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June 8, 1992

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

Subject: Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, License No. NPF-73
Report of Facility Changes, Tests and Equipments

In accordance with 10 CFR 50.59, the Annual Report of Facility Changes, Tests, and Experiments for the Beaver Valley Power Station, Unit No. 2, is attached. This report provides a brief description and summary of the safety evaluation for each facility and procedure change. The annual report covers the period of November 1, 1990 through October 31, 1991.

Sincerely,

J. D. Sieber
J. D. Sieber

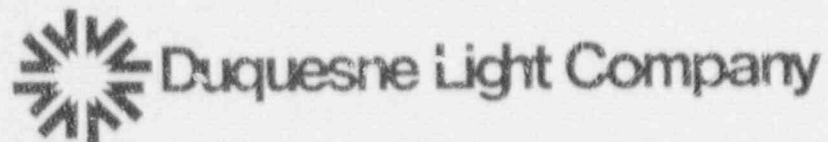
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Duquesne Light Company

BEAVER VALLEY POWER STATION
UNIT NO. 2

DOCKET NO. 50-412
LICENSE NO. NPF-73

ATTACHMENT 1

1991 REPORT OF FACILITY CHANGES,
TESTS, AND EXPERIMENTS

Beaver Valley Power Station Unit 2
1991 Report of Facility Changes, Tests, and Experiments

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CHANGE TITLE

2BVT 11.26.6, Unit 2 Baseline Test

CHANGE DESCRIPTION

This procedure obtains baseline heat rate performance data for calculation of Unit 2 heat rate. Sixteen pressure test gauges and two vacuum test gauges were installed on the condenser and Main Steam System. The pressure and vacuum test gauges were installed on non-safety related plant equipment or downstream of the MSIVs. To obtain electrical output data, a watthour meter was installed into the generator output circuitry which is non-safety related Category II plant equipment.

SAFETY EVALUATION SUMMARY

The safety evaluation was written to evaluate the potential for a loss of onsite power due to a turbine trip caused by the location of the watthour meter. Small steam leaks from connection of test gauges does not constitute a new type of accident. Loss of condenser vacuum is discussed in the UFSAR and is not considered to be safety related. Offsite power is available and unaffected by this test. There is no potential for creation of a new type of unanalyzed event because reliable offsite power is available. There is no change to the impact on the margin of safety because turbine trip availability was unchanged. Based on the above, the Safety Evaluation concluded that this test procedure posed no unreviewed safety questions.

Subsequent to this Safety Evaluation, a field revision to 2BVT 11.26.6 required another Safety Evaluation to allow a pressure test gauge to remain installed until the Unit is shutdown. The pressure test gauge cannot be removed safely due to a steam leak through its isolation valve. The location of the pressure test gauge is downstream of the MSIVs in a non-safety related area. There is no potential for creation of a new type of unanalyzed event or impact on the margin of safety because the test gauge is in a non-safety related location. Based on the above, the Safety Evaluation concluded that the field revision to this test procedure posed no unreviewed safety questions.

CHANGE TITLE

Test Equipment Installation for OST 2.24.4, Turbine Driven Auxiliary Feedwater Test

CHANGE DESCRIPTION

The temporary modification installed: 1) a proximity probe/tachometer on the Turbine Driven Auxiliary Feedwater pump [2FWE-P22] chassis adjacent to the shaft seal, 2) pressure transmitters on the drain valve for pressure indicators [2FWE-PI155] and [2FWE-PI156], and 3) controlotrons on the suction and discharge piping of the pump.

The purpose of these temporary modifications was to gather Pump operating data to assist in troubleshooting efforts. The temporary modifications did not affect any operating or design parameters, or the auxiliary feedwater system. The temporary modifications were for monitoring purposes only.

SAFETY EVALUATION SUMMARY

The temporary transmitters were not valved in until Technical Specification 3.7.1.2 was entered (one auxiliary feedwater pump inoperable), and [2FWE-P22] taken out of service for performance of OST 2.24.4. Prior to exiting the Technical Specification, the temporary instrumentation was removed. Thus, no Design Basis Accidents were affected. Based on the above, the Safety Evaluation concluded that the Temporary Modification posed no unreviewed safety questions.

CHANGE TITLE

Change Normal System Arrangement position of [2SWS-MOV308], Service Water Supply To Air Conditioning Unit [2HVP*ACU301] for Alternate Shutdown Panel Cubicle, to Shut

CHANGE DESCRIPTION

A/C SW supply to [2HVP*ACU301] For ASP Cubicle, valve [2SWS-MOV308], NSA position was changed to manual and closed. The valve will be placed in automatic by procedure, only when the Alternate Shutdown Room ACU is started. This action will prevent tube fouling by only supplying cooling water when the ACU is in service.

SAFETY EVALUATION SUMMARY

The service water system is essentially unchanged since only 17 gpm is required with the unit in operation. This portion of the service water system is isolated on a DBA. Failure of the ACU is decreased due to less tube fouling. The unit is considered to be continuously manned when in service in accordance with UFSAR 9.4.12. Manual action will be taken as needed to operate the system. No Technical Specifications are affected by this change. No unreviewed safety questions exist.

CHANGE TITLE

Normal System Arrangement Valve Position Change to Align the Fuel Pool Ion Exchanger During Normal Operation.

CHANGE DESCRIPTION

The NSA positions of [2FNC-40,41 and 42] was changed to open; the NSA position of [2FNC-44] was changed to throttled; and the NSA positions of [2FNC-MOV100A and 100B] was changed to closed. The NSA position change of these valves will align the Fuel Pool Ion Exchanger, [2FNC-IOE21], during normal operations per plant chemistry request.

SAFETY EVALUATION SUMMARY

The probability of Spent Fuel Pool Cleanup System failure is unchanged since the purification system is designed for continuous service, and the Ion Exchanger may either be lined up or bypassed as described in UFSAR 9.1.3.2. Technical Specifications are not impacted by this change. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Modification - Installation of a Temporary Throttle Valve Downstream of Lube Oil to Overspeed Trip Relief Valve [2TML-RV205]

CHANGE DESCRIPTION

Lube Oil to Overspeed Trip Relief valve [2TML-RV205] has failed open causing an Auto Stop Oil pressure decrease, which leads to the probability of a Turbine Trip. To increase Auto Stop Oil pressure, a temporary valve was installed downstream of [2TML-RV205] to throttle flow and increase pressure.

SAFETY EVALUATION SUMMARY

The temporary modification will decrease the probability of a turbine trip since [2TML-RV205] is failed open. Failure of the temporary valve will still allow the turbine trip system to function as designed as described in UFSAR 15.2.3. No Technical Specifications are affected since the modification does not affect the turbine overspeed protection devices. No unreviewed safety questions exist.

CHANGE TITLE

2TOP-91-07, Flushing Motor Control Center Cooling Coils [2HVP*CLC265A or B]

CHANGE DESCRIPTION

A new temporary procedure was written to allow higher water pressure and flow flushes of MCC cooling coils [2HVP*CLC265A or B] along with its supply and return piping. This is required to flush out any debris that is causing a flow restriction resulting in unsatisfactory flows. The flush is intended to restore the MCC Coolers to OPERABLE and meet Technical Specification 3.7.4.1 requirements.

SAFETY EVALUATION SUMMARY

Flushing water flowrate and pressure limitations have been determined by Site Engineering and have been incorporated into the temporary procedure. Only one train will be flushed at a time while the redundant MCC cooler must be operable per procedure. Flushing will be locally monitored so that any flooding problems due to hose failures may be quickly controlled and stopped. Fire watches will be established while Fire Doors are blocked open. The redundant MCC cooler will remain Operable during Modes 1-3 while Technical Specification 3.7.4.1 72 hour action statement is entered. Two charging pumps shall be maintained Operable during this procedure. No unreviewed safety questions exist.

CHANGE TITLE

OM 2.19.4.A, Gaseous Waste System Startup

CHANGE DESCRIPTION

When the Gaseous Waste Storage Tanks are purged by procedure 2.19.4.A, there is remaining pressure in the tanks. Procedure 2.19.4.A has been revised to completely depressurize the Gaseous Waste Storage Tanks to allow tank maintenance.

SAFETY EVALUATION SUMMARY

In accordance with UFSAR 11.3, the normal flowpath of Gaseous Waste is to Unit 1. Hold Tank removal of Unit 2 Storage Tanks from service has no effect on UFSAR alignment. Any failure while performing this procedure will be bounded by the Gas Tank Rupture Event described in UFSAR 15.7. No Technical Specifications are affected since the activity in the tanks has accounted for off-site dose calculations by the Discharge Permit. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Modification - Temporary Drain Hoses from Relief Path of Condensate Demineralizer Precoat Pump Discharge Line Relief [2CND-RV103] and Condensate Demineralizer Precoat Return Line Relief [2CND-RV107] Valves

CHANGE DESCRIPTION

Temporary drain hoses have been installed on the relief path of Precoat Discharge Relief Valves [2CND-RV103 and 107]. These relief valves are relieving demineralized water to a sump due to leak through of any one of ten upstream isolation valves which cannot be isolated and repaired while in an operating mode. This Temporary Modification will recover water to the Condensate System.

SAFETY EVALUATION SUMMARY

This Temporary Modification will not change plant response. The relief valves will still continue to operate as designed. No safety systems are affected by this change. No Technical Specifications are involved. No unreviewed safety questions exist.

CHANGE TITLE

Normal System Arrangement Change for Service Water Pumps Seal Water Pressure Regulators [2SWS-PCV117A and 117B] Power Supply from Closed to Open.

CHANGE DESCRIPTION

To maintain Seal Water Pressure Regulator valves [2SWS-PCV117A and 117B] failed open, their power supply breakers were changed from NSA closed to open. The valves were sluggish or had no response due to bio-fouling and macro-fouling.

SAFETY EVALUATION SUMMARY

Failing [2SWS-PCV117A and 117B] open has no safety effects. Manual valves are now throttled to maintain proper pressure and are adjusted once a shift to ensure proper pressure. Technical Specifications are not affected by this change. No unreviewed safety questions exist.

CHANGE TITLE

2TOP-91-04, BV-2 Asiatic Clam Chemical Treatment Program

CHANGE DESCRIPTION

A new temporary procedure was developed to provide a means of extermination of Asiatic clams in the BV-2 Service Water and Circulating Water systems to maintain design heat transfer and flow path conditions of those systems. The clamicide will be injected at the Unit 2 SWS valve pit and will be controlled by the Chemistry Department by temporary equipment.

SAFETY EVALUATION SUMMARY

SWS pumps are utilized by this procedure within pump discharge flow and head limitations so the pumps continue to operate as described in UFSAR 9.2.1. Performance of components supplied by SWS or Circulating Water system is not altered by this procedure. A temporary log for monitoring all heat exchangers with permanent pressure or flow instrumentation will be performed on a shiftly basis to monitor for possible buildup of clam shells. In the event of any clam shell buildup identified, proper maintenance will be initiated. Secondary plant component cooling water system described in UFSAR 9.2.7 will not be affected. No Technical Specifications are affected by this procedure. No unreviewed safety questions exist.

CHANGE TITLE

Change Normal System Arrangement Position of Recirculation Spray Cooler Discharge Header Cross-Connection Valve [SWS-82] to Open.

CHANGE DESCRIPTION

Recirculation Spray Cooler Discharge Header Cross Connection, [SWS-82], NSA position was changed from closed to open. Opening this cross-connect valve will provide an additional discharge path when one train of SWS is operating and will increase SWS total flow.

SAFETY EVALUATION SUMMARY

Operating with [SWS-82] in the open position will not affect the safety function of the SWS. SWS is affected by flow restrictions or loss of flow. This change and any failure modes will not reduce or restrict flow. This change will enhance the performance of the safety system by allowing increased flow. Restriction or blockage in either discharge line will be mitigated since flow could continue through the cross-connect valve. No Technical Specifications are affected by this change. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Modification - Defeat Primary Drains Transfer Tank Level Transmitter [2DGS-LT107A] Level Interlock to Pressurizer Relief Tank Drain Valve [2RCS-MOV523] and Primary Drains Transfer Tank Vent Header Isolation Valve [2DGS-AOV100A]

CHANGE DESCRIPTION

Pressurizer Relief Tank Drain Valve [2RCS-MOV523] and Primary Drain TK21 Vent Header Isolation Valve [2DGS-AOV100A] are interlocked shut due to [2DGS-LT107A] failed high. In order to allow operations to vent [2DGS-TK21] and drain the PRT, [2DGS-LT107A] has been defeated.

SAFETY EVALUATION SUMMARY

In accordance with UFSAR 5.4.11, no safety related components are involved. This modification has no potential impact on any Design Basis Accident. This temporary modification does not affect the Technical Specifications. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Modification - Jumper on Containment Air lock Door Interlock

CHANGE DESCRIPTION

Contacts in the Containment Air Lock interlock limit switch LS6/9 have failed. These contacts provide a permissive to allow opening the outer door provided the inner door is closed. A temporary jumper has been installed to allow opening the outer airlock door to provide access to the failed components.

SAFETY EVALUATION SUMMARY

There are no operating or design parameters affected by the temporary modification. The only system affected is the control circuit for the Containment Airlock doors. Accidents requiring Containment Integrity as identified in UFSAR 15.4.8 and 15.6.5 are not affected by this modification. The margin of safety defined in the basis of the Technical Specifications are not reduced. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Waiver of Compliance for a 24 Hour Extension to the Action Statement for Technical Specification 3.7.1.2.a Requiring Entry into Mode 4.

CHANGE DESCRIPTION

Mode 3 conditions are required to perform surveillance testing of the Steam Driven Auxiliary Feedwater Pump. To place the plant in HOT SHUTDOWN conditions to perform this test places unnecessary thermal cycle on the reactor plant. Hence, a 24 hour time extension on the action statement for Technical Specification 3.7.1.2.a (specifically the requirement to place plant in Mode 4 with the Steam Driven Auxiliary Feed Pump out of service for 80 hours) was requested.

SAFETY EVALUATION SUMMARY

The basis for the Auxiliary Feedwater System is to cooldown the Reactor Coolant System to less than 350F on a loss of offsite power. Both Motor Driven Auxiliary Feedwater pumps are operable. Should one of these become inoperable, the plant would be placed in Mode 4 in accordance with Technical Specification 3.7.1.2. Should a total loss of power occur at this time, the decay heat load is considerably less than assumed in the UFSAR and more time would be available to restore Auxiliary Feedwater or provide other means of core cooling to prevent core damage. To prevent increasing reactor heat load, the Reactor Trip Breakers will be cleared open, decreasing the probability of criticality occurring. No unreviewed safety questions exist.

CHANGE TITLE

OM 2.11.4.C, Filling Reactor Refueling Cavity, and OST 2.47.2, Containment Integrity Verification, Revisions

CHANGE DESCRIPTION

Procedures OM 2.11.4.C, Filling Reactor Refueling Cavity, and OST 2.47.2, Containment Integrity Verification, have been revised to allow the Refueling Cavity drain line to remain closed during plant operation instead of open as described in UFSAR 6.2.1.1.2. This allows operation with the two 4 inch flanges on the Refueling Cavity drain lines to remain in place after a refueling outage and to reduce human error.

SAFETY EVALUATION SUMMARY

Isolating this Refueling Cavity drain lines decrease the NPSH of the Recirculation Spray System pumps. An Engineering Department calculation determined that the new NPSH is still within acceptable limits. There is no change to radiological consequences because all water remains in containment and adequate NPSH is available for the Recirculation Spray pumps to maintain Containment atmosphere. No Technical Specifications are affected by this change. No unreviewed safety questions exist.

CHANGE TITLE

Turbine Driven Auxiliary Feedwater Pump [2FWE*P22] Operating Speed Change from 4350 to 4400 RPM.

CHANGE DESCRIPTION

Turbine Drive Auxiliary Feed Pump [2FWE*P22] operating speed was increased from 4350 rpm to 4400 rpm in order to meet the MOP.

SAFETY EVALUATION SUMMARY

The change will increase [2FWE*P22] speed to provide adequate flow as specified by the pump MOP. An increase in turbine speed by 1% will increase steam flow to [2FWE*P22] by 1% and is of no consequence during a SGTR. Increasing the operating speed of [2FWE*P22] by 1% will not create or initiate a DBA. This change does not affect any Technical Specification. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Modification for Flushing of Safeguard Area Air Conditioning Units [2HVR-ACU207A and 207B] Supply and Return Lines

CHANGE DESCRIPTION

A Temporary Modification was performed which removed the inlet and outlet Service Water System nozzles on the Safeguard Area ACUs [2HVR-ACU207A and 207B] and connected a temporary flush rig between the ACU supply and discharge lines. An existing Temporary Operating Procedure [2TOP-90-18] will be used to align Service Water to enhance flushing.

SAFETY EVALUATION SUMMARY

Site Engineering has determined limitations on flushing to ensure continued integrity and performance of systems. Flushing will be monitored locally while in operation and any flooding event will be quickly controlled and stopped. Only one train of safety related equipment will be flushed at a time. The other train will be available to perform its designed safety function. The margin of safety defined by the Technical Specifications is not reduced by this change. No unreviewed safety questions exist.

CHANGE TITLE

Hydro Test of SWS Return Lines from Radiation Monitors 2SWS-RQI100A,B,C,D

CHANGE DESCRIPTION

This safety evaluation supported a one time CMP to perform an ASME XI hydro on 1-1/2 inch SWS piping which was cut apart and rewelded to allow cleaning of the pipe during 2R.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the FSAR will not be increased or created because the performance of this procedure has no effect on systems essential for safe shutdown. For the same reason, the possibility of an accident or malfunction of a different type than any previously evaluated in the FSAR is not created. No Technical Specification bases are affected by this procedure. No changes to the FSAR are required.

CHANGE TITLE

Blocking Open of Control Room Air Conditioning Unit Cooling Coil Inlet Isolation Valve
[2SWS-143]

CHANGE DESCRIPTION

Valve 2SWS-143 was temporarily blocked open to allow its yoke nut to be removed for the repair of valve 2MSS-15. The function of valve 2SWS-143 is to provide 1 isolation of 2HVC-ACU201B. When 2SWS-143 was blocked open, valve 2SWS-151 was used to isolate the air conditioning unit. This temporary change was required to make valve 2MSS-15 operable while repair parts were being procured. The function of the control room air conditioning system was not affected by the temporary change to valve 2SWS-143.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the FSAR will not be increased or created because the air conditioning outlet valve 2SWS-151 was used to provide the same function of the valve which was blocked open. The possibility of an accident or malfunction of a different type than any previously evaluated in the FSAR is not created since system performance is not altered. No Technical Specification bases are affected by this procedure. No changes to the FSAR are required.

CHANGE TITLE

Install Temporary Gag on Reactor Coolant Pump C Cooling Water Supply Relief Valve [2CCP-RV115C] to Stop Relief Valve Leak

CHANGE DESCRIPTION

This safety evaluation supported a temporary modification to install a temporary gag on 2CCP-RV115C due to seat leakage until the valve could be permanently repaired during the next outage. Backup relief protection was provided by 2CCP-RV155B.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the FSAR will not be increased or created because, during normal operation, relief valve protection is not required. If system isolation becomes necessary, administrative procedures require installation of backup protection. The only postulated failure mode would result in leakage of CCP water into containment. This condition is within the bounds of previous analysis, thus the possibility of an accident or malfunction of a different type is not created. No Technical Specification bases are affected by this procedure. No changes to the FSAR are required.

CHANGE TITLE

Connection of a Temporary Recorder to Main Feedwater Regulating Valve [2FWS-FCV478]

CHANGE DESCRIPTION

During troubleshooting of 2FWS-FCV478 it was necessary to determine whether poor valve performance was due to mechanical binding or electrical control problems. A temporary modification was made to connect a recorder and a ramp generator and slowly ramp the valve open and closed with the valve in automatic.

SAFETY EVALUATION SUMMARY

The only postulated accident due to this change is loss of feedwater flow. This event is unlikely since the modification still allows for manual control. Loss of feedwater flow is, however, evaluated in the FSAR; thus the probability or consequences of a previously evaluated accident will not be increased or created. For the same reasons, the possibility of an accident or malfunction of a different type than any previously evaluated in the FSAR is not created. No Technical Specification bases are affected by this procedure. No changes to the FSAR are required.

CHANGE TITLE

Install Temporary Tubing Between Primary Drains Transfer Tank Pressure and Level Transmitters [2DGS-PT109A] and [2DGS-LT107A] Low Side and Recalibrate Level Transmitter

CHANGE DESCRIPTION

2DGS-LT107A failed due to a leak on the sealed sensor unit (low side capillary). A mechanical jumper was installed, via temporary modification, which replaced the leaking sealed system with a non sealed sensing line.

SAFETY EVALUATION SUMMARY

This change does not effect any safety related systems or equipment. Failure of the temporary system can only result in leakage into the containment building. This leakage is within the existing DBA analysis. Thus the probability or consequences of a previously evaluated accident will not be increased or created. For the same reasons, the possibility of an accident or malfunction of a different type than any previously evaluated in the FSAR is not created. No Technical Specification bases are affected by this procedure. No changes to the FSAR are required.

CHANGE TITLE

Removal of Emergency Diesel Generators Fuel Oil Storage Tanks Level Instruments
[2BGF-LE201A & B]

CHANGE DESCRIPTION

Normal chemistry sample locations for Unit 2 Diesel Generator fuel oil storage tanks were unusable due to contamination/corrosion concern with the sample points. A sample could be obtained at the location of the level instruments 2BGF-LE201A & B. Since sampling was required each month, since both instruments were out of service, and because of the difficulty of removing the detectors for sampling, the detectors were temporarily removed.

A blank flange is installed on the system piping when samples are not being taken.

SAFETY EVALUATION SUMMARY

This change does not effect any safety related systems or equipment. Manual measurements are used to maintain fuel level in the tanks in compliance with the Technical Specifications. Thus the probability or consequences of a previously evaluated accident will not be increased or created. For the same reasons, the possibility of an accident or malfunction of a different type than any previously evaluated in the FSAR is not created. No Technical Specification bases are affected by this procedure. No changes to the FSAR are required.

CHANGE TITLE

Jumper and Lifted Lead Modification for Unit 2 Plant Computer System Point F1000A

CHANGE DESCRIPTION

The change is installed as a lifted leads modification (Jumper and Lifted Leads Tags 2-5A-186 and 2-5A-187) for the Computer Point F1000A (CNMT VAC PP DISCH FLW) on the PCS because the related Field Device (CV-FT101) has failed. The field device input of 23 VDC was causing the PCS DMUX AIMOO module associated with it (DIN4-Lot13) to also fail because the card design allows a maximum input of 10.24 VDC. The benefits gained from this temporary change include the elimination of nuisance alarms on the Operations Journal Alarm printer and status CRT'S; also, an end of damage to expensive computer modules.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the FSAR will not be increased or created because the possibility of an accident or malfunction of a different type than any previously evaluated in the FSAR is not created. No Technical Specification bases are affected by this procedure. No changes to the FSAR are required.

CHANGE TITLE

DCP 853, PCS - Annunciator Window Point ID/status

CHANGE DESCRIPTION

The purpose of this modification is to provide BVPS-2 Control Room Operators with a means to check the status of annunciator windows in the Control Room via the Plant Computer System. A spare pushbutton on the operator's console will be labeled "ANNUNC". When an operator pushes this button, he will then be able to enter the appropriate annunciator window number and the computer will display the status of input signals to the window. The operator will also be able to obtain a printout of this information. No modifications to the station's annunciator system are required to provide this capability.

SAFETY EVALUATION SUMMARY

The probability of an occurrence or the consequence of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report (FSAR) will not be increased. The plant computer system is an information acquisition and processing system that performs no control functions for the station. This modification provides another means to allow operators to obtain plant status information, but does not substitute for any safety-related instrumentation. This modification also does not affect the Bypassed and Inoperable Status Indication System (BISI) described in BV-2 FSAR Section 7.5.5.

The possibility for an accident or malfunction of a different type than previously evaluated in the Updated Final Safety Analysis Report will not be created. This modification does not make any changes to any systems important to safety and does not create the possibility of a previously unanalyzed accident or malfunction because it only provides another means of data acquisition only, and does not add any control functions that could challenge the safety of the plant.

The margin of safety as defined in the basis for any Technical Specification will not be reduced. No Technical Specifications are affected by this modification. This changes will not require a change to the Technical Specifications.

This change will not require a change to the UFSAR.

CHANGE TITLE

DCP-886, Blowdown Flow Indicator

CHANGE DESCRIPTION

Presently the existing steam generator blowdown mass flowmeters are out of service due to various mechanical and human problems. EM 63022 requested a solution to the Unit 2 blowdown flow indication problem and suggested that a differential pressure transmitter similar to Unit 1 be used. The purpose of this design modification is to remove the existing mass flowmeters and replace them with Annubar differential pressure flow sensors, isolation valves, and indicator instruments. By performing this modification, more accurate readings should be obtained which would allow operators to take credit for blowdown flow while performing the plant heat balance.

SAFETY EVALUATION SUMMARY

The probability of an occurrence or the consequence of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report (FSAR) will not be increased. This design change is removing the steam generator blowdown mass flowmeters and replacing them with differential pressure type flowmeters. The existing mass flowmeters are not discussed in UFSAR Section 10.4.8.5, "Instrumentation Requirements", nor are they relied upon in UFSAR Section 10.4.8.3, the safety evaluation subsection. By performing this modification, the intended design function of the flowmeters to provide steam generator blowdown flow data will not change, and the location of the new flowmeters will still remain within the Turbine Building, a non-seismically designed structure.

The possibility for an accident or malfunction of a different type than previously evaluated in the Updated Final Safety Analysis Report will not be created. This modification will remove the existing in-line mass flowmeter spool pieces and install newly fabricated spool pieces for the Annubar sensors in their place, and it will also reuse the existing non-Class IIE power supply for the new indicators. The new spool pieces and associated instrument tubing will meet the system design conditions and will be pressure tested to ensure leak tightness. Additionally, UFSAR Section 10.4.8.5 states that the steam generator blowdown sample isolation valves close automatically when the auxiliary feedwater pumps are auto-started or a steam generator has a high radiation sample. In the event of a new spool piece rupture, the blowdown sample isolation valves could be used to isolate the blowdown break flow into the Turbine Building.

The margin of safety as defined in the basis for any Technical Specification will not be reduced. The steam generator blowdown system is not included in the Technical Specifications and no changes to the Technical Specifications will be required.

UFSAR Figures 10.4-23 will need to be revised to show the differential type flowmeters.

CHANGE TITLE

DCP 891, Modifications for the Plant Safety Monitoring System

CHANGE DESCRIPTION

The purpose of this modification is to correct PSMS deficiencies by rewiring the position indication inputs to the PSMS for 15 main steam safety valves, wiring two switches, and installing and replacing numerous EPROMS (Erasable Programmable Read Only Memory) integrated circuits (see W FCN-DMWO-40502, FCN-DMWM-10689, FCN-DMWM-10690 and FCN-DMWM-10688). The time-code translator will be modified via FCN-DMWM-10685. The design change will correct problems that have been in the system since start-up.

SAFETY EVALUATION SUMMARY

The probability of an occurrence or the consequence of an accident or malfunction of equipment important to safety as previously evaluated in the UFSAR will not be increased. The work will be performed on one train at a time and therefore the PSMS displays shall be available throughout the installation and testing of the design change. The changes in no way alter the function and reliability of the PSMS.

The possibility for an accident or malfunction of a different type than previously evaluated in the UFSAR will not be created. The PSMS is an information source and, as defined in the UFSAR Section 7, it is sufficiently isolated to preclude faults from affecting input sources. The changes will enhance the system's function and allow it to provide accurate information.

The margin of safety as defined in the basis for any Technical Specification will not be reduced. The PSMS satisfies a number of Technical Bulletins, Reg. Guide requirements, and Position Statements. The changes proposed will not affect any of these documents. This change will not require a change to the Technical Specifications.

This change will not require a change to the UFSAR.

CHANGE TITLE

DCP 906, Control Room Air Intake Duct Smoke Detector

CHANGE DESCRIPTION

Air duct smoke detectors 2FPM-DI13 and 14 (TC100D Type) are to be removed from the existing location. 2FPM-DI13 is to be replaced with a space smoke detector (TC100C Type) inside of the air intake duct. 2FPM-DI14 is to be deleted. This modification is required since the air velocity in the duct is below the acceptable minimum for a TC100D type smoke detector. At normal operation, a space detector is compatible with this system's air velocity and duct volume.

SAFETY EVALUATION SUMMARY

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the final safety analysis report will not be increased. The same type of fire detection (ionization smoke detector) is provided at the same location as originally designed, as described in FSAR Section 9.4.1.2.1 and in accordance with the Design Bases FSAR Section 9.4.1.1.

Deleting the second duct smoke detector will enhance the maintainability and will not adversely affect this systems operation. This second detector does not provide a separate redundant function, and is not required. Both detectors were powered from the same power unit, PU-20. Since the system is a class "A" supervised system, any malfunction will annunciate a trouble alarm in the control room.

The possibility for an accident or malfunction of a different type than any evaluated previously in the final safety analysis report will not be created. This configuration of the smoke detection system performs the same function as the original configuration as described in FSAR Section 9.4.1.2.1 and in accordance with the design bases FSAR Section 9.4.1.1. The smoke detector will locally alarm and annunciate in the Control Room upon detecting smoke within this duct.

The margin of safety as defined in the basis for any technical specification will not be reduced. The fire detection system is not addressed in the technical specifications. This change will not require a change to the Technical Specifications.

The UFSAR will need to be revised to reflect this modification.

CHANGE TITLE

DCP 926, Seal-in (Lockout) for Primary Turbine Trip Circuit (TMAAB)

CHANGE DESCRIPTION

The relays 62-TMAAB-X1 and 62-TMAAB-X2 are to be replaced by an electroswitch (T₁ LOR or Equal) Lockout Relay [86-TMAAB] in the Primary Turbine Trip Circuit. This relay will lock-in the trip coil and prevent a momentary thrust bearing trip from removing voltage from the "USST" breaker trip coils, inhibiting immediate breaker reclosure. This will increase the reliability of the circuits.

SAFETY EVALUATION SUMMARY

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the final safety analysis report will not be increased, because the proposed modification is for a Category II control circuit which was not previously evaluated in the FSAR.

The proposed modification will only change and rewire components inside Category II equipment. Since the Category II equipment was not previously evaluated in the FSAR, the proposed modification will not create a possibility for a different accident or malfunction than previously evaluated.

The category II control circuit is not considered in the basis for any technical specification and therefore does not reduce the margin of safety as defined in the basis of any technical specification. This change will not require a change to the Technical Specifications.

This change will not require a change to the UFSAR.

CHANGE TITLE

DCP 1021, Sampling of the Steam Generator Blowdown Evaporators

CHANGE DESCRIPTION

The purpose of this modification is to provide for continuous flow sampling of the evaporator bottoms for 2SGC-EV21B instead of the existing 3-5 ml bite sample; also, to relocate the sample point to a location downstream of the evaporator bottoms cooler (2SGC-E24) to reduce the sample temperature to 140 - 150F. Currently, the sample is too hot to handle by Chemistry personnel. Continuous sampling capability will be provided by replacing existing sample valves SGC-362 and SGC-363 with tees. Controls for 2SGC-A0V102A & B and 2SGC-A0V103A & B will be relocated to nearby the sample station for ease of operation. Heat tracing and insulation will be removed from lines being modified and new heat tracing and insulation will be installed on new sections of piping.

SAFETY EVALUATION SUMMARY

The probability of an occurrence or the consequence of an accident or malfunction of equipment important to safety as previously evaluated in the BVPS-2 Final Safety Analysis Report (FSAR) will not be increased. Section 11.2 of the BVPS-2 FSAR is not affected by this modification. This modification will serve to improve the sampling process of evaporator bottoms and improve personnel safety while sampling.

The possibility for an accident or malfunction of a different type than previously evaluated in the BVPS-2 Final Safety Analysis Report will not be created. No failures of the sample tubing create any new accidents or malfunctions; replacement of the sample valves with tees will reduce the possibility of flowpath blockage due to boric acid crystallization and malfunction of the valves without affecting the sample flowpath. Relocation of controls for SGC-A0V102A & B and SGC-A0V103A & B will allow for easier and safer sampling of evaporator bottoms by one person and creates no new accidents or malfunctions. No safety-related equipment is affected by this modification.

The margin of safety as defined in the basis for any Technical Specification will not be reduced. No Technical Specification bases are affected by this modification. This change will not require a change to the Technical Specifications.

UFSAR Figures 11.2-4 and 11.2-6 will need to be revised to reflect this modification.

CHANGE TITLE

DCP 1050, Steam Generator Blowdown Demineralizer System

CHANGE DESCRIPTION

The existing permanent design of the Steam Generator Blowdown (BDG) System normally directs the BDG to the feedwater fourth point heaters where it becomes mixed with condensate flow. The Condensate Polishing System is unable to remove the BDG impurities after they are diluted with condensate; therefore, the required secondary side chemistry cannot be achieved.

A temporary BDG demineralizer system, located between the blowdown tank [2BDG-TK21] and the main condenser, is currently in operation. It uses rented demineralizer skids to condition the BDG prior to its discharge to the condenser hotwell. This modification proposes to permanently install a BDG demineralizer system by performing the following:

- replacing all temporary hoses (both metal and rubber) with piping,
- rotating the two heat exchangers presently used 180° in order to facilitate tube removal and minimize pipe runs,
- adding new cooling lines for these heat exchangers from condensate (CNM) and secondary plant component cooling (CCS),
- removing the temporary circulating water cooling pump, piping, and hoses that are presently used as cooling for these heat exchangers,
- adding temperature control valves to the heat exchangers' cooling water outlet lines, and
- adding a temperature indicating switch upstream of the demineralizers that will terminate flow to the demineralizers and divert it to the fourth point heaters on a temperature 120°F.

The rented demineralizer skids will be used as the permanent demineralizers with these modifications:

- relocating the skids to facilitate resin removal for regeneration,
- piping in all three skids in parallel with isolation capabilities so that two can be on-line with one in standby, and
- adding an in-line flowmeter downstream of the skids to read total BDG flow.

A sample panel will include instrumentation to monitor total conductivity, cation conductivity, pH, sodium, and silica levels. A temperature control unit will maintain samples at a desired temperature for uniform analysis. All data will be trended on a multi-point strip chart recorder.

and will be continuously transmitted to a computer located in the Unit 2 Chemistry Lab. This computer will be a commercial grade personal computer (PC) and will be equipped with software especially designated to monitor and trend water chemistry. If present levels of conductivity, pH, silica, or sodium, are exceeded, a trouble signal will annunciate locally and at the PC.

SAFETY EVALUATION SUMMARY

The probability of an occurrence or the consequence of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report (FSAR) will not be increased. The purpose of this modification is to provide a method of demineralization to the steam generator blowdown water so that the required secondary chemistry limits can be adhered to. All components that are affected by this modification are non-safety-related. The safety evaluations and system analyses of USFAR Sections 9.3.2, 10.4.8, and 15.6.3 remain valid.

The possibility for an accident or malfunction of a different type than previously evaluated in the Updated Final Safety Analysis Report will not be created. No new failure modes or potential hazards will be created by the implementation of this modification.

The margin of safety as defined in the basis for any Technical Specification will not be reduced. The implementation of this modification will not affect the bases of any Technical Specifications, including 3.4.6.2, "Operational Leakage" and 3.11, "Radioactive Effluents". This change will not require a change to the Technical Specifications.

This change will require changes to the FSAR. Section 10.4.8. will need to include the demineralizers and all associated equipment and alarms. Figure 10.4-23 and Table 10.4-12 will need to be revised to include applicable components.

CHANGE TITLE

DCP 1068, RWST Area

CHANGE DESCRIPTION

The instrument lines affected by DCP 1068 are RWST and chemical addition tank lines for level transmitters 2QSS*LT100A/B, 101A/B, 104A/B/C/D and 2QSS-LT102A/B. Freezing problems had been experienced with these lines. The modification will protect these lines via higher wattage heat tracing and insulation. This modification will include the installation of another heat trace cable on the sensing lines of 2QSS*LT104A/B/C/D and new conduit to accommodate the additional circuits. An eyewash station which will be seismically installed and used for personnel safety is also included in this DCP.

Eyewash stations are not routinely described in the UFSAR, it does not meet the criteria of 50.59 (a)(1)(i), and has no adverse impact on any plant system. The addition of an eyewash station is not, therefore, included in this evaluation.

SAFETY EVALUATION SUMMARY

There are no BVPS Unit 2 Chapter 15 design basis accidents impacted by this DCP because heat tracing is not specifically addressed in the accident analysis.

The RWST Level Transmitters and the CAT Level Transmitters are part of the quench spray subsystem; however, the proposed new heat tracing will not adversely affect safety because the replacement heat tracing is installed to the same requirements as the original.

The probability of an occurrence of an accident previously evaluated in the safety analysis will not be increased. This change does not affect any Chapter 15 analysis, and does not, therefore, affect the probability of those accidents.

The consequences of an accident previously evaluated in the UFSAR will not be increased. Off-site dose will not be increased. This DCP is minor and replacing the heat tracing will not affect any other safety systems or components.

The probability of a malfunction of equipment important to safety as previously evaluated in the UFSAR will not be increased. The single failure analysis as defined in UFSAR Section 3.1 is not changed. This DCP only modifies heat tracing; this type of a malfunction was not previously evaluated.

The consequences of a malfunction of equipment important to safety as previously evaluated in the UFSAR will not be increased. This DCP will not adversely affect any parameter which would increase the consequences of a malfunction. This DCP will not adversely affect any safety system used to mitigate an accident. Therefore, there should be no effect on the consequences of a malfunction of equipment important to safety.

This DCP will not cause any new credible failure modes because the fundamental design features and functions of the heat tracing have not been altered. The new heat trace cable associated with 2QSS*LT104A/B/C/D shall be installed such that the heat trace on the sensing lines for two transmitters are orange powered and for the other two transmitters is purple powered. No sensing line will have both orange and purple powered heat trace. This meets Reg. Guide 1.75.

The possibility for an accident of a different type than previously evaluated in the UFSAR will not be created. This DCP is minor, and the existing heat tracing will be replaced by heat tracing with a higher rating; therefore, the change is not significant enough to create the possibility for an accident of a different type than analyzed in the UFSAR.

The possibility for a malfunction of a different type than any previously evaluated in the UFSAR will not be created. Again, because this DCP is so minor, and the proposed new heat tracing would have the same type of malfunctions as the original tracing, the possibility of malfunction of a different type is not created.

The Technical Specification index and Specification 3/4.1.2, 3/4.6.2 and 3/4.6.3 were reviewed to determine if any bases might be affected. It was determined that this DCP will not adversely affect the margin of safety as defined in the basis for any Technical Specification because the reliability of the heat tracing will be maintained, and no other equipment will be affected. This change will not require a change to the Technical Specifications.

UFSAR Section 8.3.1 will need to be revised to accurately reference circuits powered from 1E sources.*

* A subsequent UFSAR review determined that no changes were required.

CHANGE TITLE

DCP 1105, Turbine Supervisory Instrument System Upgrade

CHANGE DESCRIPTION

This design change will replace the original Westinghouse Turbine Supervisory Instrument System (T.S.I.) with a Bently Nevada Corporation (BNC) Model 3300 T.S.I. System which provides a more reliable, accurate, versatile and state-of-the-art rotating machinery monitoring system.

The turbine-generator monitoring functions to be provided by the BNC package include the following:

- 1) Vibration Displacement
- 2) Eccentricity
- 3) Keyphasor
- 4) Rotor Thrust Position
- 5) High Pressure Rotor Differential Expansion
- 6) Low Pressure Rotor Differential Expansion
- 7) High Pressure Casing Expansion
- 8) Speed

The T.S.I. System monitors will be housed in a cabinet provided by BNC. The cabinet will be delivered with the system monitors installed and internally wired to output terminal strips in accordance with DLC specifications. The cabinet will be mounted on the Turbine Building elevator. This location is directly over the Turbine Building to service building cable penetrations which serves to minimize cable installation requirements.

The BNC monitors will be powered from essential Bus Panel (PNL-ESSBS2-5C) located in the Service Building, Elevation 760'-6". One (1) cable will be installed along existing cable trays between (PNL-ESSBS2-5C) and the T.S.I. cabinet. The essential bus power supply maintains the present degree of electrical reliability for the turbine thrust bearing failure turbine trip function.

SAFETY EVALUATION SUMMARY

The only DBA affected is UFSAR Section 15.2.3, Turbine Trip. The rotor thrust position circuit will initiate a turbine trip when thrust bearing failure is detected. The discussion addresses only

the effects of a turbine trip on the reactor power. This design change will have no effect on the analyzed accidents.

No safety systems will be affected by this design change. It is basically a one-for-one change out with reliable state-of-the-art equipment that is to function as the present system does.

The probability of occurrence of a previously evaluated accident will be unaffected by existence and/or functionality of this monitoring system. The Turbine Supervisory Instrumentation does not perform any nuclear safety function.

The consequences of previously analyzed accidents will remain unchanged. The turbine is used to convert internal energy to kinetic energy. The T.S.I. ensures the integrity of various turbine mechanical parameters. Accident analysis takes credit for other methods of removing the energy from the core during an accident.

No increase in probability of malfunction of equipment important to safety will occur because the T.S.I. could only affect the operability of the turbine-generator unit and/or its support systems. None of the affected equipment is QA Category I, safety-related.

No equipment important to safety could have an increase in the consequences of a malfunction due this design change. There are no dependencies, whether direct or indirect, between the T.S.I. and safety equipment.

A failure of any one of the T.S.I. capabilities would not result in a scenario to be evaluated within the scope of the accident analysis.

The proposed design change will not create the possibility of an accident of a different type than previously evaluated in the safety analysis report. There is not impact on the primary system nor the ESF support systems by the proposed modification.

The proposed design change will not create the possibility of a malfunction of a different type than previously evaluated in the safety analysis report. The T.S.I. is only a monitoring system and does not provide any control nor protection any ESF equipment. It in no way will affect the operability of safety equipment.

The margin of safety as defined in the basis for any Technical Specification will not be reduced. The design change will in no way affect the parameters that influence reactor kinetics, fission product barriers, or any other safety concern. The design change has no direct nor indirect impact on the margin of safety used in the bases for the Technical Specifications. The T.S.I. will in no way affect equipment required by the limiting conditions for operation. This change will not require a change to the Technical Specifications.

This change will require a change to UFSAR Figure 10.2-6.

CHANGE TITLE

DCP 1110, Heavy Load Handler Down Ramp PAB El. 774'

CHANGE DESCRIPTION

A housekeeping tour conducted on 3/11/88 identified a need to provide a means of safely transporting heavy loads and equipment on the ramp, located in the PAB at elevation 773'-6", which leads to the reactor containment personnel air lock area. The purpose of this design change is to install a concrete pier which will be anchored on the existing floor slab at elevation 773'-6" and in front of the existing exhaust fan motor at the top of the ramp. A motor operated winch with a sufficient length of cable will then be installed on the pier. This winch will then be capable of pulling heavy loads along the ramp and should help reduce the risk of personnel injuries while moving heavy loads along the ramp.

SAFETY EVALUATION SUMMARY

The probability of an occurrence or the consequence of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report (UFSAR) will not be increased. This design modification involves installing a concrete pier on an existing floor slab in a seismic structure and attaching an electrically powered winch to the pier. This, however, should not cause any concerns since the new installation will be designed to maintain its integrity during seismic events. Additionally, this design modification will not involve or affect any safety-related equipment or Class IE power supplies.

The possibility for an accident or malfunction of a different type than previously evaluated in the Updated Final Safety Analysis Report will not be created. Failure of the winch cable, electrical malfunction, or separation of the winch from the concrete pier while moving a heavy load could create a gravity generated missile, consisting of the heavy load rolling down the ramp towards containment. However, this gravity missile would be stopped by the two-feet thick concrete wall in front of the personnel air hatch before it could strike the air hatch or containment building wall. The only damage which could possibly result from the missile would be the failure of radiation monitoring equipment - 2RMR*RL206, 2RMR*RL207, 2RMR*RQ202A, 2RMR*RQ202B, 2RMR*DAU201, and 2RMR-DAU203, which are located in front of the concrete wall. However, none of these components are listed in UFSAR Table 3.6B-2 as components outside containment required for safe shutdown of the reactor.

Since this design change will add a non-safety-related concrete pier and motor operated winch which are seismically designed, it should not adversely affect any safety-related equipment and will not create the possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR.

The margin of safety as defined in the basis for any Technical Specification will not be reduced. This design change is not covered by any Technical Specifications and no change to the Technical Specifications will be required.

This change will not require a change to the UFSAR.

CHANGE TITLE

DCP 1170, Addition of Pipe Supports to Vacuum Priming Piping to Main Collection Tank 2VPS-TK-21

CHANGE DESCRIPTION

A vacuum priming system is provided to prevent air binding in the condenser waterboxes and sections of the circulating water piping, and to maintain a siphon to the cooling tower pump suction. Due to inadequate supports on the vacuum priming lines, excessive pipe movement occurred on the 6" and 3" diameter lines from the air separating tanks to the collection tank whenever the level control valves (2VPS-LCV-101's and 103's) actuated.

The purpose of this modification is to add new pipe supports, revise existing pipe supports' functions, relocate pipe support strut and shim existing pipe support to take excessive movements out of the pipes.

SAFETY EVALUATION SUMMARY

There are no UFSAR design basis accidents which are potentially impacted by the proposed design change.

There are no safety systems which will be affected by the proposed design change.

The probability of an occurrence of an accident previously evaluated in the safety analysis report will not be increased because the circulating water system and its vacuum priming system are not safety-related and are independent of the emergency cooling requirements.

The consequence of an accident previously evaluated in the safety analysis report will not be increased because the inoperability of the circulating water system and its associated vacuum priming system do not impact safety-related equipment, and therefore affect no accident consequences.

The probability of a malfunction of equipment important to safety as previously evaluated in the safety analysis report will not be increased because the proposed changes will not affect any safety-related equipment. Besides, this more reliable vacuum priming system will enhance the circulating water system's operability. Thus, the probability of a malfunction of equipment will not be increased.

The consequence of a malfunction of equipment important to safety as previously evaluated in the safety analysis report will not be increased because the proposed design changes will not affect the consequences of any malfunction of safety-related equipment.

The possibility of an accident of a different type than previously evaluated in the safety analysis report will not be created because the installation of extra supports on the vacuum priming piping

will reduce the chance of pipe failure, damage to nearby equipment, and personnel injury. No possibility for an accident of a different type will be created.

The possibility for a malfunction of equipment important to safety of a different type than previously evaluated in the safety analysis report will not be created because the safety analysis report did not take credit from the circulating water and vacuum priming systems and therefore the malfunction of the vacuum priming system will not create a different type of malfunction of safety equipment.

Failure modes of the proposed design change which were reviewed included the failure of the vacuum priming system. However, since the circulating water and vacuum priming systems were not accounted for by the accident analyses, their failure will not affect the reactor safety.

The margin of safety as defined in the basis for any Technical Specification will not be reduced because the proposed design changes do not impact any Technical Specification requirements. This change will not require a change to the Technical Specification.

This change will not require a change to the UFSAR.

CHANGE TITLE

DCP 1199, 2HVI-FN203 Control Circuit Modification

CHANGE DESCRIPTION

The auxiliary boiler area electrical equipment room vent fan [2HVI-FN203] does not operate properly in fast speed in the automatic mode. A mechanical interlock exists between the slow and fast speed contactor coils. The slow speed coil does not de-energize when the fast speed coil is energized. As a result, the fast speed coil shorts out attempting to overcome the mechanical interlock.

2HVI-FN203 will be changed from a two-output to a three-output temperature controller. The first output will be set at 75°F, the second output at 80°F and the third output at 85°F. The contact associated with the second output can then be used to de-energize the slow speed coil before the fast speed coil receives a signal to energize.

This change will result in the fan operating as follows:

Case 1 - Temperature Rising - The fan will turn on at slow speed at 75°F and turn off 80°F. With no air flow, the temperature will continue rising and the fan will turn on at high speed at 85°F.

Case 2 - Temperature Falling - Assume the fan is operating at fast speed with temperature above 85°F. As the heat load falls below the heat removal rate, the temperature will drop. When the temperature falls below 85°F, the fan will turn off. With no air flow, the temperature will rise, and the fan will turn on at 85°F again at fast speed. The fan will continue cycling On and Off at fast speed until the heat load is low enough that it can bridge the gap between 85°F and 80°F at which time the fan will turn On at slow speed and continue the cool down.

Although this may not be the optimum mode of operation (no air flow between 80-85°F), the lead engineer has indicated that it is acceptable and is considered to adequately maintain the ventilation required for this room.

Therefore, this design change will maintain the reliability, integrity, and operability of the Electrical Equipment Room Vent Fan (EERVF) and will have no adverse effects on any other equipment.

SAFETY EVALUATION SUMMARY

No design basis accidents will be affected because this design change does not adversely affect any safety or non-safety systems, does not exacerbate any existing accidents, and does not introduce any new hazard beyond that already considered in the UFSAR.

This design change will not adversely affect the safety function of any system. The reliability, integrity, and operability of the EERVF will be maintained and no other systems will be affected.

The probability of an occurrence of any accident previously evaluated in the UFSAR will not be increased. This design change will maintain the reliability, integrity, and operability of the EERVF, and it will have no effect on any other equipment; therefore, no probabilities of occurrence of any accidents will be increased.

The consequences of an accident previously evaluated in the UFSAR will not be increased because the reliability, integrity, and operability of the EERVF is being maintained, and the change will have no effect on any other equipment. This design change will not affect any parameter which would increase the consequences of an accident beyond that previously considered in the UFSAR. This design change will not adversely affect any safety system used to mitigate an accident.

The probability of a malfunction of equipment important to safety as previously evaluated in the UFSAR will not be increased because this design change will not adversely affect, either directly or indirectly, any equipment, including the EERVF.

The consequences of a malfunction of equipment important to safety as previously evaluated in the UFSAR will not be increased. This design change will not adversely affect any parameter which would increase the consequences of a malfunction. This design change will not adversely affect any safety system used to mitigate an accident. Therefore, there will be no effect on the consequences of a malfunction of equipment important to safety.

This design change will not cause any new credible failure modes because the fundamental design feature and functions of the equipment have not been significantly altered. This is a relatively minor change.

The possibility for an accident of a different type than previously evaluated in the UFSAR will not be created because nothing is being added or altered in a way which creates the possibility of a different type of accident. This design change is minor, and the reliability, integrity, and operability of the EERVF will be maintained, and no other equipment will be affected.

The possibility for a malfunction of a different type than any previously evaluated in the UFSAR will not be created because of the fundamental design features and functions will not be changed in a way that creates a possibility of a malfunction of a different type. This design change is minor, and the reliability, integrity, and operability of the EERVF will be maintained.

This design change will not change any parameter which affects the course of any accident analysis supporting Technical Specification bases. The Technical Specification index was reviewed to determine if any bases might be affected. It was determined that this design change will not adversely affect the margin of safety as defined in the bases for any Technical Specifications because the reliability, integrity, and operability of the EERVF will be maintained, and no other equipment will be affected. This change will not require a change to the Technical Specifications.

This change will not require a change to the UFSAR.

CHANGE TITLE

DCP 1280, Modification of Hotwell Sample Panel

CHANGE DESCRIPTION

Six (6) small diaphragm type positive displacement pumps supply condensate samples from the hotwell to the Hotwell Sample Panel. The pumps operate at a constant 172 strokes per minute. The pulsed flow from these pumps prevents accurate adjustment of the panel flowmeters, prevents dissolved oxygen analysis from being performed accurately, and rattles the entire panel. Each sample passes through a resin exchange column on the Sample Panel. Because of the constant pulsation of the fluid, the potential exists for the resin retention screens to wear out or rupture. Since the Sample Panel effluent is designed to be returned to the hotwell, resin beads could be introduced into the condensate.

The pump diaphragms are oil-actuated. Each pump contains about one pint of oil. If the diaphragm should rupture, the oil would be drawn into the hotwell. The oil would break down into organic acids that would disrupt the carefully controlled condensate chemistry. It would also "poison" the cation columns and the various electrodes that monitor conductivity, pH, sodium, etc. To prevent resin and oil from contaminating condensate, the return line to the hotwell has been disconnected and the effluent from the Sample Panel is currently routed to the Turbine Building floor drain system. Approximately 20,000 gallons of condensate per month are discarded in this manner.

The solutions to these problems are to replace the existing diaphragm pumps with pulseless rotary pumps and add a strainer to the line that returns panel effluent to the hotwell. The strainer should be large enough to trap all the resin contained in one (1) cation column.

SAFETY EVALUATION SUMMARY

The Hotwell Sample System does not affect any safety-related equipment.

The proposed design change will not increase the probability of occurrence of an accident previously evaluated in the safety analysis report. The proposed design change will improve the reliable operation of the Hotwell Sample System and allow the system to operate as intended. The strainer will ensure that no resin that escapes in the unlikely event of an ion exchanger failure will enter the condenser hotwell.

The proposed design change will not increase the consequences of an accident previously evaluated in the safety analysis report. The consequences of accidents described in Section 9.3.2.2 of the UFSAR are not increased by this design change.

The proposed design change will not increase the probability of occurrence of a malfunction of equipment important to safety as previously evaluated in the safety analysis report. The Condenser Hotwell Sample System does not affect any safety-related equipment as described in

Section 9.3.2.2 of the UFSAR. This modification will reduce the probability of a sample panel ion exchanger to lose resin into the hotwell and to eliminate the possibility of a diaphragm failure of the sample pumps by replacing the pumps.

The proposed design change will not increase the consequences of a malfunction of equipment important to safety as previously evaluated in the safety analysis report. The Condenser Hotwell Sample System does not affect any safety-related equipment as described in Section 9.3.2.2 of the UFSAR.

No new credible failure modes of the proposed design change can be identified.

The proposed design change will not create the possibility of an accident of a different type than previously evaluated in the safety analysis report. This modification will correct deficiencies in the previous design to permit the system to operate as originally designed per Section 9.3.2.2 of the UFSAR.

The proposed design change will not create the possibility of a malfunction of a different type than previously evaluated in the safety analysis report. New malfunctions are being created under this design.

There are no changes in parameters which affect the course of any accident analysis supporting Technical Specification bases and result in exceeding the acceptance criteria for fuel cladding, RCS boundary, or containment integrity. The proposed design change will not reduce the margin of safety as defined in the basis for any Technical Specification. No Technical Specifications or bases are affected by this design change. This change will not require a change to the Technical Specifications.

UFSAR Figure 9.3-10 will need to be revised to show the location of the strainer to be added by this design change.

CHANGE TITLE

DCP 1304, RPI Low Voltage Power Supply Modification

CHANGE DESCRIPTION

The accuracy of the Analog Rod Position Indication System (ARPIS) is dependent upon the systems four 13 volt D.C. power supplies.

The current system configuration provides annunciation for any power supply failure via 4 monitor relays. This arrangement does not provide indication for power supply drift.

A reactor trip on 2/7/87 revealed system inaccuracies due to power supply drift prompting NRC concerns about system degradation.

This DCP will replace the four non-adjustable monitor relays with four relays with an adjustable trip point to provide immediate annunciation due to power supply drift. Steps can then be taken to correct the power supply drift problem and thereby maintain the accuracy of the ARPIS.

The specific location of equipment associated with this change is the rear of ARPIS cabinet RPI-3 in the Process Control Room.

The DCP will maintain the reliability, integrity, (accuracy) and operability of the ARPIS and will have no adverse effects on any other equipment.

SAFETY EVALUATION SUMMARY

No design basis accidents will be affected by this DCP because this DCP does not adversely affect any safety or non-safety systems, does not exacerbate any existing accidents, and does not introduce any new hazard beyond that already considered in the UFSAR.

This DCP will not adversely affect the safety function of any system. The reliability, integrity, and operability of the ARPIS will be maintained and no other systems will be affected.

The probability of an occurrence of an accident previously evaluated in the UFSAR will not be increased. This DCP will maintain the reliability, integrity, and operability of the ARPIS and it will have no effect on any other equipment; therefore, no probabilities of occurrence of any accidents will be increased.

The consequences of an accident previously evaluated in the UFSAR will not be increased because the reliability integrity, and operability of the ARPIS is being maintained and the change will have no effect on any other equipment. This DCP will not affect any parameter which could increase the consequences of an accident beyond that previously considered in the UFSAR. This DCP will not adversely affect any safety system used to mitigate an accident.

The probability of a malfunction of equipment important to safety as previously evaluated in the UFSAR will not be increased because this DCP will not adversely affect, either directly or indirectly, any equipment, including the ARPIS. This DCP only affects non-safety related equipment.

The consequences of a malfunction of equipment important to safety as previously evaluated in the UFSAR will not be increased. This DCP will not adversely affect any parameter which would increase the consequences of a malfunction. This DCP will not adversely affect any safety system used to mitigate an accident. Therefore, there will be no effect on the consequences of a malfunction of equipment important to safety.

This DCP will not cause any new credible failure modes because the fundamental design features and functions of the equipment have not been significantly altered. This is a relatively minor change.

The possibility for an accident of a different type than previously evaluated in the UFSAR will not be created because nothing is being added or altered in a way which creates the possibility of a different type of accident. This DCP is minor, and the reliability, integrity, and operability of the ARPIS will be maintained, and no other equipment will be affected.

The possibility for a malfunction of a different type than any previously evaluated in the UFSAR will not be created because the fundamental design features and functions will not be changed in a way that creates the possibility of a malfunction of a different type. This DCP is minor and the reliability, integrity, and operability of the ARPIS will be maintained. This DCP only affects non-safety related equipment.

The margin of safety as defined in the basis for any Technical Specification will not be reduced. This DCP will not change any parameter which affects the course of any accident analysis supporting Technical Specification bases. The Technical Specification index was reviewed to determine if any bases might be affected. It was determined that this DCP will not adversely affect the margin of safety as defined in the bases for any Technical Specifications because the reliability, integrity, and operability of the ARPIS will be maintained, and no other equipment will be affected. This change will not require a change to the Technical Specifications.

This change will not require a change to the UFSAR.

CHANGE TITLE

DCP 1312, Upgrade of Turbine Plant Sample Panel and Hotwell Sample Panel

CHANGE DESCRIPTION

Presently, BVPS-2 does not have the capability to detect chemistry changes on a continuous basis for the Turbine Plant Sampling System. Various in-line monitors are not in service, and the status of important chemistry parameters are determined, once a day, by analyzing grab samples.

A review of the existing sampling equipment has determined that most of the equipment is obsolete and should be replaced. This modification proposes to update the Turbine Plant and Hotwell Sampling Panels by deleting extraneous equipment, replacing outdated equipment, and installing new equipment. The Turbine Plant Panel will be reworked and the Hotwell Panel will be replaced, in order to accommodate the changes. A Data Acquisition System Management Station will be installed in the Secondary Chemistry Lab, along with the conduit required for the connecting cable. Four (4) new tubing runs will be installed; one (1) tubing run from each of the three (3) steam generator discharge lines, and one (1) tubing run from the heater drain pumps discharge header will all provide samples to the Turbine Plant Sample Panel.

SAFETY EVALUATION SUMMARY

This modification will not impact any of the design basis accidents discussed in JFSAR Chapter 15.

No safety systems will be affected by the proposed design change. The Turbine Plant Sampling System performs no safety-related function. The failure of this equipment will not affect the safety functions of other equipment.

The proposed design change will not increase the probability of occurrence of an accident previously evaluated in the safety analysis report. No safety-related components, systems or structures will be affected in any way by this modification.

The proposed design change will not increase the consequences of an accident previously evaluated in the safety analysis report. None of the equipment required to mitigate any of the previously analyzed accidents will be affected in any way by this modification.

The proposed design change will not increase the probability of occurrence of a malfunction of equipment important to safety as previously evaluated in the safety analysis report. No safety-related equipment or functions will be affected by this modification. Even the non-safety related function of the Turbine Plant Sampling System will remain essentially unchanged. This modification serves only to update the existing system with more modern and reliable sampling equipment.

The proposed design change will not increase the consequences of a malfunction of equipment

important to safety as previously evaluated in the safety analysis report. This modification will have no effect on any safety-related equipment functions.

The modified sample panels and all associated components will meet applicable requirements for a QA Category II, non-seismic installation. None of the Turbine Plant Sample System components performs a safety-related function; therefore, there are no instrument failures that could occur that would be immediately detrimental to plant equipment or to personnel or public safety. Also, since the equipment will be installed to appropriate standards, the possibility of leaking components will not be increased from what presently exists.

The proposed design change will not create the possibility of an accident of a different type than previously evaluated in the safety analysis report. No other components, systems or structures will be adversely affected by this modification.

The proposed design change will not create the possibility of a malfunction of a different type than previously evaluated in the safety analysis report. No new failure modes or potential hazards will be created by the implementation of this modification.

There are no changes in parameters which affect the course of any accident analysis supporting Technical Specification bases and that result in exceeding the acceptance criteria for fuel cladding, RCS boundary, or containment integrity. The proposed design change does not reduce the margin of safety as defined in the basis for any Technical Specification (T.S.). T.S. 3/4.4.7 and 3/4.4.8 deal only with the Reactor Coolant System chemistry and specific activity. T.S. 3/4.7.1.4 specifies the activity limits on the secondary coolant system to ensure that the resultant offsite radiation dose, in the event of a steam line rupture, will not exceed 10CFR Part 100 limits. The requirements of this T.S. will continue to be adhered to and the margin of safety will not be affected by this modification. This change will not require a change to the Technical Specification.

UFSAR Section 9.3.2.2. and Figures 9.3-9 and 9.3-10 will need to be revised to reflect this modification.

CHANGE TITLE

DCP 1354, Replacement of Instrument Air Dryer, 2IAS-DRY21

CHANGE DESCRIPTION

This design change is to replace the existing dryer with a larger capacity dryer to correct a design deficiency and therefore, improve the instrument air supply system with standard ISA S7.3. Another design objective of this DCP is to install a particulate filter in the copper line immediately after the transition to trap any particulate that may be within the lines due to corrosion of the carbon steel pipe and receiver tank downstream of the dryer.

SAFETY EVALUATION SUMMARY

UFSAR, Chapter 15 design basis accidents were reviewed to identify what design basis accidents could be impacted by the proposed modification. The station air system is non-safety-related and not required for safe shutdown of BVPS Unit 2. None of the UFSAR Chapter 15 safety analysis will be affected by this modification.

All safety systems that utilize air from the non-safety related station instrument air will be affected; however, the effect will be favorable in that the quality of the air provided to the safety systems will be improved by the removal of any particulate that may have entered the air stream due to degradation of the instrument air receiver tank and any other carbon steel line and by removal of moisture within the air stream that previously was not removed by the undersized dryer.

The design change will not increase the probability of occurrence of a loss of instrument air or any other accident previously evaluated. The existing system has an undersized dryer that has required excessive maintenance. The new dryer has a large enough capacity so as not to overload and is flow regenerative vs. a heat regenerative type that the existing unit is. Flow regenerative dryers require less maintenance than heat regenerative dryers. Therefore, the system will be in the bypass mode less frequently, decreasing the time safety system vulnerable to excessive moisture must use non-dried air.

No equipment or systems required to mitigate the consequences of any previously analyzed accident will be affected by this modification. Desiccant-type cartridge removal filter bypass system would be utilized to supply dry air to instrument air system in case of air dryer ruptures or malfunctions. Containment isolation valves' closure will not be affected by this modification.

The modification of the instrument air dryer and the receiver tank does not create a situation which would increase the probability of a malfunction. Air dryer ruptures or malfunctions and filter clogs have been reviewed. They should have the same reliability and will not increase the probability of a malfunction.

There should be no effect on the consequences of a malfunction of equipment important to safety

as previously evaluated in UFSAR. All safety-related instruments that utilize air from the non-safety related instrument air system and the containment isolation will not reduce their safety function.

Air dryer ruptures or malfunctions and filter clogs were reviewed. No new credible failure modes will be created by the implementation of this modification. There will be no functional changes to any safety related equipment, system or structures.

There is no configuration change such that an accident of a different type is created. Air dryer ruptures or malfunctions will not affect desiccant-type cartridge removal filter bypass system to be utilized to supply dry air to instrument air system.

The proposed design change will not create the possibility of a malfunction of a different type than previously evaluated in the safety analysis report. No new failure modes or potential hazards will be created by the implementation of this modification. The failure of this equipment has no effect on safe plant operation and shutdown of the plant, and the failure of this equipment will not affect the safety function of other equipment.

There are no changes in parameters which affect the course of any accident analysis supporting Technical Specification bases and result in exceeding the acceptance criteria for fuel cladding, RCS boundary, or containment integrity. The proposed design change does not reduce the margin of safety as defined in the basis for any Technical Specification. No TS basis will be affected in any way in this modification. This change will not require a change to the Technical Specifications.

UFSAR Section 9.3.1.1.2 will need to be updated to reflect this modification.

CHANGE TITLE

DCP 1370, Control Room HVAC Noise Level Reduction - NRC Licensing Commitments Human Engineering Discrepancies

CHANGE DESCRIPTION

Considerable background noise and drafts exist in the Unit 2 control room due to high air velocity in the supply and return ductwork. Also, compressor/ condenser units 2HVC-REF24A, B continuously start and stop during low cooling periods, damaging motor starters and compressors. New setpoints for the control room ventilation were calculated. The design objectives are to reduce air velocities in the ductwork by 20% in order to reduce control room noise and to re-balance the air system flows as a result. A 30 KW heater will be added to each air handler to increase the heat load during the winter and shutdowns to prevent the compressor/condenser units from excessive cycling. If possible, for further noise reduction, the existing fans in Radiation Monitors 2RMS-RM11-1, 2 will be replaced with quieter fans.

SAFETY EVALUATION SUMMARY

None of the accidents in Chapter 15 of the Unit 2 UFSAR are affected by this design change. The control room isolation functions that occur during a CIB resulting from an accident described in Chapter 15 will continue to operate as described in the UFSAR Section 9.4.1.

No safety systems will be affected by the proposed design change. The changes to be made under this design change will not affect the Control Room Emergency Bottled Air Pressurization System (CREBAPS) or the outdoor emergency air supply system. The operation of these subsystems is not affected.

The proposed design change will not increase the probability of occurrence of an accident previously evaluated in the safety analysis report. The probability of a chlorine leak or a design basis accident that would cause a control room isolation is not increased. A 20% reduction in air flow to the control room will still provide adequate air flow for equipment cooling and habitability and will reduce wind noise in the control room.

The proposed design change will not increase the consequences of an accident previously evaluated in the safety analysis report. The signals and initiating events that cause the control room to isolate are not affected by this design change. The control room will isolate and pressurize as presently described in Section 9.4.1 of the UFSAR. The 200 CFM exfiltration of air from the control room used to comply with dose assessment calculations will not be changed.

The proposed design change will not increase the probability of occurrence of a malfunction of equipment important to safety as previously evaluated in the safety analysis report. All installations will be seismic and will not affect any part of the system that will respond to an accident (CREBAPS, outdoor emergency air supply systems).

The proposed design change will not increase the consequences of a malfunction of equipment important to safety as previously evaluated in the safety analysis report. This design change will not increase the consequences of a malfunction of the control room isolation and pressurization equipment because none of this equipment is affected by this design change.

The only credible failure modes in this design change are the electrical failure of the 30 KW preheater and the failure of the new fan blowers on 2RMS-RM11-1, 2.

None of the changes will create the possibility of a new accident scenario not previously evaluated in the UFSAR. The Control Room Air Conditioning System is designed to respond to accidents external to it and is not listed as a cause for any accidents (Chlorine Spill or CIB).

The proposed design change will not create the possibility of a malfunction of a different type than previously evaluated in the safety analysis report. All modifications will be seismically installed. No part of this installation affects any part of the system (CREBAPS, outdoor emergency air system) required to function in the event of an accident.

There are no changes in parameters which affect the course of any accident analysis supporting Technical Specification bases and result in exceeding the acceptance criteria for fuel cladding, RCS boundary, or containment integrity.

The proposed design change will not reduce the margin of safety as defined in the basis for any Technical Specification. This design change does not affect any of the equipment required to be operable in Technical Specification 3/4.7.7. This change will not require a change to the Technical Specification.

UFSAR Sections 9.4.1.1.13 and 9.4.1.2.1 and Figure 9.4-1 will need to be revised to reflect these modifications.

CHANGE TITLE

DCP 1389, ERFCS ATSC Elimination

CHANGE DESCRIPTION

This design change proposes to eliminate the Alternate Technical Support Center (ATSC) as approved by the NRC on 4/20/88. The modification will affect only non-safety related components and will remove one console table and two wireways. Associated cables will be disconnected and spared. The proposed change will have no effect on any safety related systems or components.

SAFETY EVALUATION SUMMARY

There are no Chapter 15 design basis accidents impacted by this DCP because the ATSC is not specifically addressed in the accident analysis.

The probability of an occurrence and the consequences of an accident previously evaluated in the safety analysis will not be increased. This change does not affect any safety-related components, and does not, therefore, affect any Chapter 15 analysis.

The probability of a malfunction and consequences of a malfunction of equipment important to safety as previously evaluated in the UFSAR will not be increased. This DCP will remove a non-safety related computer system from service. This DCP will not affect any safety system used to mitigate an accident. Therefore, there should be no effect on the consequences of a malfunction of equipment important to safety.

This DCP will not cause any new credible failure modes because the fundamental safety features and functions of the plant have not been altered. This DCP removes the ATSC from service.

The possibility for an accident of a different type than previously evaluated in the UFSAR will not be created. This DCP is minor, and the task will affect only non-safety related electrical systems; therefore, the change is not significant enough to create the possibility for an accident of a different type than analyzed in the UFSAR.

The possibility for a malfunction of a different type than any previously evaluated in the UFSAR will not be created. Again, because this DCP is so minor, and the ATSC has no safety functions. The possibility of malfunction of a different type is not created.

This DCP will not change any parameter which affects the course of any accident analysis supporting Technical Specification bases. The Technical Specification index and Section 5, Design Features, were reviewed. The ATSC is not addressed in the Technical Specifications. This change will not require a change to the Technical Specifications.

This change will not require a change to the UFSAR.

CHANGE TITLE

DCP 1472, Unit 2 I&C Shop Ventilation Hood

CHANGE DESCRIPTION

Several INPO findings and an incident during the past year demonstrate the need for a fume exhaust hood in the SOSB Instrument and Control (I&C) Shop. The objective of this design change is to provide a means of exhausting fumes from the SOSB I&C Shop. This will provide a safe method of handling chlorine and other hazardous materials during calibration procedures.

SAFETY EVALUATION SUMMARY

UFSAR Chapter 15 design basis accidents were reviewed to identify what design basis accidents could be impacted by the proposed modification. This design change is non-safety related and in no way affects design basis accidents. It has no impact on any safety function of any system. The ventilation system has a negligible impact.

This DCP will not adversely affect the safety function of any system. The fume hood will not be powered from an IE power source. It does not have a significant impact on the ventilation system because the exhaust totals only 800 cfm.

This design change will not increase the probability of occurrence of an accident of the ventilation system or any other accident previously evaluated. It has no safety function. This will provide a safe method of handling chlorine during calibration procedures.

This DCP will not affect any parameter which would increase the consequences of an accident beyond that previously considered in the UFSAR. This equipment does not impact the ability of safety systems to respond to an accident, and therefore will not increase the consequences.

The probability of a malfunction of equipment important to safety as previously evaluated in the safety analysis report will not be increased because it will not be powered from an IE power source. It has no safety function. It will not decrease the reliability of other equipment.

The consequences of a malfunction of equipment important to safety as previously evaluated in the UFSAR will not be increased. This DCP will not adversely affect any parameter which would increase the consequences of a malfunction. This DCP will not adversely affect any safety systems used to mitigate an accident. Therefore, there will be no effect on the consequences of a malfunction of equipment important to safety.

Failure modes of the proposed design change which were reviewed included the equipment failure of the ventilation system and power failure in the SOSB I&C Shop. Since it is not safety-related, it does not introduce a new accident.

The proposed design change will not create the possibility of an accident of a different type than

previously evaluated in the safety analysis report. No possibility for an accident of a different type than those that have already been evaluated is foreseen. The accident of a different type will not be created.

The proposed design change will not create the possibility of a malfunction of a different type than previously evaluated in the safety analysis report. No new safety-related component functions are being created. This equipment is not safety-related. The fume hood will not be powered from an IE power source. It has negligible impact on the ventilation system. The failure of this equipment will not affect the safety function of other equipment.

There are no changes in parameters which affect the course of any accident analysis supporting Technical Specification bases and result in exceeding the acceptance criteria for fuel cladding, RCS boundary, or containment integrity. The proposed design change does not reduce the margin of safety as defined in the basis for any Technical Specification. No T.S. basis will be affected, in any way, by this design change. This change will not require a change to the Technical Specifications.

This change will not require a change to the USFAR.

CHANGE TITLE

DCP 1496, Maintenance Improvements for Heater Drain Pumps (2HDH-P21A, B)

CHANGE DESCRIPTION

The purpose of this design change is to provide clearance and cooling water line modifications to allow the heater drain pumps (2HDH-P21A and B) to be removed for maintenance. This will be accomplished by re-routing the overhead obstructions consisting of two cable raceways (2Ti4710N and 2TH711N), a conduit (2CC960YA), and an extraction steam line (2-ESS-002-124-4). It will also include minor piping modifications made to the secondary component cooling water lines supplying the heater drain pumps to allow for isolation of either pump without affecting the operation of the other or for isolation of both pumps simultaneously. Additionally, four valves will be added to the cooling water supply lines to be used as blowdown valves for clearing out any blockages which occur in the lines.

SAFETY EVALUATION SUMMARY

UFSAR Sections 15.1 and 15.2 were reviewed and will not be impacted by this proposed design change. No credit is taken in any of the safety analyses of Chapter 15 for a reactor trip on a turbine trip.

The Secondary Component Cooling Water System (CCS), Extraction Steam System (ESS), and the Heater Drains System (HDH) are non safety-related. Any modifications made to these systems as part of this proposed design change will not affect any safety systems. The modifications made to conduit 2CC960YA affects turbine trip/reactor trip cables; however, these are not required for reactor safety.

The proposed design change will not increase the probability of occurrence of an accident previously evaluated in the safety analysis report. The modifications made to the CCS and ESS are simple piping modifications whose failure would not affect any safety-related components. Any failures associated with the re-routing of the electrical cable trays which house cables for the heater drain pumps would not affect safety-related components. Modifications made to the conduit and cables which provide turbine trip signals to the SSPS will have electrical tests performed upon completion to ensure that it does not degrade the reactor trip on turbine trip function.

The proposed design change will not increase the consequences of an accident previously evaluated in the safety analysis report. The CCS, ESS and HDH systems are all non safety-related, and any postulated failures of these systems as a result of this design change will not increase the consequences of any previously evaluated accident. The reactor trip on turbine trip function, as stated in UFSAR Section 7.2.1.1.2, provides additional protection and conservatism beyond that required and is included as part of good engineering practice and prudent design. However, no credit is taken in any of the UFSAR Chapter 15 safety analyses for this trip, and therefore its failure will not increase the consequences of any accidents previously evaluated in the UFSAR.

The proposed design change will not increase the probability of occurrence of a malfunction of equipment important to safety as previously evaluated in the safety analysis report. As stated above, CCS, ESS and HDH have no safety functions, and their failure will not affect the safety functions of other equipment. The reactor trip on turbine trip function is part of good engineering practice and provides additional protection and conservatism. Moreover, mechanical and electrical test specifications will be written to ensure that these modified components are tested and deemed operable, and have not been degraded from performing their original functions.

The proposed design change will not increase the consequences of a malfunction of equipment important to safety as previously evaluated in the safety analysis report. Only the work performed on conduit 2CC960YA could affect equipment which is important to safety. However, the consequences of a turbine trip accident, as discussed in UFSAR Section 15.2.3, would not be increased since no credit is taken for a direct reactor trip from a turbine trip signal.

The credible failure modes have been identified and it has been concluded that these modes were previously evaluated.

Pipe Breaks:

CCS - Resulting flood water would be contained inside of the Turbine Building and would not affect safety-related equipment, break can be isolated.

ESS - Resulting steam release would be inside of the Turbine Building and would not affect safety-related equipment, break can be isolated.

Electrical Malfunctions:

HDH - System is non-IE and any failures would not affect any IE equipment.

SSPS Input - Loss of reactor trip on turbine trip signal, no credit is assumed in accident analyses for this feature.

The proposed design change will not create the possibility of an accident of a different type than previously evaluated in the safety analysis report. Modifications performed under this proposed design change are minor piping modifications and cable raceway and conduit re-routes. All work will be performed in the Turbine Building and will meet the original design requirements.

The proposed design change will not create the possibility of a malfunction of a different type than previously evaluated in the safety analysis report. This proposed design change consists of minor cable tray and conduit re-routing and piping modifications to provide clearance so that the heater drain pumps can be removed for maintenance. It will be designed and installed so that the original system design is maintained.

The implementation of this design change would not change any parameters which could affect the course of any accident analysis supporting Technical Specification Bases and result in exceeding fuel cladding, RCS boundary, or containment integrity acceptance criteria. The proposed design change will not reduce the margin of safety as defined in the basis for any Technical Specification. The margin of safety as defined in Technical Specification Bases 3/4.8.2 will not be reduced since the operability of Vital Bus IV will be maintained in the same manner which currently exists. This change will not require a change to the Technical Specification.

UFSAR Figure 9.2-29 will need to be revised to show the piping modifications performed on the Secondary Component Cooling Water System.

CHANGE TITLE

DCP 1512, Modification of the Appendix R Emergency Lighting Controls for the CR, SDP, and ASDP Areas

CHANGE DESCRIPTION

During the design and licensing process for BVPS Unit 2, a commitment was made to supply a minimum illumination level of ten (10) foot-candles in the control areas critical to a safe plant shutdown. These areas include the Control Room (CR), the Shutdown Panel (SDP), and the Alternate Shutdown Panel (ASDP). Results of tests conducted in these areas indicate that the minimum illumination levels required can only be obtained if either additional lighting is installed or if the operation of the existing Appendix R lighting is modified.

This modification proposes to modify the operation of the existing Appendix R lights. The Appendix R lights consist of Holophane fluorescent lighting fixtures. These lights are not normally illuminated; they receive necessary AC power only to trickle charge their 8-hour battery packs and to provide indication of the availability of normal AC lighting power. On a loss of normal AC lighting power they are designed to illuminate, being powered by their 8-hour battery packs. Currently, the AC power being supplied to the Appendix R lights is backed up by the non-safety related black diesel. This is a conservative design for lights that are illuminated by AC power; however, since the Appendix R lights illuminate on the loss of AC power, they only illuminate if both the original AC power source and the black diesel are lost. These lights have been shown to illuminate for approximately 30 seconds only on a loss of AC power since they will extinguish when the black diesel starts to supply the AC power.

This modification proposes to provide the necessary AC power to the Appendix R lights from sources that are not backed up by the black diesel. This will allow the Appendix R lights to operate in tandem with existing emergency lighting that is powered from the black diesel. In this case, the Appendix R lights will not be considered as emergency lighting themselves, but they will provide an additional source of illumination for up to eight (8) continuous hours following a loss of normal AC power.

Also to be implemented under this modification is the work that has already been approved under DCP 1019. This involves the installation of a Holophane fluorescent lighting fixture in the Unit 1/2 CR vestibule area and the installation of approximately ten (10) feet of lighting conduit. This fixture, being located in an access/egress area, will be continuously illuminated by normal AC lighting power and will be illuminated by 8-hour battery backup on the loss of normal AC. Since the steel plate roof of this area is considered to be part of the CR pressure boundary, Nuclear Group Administrative Manual (NGAM) 8.15 must be adhered to during any breaching and re-sealing of this boundary.

SAFETY EVALUATION SUMMARY

None of the previously analyzed accidents will be impacted by the proposed modification. This modification will have the effect of better illuminating the plant control areas when normal AC lighting power is lost. The existing Appendix R lighting will illuminate using power from 8-hour battery packs until the time when the normal AC lighting power is restored.

No safety systems will be adversely affected by the proposed design change. The Appendix R lighting is considered as QA Category F. Currently it receives an AC power input from a non-Class 1E source that is backed up by the non-safety related diesel generator (the black diesel). The lights, in effect, receive an AC power input from one of two "normal" AC power sources. Power for illumination comes from their 8-hour battery packs and this occurs only during the loss of both the original AC power signals. This modification will cause the lights to illuminate during the loss of the original AC power source and continue to illuminate when the black diesel is operating. In this way they will work in tandem with emergency lighting that is illuminated from black diesel power. The Appendix R lights will then extinguish when the original AC power signal is restored.

The proposed design change will not increase the probability of occurrence of an accident previously evaluated in the safety analysis report. No safety-related system or component functions will be adversely affected by this modification.

The proposed design change will not increase the consequences of an accident previously evaluated in the safety analysis report. No components required to help mitigate any of the previously analyzed accidents will be affected by this modification.

The proposed design change will not increase the probability of occurrence of a malfunction of equipment important to safety as previously evaluated in the safety analysis report. No safety-related equipment will be adversely affected by this modification. The implementation of this modification will help to ensure that a minimum illumination level of 10 foot-candles is met for at least 8 hours. Appendix R lights and their associated power sources are not safety-related; however, they are still designed with a very high degree of reliability. This modification will actually help to enhance the ability of station personnel to safely shut down the plant by providing better illumination at the three control locations.

The proposed design change will not increase the consequences of a malfunction of equipment important to safety as previously evaluated in the safety analysis report. All equipment directly involved with this modification is non-safety related except for the vestibule ceiling which is part of the CR pressure boundary. Adherence to NGAM 8.15 will insure that an acceptable boundary is kept therefore, maintaining adequate CR habitability.

No new failure modes or potential hazards will be created by the implementation of this modification. The equipment involved in this DCP is considered to be QA Category F but will be mounted seismically due to its location in close proximity to safety-related equipment.

The proposed design change will not create the possibility of an accident of a different type than previously evaluated in the safety analysis report. The functions of all safety-related equipment

will remain unchanged. The involved electrical equipment, although non-safety related, is adequately sized to facilitate this modification.

The proposed design change will not create the possibility of a malfunction of a different type than previously evaluated in the safety analysis report. The Appendix R lights will still be illuminated by their 8-hour battery power units. This modification will cause them to illuminate on the loss of normal AC power and allow them to continue to illuminate after the black diesel supplies AC power. This will not degrade the function of these or any other lights; it will simply allow the Appendix R lights to work in tandem with emergency lights in the event of a loss of normal AC lighting power.

There are no changes in parameters which affect the course of any accident analysis supporting Technical Specification bases and that result in exceeding the acceptance criteria for fuel cladding, RCS boundary, or containment integrity. The proposed design change does not reduce the margin of safety as defined in the basis for any Technical Specification (T.S.). No T.S. or their bases, including that of T.S. 3/4.3.3.5, 3/4.8.1, 3/4.7.7 or 5.7.1 will be affected by the implementation of this modification.

This change will not require a change to the UFSAR.

CHANGE TITLE

DCP 1629, Addition of a Manual Drain Valve to Remove Radioactive Particles from Fuel Pool Cooling Hot Spot

CHANGE DESCRIPTION

A capped 3/4 inch pipe nipple, 6 inches long is located on a six inch pipe, 2-FNC-00C-17-4, the inlet side of Fuel Pool Cooling Pump 2FNC-P24A. The proposed modification is for the addition of a 3/4 inch drain valve to remove the accumulated radioactive debris.

The need for this modification is based on the stations' need for adherence to ALARA concerns. Adding a valve to the pipe nipple will allow the hot spot to be eliminated by removing the radioactive debris.

SAFETY EVALUATION SUMMARY

No credible failure modes associated with the change have been identified. The valve will be normally shut with the end plugged. Also if the valve should leak the fuel pool cooling system consists of two trains, so it may be isolated.

The proposed change will not increase the probability of occurrence or the consequences of a malfunction of equipment important to safety evaluated previously in the UFSAR.

The change and/or the failure modes associated with the change will have no effect on the probability of failure of the systems identified. Addition of a drain valve would not impact the performance of the safety system. Addition of a drain valve would remove the hot spot concern.

The proposed change will not increase the probability of occurrence or the consequences of an accident evaluated previously in the UFSAR.

In the event of a loss of fuel pool cooling and normal make up water, a supply of water is provided from seismic Category I service water system, described in UFSAR Section 9.1.3. If the valve would leak makeup water will be supplied. Also there are two trains so the valve can be isolated for repairs.

There are no design basis accidents for which failure modes associated with the change can be an initiating event. Addition of a 3/4 inch plugged drain valve is not necessary for system operation.

The change will have no effect on the probability of occurrence of the design basis accidents. Addition of a 3/4 inch plugged drain valve does not contribute to the severity of a leak in the fuel pool cooling system.

The proposed activity will not create the possibility of an accident of a different type than any evaluated previously in the UFSAR.

A new type of accident situation is not presented. Addition of the valve will allow any "radioactive debris" to be removed. Installation of this valve will prevent excessive radiation exposure to equipment operators.

The proposed activity will not create the possibility of a malfunction of equipment important to safety of a different type than any evaluated previously in the UFSAR.

There are no failure modes of equipment important to safety created by addition of a plugged drain valve.

This change has no impact on the acceptance limits which form the basis for the TECHNICAL SPECIFICATIONS. Technical Specification 3.9.11 requires a minimum of 23 feet of water over the top of irradiated fuel assemblies. The proposed activity will not reduce the margin of safety as defined in the basis for any Technical Specification. Each train can be isolated, and the drain valve will be plugged.

CHANGE TITLE

DCP 1664 (TER 5837), Remove Internals from Service Water System Check Valves 2SWS*29, 216, 548, 1038, 1039, 1040

CHANGE DESCRIPTION

The internals of Service Water System check valves 2SWS*29, 216, 548, 1038, 1039 and 1040 are being removed to increase cooling water flow to the charging pump coolers 2CHS*E25A, B, and C.

SAFETY EVALUATION SUMMARY

With fewer parts, no new failure modes are associated with this change. The original pressure boundary and flow paths are being retained.

The proposed change will not increase the probability of occurrence of a malfunction of equipment important to safety evaluated previously in the UFSAR.

Removal of check valve internals will not increase probability of failure of SWS. Non-priority train manual valves are locked shut administratively when not supplying cooling water to the charging pump coolers and thus provide adequate train separation.

The proposed change will not increase the consequences of a malfunction of equipment important to safety evaluated previously in the UFSAR.

The SWS flow path is not changed and no decrease in flow to the charging pump coolers will occur. Redundant charging pumps on separate trains plus one swing pump are available to prevent single failure criteria from becoming an issue. Train separation is maintained by administrative controls on manual isolation valves 2SWS*161, 163, 164, and 165.

The proposed change will not increase the consequences of an accident evaluated previously in the UFSAR.

UFSAR Chapter 15: Sections 15.5 "Increase in Reactor Coolant System Inventory" and 15.6, "Decrease in Reactor Coolant System Inventory" have been reviewed for potential impact by the change. This change has no impact on assumptions and radiological consequences of the above design basis accidents because no changes in the SWS flow paths to the CHS pump coolers are being made that will reduce SWS flow.

The proposed change will not increase the probability of occurrence of an accident evaluated previously in the UFSAR.

This change is not an initiating event for any of the above design basis accidents; the charging pumps respond to mitigate the consequences of the above accidents. This change has no effect on

the probability of occurrences of any of the above design basis accidents.

The proposed activity will not create the possibility of an accident of a different type than any evaluated previously in the UFSAR. This change creates no new failure modes because safety train separation is maintained via administrative controls that exist on the manual isolation valves for the non-priority train.

The proposed activity will not create the possibility of a malfunction of equipment important to safety of a different type than any evaluated previously in the UFSAR. Since no new failure modes are created, none represent a new unanalyzed type of malfunction.

This design change has no impact on the acceptance limits which form the basis for the Technical Specifications. Technical Specifications 3.1.2.4, 3.5.2, and 3.5.3 are not affected. This change will not affect the operability of the charging pumps because cooling water flow via SWS to the CHS pump coolers will not be adversely affected. The proposed activity will not reduce the margin of safety as defined in the basis for any Technical Specification.

CHANGE TITLE

DCP 1799, Diesel Generator Building Fan Control Circuit Changes

CHANGE DESCRIPTION

A seal-in contact will be added to the auto start circuits of the emergency diesel generator building ventilation fans, 2HVD*FN207A and B. This will modify the start circuit such that once the fans start due to a emergency diesel generator start, via relays 3-EGGAAX3 and 3EGGBAX3, they will continue to run until manual operator action shuts the fans down. These fans should auto start at load step 3 and continue to run when their respecting diesel generator starts. However, the existing control circuit will stop the fans if the initiating signals are cleared.

SAFETY EVALUATION SUMMARY

The credible failure modes for these fans are a failure to start or a failure to run. This change does not alter the auto start function and does not introduce any new failure to start mechanism. The existing design will cause a failure to run if the initiating signal is removed. This change will eliminate that failure mechanism and it does not introduce a new failure to run mechanism.

The proposed change will not increase the probability of occurrence or the consequences of a malfunction of equipment important to safety evaluated previously in the UFSAR. This change will bring the operation of the fans into agreement with their original design function. These fans are required to operate and maintain environmental conditions in the diesel generator building suitable for equipment operation for all DBAs which require the diesel generators to start and run.

The proposed changes will not increase the consequences of an accident evaluated previously in the UFSAR. It will result in the fans operating as originally described in the UFSAR. There will be no changes in the assumption or radiological consequences of any DBA.

The proposed changes will not increase the probability of occurrences of an accident evaluated previously in the UFSAR. A failure of these fans would not initiate a DBA. None of the DBA initiating events will be affected by this change.

The proposed activity will not create the possibility of an accident or a malfunction of equipment important to safety of a different type than any evaluated previously in the UFSAR. This change will bring the plant response into agreement with the intended design. There are no new failure modes. The original design of the motor starter device accommodates the adding of additional auxiliary contacts and does not adversely impact seismic qualification of the device.

The proposed activity will not reduce this margin of safety as defined in the basis for any Technical Specification. It will not alter any acceptance limits in the Technical Specifications. The diesel generator ventilation fans are not explicitly mentioned as required equipment in Technical Specification 3.8.1.1.

CHANGE TITLE

TER 5810, Design Parameter Change for BVPS 2 Supplementary Leak Collection and Release System Charcoal Filter Media

CHANGE DESCRIPTION

UFSAR Section 6.5.3.2 specifies a sole manufacturer of carbon and also sieve specifications that differ from ANSI Standard N509-1980. Also section 1.8 dealing with exceptions to Reg Guide 1.52 specifies testing methodology and humidity values that conflict with ANSI standards.

These deviations from standards require the station to incur considerable expense in the procurement of charcoal. The sole source reference requires only one supplier, while the deviations from standards require special efforts in the manufacture and test of nuclear grade carbon, while providing no added operational benefit over ANSI N509-1980 spec. carbon.

The SLCRS System will maintain all operating parameters and the system will remain operationally unaffected by the change. Design parameters of the carbon will be changed to reflect industry standards of ANSI N509-1980.

SAFETY EVALUATION SUMMARY

This change does not affect any parameter within which the system operates. It only clarifies the guidelines for replacement carbon procurement.

The proposed change will not increase the probability of occurrence of a malfunction of equipment important to safety evaluated previously in the UFSAR. This change does not increase the probability of failure nor does it decrease the probability. The failure modes remain the same because no parameter within which the system operates is changed. Only the guidelines for replacement carbon are clarified.

The proposed change will not increase the consequences of a malfunction of equipment important to safety evaluated previously in the UFSAR. This change has no effect on system performance because the system was designed to ANSI N509-1980. Therefore clarification of charcoal specification to those of ANSI N509-1980 does not affect the system's performance.

The proposed change will not increase the consequences of an accident evaluated previously in the UFSAR. The assumption and radiological consequences of accidents are not changed by the UFSAR change requested. The Unit 2 SLCRS radiological control of process air is unaffected by the requested changes.

The proposed change will not increase the probability of occurrence of an accident evaluated previously in the UFSAR. This change does not cause or create any failure mode or have a failure mode of its own. Activated ANSI N509-1980 Charcoal has a finite longevity, and therefore requires change out periodically. Failure of the charcoal, however, cannot become the initiating

event of an accident. No change in probability of occurrence of DBAs are possible due to this change, as the change only clarifies charcoal specifications and requirements.

The proposed activity will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the UFSAR. There are no system or component failure modes associated with this change. The SLCRS will operate and perform under the same parameters.

The proposed activity will not reduce the margin of safety as defined in the basis for any TECHNICAL SPECIFICATION. This change does not have any impact on the acceptance limit for Technical Specification 3.7.8.1. This Tech Spec is based on ANSI N509-1980 and ANSI N510-1980 Limits.

CHANGE TITLE

Valve List Normal System Arrangement Change for Chilled Water System Makeup Water Isolation [2CDS-156] and Fill Isolation [2CDS-275] Valves

CHANGE DESCRIPTION

Change NSA for [2CDS-156] from "S" to "O." Change NSA for [2CDS-275] from "T" to "S". These valves are in the chilled water makeup line from the demineralized water supply system.

[2CDS-156] is shown in the FSAR as open. [2CDS-275] is a ball valve and is not suitable for throttling. One of these valves is required to be shut to prevent overfilling of the chilled water system.

SAFETY EVALUATION SUMMARY

No credible failure modes are associated with the change. The valves are designed to be opened and closed.

The proposed change will not increase the probability of occurrence of a malfunction of equipment important to safety evaluated previously in the UFSAR. The chilled water system is non safety related.

The proposed change will not increase the consequences of a malfunction of equipment important to safety evaluated previously in the UFSAR. The chilled water system is non safety-related.

The proposed change will not increase the consequences of an accident evaluated previously in the UFSAR. The chilled water system is a non-safety related system and a non-radioactive system that does not affect the accident analysis.

The proposed change will not increase the probability of occurrence of an accident evaluated previously in the UFSAR. No failure modes are associated with this change.

The proposed activity will not create the possibility of an accident or a malfunction of equipment important to safety of a different type than any evaluated previously in the UFSAR. No new failure modes are created. The chilled water system is non safety-related.

The proposed activity will not reduce the margin of safety as defined in the basis for any TECHNICAL SPECIFICATION. This change has no impact on the acceptance limits which form the basis for the Technical Specifications.

CHANGE TITLE

Change Updated Final Safety Analysis Report to Remove Battery Duty Cycle and Load Requirements and Replace with Reference to Station Administrative Procedures

CHANGE DESCRIPTION

The battery duty cycles, load requirements (Tables 8.3-7,-8,-9) and the sentence referencing these tables (Pg. 8.3-75) are being deleted from the UFSAR. Information on the calculation program to control dc loads will be added to the UFSAR. A sentence is being added to allow jumpering of cells from the battery sets. There will be no unforeseen effects since the electrical calculation program (NED-SI-E003, Rev 2) and present calculations 10080-E-201,-202,-203, and -204 ensures the capacity of the batteries continues to be adequate to power the loads. The calculations per the calculation program are revised as required to assure any load changes are evaluated.

With the duty cycles deleted from the UFSAR, the UFSAR will not have to be changed for every load change. Also, a 50.59 safety evaluation will not have to be performed every time the batteries are tested to their duty cycle during outages except as required by NGAM 7.4 for jumpering cells. At that time the duty cycle does not match the UFSAR because of outage changes to loads. The duty cycles will be maintained in the calculations.

SAFETY EVALUATION SUMMARY

No credible failure modes are associated with the change. Transferring information to the calculations from the UFSAR will have no effect on the ability of the batteries to supply the dc loads for the required two hour duty cycle.

The proposed changes will not increase the probability of occurrence of a malfunction of equipment important to safety evaluated previously in the UFSAR. Deleting the duty cycle from the UFSAR has no effect on the probability of failure in the dc system because all the information being deleted will be maintained in calculations. The calculations show that the batteries are capable to supply their two hour duty cycle even when a cell is jumpered.

The proposed change will not increase the consequences of a malfunction of equipment important to safety evaluated previously in the UFSAR. There is no change in performance of the dc system since by calculations referenced the battery capacity will not be exceeded and the two hour duty cycle can be met. The calculations will be updated periodically as required by the electrical calculation program (NED-SI-E003).

The proposed changes will not increase the consequences of an accident evaluated previously in the UFSAR. Section 15.2.6.1 of the UFSAR states "following a loss of ac power with turbine and reactor trips plant vital instruments are supplied from emergency dc power sources". The assumptions and radiological consequences of this accident remain unchanged. The referenced calculations show that the batteries still have the capacity for the two hour duty cycle. The calculations will be updated periodically as required by the electrical calculation program (NED-SI-E003).

The proposed change will not increase the probability of occurrence of an accident evaluated previously in the UFSAR. There will be no change in the performance of the dc system.

The proposed activity will not create the possibility of an accident of a different type than any evaluated previously in the UFSAR. There will be no change in the performance of the dc system.

The proposed activity will not create the possibility of a malfunction of equipment important to safety of a different type than any evaluated previously in the UFSAR. There are no new unanalyzed types of malfunctions.

The proposed activity will not reduce the margin of safety as defined in the basis for any TECHNICAL SPECIFICATION. No acceptance limits will be affected by this change. Calculations will show that the batteries will have the capacity to meet the two hour duty cycle and there will be no change in the operation of the dc system.