total) in the following systems will be operable in the event of a design earthquake or a maximum credible earthquake.

- Standby Gas Treatment System
- Control Room Emergency Fresh Air Supply
- Emergency Switchgear Exhaust
- Battery Room Exhaust
- Cardox Room Supply, Diesel Generator Building
- Diesel Generator Supply
- Control Room Fresh Air Supply

The modification included addition of structural bracing to some of the fan frames and deflection limiters to all fan frames.

Control Room Emergency Vent Fans

Shift seals have been installed on control room emergency vent fans OAV-30 and OBV-30 in order to prevent pulling of unfiltered air into the system.

Hot Spot Indicators for Emergency Load Centers

Due to the inaccessibility of the existing hot spot indicators, which are inside the transformer tank, a modification has been completed and installed, external temperature sensors on transformers E-134 and E-324 of the emergency load centers.

Replace Radwaste Floor Drain Filter Transmitter

The existing floor drain filter transmitter (dpt-20-425), a GEMAC GE552, has been replaced with a Rosemont IISID-PCB22MB. The GEMAC instrument failed and no parts are available.

ESW Seismic Upgrade

A modification has been completed in order to bring the Emergency Service Water booster pump up to the required seismic capability. This modification involved the installation of dowel pins at the end shields.

Units 2 & 3

Refuel Crane Dust Cover Drain Hole

A modification to the refuel cranes has been completed in order to prevent the buildup of grease inside the dust covers on both ends of the main hoist brakes. The modification consisted of drilling a 1/4 inch hole in the dust covers to reroute the oil drainage back to the main oil reservoir.

HPCI/RCIC Isolation Logic

In order to prevent spurious isolation of the HPCI and RCIC system due to a high steam flow transient experienced during system start-up, time delay relays have been added to the steam line high flow isolation logic. This is a NUREG 0660 requirement (II.K.3.15).

Torus Vent Header Deflectors

Deflectors have been added to the torus vent headers to minimize the swell impact loading during the initial clearing of air.

Torus Vent Header Downcomer Ties

Downcomer ties were added to the torus header in order to support lateral loads which may occur during a LOCA.

Main Steam Relief Valve Discharge Quenchers and Supports

This modification was made in order to withstand the loading identified during the Mark I studies. The quenchers and supports serve to mitigate the initial pressure surge resulting from air in the lines and to minimize condensation caused instabilities.

Unit 2 Only

Scram System Air Dump

In response to IE Bulletin 80-17, a system was installed to automatically scram the reactor upon low air pressure in the scram system air supply header. This modification involved the installation of pressure switches on the supply header which activate the back-up scram valves upon a low pressure condition. The modification will be removed upon completion of the modifications to scram system discharge piping.

Refuel Bridge Rod Block Interlock

The refuel bridge truck switch, a single contact mechanism, was replaced with a two contact switch in order to permit the bridge to remain de-energized with the reactor mode switch in the start-up position. This modification was performed in response to GECo. SIL-248.

Cardox Batteries

A modification was completed which installed a protective screen around the cardox fire protection system batteries to provide protection from inadvertent contact.

Waste Demineralizers

Due to ongoing difficulties, piping has been modified and a restricting orifice installed on the waste demin line to prevent damage to the resin bed during filling operations.

Recirculation Pump MG Set Ventilation

A modification to prevent side movement of the vane housing and to strengthen the entire assembly was completed. This modification consisted of the installation of 1 1/2 X 1 1/2 angle iron to the sides of the vane housing and two tie rods through the sides of the assembly.

RCIC Pump Suction Pressure Transmitter

A General Electric model 55IPT has been replaced by a Rosemount Alpha Line Transmitter Model 115P7B22 for the RCIC pump suction pressure transmitter. This was necessitated as a result of damage and lack of parts availability.

Unit 3 Only

RHR Loop Selection Instrument Line

The one inch RHR loop selection instrument line was cut and capped due to leakage in a portion of the line between the connection to the 270 degree recirculation riser and penetration N52-B. The leakage was detected during the ISI program. Loop selection logic is no longer utilized, therefore, this line is no longer necessary.

4KV Control Cable Re-route

A modification was performed in order to bring the unit into compliance with the FSAR with regard to safeguards separation. This modification involved re-routing of some control cables to the 4KV emergency buses, canning of control switches, relocation of other control switches and the installation of auxiliary relays as interposing contacts in some control circuits.

Reactor Recirculating Pump Seal Pressure Sensing Line

A 1/4" restricting orifice has been installed in the reactor recirculation pump seal pressure sensing line in order to meet FSAR commitment regarding instrument lines which penetrate primary containment.

HPCI Temperature Switch

An obsolete ASHCROFT temperature switch has been replaced with a Fenwal 50 to 250 degree F temperature switch.

Radiation Monitoring Batteries

The 24V batteries 3AD27 and 3CD7 have been replaced with batteries of an improved design.

Autotransfer of RCIC

A modification has been completed in response to NUREG 0737 item II.K.3.22 which transfers the RCIC suction to the Torus when the condensate storage tank level falls to 10,000 gallons.

Main Steam Isolation Valve

Due to stripped threads, a helicoil insert has been installed on the 86D MSIV cylinder block. This action assures that the manifold will stay afixed to the cylinder block.

Reactor Water Level Recorder

In response to a NUREG 0737 requirement, a two pen recorder has been installed to monitor reactor water level over the normal operating range and the bottom of the active fuel. The wide range section on the recorder covers -165 to +50 inches whereas the fuel zone section covers -325 to 0 inches.

Grapple Head Modification

A new mounting hole for the grapple head light has been drilled and tapped in the grapple head. This new hole was necessitated due to stripping of one of the original holes and will provide positive mounting of the light.

Scram Discharge Volume Modification

In response to IE Bulleting 80-17 concerning the failure of control rods to fully insert several modifications have been made to the scram discharge piping including:

- 1) Replacement of existing piping from discharge volume to instrument volume with 8" pipe.
- 2) Addition of redundant isolation valves on the instrument volume vent and drain.
- 3) Removal of relief valve RV34
- 4) Re-routing of the level detection piping

Reactor Building Wall Penetrations

Eight penetrations were made through the reactor building wall. Six of the penetrations (10 inches in diameter) were temporary and have been plugged and 2 (8 inches in diameter) are permanent. The permanent penetrations were closed and leak tested. These penetrations were used to provide pathways for the introduction of compressed gases, compressed air, electrical leads and welding connections required during modification work within the drywell and torus.

Control Rod Drive Cooling Water Header Flow Transmitter Replacement

FT-3-03-212, a GEMAC Model 555111BCAA3B , has been replaced by a Rosemont 1151-5822-T0002-PB due to the fact that the GEMAC unit was defective and is no longer manufactured.

Scram Discharge Header Water Level Detectors

Ultrasonic detectors were installed in the low point of the two scram discharge headers in order to detect any accumulation of water. This work was done in response to IE Bulletin 80-17.

D RHR Suction Drain Piping

The drain piping on the suction of the D RHR pump has been removed and the connection point repaired. This modification was performed in order to secure a leaking pipe and return the piping to the original configuration.

RHR Elbows on Discharge to Torus

A modification was completed which added elbows to the RHR discharge lines to the torus. The purpose of this modification is to induce water circulation within the torus, thereby preventing thermal stratification and local heat concentration.

Replacement of Core Spray Piping

A modification to the core spray piping was completed which replaced all of the piping from the reactor vessel safe ends to first valve. The purpose of this modification is to replace piping which may be susceptible to intergranular stress corrosion cracking with material which is less susceptible.