PSE&G

Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236

Nuclear Business Unit

May 10, 1996

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

MONTHLY OPERATING REPORT
HOPE CREEK GENERATION STATION UNIT 1
DOCKET NO. 50-354

In compliance with Section 6.9, Reporting Requirements for the Hope Creek Technical Specifications, the operating statistics for **April 1996** are being forwarded to you with the summary of changes, tests, and experiments that were implemented during **March 1996** pursuant to the requirements of 10CFR50.59(b).

Sincerely yours,

Mark Reddemann
General Manager -
Hope Creek Operations

DL:DS
Attachments

C Distribution

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INDEX

DOCKET NO.: 50-354
UNIT: Hope Creek
DATE: 5/6/96
COMPLETED BY: D. W. Lyons
TELEPHONE: (609) 339-3517

OPERATING DATA REPORT
OPERATING STATUS

1. Reporting Period April 1996 Gross Hours in Report Period 719.
2. Currently Authorized Power Level (MWt) 3293
   Max. Depend. Capacity (MWe-Net) 1031
   Design Electrical Rating (MWe-Net) 1067
3. Power Level to which restricted (if any) (MWe-Net) None
4. Reasons for restriction (if any)

		This Month	Yr To Date	Cumulative
5.	No. of hours reactor was critical	719.0	1041.2	67965.1
6.	Reactor reserve shutdown hours	0.0	0.0	0.0
7.	Hours generator on line	719.0	883.4	66825.0
8.	Unit reserve shutdown hours	0.0	0.0	0.0
9.	Gross thermal energy generated (MWH)	2311102	2644374	213418623
10.	Gross electrical energy generated (MWH)	779790	886491	70712113
11.	Net electrical energy generated (MWH)	748839	822392	67539627
12.	Reactor service factor	100.0	35.9	82.8
13.	Reactor availability factor	100.0	35.9	82.8
14.	Unit service factor	100.0	30.4	81.4
15.	Unit availability factor	100.0	30.4	81.4
16.	Unit capacity factor (using MDC)	101.0	27.5	79.8
17.	Unit capacity factor (using Design MWe)	97.6	26.6	77.1
18.	Unit forced outage rate	0.0	0.0	5.0

19. Shutdowns scheduled over next 6 months (type, date, & duration):

20. If shutdown at end of report period, estimated date of start-up:

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OPERATING DATA REPORT
UNIT SHUTDOWNS AND POWER REDUCTIONS

MONTH APRIL 1996

NO.	DATE	TYPE F=FORCED S=SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER (2)	CORRECTIVE ACTION/COMMENTS
1.	4/7/96	F	0	H - CONTROL ROD ADJUST-MENTS	5 - POWER REDUCTION > 20%	UNIT WAS BROUGHT DOWN IN POWER FOR CONTROL ROD ADJUSTMENTS TO ALLOW ATTAINMENT OF 100% POWER

DOCKET NO.: 50-354
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AVERAGE DAILY UNIT POWER LEVEL

MONTH APRIL 1996

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	1053	17	1067
2	1060	18	1060
3	1047	19	1044
4	1057	20	1001
5	1037	21	1048
6	1043	22	1049
7	759	23	1038
8	1066	24	1056
9	1060	25	1057
10	1063	26	1048
11	1055	27	1054
12	1048	28	1052
13	1054	29	1044
14	1025	30	1047
15	1062	31	N/A
16	1048		

DOCKET NO.: 50-354
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REFUELING INFORMATION

MONTH APRIL 1996

1. Refueling information has changed from last month:

   Yes X No __

2. Scheduled date for next refueling (RF07): 9/6/97 (tentative)

3. Scheduled date for restart following refueling: 11/5/97 (tentative)

4A. Will Technical Specification changes or other license amendments be required?

   Yes __ No X

B. Has the Safety Evaluation covering the COLR been reviewed by the Station Operating Review Committee (SORC)?

   Yes __ No X

   If no, when is it scheduled? To Be Determined for Cycle 8 COLR

5. Scheduled date(s) for submitting proposed licensing action:

   Not required.

6. Important licensing considerations associated with refueling:

   N/A

7. Number of Fuel Assemblies:

   A. Incore 764
   B. In Spent Fuel Storage 1472

8. Present licensed spent fuel storage capacity: 4006
   Future spent fuel storage capacity: 4006

9. Date of last refueling that can be discharged to spent fuel pool assuming the present licensed capacity: 5/3/2006 (EOC13)

   (Does allow for full-core off-load)
   (Assumes 244 bundle reloads every 18 months until then)
   (Does not allow for smaller reloads due to improved fuel)

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MONTHLY OPERATING SUMMARY

MONTH APRIL 1996

- The Hope Creek Generating Station remained on-line for the entire month and operated at essentially 100% power for the month of April 1996.
- Five power reductions to perform control rod adjustments occurred this month. The power reduction on April 7, 1996, resulted in a greater than 20% loss of capacity for the day.
- There were two power reductions to perform turbine valve testing.
- At the end of the month the unit had been on-line for 37 days.

DOCKET NO.: 50-354
UNIT: Hope Creek
DATE: 4/30/96
COMPLETED BY: D. W. Lyons
TELEPHONE: (609) 339-3517

SUMMARY OF CHANGES, TESTS, AND EXPERIMENTS FOR THE HOPE CREEK GENERATING STATION

MONTH APRIL 1996

The following items completed during **March 1996** have been evaluated to determine:

1. If the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased; or
2. If a possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report may be created; or
3. If the margin of safety as defined in the basis for any technical specification is reduced.

The 10CFR50.59 Safety Evaluations showed that these items did not create a new safety hazard to the plant nor did they affect the safe shutdown of the reactor. These items did not change the plant effluent releases and did not alter the existing environmental impact. The 10CFR50.59 Safety Evaluations determined that no unreviewed safety or environmental questions are involved.

Design Changes Summary of Safety Evaluations

- **4EC-3434; PACKAGE 1, ADDITION OF ACCUMULATORS ON TURBINE CONTROL VALVES EHC FAS LINES** This design change installed a control valve manifold assembly with hydraulic accumulator on control valves #1, #2, #3, and #4 spring can housing. A pressure transmitter will be installed on control valve #4 spring can housing. The hydraulic accumulator will absorb and reduce large pressure oscillations in the EHC Fluid Actuating Supply (FAS) lines feeding the control valves. The pressure transmitter will measure the EHC fluid pressure data for analysis. HCGS UFSAR Figure 10.3-1 will be revised to show the pressure transmitter. The EHC Control Oil System is part of the Main Turbine Generator system, which has no safety-related function. Failure of the system does not compromise any safety-related system or component, nor prevent shutdown of the plant. The modification has no impact on the functional design or operability of the main turbine control valves.

  Therefore, this design change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

Design Changes Summary of Safety Evaluations (continued)

- **4EC-3449, REPLACEMENT OF DEGRADED PIPE AND FITTINGS WITH CHROME ALLOY STEEL** This design change replaces various pipe fittings and pipe segments in the Feedwater, Main Steam, Condensate, Extraction Steam, Seal Steam, Heater Drains, and Moisture Separator Drains systems with chrome alloy steel and, in some cases, heavier wall material. The design requirements of the replaced piping material are not changed and the replacement piping material meets or exceeds the original design specifications. The UFSAR will be revised to reflect the new material. The chrome alloy steel reduces the likelihood of leakage due to erosion/ corrosion damage and enhances the reliability of the systems. Overall piping configuration has not been changed, therefore, no additional postulated pipe breaks need to be considered. This change restores the plant to its analyzed configuration and design margin.

  Therefore, this design change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **4EC-3586; PACKAGES 1 - 12, INSTALLATION OF UNINTERUPTIBLE POWER SUPPLIES** This design change installed Uninteruptible Power Supply (UPS) units with overcurrent protection devices (OCPD) in 12 208/120 VAC, non-Class 1E distribution system circuits that power non-safety related control cabinets. Steady state power operations are impacted by short duration power losses to these circuits. This change enhances the reliability and decreases the unavailability of the power supplies to these control circuits. The failure rate for each UPS is 0.0081/ year. This failure rate is significantly less than the UFSAR projected 1.22 turbine trip events per plant year. Consequently, this change does not present the potential for plant transients that are either more severe or more frequent than those in the UFSAR. UFSAR Section 8.3.1.1.1 and Figure 8.3-11, sheet 2 of 5, will be revised to show the new UPS's. There are no changes to the trip settings and/ or controls for circuit breakers supplying the 12 circuits

  Therefore, this design change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **4EC-3546; PACKAGES 1 - 4, STATION SERVICE WATER SCREEN SPRAY HEADER MODIFICATIONS** This design change modified the Hope Creek Station Service Water System (SSWS) traveling water screen wash spray headers on each of the four trains. The Inside Fish Removal Spray Headers and the Debris Removal Spray Headers will have one nozzle added at each end. The welded caps shown on UFSAR Figure 9.2-2 were changed to threaded to simplify removal and replacement for frequent cleaning of the header. The threaded end caps are in accordance with the vendor recommendations. The spray from the headers removes debris and fish from the traveling screens. Operating experience indicates that the first and last nozzle are not fully effective in keeping the edges of the screens clean and debris tends to build up on each end of the screen reducing its effectiveness. The nozzles installed by this design change will provide better spray coverage to the ends of the screens and provide redundancy for the existing nozzles. The credible failure modes, cracks, leaks, loss of pressure boundary integrity, exist in the current design and have been evaluated. Proper functioning of two of the four trains of SSWS are required in an emergency. This change will increase the performance of the spray wash headers and the SSWS

  Therefore, these packages of the DCP do not increase the probability or consequences of an accident previously described in the UFSAR and do not involve any Unreviewed Safety Questions.

- **4EC-3546; PACKAGES 5 - 8, STATION SERVICE WATER STRAINER BACKWASH VALVE MODIFICATION** This design change modified the Hope Creek Station Service Water System (SSWS) Strainer Backwash Valve control circuit on each of the four trains. The valve logic has been modified so that the valve opens when the associated SSWS pump starts and remains open until the pump stops. This will eliminate the excessive cycling caused by the amount of debris in the Delaware River. The SSWS Strainer Backwash valves are discussed in UFSAR Section 9.2.1.4.1 and shown on Figure 9.2-2. The controls for these valves are described in UFSAR Section 7.3.1.1.11 and the logics shown on UFSAR Figure 7.3-20. Applicable text and Figures will be revised to reflect this change. The credible failure modes associated with this change are failure of an SSWS Backwash valve or SSWS Backwash valve control circuit. These failure modes are unchanged from the current design. The consequences are enveloped by those associated with the loss of one SSWS train. Proper functioning of two of the four trains of SSWS are required in an emergency. This change will increase the performance of the SSWS Backwash valves by reducing the amount of cycling which challenges the duty cycle of the motor and causes thermal overload trips. Because of this the performance and reliability of the SSWS will be increased.

  Therefore, these packages of the DCP do not increase the probability or consequences of an accident previously described in the UFSAR and do not involve any Unreviewed Safety Questions.

- **4EC-3546; PACKAGES 9 - 12, STATION SERVICE WATER STRAINER VENT LINE AND VENT VALVE MODIFICATIONS** This design change modified the Hope Creek Station Service Water System (SSWS) strainer vent configurations and added new high point vents. The valves and piping will be configured to continuously vent each strainer. This will eliminates the concern with postulated air ingestion during a loss of power event impairing the operation of the strainers. UFSAR Section 9.2.1.4.1 and Figure 9.2-2 will be revised to reflect this change. The modified vent configuration has been designed, fabricated, tested, and inspected to the applicable codes. The credible failure modes associated with this change are those that involve loss of pressure boundary integrity of the vent lines. The consequences of such failures are no more severe than with the existing design. Proper functioning of two of the four trains of SSWS are required in an emergency. This change will eliminate the potential of air ingestion into the SSWS strainer during a Loss of Power event. Because of this the performance and reliability of the SSWS will be increased.

  Therefore, these packages of the DCP do not increase the probability or consequences of an accident previously described in the UFSAR and do not involve any Unreviewed Safety Questions.

- **4EA-0048, LUBE OIL RESERVOIR DRAIN VALVES FOR RESIDUAL HEAT REMOVAL AND CORE SPRAY SYSTEMS** This design change documents the as-found configuration of the oil reservoir drains on the Residual Heat Removal (RHR) and Core Spray (CS) pump motors. Each drain plug has been replaced with a length carbon steel pipe and a bronze gate valve. The drains are non-safety related. The replacement facilitates sampling and changing of the reservoir oil. The only credible failure is loss of pressure retaining capability. Potential causes are chemical attack, overpressurization, failure of valve body, or opening of valve. The materials were selected for their compatibility with the oil, the design pressure is much higher than system pressure, the line has been seismically analyzed, so failure due to a seismic event will not occur, and valve position is verified as part of system line ups. The drains are not accident initiators. Failure of an RHR or CS pump has been previously analyzed in the UFSAR, the ECCS are provided with redundancy that prevents a single failure from causing loss of function.

  Therefore, this design change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **4EX-3435, HWC - HYDROGEN FLOW VARIATION TEST** This test provided detailed instructions for varying the hydrogen and oxygen flows beyond current limitations. This was done to verify in-reactor relationships between ECP, oxygen, and hydrogen and to determine the amount of feedwater hydrogen required to reduce oxygen to 1-2 ppb in the lower plenum. The reason for the test is the ECP has shown an upward drift instead of the required IGSCC mitigation reading of -230 mV. No new credible failure modes to those addressed during the initial installation of the HWC are introduced. There are no important to safety systems or equipment affected by this test. Operation of HWC does not increase the probability or consequences of a malfunction of equipment important to safety.

  Therefore, this test does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **4EX-3577, COOLING TOWER BASIN BLOWDOWN FLOW** This test creates Cooling Tower Basin overfill conditions for level measurement and data recording to resolve cooling tower blowdown flow instrumentation problems. UFSAR Section 10.4.5 states that the water level in the cooling tower is controlled by use of a weir. Certain conditions, e.g. high river level, low evaporative losses, the Station Service Water System (SSWS) pumps operating, cause the water level downstream of the weir to rise significantly over the crest of the weir. When this happens, the existing flow correlations become invalid and basin water level becomes controlled by the discharge pipe. No new credible failure modes are associated with this test. Temperature ranges for systems and components will be maintained within existing limits by operators. The Cooling Tower is not required for safe shutdown of the plant, and provides no safety-related function although it interfaces with the SSWS. UFSAR Section 9.2.1.4.3.4. describes operation of the SSWS following loss of the Cooling Tower. High water level in the Cooling Tower Basin and the resultant increase in the SSWS discharge line pressure during normal plant operation is not analyzed in the UFSAR. This condition is bounded by the collapse of the non-seismic SSWS discharge line described in UFSAR Section 9.2.1.

  Therefore, this test does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

Design Changes Summary of Safety Evaluations (continued)

- **4HE-0132; PACKAGE 1, TORUS LEVEL HI/LO ALARM** This design change provided control room annunciation that will alarm when the suppression pool level approaches the Technical Specification operability limits. The change redefined the existing low (LO) level alarm setpoint @ 65 inches as the LO-LO alarm and the existing high (HI) alarm @ 78.5 inches as the HI-HI alarm. Also, it provides a new LO alarm setpoint @ 75 inches and a new HI alarm setpoint @ 78 inches. The Annunciator window engraving was not changed. Changes were made to CRIDS points to allow the operators to determine which alarm was indicated by the lit Annunciator window. UFSAR Figure 6.3-1 will be revised to show the modified instrumentation arrangement. No new failure modes are introduced by this change. The instrumentation changes comply with the requirements of 10CFR50.46 and comply with all licensing requirements and good design practices for isolation, separation, and common modes failure analysis.

  Therefore, this design change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **4HE-0167; PACKAGES 1 AND 2, ADDITION OF WIDE RANGE LEVEL AND WIDE RANGE PRESSURE SIGNALS TO GETARS** This design change modifies Wide Range Reactor Pressure and Level channels to provide an input signal for the General Electric Transient Analysis Recording System (GETARS). This provides additional input for analysis of transients and "ringing" of reactor vessel transmitters that sometimes occurs when a turbine trip causes a reactor trip. This change did not affect the design basis of the plant as described in the UFSAR, CBDs or other design basis documents. UFSAR Section 7.2.1.1 AND Figure 7.2.2 describes typical arrangements for these circuits. This modification changed this circuit from a typical circuit shown in the UFSAR. The affected transmitters are used by the ECCS actuation system to mitigate the consequences of an accident. Neither reliability of the Class 1E loop nor the time response of the protection train are affected by this change. The GETARS is isolated from the Class 1E instrument loop by a Class 1E isolation device (MUX). There are no new credible failure modes as the failure mode of the new resistor is no different than any other instrument in the loop.

  Therefore, this design change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **4HE-0201; PACKAGE 1, RELOCATE AND REPLACE MAIN GENERATOR WATT-HOUR METER** This design change replaces the existing mechanical meter with a digital meter and relocates it closer to the Potential Transformers (PTs) and Current Transformers (CTs) to lessen the metering losses. UFSAR Figure 8.3-3 will be revised to show the relocated meter. Replacing and relocating the watt-hour meter within the same circuit does not create the possibility of any new failures. There are no new credible failure modes associated with this change. The changes are within the non-safety related portion of the electrical system and does not affect any equipment that is important to safety.

  Therefore, this design change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **4HE-0300, REWORK CLOSED MOTOR OPERATED VALVE (MOV) POSITION INDICATIONS ON VARIOUS MOVs** This design change modifies the motor operators for various valves. A separate package will be prepared for each valve and reported when it is implemented.

  In summary, limit switch LS-7 will be reset to provide unambiguous indication of MOV position by maintaining illumination of the valve open light until the valve has reached the full closed position. To allow the resetting of LS-7, limit switch LS-5, which is presently used to bypass torque switch WS-18 on initial opening, will be jumpered to bypass WS-18 during normal operations. This is necessary because LS-5 and LS-7 are integral to the same rotor, R2. Since torque switch WS-18 will be bypassed, this change, also, eliminates the potential for the torque switch to prevent valve opening in response to remote-manual initiation. The jumper will be removed during testing and limit switch calibration to minimize the potential for mechanical damage to the valve.

  Discussion of torque switches in the UFSAR, Section 6.3.4.1, is part of a general discussion of testing performed on ECCS components, and does not establish criteria for determining when torque switches are required. However, most of these torque switches are shown on figures in the UFSAR and therefore, these are changes that involve a change to the facility as described in the UFSAR.

  The revision of the LS-7 setting and the deletion of the open torque feature do not adversely affect the design basis or operation of the affected MOV, impact its ability to perform required functions, or modify the MOV in such a manner as to cause the valve to be susceptible to failure modes different from those considered in the UFSAR.

PACKAGE 17, REWORK CLOSED MOV POSITION INDICATION ON 1BCHV-F016B This Design Change Package installs the limit switch modifications on the Residual Heat Removal System (RHR) Loop "B" Containment Spray outboard isolation valve, 1BCHV-F016B. The torque switch is shown in UFSAR Figure 7.3-8, Sheet 7 of 13, which will be revised to reflect this change. The valve is normally closed for proper alignment of the Emergency Core Cooling System and Containment Isolation. It is open when required for the Containment Spray mode of ECCS/RHR operation. The modification will not prevent the MOV from performing its function.

PACKAGE 19, REWORK CLOSED MOV POSITION INDICATION ON 1BCHV-F021B This Design Change Package installs the limit switch modifications on the Residual Heat Removal System (RHR) Loop "B" Containment Spray Inboard Isolation Valve, 1BCHV-F021B. The torque switch is shown in UFSAR Figure 7.3-8, Sheet 7 of 13, which will be revised to reflect this change. The valve is normally closed for proper alignment of the Emergency Core Cooling System and Containment Isolation. It is open when required for the Containment Spray mode of ECCS/RHR operation. The modification will not prevent the MOV from performing its function.

PACKAGE 30, REWORK CLOSED MOV POSITION INDICATION ON 1BDHV-F031 This Design Change Package installs the limit switch modifications on the Reactor Core Isolation Cooling (RCIC) Torus Suction Isolation Valve, 1BDHV-F031. The torque switch is shown in UFSAR Figure 7.4-2, Sheet 6 of 9, which will be revised to reflect this change. The valve is a Primary Containment Isolation Valve and is normally closed to isolate the RCIC Pump suction from the Suppression Pool. There are no normal operating conditions when the valve would be operated. The modification will not prevent the MOV from performing its function.

Design Changes Summary of Safety Evaluations (continued)

- **4HE-0300, REWORK CLOSED MOTOR OPERATED VALVE (MOV) POSITION INDICATIONS ON VARIOUS MOVs (continued)**

  PACKAGE 44, REWORK CLOSED MOV POSITION INDICATION ON 1BJHV-F042 This Design Change Package installs the limit switch modifications on the High Pressure Coolant Injection (HPCI) Suppression Pool Isolation Valve, 1BJHV-F042. The torque switch is shown in UFSAR Figure 7.3-2, Sheet 2 of 6, which will be revised to reflect this change. The valve is a Containment Isolation Valve. This valve is normally closed. It receives an automatic ECCS actuation signal to open. The modification will not prevent the MOV from performing its safety function..

  PACKAGE 45, REWORK CLOSED MOV POSITION INDICATION ON 1BJHV-F006 This Design Change Package installs the limit switch modifications on the High Pressure Coolant Injection (HPCI) Pump discharge to Core Spray Isolation Valve, 1BJHV-F006. The torque switch is shown in UFSAR Figure 7.3-2, Sheet 2 of 6, which will be revised to reflect this change. The valve is normally closed and is a Containment Isolation Valve. There are no normal operating conditions when the valve would be operated. Its safety-related function is to open automatically upon automatic or manual HPCI initiation. The modification will not prevent the MOV from performing its function.

  PACKAGE 55, REWORK CLOSED MOV POSITION INDICATION ON 1FDHV-F071 This Design Change Package installs the limit switch modifications on the High Pressure Coolant Injection (HPCI) Turbine Exhaust Isolation Valve, 1FDHV-F071. The torque switch is shown in UFSAR Figure 7.3-2, Sheet 5 of 6, which will be revised to reflect this change. The valve is a normally open Containment Isolation Valve. The valve is opened when preparing the HPCI system for standby operation. The valve remains open during all modes when HPCI is required to be operable. The valve does not receive any automatic actuation signals. The modification will not prevent the MOV from performing its function.

  Therefore, these packages of the DCP do not increase the probability or consequences of an accident previously described in the UFSAR and do not involve any Unreviewed Safety Questions.

UFSAR Change Notices Summary of Safety Evaluations

- **UFSAR CHANGE NOTICE UFSAR 5.2.2.4, CHANGE TO ADS STROKE REQUIREMENT FOR REACTOR PRESSURE** This change alters UFSAR Section 5.2.2.4 to read " ADS SRVs and all other SRVs shall be tested within 12 hours after reactor steam dome pressure is adequate to perform the test." This will allow adequate steam pressure availability to perform the test without compromising reactor control. The effect of this change will be transparent to the operators. Performing the test at a higher steam dome pressure will provide a back pressure for the pilot disc reseating. This will provide a cushioning effect prevent valve seat and disc damage from the closing forces. Failure to reclose is the only credible failure mode, this is discussed in UFSAR Chapter 15. The required actions are to reclose the vaive or, if it cannot be shut, to shutdown the plant. This change is in accordance with BWR Owners' Group and vendor recommendations. This change aligns the UFSAR with the Technical Specification requirements.

  Therefore, this UFSAR change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **UFSAR CHANGE NOTICE CN 96-30, DELETE BATTERY CHARGER INSUFFICIENT CHARGE ALARM** This change notice deletes the UFSAR Section 8.3.2.2.(9)e(6) reference to an "Insufficient Charging Current" (ICC) local indicator. The installed alarm is not functional as designed. The ICC alarm card is to monitor the charger output current. The card as supplied requires a minimum DC system load that is less the actual DC load supplied by the charger during normal operations. The ICC is one of several local charger alarms. Other alarms are: DC Output Over or Under Voltage, High Voltage Shutdown, AC Power Failure, AC Input or DC Output Breaker Open. The intent of the ICC is to provide a warning of the charger's inability to supply current. The charger DC Output Undervoltage alarm, also, provides indication of this condition. Additionally, the various Technical Specification surveillance tests provide positive indication that the charger is operable.

  Therefore, this UFSAR change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **UFSAR CHANGE NOTICE LCR 96-22, DRYWELL AIR COOLING SYSTEM - COOLER FAN OPERATION** This change notice revises UFSAR Section 9.4.5.2 to read "The Drywell Air Cooling System includes eight unit coolers, each of which contains two 100 percent cooling coils and two 100 percent fans. The operating configuration of fans and cooling coils is dictated by the drywell temperature limits. Any configuration of fans and cooling coils is acceptable. The design parameters for the unit coolers are listed in Table 9.4-14. When a fan is in standby, the standby fan starts automatically when a low air flow condition exists, as sensed by a pressure differential switch on the operating unit cooler. ..." This change will allow either one or two units to be in service during normal operation. This s system is not safety-related and is not listed as important to safety in UFSAR Table 3.2-1. This proposed change will have no effect on any system, structure or component (SSC). The temperature limits of the drywell will be maintained. An Engineering Evaluation has been performed and concluded either one or two fan operation will not result in unsafe operation of the Drywell Air Cooling System. There are no credible failure modes introduced by this change. This system does not mitigate the consequences of any accident evaluated in the UFSAR.

  Therefore, this UFSAR change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

UFSAR Change Notices Summary of Safety Evaluations (continued)

- **UFSAR CHANGE NOTICE CN 96-10, STACS & RACS MINIMUM DESIGN TEMPERATURE REDUCTION** This change notice revises the minimum design temperature specified in several sections, from 65°F to 32°F for STACS and from 65°F to 40°F for RACS. The systems were reviewed to identify equipment and systems cooled, design specifications and material specifications of the equipment, and impact of the lower temperatures on equipment performance. All components on the STACS and RACS are capable of operating at the new temperatures. The low temperature water will not cause degradation above and beyond the previous design temperature. Precautions will be taken to prevent freezing of standby loops. This change does not affect the capability of these systems to perform their functions. This change neither modifies nor causes any system or component to be operated outside its design or testing limits. The change does not affect assumptions made in the UFSAR accident analysis.

  Therefore, this UFSAR change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **HC UFSAR APPENDIX 9A COORDINATION FIGURES** This change notice deletes unnecessary protective device data from UFSAR Coordination Figures 9A-21, -23, -27, and -28 which depict power sources required during a post-fire shutdown scenario. For coordination, only the branch circuit protective device with the highest trip characteristic is plotted against the upstream device. If coordination is established with the largest device then all devices with lower ratings coordinate. Only the feeder protective device and the largest load protective device are necessary for coordination and GL 81-12 compliance. Information on smaller devices is not relevant for coordination analysis. This is an editorial change. Deletion of this data does not create any failure mode. There are no operational transients or postulated design basis accidents evaluated in the UFSAR applicable to this proposal. No analyses documented in the UFSAR are affected

  Therefore, this UFSAR change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **UFSAR SECTION 6.2.6.5.1, CHANGE IN TEST METHOD, CONFIGURATION, AND TEST INTERVAL REQUIREMENTS: DRYWELL TO SUPPRESSION CHAMBER ATMOSPHERE BYPASS AREA TEST** This change modifies the UFSAR Section 6.2.6.5.1 testing requirements for the Suppression Chamber Atmosphere Bypass Area test to allow a test specific alignment instead of the ILRT Type A alignment and changes the method from a pressure decay test to leak rate determination based on calculation of the chamber mass change. It deletes the statement that the test is conducted each ILRT. This change reduces the extent of containment isolation required, eliminates inaccuracies from volumetric changes in the Residual Heat Removal and Drywell Chilled Water systems and aligns the UFSAR test interval with Technical Specification test interval. These changes introduce no credible failures during Mode 4 operation. They are not associated with any existing failure modes or fault analyses. No accident scenario or operational transient is associated these changes.

  Therefore, this UFSAR change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

UFSAR Change Notices Summary of Safety Evaluations (continued)

- **UFSAR SECTION 6.2.4.4.3, CHANGE TO MSIV LEAKAGE REQUIREMENTS** This change modifies the Main Steam Isolation Valve (MSIV) allowable leakage of 11.5 scf per hour for each MSIV penetration to 46.0 scf per hour total leakage for all four Main Steam lines. Several UFSAR Sections, including 6.7.1.1, 6.7.3.7, 6.7.5, and 15.6.5.5.1.2 already specify the 46.0 scf total leakage. This change aligns this section with those. Specifying leakage in terms of individual steam line limits is not in keeping with the off-site dose assumptions listed in the UFSAR. The MSIV leak testing methods are not affected by this proposal. The safety-related functions of the MSIVs, MSSVs, and the MSIV Sealing Steam system are not affected. The 10CFR100 dose calculations are not affected as they already used a total leakage of 46 scf per hour at accident conditions.

  Therefore, this UFSAR change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

Temporary Modification Summary of Safety Evaluation

- **TM# 96-010, SAFETY AND TURBINE AUXILIARIES COOLING WATER SYSTEM OPERATION WITH FOUR EDG ROOM COOLER AOVs FAILED OPEN** This Temporary Modification (T-Mod) changes the configuration of the Emergency Diesel Generator (EDG) Room Recirculation System by failing open one air-operated valve (AOV) per EDG. The T-Mod will be removed upon completion of a design change to correct valve and actuator deficiencies. The AOVs are designed to open when the fan on the room cooler starts. There is a concern about valve opening reliability. To ensure operability of the EDG Room Recirculation System, the cooling water inlet AOV to the auto-lead room cooler has been failed open. Maintaining these valve open ensures the EDGs will be able to fulfill their design function. This configuration places additional flow demands on STACS during power operation and shutdown by diverting flow to the EDG Room Coolers The slight reduction of cooling capability can be overcome during normal operations by operating both SACS loops and during shutdown by shedding non-essential TACS loads. The continuous flow of cooling water is not expected to cause additional wear or operational difficulties with the EDG Room Coolers. There are no new credible failure modes. The proposed change does not degrade the performance of the SACS or the ESF equipment it cools, during accident conditions.

  Therefore, this temporary modification does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

Deficiency Report Summary of Safety Evaluation

- **DEFICIENCY REPORT 960220317, 125 & 250 VDC BATTERY CHARGER TROUBLESHOOTING**

- **PROCEDURES HC.MD-CM.PK-0001(Q), REV 5 & HC.MD-CM.PJ-0001(Q), REV 5**

  The procedure revisions give instructions on disabling the insufficient charging current (ICC) alarm. This was done to disable the ICC alarm in accordance with the disposition of the Deficiency Report. To function properly, the ICC alarm card requires a minimum DC system current that the charger is continuously providing. Our DC loads are less than this minimum during normal operations. Setting the ICC to the vendor specified minimum would cause the charger to be in alarm constantly. Setting the ICC alarm card to less than the vendor recommended minimum would result in unreliable operation. Either action creates nuisance alarms. The other alarms on the charger (e.g. DC output voltage, high voltage shutdown, AC power failure, AC input, DC output breaker open) are unaffected by this change. The intent of the ICC alarm is to provide a warning of the charger's inability to supply current. The charger DC output undervoltage alarm, also, monitors this. Additionally, the periodic Technical Specification battery surveillance requirements provide positive indication that the battery charger is functioning properly. UFSAR Section 8.3.2.2.(9) states that the battery charger has a local ICC alarm. This action is considered interim until a design change can be implemented to permanently resolve the issue. If an UFSAR change is required for the permanent change it will be submitted at that time. No other components or systems are affected by this change. The only credible failure mode is that of the charger failing. This has been previously analyzed in the UFSAR. Disabling of the ICC alarm does not affect the evaluated transients or accidents for which the DC system is required.

  Therefore, implementation of the disposition of this deficiency report and the related procedure revisions does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

- **DEFICIENCY REPORT 960228304, TEFZEL SEATS INSTALLED IN VARIOUS SCRAM OUTLET VALVES** The Use-As-Is disposition of this Deficiency Report permits continued use of Tefzel seats in 98 scram outlet valves. This is a change to the Environmental Qualification program in UFSAR Section 3.11 because Teflon is specified as the seat material in EQMIS M001-HCU-011. The Tefzel seats were installed during RF03 and RF04. The use of the Tefzel seats has been previously evaluated and found acceptable until RF06 (DR# HTE-92-180). Based on testing of sample populations taken during RF05 and RF06, it was found the Tefzel seats are outperforming the Teflon seats. General Electric has recommended the Tefzel seats remain in service through RF07 at which time another inspection should be performed. Tefzel has higher tensile strength, compressive strength, hardness and radiation damage threshold value than Teflon. However, it has a lower melting point. Operation of the valves at elevated temperatures for extended periods of time is a concern. Insofar as failure of the Tefzel seats does not pose the potential to adversely impact the trip function of the associated control rods, there are no anticipated operational transients or postulated design basis accidents evaluated in the UFSAR that are applicable to this change. Failure of the Tefzel seat could result in the associated control rod drifting into the core. This is a conservative failure mode and is not a precursor to any accident.

  Therefore, implementation of the disposition of the deficiency report does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

Procedure Summary of Safety Evaluation

- **HC.OP-IS.BD-0001(Q), REV. 19, REACTOR CORE ISOLATION COOLING PUMP - OP203 - INSERVICE TEST** This procedure revision tests the Reactor Core Isolation Cooling pump in accordance with the requirements of the Technical Specifications and the ASME Boiler & Pressure Vessel Code, Section XI, which are more stringent than the testing requirements delineated in the UFSAR. The test is done at a fixed pump speed rather than the UFSAR specified pump discharge pressure. This is a s better means to identify pump degradation over time, which is the purpose of the IST program. This change does not introduce any new failure modes. The physical changes are made to nay System, Structure or component. There are no anticipated operational transients or postulated design basis accidents previously evaluated in the UFSAR considered applicable to this change

  Therefore, this procedure change does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.

Other Summary of Safety Evaluation

- **AR# 960313309, AN EVALUATION OF THE EFFECTS OF LOW DENSITY FUEL ON DESIGN AND LICENSING PARAMETERS** This 10CFR 50.59 evaluation documents the design bases review that determined the operation of Hope Creek with a small population of low density pellets can be achieved within the existing design bases with no unreviewed safety questions. This evaluation was initiated because General Electric (GE) notified PSE&G that a manufacturing process deficiency was discovered that resulted in sporadic manufacture of Uranium pellets with low as-built densities. At the current time it is not known if any fuel with low density pellets has been delivered to Hope Creek. The Nuclear Design Basis - Reactivity and Pin Power Distribution Characteristics, Burnup Limit and Source Term Characteristics, Fuel melting Characteristics, Fuel Rod Internal Pressure Characteristics, Cladding Strain Characteristics, Transient Thermal Hydraulic Performance, Critical Power Performance, and other items were considered and reviewed for this evaluation. Analyses and evaluations previously performed by PSE&G and GE remain valid without revision. No changes to systems, structures, or components described in the UFSAR are required. The density variation is larger than the tolerance assumed for design input, however the evaluations have shown that the fuel will perform its design function within existing design basis requirements. No changes are required to the Power Distribution Limits. Since no SSCs will operate beyond the design described in the UFSAR, no new failure modes are introduced. The design basis review generically addressed the UFSAR, SER, Technical Specifications and the 100% Operating License. As such the review concluded independent of cycle specific conditions that operation with a small population of low density pellets is within the existing design basis. No cycle specific limitations or deviations were found.

  Therefore, this condition does not increase the probability or consequences of an accident previously described in the UFSAR and does not involve an Unreviewed Safety Question.