FirstEnergy

Davis-Besse Nuclear Power Station
5501 North State Route 2
Oak Harbor, Ohio 43449-9760

Guy G. Campbell
Vice President - Nuclear

419-321-8588
Fax: 419-321-8337

Docket Number 50-346

License Number NPF-3

Serial Number 2677

November 9, 2000

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Subject: 10 CFR 50.59 Report of Facility Changes, Tests and Experiments

Ladies and Gentlemen:

The FirstEnergy Nuclear Operating Company (FENOC) hereby submits, pursuant to 10 CFR 50.59 (b)(2), the attached 10 CFR 50.59 Summary Report of Facility Changes, Tests and Experiments for the Davis-Besse Nuclear Power Station, Unit No. 1 (DBNPS).

The DBNPS 10 CFR 50.59 changes, tests and experiments identified via the safety evaluation process during the reporting period of May 24, 1998 through May 18, 2000 are included in the report. This reporting period includes operating fuel Cycle 12 and the Twelfth Refueling Outage, which concluded on May 18, 2000. These safety evaluations did not involve any unreviewed safety questions.

If you have any further questions concerning this matter, please contact Mr. D. H. Lockwood, Manager - Regulatory Affairs at (419) 321-8450.

Very truly yours,

JMM/laj

Attachment

cc: J. E. Dyer, Regional Administrator, NRC Region III
S. P. Sands, DB-1 NRC/NRR Project Manager
K. S. Zellers, DB-1 NRC Senior Resident Inspector
Utility Radiological Safety Board

IE47

Docket Number 50-346
License Number NPF-3
Serial Number 2677
Attachment 1

10 CFR 50.59 Summary Report
of
Facility Changes, Tests, and Experiments
for
Davis-Besse Nuclear Power Station, Unit No. 1

May 24, 1998 - May 18, 2000

(107 pages follow)

Abbreviations Used:

DCR	=	Design Change Request
ERR	=	Equivalent Replacement Resolution
FPR	=	Field Problem Resolution
LM	=	Limited Modification
MOD	=	Modification
PCAQR	=	Potential Condition Adverse to Quality Report
SE	=	Safety Evaluation
SSC	=	Structures, Systems and Components
TM	=	Temporary Modification
UCN	=	USAR Change Notice
USQ	=	Unreviewed Safety Question

10 CFR 50.59 Summary Listing

Initiating Document	Safety Evaluation	Title
CR 1999-1692	SE 00-0007	CCW Pump Room Ventilation
DB-OP-00016	SE 98-0036	Temporary Alignment of Valves SS24, SS25 and DW507 in the Sample System
DB-OP-0016	SE 99-0019	EDG Ventilation Controller in Manual, Full Outside Air Configuration
DCR 98-0039	SE 99-0033	Lighting Circuit Drawing Discrepancy
DCR 98-0054	SE 99-0005 Rev. 1	Changing the Normal Decay Heat Removal System Valve Lineup
DCR 99-0046	SE 99-0048	Revise Emergency Diesel Generator Load Tables
ERR 27-0347-002	SE 98-0050	Replacement of ARLA Relay With MDR Relay
ERR 60-0001-039, ERR 60-0001-040, ERR 60-0001-041	SE 99-0040, SE 99-0039, SE 99-0038	Replacement of ARLA relay with MDR relay
ERR 60-0001-050	SE 99-0015	Replacement Thermocouple For TERC52-8, RCP 1-2 Motor Upthrust Bearing Metal Temperature Element
ERR 60-0001-085	SE 99-0037	SFAS Power Supply Replacement
ERR 60-0003-035	SE 99-0014	Replacement Gasket Material for Containment Personnel and Emergency Air Locks
FCR 86-0112	SE 87-0313 Rev. 1	Removal of Chemical Addition Feed Tanks from SG Wet Lay-Up Recirculation Flow Path
FPR 94-0390-902	SE 97-0070	Install Air Dryers in EDG and SBODG Air Compressors Loadless Start Lines

Initiating Document	Safety Evaluation	Title
FPR 94-0426-901	SE 99-0032	Replacement of RPS Square Root Extractors RPS2RC1404, RPS3RC1504, RPS4RC1504
LM 95-0021	SE 97-0014 Rev. 2	Replace ITH Relays
MOD 92-0008	SE 94-0032 Rev. 1	Atmospheric Vent Valve (AVV) Replacement
MOD 92-0013	SE 92-0069 Rev. 2	Replace Emergency Diesel Generator (EDG) Air Start Check Valves.
MOD 94-0016	SE 95-0067 Rev. 2	Containment Service Penetration (Emergency Air Lock)
MOD 94-0019	SE 95-0055	Pressure Locking Concerns for DH63 and DH64
MOD 95-0020	SE 97-0012	Replacement of The Emergency Diesel Generator Differential Relays
MOD 95-0022	SE 96-0099	Replace 52X Relays in Breaker Cubicles ABDC1, AC110, AACD1, and AD110
MOD 95-0028	SE 97-0002	Replace Relays in Emergency Diesel Generator Voltage Regulator & Exciter Circuits in Panels C3617 & C3618
MOD 95-0052	SE 97-0024 Rev. 1	Connection of Domestic Water to the Carroll Township Water Supply System
MOD 96-0007	SE 99-0007	Eliminating High Speed Overload Indication for the CAC Fan Motors
MOD 97-0003	SE 98-0054	Replace Several Service Water Valves Associated With the ECCS Room Coolers
MOD 97-0042	SE 99-0013	Transformer Deluge Permissive Interlock
MOD 97-0043	SE 99-0004	Air Condition Room 517A, Security Battery Rack Room

Initiating Document	Safety Evaluation	Title
MOD 97-0074	SE 99-0025 Rev. 4	Post-LOCA Boric Acid Precipitation Control (BPC)
MOD 97-0076	SE 98-0012	Motor Operated Valve Modifications
MOD 97-0085	SE 99-0001	Pressurizer Code Safety Valve Discharge Rupture Disc
MOD 98-0002	SE 99-0003	Installation of High Density Spent Fuel Storage Racks in the Cask Pit
MOD 98-0015	SE 98-0041	Class IE / Non-Class IE Separation for Circuits in Panels Y1 and Y2
MOD 98-0022	SE 99-0012	Changes to the Emergency Diesel Generator Load Tables
MOD 98-0034	SE 99-0029	SPDS/DADS Replacement
MOD 98-0036	SE 99-0034	Replace Control Room Humidifiers
MOD 98-0037	SE 99-0002 Rev. 2	RE8433 Upgrade – Effluent Sampling Station
MOD 98-0039	SE 99-0022	Closure of Gaps at Emergency Sump Screen Base Plates
MOD 98-0045	SE 00-0020	Evaluation of the Steam Generators at the Completion of the 12th Operating Cycle
MOD 98-0050	SE 99-0024	Overpressure Protection for CCW to the Letdown Coolers
MOD 98-0056	SE 99-0044	Eliminate Time Delay for Opening Component Cooling Water System (CCW) Nonessential Header Isolation Valves
MOD 98-0061	SE 99-0006 Rev. 1	Modifications Due to Emergency Diesel Generator Room High Temperature Concerns

Initiating Document	Safety Evaluation	Title
MOD 99-0006	SE 00-0004	Reverse Direction of SA237, IA/SA Cross Tie Check Valve
MOD 99-0050	SE 99-0045	Condensate Removal In Containment Normal Range Radiation Element (RE4597AA) Sample Line
SCR 94-5010	SE 97-0052	Core Flood Tank Isolation Valve Interlock Bistables
SCR 97-5002	SE 97-0048	Increase Temperature Setpoints for the Low Voltage Switchgear Rooms
SE 00-0015	SE 00-0015	Decay Heat Pump 1-1 and 1-2 Bearing Test with Cold CCW Cooling
SE 00-0016	SE 00-0016 Rev. 1	Chemical Cleaning of the Once Through Steam Generators During 12RFO
SE 00-0019	SE 00-0019	Cycle 13 Reload and Core Operating Limits Report
SE 95-0060	SE 95-0060 Rev. 1	Fuel Repairs
SE 97-0033	SE 97-0033 Rev. 2	Fuel Assembly Grid Repositioning
SE 98-0037	SE 98-0037 Rev. 1	Modified Use of Deborating and Purification Demineralizers
SE 99-0035	SE 99-0035	Safety Tagging of SA6446, SA Header Auto Drain Valve
TM 00-0001, TM 00-0002	SE 00-0008	Installing Torque Thrust Cell and Quick Test Cable Assembly on CCW Nonessential Header Isolation Valves CC2645 and CC2649
TM 00-0004	SE 00-0014	Temporary Change in Configuration of Some of the Normal Flow Path Components of the Service Water System
TM 00-0007	SE 00-0011	Supply Temporary Cooling to Station Air Compressor 1-1 from Domestic Water

Initiating Document	Safety Evaluation	Title
TM 00-0019, TM 00-0020	SE 00-0018	Control Room Normal Ventilation System Isolation Dampers during 12RFO
TM 00-0021	SE 00-0017 Rev. 1	Auxiliary Domestic Hot Water Heater Alternate Supply
TM 98-0034	SE 98-0044	Gag Main Steam Safety Valve SP17B7
TM 98-0036	SE 98-0045	Pressurizer Code Safety Valve Discharge Rupture Disc
TM 99-0007	SE 99-0031	EDG Ventilation Dampers Locked to Full Outside Air Configuration
TM 99-0022	SE 99-0026	Portable Filtration Units in Containment
TM 99-0023	SE 99-0028	Removal of Fire Damper FD1164 and Installation of Temporary Ductwork For the Lab Hood Exhaust Fan C61
TM 99-0030	SE 99-0047	Provide a Parallel Flow Path For Providing Water to the Intake Canal
UCN 00-001	SE 00-0001	Staffing Changes in the Work Management Organization
UCN 00-005	SE 00-0005	Revise Configuration of Fan C46 (Elevator Machine Room Exhaust Fan)
UCN 00-010	SE 00-0006	Correction to USAR Statement Regarding Service Water Pressure
UCN 00-015	SE 00-0009	Reclassifying Penetration 4 as an EVS Bypass Leakage Penetration
UCN 00-018	SE 00-0013	Manually Operate Cask Crane Main Hook Interlock Limit Switch
UCN 00-019	SE 00-0012	Fuel/Control Component Shuffle

Initiating Document	Safety Evaluation	Title
UCN 00-026	SE 00-0022	CNRB Meeting Frequency
UCN 00-036	SE 00-0028	Changes to the Fire Hazards Analysis Report
UCN 96-180	SE 99-0020	Clarify USAR Section 7.2, Reactor Protection System
UCN 96-184	SE 98-0052	Safety Related Equipment in Turbine Building
UCN 96-202	SE 98-0046	Revise USAR Section 3.9.2.6.1, Functional Testing of Active Pumps and Valves
UCN 97-001	SE 98-0049	Purchase Specifications
UCN 97-004	SE 00-0010	Add Specification M-367Q to USAR Section 7.4.1.4
UCN 97-070	SE 97-0022	Correcting Resin Volume For Spent Fuel Pool Demineralizer
UCN 98-004	SE 98-0048	USAR Table 5.1-8 Transient Cycle
UCN 98-009	SE 98-0042	Additional Containment Penetrations Classified as Bypass Penetrations
UCN 98-012	SE 99-0011	Emergency Diesel Generator Fuel Oil System
UCN 98-022	SE 99-0008	Seismic Qualification of Valves SW1424, SW1429, and SW1434
UCN 98-030	SE 00-0003	Revise the USAR Regarding Effective Leakage Area in the Shield Building
UCN 98-032	SE 98-0027	Change to USAR Table 7.7-2 and Section 7.7.1.2.1

Initiating Document	Safety Evaluation	Title
UCN 98-116	SE 98-0040	Staffing Changes in the Operations and Outage Management Organizations
UCN 98-131	SE 99-0046	Remove Description of Interlock Associated With the RCP Control Circuitry
UCN 98-134	SE 98-0055	Reconfigure Offsite Communications Between Control Room and Load Dispatcher
UCN 98-135	SE 99-0023	SFAS Response Times
UCN 99-003	SE 99-0010	Changes to the Fire Hazards Analysis Report
UCN 99-010	SE 99-0017	Delete Reference to NT-ST-07042, "Nuclear Security Force Training" From Section 13.2 of the USAR
UCN 99-022	SE 99-0021 Rev.1	Emergency Diesel Generator (EDG) Room Ventilation
UCN 99-038	SE 99-0036	Changes to the DBNPS Nuclear Group Organization
UCN 99-040	SE 99-0041	Correct Discrepancies Between Vendor Drawings and USAR Figure for The Decay Heat Pump 1-1
UCN 99-041	SE 99-0042	Realignment of the Nuclear Training Section from the Director - Technical Services to the Plant Manager
UCN 99-046	SE 00-0002	Removing HV2548 from Table 9.3-1: Safety Related Air Operated Valves Required for Safe Shutdown

SAFETY EVALUATION SUMMARY
FOR
CR 1999-1692 (SE 00-0007)

TITLE:

CCW Pump Room Ventilation

CHANGE:

Evaluate CCW Pump Room ventilation with increased outdoor temperature and with only one fan in operation.

REASON FOR CHANGE:

A condition report documented that there is insufficient ventilation under a single failure to meet the USAR limits of CCW Pump Room temperature being maintained between 60°F and 104°F.

SAFETY EVALUATION SUMMARY:

The CCW Pump Room ventilation calculation was revised to analyze the condition with the design outdoor air temperature greater than the design basis outdoor air temperature of 104°F, and one ventilation train operating with two pumps during LOCA conditions. The results indicate that for the short duration of the accident the room temperature could reach 116°F. With the outdoor air flow reduced by the Elevator Equipment Room fan (assuming that the Turbine Building exhaust is not running), the temperatures are still less than 120°F. Review of the equipment in the CCW Pump Room and the equipment specifications, vendor manuals, vendor literature and EQ packages, is was determined the equipment will operate acceptably for short periods of temperature up to at least 120°F.

Based on the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
DB-OP-00016 (SE 98-0036)

TITLE:

Temporary Alignment of Valves SS24, SS25 and DW507 in the Sample System

CHANGE:

Sample System valves SS24, Reactor Coolant Letdown High Pressure Sample Valve, SS25, Letdown Line Sample Isolation and DW507, Demin Water Isolation to Sample Sink are being maintained in the closed position.

REASON FOR CHANGE:

Solenoid valves in the Sampling System are currently leaking past the seats when closed. These valves have been isolated using SS24, SS25, and DW507. When these valves are in the open position, the Reactor Coolant Drain Tank level increases due to leakage past the solenoid valves. In order to minimize the leakage from the primary system and the processing of radioactive waste, these valves are being maintained in the closed position.

SAFETY EVALUATION SUMMARY:

Operating the Post Accident Sampling System with SS24, SS25 and DW507 closed will not affect the ability of the Post Accident Sampling System to promptly obtain reactor coolant samples or containment atmosphere samples as required in NUREG-0737. The operation of the Post Accident Sampling System with SS24, SS25 and DW507 closed will not result in a reduction in reliability or performance of the Post Accident Sampling System for obtaining reactor coolant or containment atmosphere samples. Only the letdown sample will not be able to be obtained, which is not required by NUREG-0737.

This change in operation will have no adverse effect on the safety functions of the affected SSCs, therefore the proposed temporary alignment change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
DB-OP-0016 (SE 99-0019)

TITLE:

EDG Ventilation Controller in Manual, Full Outside Air Configuration

CHANGE:

The #1 Emergency Diesel Generator (EDG) Room temperature controller has been placed in manual control at 100% outside air.

REASON FOR CHANGE:

This change is due to a failure in the automatic circuit that controls the recirculation and discharge dampers to control the room temperature.

SAFETY EVALUATION SUMMARY:

Operating the EDG Ventilation System with the temperature control in manual at 100% outside air will not affect the ability of the EDG to supply essential power. The EDG Specification provides a low temperature limit of 50°F for the room to ensure the Emergency Diesel Generator is warm enough to start within 10 seconds with no equipment damage. The ventilation system is not operating until the EDG starts, therefore room temperature is not affected while the EDG is in standby. When the EDG starts the full airflow provided to the EDG room is sufficient cooling to the room under all conditions.

With the EDG Ventilation System temperature control in manual at 100% outside air after the diesel starts the room temperature may decrease below the desired value. There is a possibility of below freezing temperatures in the room occurring until operator action is taken to manually modulate the dampers. A trouble alarm would alert the Control Room staff if the room temperature decreased below the alarm setpoint of 60° F. The EDG is operating with full jacket water flow and ~1000 GPM flow through the Component Cooling Water pipes and Heat Exchanger. The heat created by the EDG and the flow through the Component Cooling Water piping will prevent loss of the safety function of the Emergency Diesel Generator.

Operating the EDG Ventilation System with the temperature control in manual at 100% outside air will not affect the reliability of the EDG. Room temperature is maintained within the desired band when in standby operation, and when operating will not cause failure of the Emergency Diesel Generator.

Based on the above, the proposed change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
DCR 98-0039 (SE 99-0033)

TITLE:

Lighting Circuit Drawing Discrepancy

CHANGE:

Assign new equipment numbers to regulating transformer (X4707) and to a small lighting panel (L4707).

REASON FOR CHANGE:

PCAQ 98-1286 documented drawing discrepancies with regard to lighting panel L4701 and identified a smaller lighting panel not reflected on drawings.

SAFETY EVALUATION SUMMARY:

Lighting transformer X4707, lighting panel L4707, interconnection cables, and circuit breakers were properly sized and installed using standard electrical practices. These components are part of the Non-Essential Station Lighting System, which performs no safety function. There is no seismic II/I hazard for lighting panel L4707 or transformer X4707.

The installation of this lighting distribution equipment does not have an adverse effect on safety. All equipment required for safe shutdown will perform as evaluated in the USAR.

Based on the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
DCR 98-0054 (SE 99-0005 Rev. 1)

TITLE:

Changing the Normal Decay Heat Removal System Valve Lineup

CHANGE:

Close one of the Decay Heat Removal (DHR) bypass line isolation valves, DH-10, to eliminate potential failure for one train.

REASON FOR CHANGE:

Following a small break LOCA, a significant differential pressure could exist across the restriction orifices of the decay heat bypass lines. This would cause water passing through it to flash to steam which would then enter the suction of the Low Pressure Injection (LPI)/ DHR pump, where it could damage the pump. Since the configuration is the same in each train of the LPI/DHR, it represents a potential common mode failure mechanism.

SAFETY EVALUATION SUMMARY:

Operating the plant with DH-10 normally closed will not affect plant safety. During normal plant operation, this system, including the bypass lines around the normal suction isolation valves of the DHR portion of the system, is not in service. Consequently, there is no effect on normal plant power operation.

The absence of the DH-10 flow path does not affect the boric acid dilution function. Closure of DH-10 will protect one train of LPI/DHR in the event that the boric dilution path was improperly initiated. This ensures that no matter what effect opening DH-11 and DH-12 (RCS to DH isolation valve) has on the train with its bypass line open, LPI/DHR will be maintained.

DH-10 does not need to be open to mitigate any accidents, since the other train (DH-26) will be open, and other mechanisms for boron dilution exist if a single failure occurs.

Closure of DH-10 has no effect on the ability of the DHR system to provide a seismic backup to the Spent Fuel Pool Cooling System because the valve is not involved in the lineup of the DHR system support that function.

Based on the above, it is concluded that operating the plant with DH-10 normally closed is safe, will have no effect on plant safety, and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
DCR 99-0046 (SE 99-0048)

TITLE:

Revise Emergency Diesel Generator Load Tables

CHANGE:

Change the load on the Emergency Diesel Generator (EDG) 1-2 Load Table from the present value of 18.6 kW to 27.1 kW, the limiting value of the lighting panel L57D1. This will increase the total load on EDG 1-2 by 8.5 kW.

Create a new note on both EDG load tables for a "Loss of Offsite Power Only" (LOSP) condition to reflect that the Service Water Pump Motors are load shed by undervoltage relays and there is a 40 second delay before this load is added to the EDG.

REASON FOR CHANGE:

PCAQ 97-0059 identified a concern that loads may be added to L57D1, which includes outlets in the Control Room, such that the total load exceeds that specified on the EDG 1-2 Load Table. Condition Report 1999-1657 identified a deficiency in a Note on both EDG Load Tables.

SAFETY EVALUATION SUMMARY:

The new total load of 8.5 kW on EDG 1-2 is considerably less than the Technical Specification allowable value of 2838 kW for auto-connected loads. The increased load is still within the ratings of the circuit components.

Revising the "LOSP ONLY" description to reflect the fact that the service water pump and the Component Cooling Water pump, if on standby, are not started as soon as the EDG breaker closes but after 40 seconds, does not affect safety since it reflects a less challenging situation for the EDG, i.e. the block load when the EDG breaker closes will now be lower.

Since the EDG load remains essentially the same, well within the allowable range, and this change reflects information already on other design drawings, the Service Water, Component Cooling Water and Essential 4160 systems are not affected by this drawing revision.

Based on the above, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
ERR 27-0347-002 (SE 98-0050)

TITLE:

Replacement of ARLA Relay With MDR Relay

CHANGE:

Replace the Westinghouse ARLA relay with an equivalent one by Potter & Brumfield's MDR relay in Motor Control Center cubicles BE1217 and BF1204.

REASON FOR CHANGE:

The Westinghouse ARLA relay is obsolete.

SAFETY EVALUATION SUMMARY:

The equivalent replacement relay MDR performs the same as the ARLA relay and has been qualified by Westinghouse for installation in class 1E Motor Control Centers. The new MDR relays have an additional 5 contacts that will not be used and will become spares. Addition of the spare contacts on the drawings will not adversely affect the safety functions of any SSC.

Base upon the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
ERR 60-0001-041 (SE 99-0038)
ERR 60-0001-040 (SE 99-0039)
ERR 60-0001-039 (SE 99-0040)

TITLE:

Replacement of ARLA relay with MDR relay

CHANGE:

Replace the existing ARLA with a MDR relay in the breaker cubicles BE1280, BF1280, BE1401, BF1401, BE1501, BF1501, BF1219, and BF1203.

REASON FOR CHANGE:

Replaces obsolete Westinghouse ARLA relay with an equivalent MDR relay, by Potter & Brumfield.

SAFETY EVALUATION SUMMARY:

The equivalent replacement relay, MDR, performs the same as the ARLA relay and has been evaluated under an engineering evaluation. The MDR has been qualified by Westinghouse for installation in class 1E Motor Control Centers (MCC). The replacement relays will be installed seismically. These replacement relays have additional contacts as compared to the ARLA relay. These contacts are not being used and are spared.

These changes are considered safe and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
ERR 60-0001-050 (SE 99-0015)

TITLE:

Replacement Thermocouple For TERC52-8, RCP 1-2 Motor Upthrust Bearing Metal Temperature Element

CHANGE:

Replace the original three wire element thermocouple, TERC52-8, RCP 1-2 Motor Upthrust Bearing Metal Temperature (MT) Element, with a two wire element thermocouple of the same model number.

REASON FOR CHANGE:

The vendor no longer uses three wires in their thermocouple.

SAFETY EVALUATION SUMMARY:

The original TERC52-8, RCP 1-2 Motor Upthrust Bearing MT Element, an installed spare, was a three wire thermocouple. The third wire was used for a ground or shield connection and is not required, per vendor. The two wire replacement thermocouple is a suitable replacement.

This change has no effect on safety and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
ERR 60-0001-085 (SE 99-0037)

TITLE:

SFAS Power Supply Replacement

CHANGE:

The Safety Features Actuation System (SFAS) power supply (SFASPS-409) will be replaced via ERR 60-0001-085.

REASON FOR CHANGE:

The SFAS power supply is no longer being manufactured.

SAFETY EVALUATION SUMMARY:

The power supply will function equivalent to the existing power supply. The power supply has been acceptably reviewed for the seismic capabilities and physical, performance and operating characteristics. This insures that no new hazards will be introduced by the installation of the power supply. The control functions of the equipment will not be affected by the replacement of the power supply. The reliability of the actuation equipment will remain the same.

Based on the above, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
ERR 60-0003-035 (SE 99-0014)

TITLE:

Replacement Gasket Material for Containment Personnel and Emergency Air Locks

CHANGE:

Replace the current silicone rubber door gasket material for the containment vessel personnel and emergency air locks with EPDM compound E401 from Trentec Incorporated.

REASON FOR CHANGE:

The air locks were originally obtained from Chicago Bridge & Iron Works (CB&I) who no longer serve the nuclear industry. Trentec is unable to supply the original rubber door gasket material, but has successfully substituted and recommends EPDM compound E401 for these applications.

SAFETY EVALUATION SUMMARY:

The replacement gasket material will have no effect on the ability of the air locks to perform their designed safety function. EPDM compound E401 gasket has been determined by an engineering evaluation to provide better sealing capability and equivalent temperature and radiation resistance to the original silicone rubber material.

This change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
FCR 86-0112 (SE 87-0313 Rev. 1)

TITLE:

Removal of Chemical Addition Feed Tanks from SG Wet Lay-Up Recirculation Flow Path

CHANGE:

Remove the Chemical Addition Feed Tanks from the Steam Generator wet lay-up recirculation flow path by altering the tanks and the associated piping to permit them to function as atmospheric reservoirs feeding into the recirculation flow path via Chemical Addition Pumps.

REASON FOR CHANGE:

The Chemical Addition Tank had previously been over-pressurized which caused plastic deformation.

SAFETY EVALUATION SUMMARY:

In Mode 5, during the periods when the Steam Generator Wet Lay-up Recirculation System is in operation the volume of water in a wet lay-up steam generator is administratively controlled to the level of the steam generator upper tube sheet vent, leaving a large volume of compressible fluid within the closed loop pressure boundary formed when the steam generator recirculation is in service. The maximum potential compressible fluid volume that can be added to this closed system by the new positive displacement pump is limited to the volume of the tank. This volume of incompressible fluid will cause insignificant change in the pressure of the closed loop formed when the steam generator recirculation system is in service.

Because the accident initiator (loss of integrity for the system), the chemicals stored and processed by the system, the volume of chemicals stored/potentially released by the system and the potential locations of release were unchanged by the modification, the modification/change in method for adding wet lay-up chemicals to the system does not create a change in control room operations/habitability from what was previously analyzed. The transport of wet lay-up chemicals to the SG Wet Lay-up Chemical Addition Tank and the volume of chemicals stored in the tanks is limited by administrative controls as describe in the USAR Section 6.4. These administrative controls are not affected by the modification. Based on the above discussion the actions of FCR 86-0112 are safe and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
FPR 94-0390-902 (SE 97-0070)

TITLE:

Install Air Dryers in the EDG and SBODG Air Compressors Loadless Start Lines

CHANGE:

Install air dryers in the loadless start lines to EDG air compressors C11-2 and C11-3 as well as SBODG Air Compressors C430A and C430B.

REASON FOR CHANGE:

This will provide a means of removing moisture from the air being supplied to the loadless start device.

SAFETY EVALUATION SUMMARY:

The portion of the EDG Air Start System affected by this activity is not required for the system to perform its safety function. The ability to charge the air receivers from minimum to maximum pressure in not more than 30 minutes will not be affected.

Experience with this dryer indicates that it has no adverse effect on the air start system and has increased the reliability of Air Compressor C11-1 by eliminating the effects of moisture that was introduced into the air compressor prior to installation of the air dryer.

It is concluded that the above change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
FPR 94-0426-901 (SE 99-0032)

TITLE:

Replacement of RPS Square Root Extractors RPS2RC1404, RPS3RC1504, RPS4RC1504

CHANGE:

Replace the currently installed Bailey Model Square Root Extractors (6623752 rev. A5) with Bailey Model 6623752 rev. J5 or R1021 models.

REASON FOR CHANGE:

This change is being performed because the higher revision models have the capabilities to monitor the calibration and field input and module output via jacks located on the front of the module. The replacement will prevent shorting from occurring.

SAFETY EVALUATION SUMMARY:

This change will have no effect on safety. The higher revision (J5 or R1021) modules perform the same functions as the older revision modules. The new revisions have the same, form, fit, function, performance, and characteristics as the old revisions. The only difference between the two revisions is the higher revision allows for input through the front of the module versus the back.

These replacements of the Square Root Extractors will have no adverse effect on the Reactor Protection System safety function and its ability to perform its safety functions. The modules will also limit the chance to short two pins together.

This change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
LM 95-0021 (SE 97-0014 Rev. 2)

TITLE:

Replace ITH Relays

CHANGE:

Replaces the Westinghouse ITH ground fault relays on the 4.16 kV electrical distribution system breakers AC 1 CE 11, AC 107, AC 113, AD 105, AD 1 DF 12, and AD107 with an ABB (ITH) type 50D relay.

REASON FOR CHANGE:

This modification improves the seismic response of the associated ground sensor relays to a seismic event.

SAFETY EVALUATION SUMMARY:

The Westinghouse ITH is labeled as a "Low Ruggedness Relay." Its replacement, ABB 50D, has a better seismic response characteristic. As a solid state device with no moving parts with inertia, the response time is much faster. Also, ABB 50D has significantly less burden than the Westinghouse ITH (0.16 ohms versus 7.04 ohms). The higher burden may serve to dampen transients. The ABB 50D relay is provided with a time delay function to block inadvertent actuation due to transients during breaker closure. Since there has been no problem with electomagnetic interference with the existing circuit shield relays, no problem is anticipated with the new relays. There are no other hazards are associated with this modification. This modification is considered to be safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 92-0008 (SE 94-0032 Rev. 1)

TITLE:

Atmospheric Vent Valve (AVV) Replacement

CHANGE:

Installs new AVVs, with drain lines from the bonnets of these valves to new branch connections in the Main Steam Warm Up Drain lines downstream of the manual isolation valves (MS700/703) and upstream of the containment isolation valves (MS375/394), and changes the position of MS375 and MS394 from normally closed to normally open.

REASON FOR CHANGE:

Atmospheric vent valves have experienced almost constant leakage to atmosphere despite repeated attempts to repair the valves.

SAFETY EVALUATION SUMMARY:

The replacement valves have equivalent capacity and similar control characteristics and are designed, fabricated and installed to the requirements of ASME Section III, Subsections NC and NE. The seismic qualification of the new AVVs, actuators, controls and appurtenances is to the same criteria as the currently installed valves. The environmental qualification is to the same criteria as the currently installed valves. The safety function of the AVVs, to close in response to a remote manual action signal to form secondary pressure boundary in accordance with the requirements of GDC 57, is fulfilled in the same manner as before. The new AVVs do not change the normal room environment or the post accident environment for Rooms 601 and 602 nor do they create new hazards for equipment installed in these rooms. The provisions for testing of operational functions are unchanged. The system function of providing a release path to atmosphere for decay heat removal is unchanged, based on the new AVVs' capacity, flow characteristics and stroke time being equivalent to the currently installed valves.

The change in position of MS375/MS394 during power operations does not change the failure position for the valves, nor does it change the analysis of the downstream piping. These valves are classified as active valves with the function of containment isolation, the change in position does not affect this function or the method the valves fulfill this function.

Based on the above, the Modification 92-0008 does create an unreviewed safety question.

SAFETY EVALUATION SUMMARY
FOR
MOD 92-0013 (SE 92-0069 Rev. 2)

TITLE:

Replace Emergency Diesel Generator (EDG) Air Start Check Valves

CHANGE:

Replace Emergency Diesel Generator (EDG) Air Start Check Valves DA24, DA25, DA38 and DA39. The valves are safety related and Seismic Category I but are designed to the requirements of ANSI B31.1. The valves being replaced were designed to the requirements of ASME Section III.

REASON FOR CHANGE:

The EDG air start system has experienced problems with check valve failures between the air compressors and the air receivers.

SAFETY EVALUATION SUMMARY:

While the change from ASME Section III Class 3 to ANSI B31.1 results in less documentation of the pressure retaining capability of the replacement check valves, the replacement check valves have a design pressure and temperature of 4100 psig and 400°F compared to less than 200 psig at 100°F for the valves being replaced, and provide a greater safety factor. The replacement valves have a demonstrated history of reliability for both preventing reverse flow and allowing forward flow while the existing valves have a history of failures to perform both these functions. The change from ASME Section III Class 3 to ANSI B31.1 for the check valves is acceptable. The change from carbon steel to stainless steel is acceptable based on the improved corrosion resistance and the acceptable design pressure/temperature. Galvanic corrosion is not a concern based on the acceptable experience with the stainless steel seats contained in the check valves being replaced.

The replacement check valve and the new flanges and fittings were designed to appropriate provisions of ASME, ASTM, and ANSI codes and standards. Seismic/stress analyses have been performed for the new piping configuration. The analyses concluded that the configuration, including the threaded and flanged connections, are adequate. Based on the above discussion, it is concluded that this modification is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 94-0016 (SE 95-0067 Rev. 2)

TITLE:

Containment Service Penetration (Emergency Air Lock)

CHANGE:

Allow use of the Emergency Air Lock (EAL) as an additional service penetration to provide access into Containment for cables and/or hoses required for outage work.

REASON FOR CHANGE:

The existing Containment service penetration does not provide adequate support for OTSG work to be done during the refueling outages.

SAFETY EVALUATION SUMMARY:

When the EAL is to be used for service access, a temporary Enclosure Plate with an egress door will be installed at the inner door opening of the EAL. The egress door will be used as an emergency exit during outages. Cables/hoses will pass through penetrations provided in the Enclosure Plate. The egress door and the penetrations will be sealed. Procedures will ensure that the temporary Enclosure Plate with quick disconnects and isolation valves are in place with egress door closed during core alterations or irradiated fuel movements in Containment.

The USAR states that the doors of the EAL are mechanically interlocked to ensure that one door cannot be opened until the second door is sealed. Installation of the Enclosure Plate and cables/hoses will require both EAL doors to remain open during Modes 5-6. Provisions are made for defeating the interlock. The mechanical interlock between the two EAL doors will be restored when the Enclosure Plate is removed. The EAL doors will be restored prior to entering Mode 4.

This modification also does not change any environmental or radiological protection functions of the missile shield enclosure.

The potential to create a leakage path exists, if any hoses become depressurized, drained and opened on both sides of the Containment. Provisions will be made to ensure that no direct access from Containment to outside atmosphere exists. Temporary isolation techniques that restrict the release of radioactive material from the Containment during a postulated fuel handling accident have been deemed acceptable, provided they are approved by engineering evaluation and allow sufficient time to replace the temporary closure with one capable of holding Containment design pressure.

Based on the above, this change does not create an unreviewed safety question.

SAFETY EVALUATION SUMMARY
FOR
MOD 94-0019 (SE 95-0055)

TITLE:

Pressure Locking Concerns for DH63 and DH64

CHANGE:

This modification drills a 1/4" hole in the upstream disc of the wedge for DH63 and DH64, the LPI/HPI cross connect valves that are used during the 'piggy back' mode of operation.

REASON FOR CHANGE:

Several industry pressure locking events indicated the need for a detailed review of the susceptibility of safety related Motor Operated Gate Valves for pressure locking. Davis-Besse's initial and subsequent review of these concerns recommended that DH63/DH64 be modified to alleviate the potential of pressure locking.

SAFETY EVALUATION SUMMARY:

Drilling a hole in the upstream disc of the wedge for DH63(DH64) does not affect the pressure boundary for the Decay Heat System or the High Pressure Injection System. The valve will isolate completely in the normal flowing direction. If DH63/DH64 is closed to isolate flow, sealing occurs on the downstream disc of the wedge against the downstream seat ring. Since only the upstream disc is drilled, normal isolation will occur. For flow in the opposite direction this is not true. Leakage will occur past the first disc of the wedge and then through the hole drilled in the other disc. However the downstream pressure of DH63/DH64 is limited to the head of the Borated Water Storage Tank when DH63(DH64) is isolated. This pressure will be approximately equal to or lower than the upstream pressure for all normal and anticipated system lineups.

The proposed change will not affect the ECCS response to a large break Loss of Coolant Accident because the DH63(DH64) will remain closed. The HPI system and the DH/LPI system will remain isolated. The proposed change will eliminate an opening failure mode for DH63(DH64). This improves the probability that DH63(DH64) will be able to open during Small Break Loss of Coolant Accidents. No other safety functions are affected.

The hole is drilled in the location recommended by the manufacturer and is not located in the section of the wedge that provides pressure boundary isolation. As such, drilling a hole in the wedge will not have an adverse impact on plant safety. The overall effect on safety is the elimination of the possibility of the pressure locking of DH63(DH64).

Based on the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 95-0020 (SE 97-0012)

TITLE:

Replacement of The Emergency Diesel Generator Differential Relays

CHANGE:

Modification 95-0020 replaces the General Electric - type CFD differential relays on both emergency diesel generators (EDGs) with ABB (Asea Brown Boveri) type SA-1 Class 1E qualified differential relays.

REASON FOR CHANGE:

Replacement is necessary due to the existing relays' reported low seismic capacity and the inability to seismically qualify these relays for use in the EDG protection circuits.

SAFETY EVALUATION SUMMARY:

Electrical calculations, which evaluate the differential relay replacement, conclude that the accuracy rating of the existing Current Transformers is adequate to drive the EDG differential circuits with the addition of SA-1 relays and burden balancing resistors. Therefore, the replacement relays do not impact EDG protection and also do not result in spurious trips of the EDGs.

The SA-1 is provided surge protection in the form of capacitors and an R-C network which prevent the SCR from firing due to surge voltages. Surge Withstand Capability (SWC) Oscillatory and Fast Transient tests on the Class 1E SA-1 have been performed per ANSI C37.90.1.

Replacement of the existing General Electric - type CFD differential relays with Class 1E ABB type SA-1 differential relays will not affect the safety function of any structure, system or component and is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 95-0022 (SE 96-0099)

TITLE:

Replace 52X Relays in Breaker Cubicles ABDC1, AC110, AACD1, and AD110

CHANGE:

Four 52X relays in 4160 volt cubicles, ABDC1, AC110, AACD1, and AD110 are being replaced with seismically qualified relays.

REASON FOR CHANGE:

These relays are known for their low seismic ruggedness or demonstrated sensitivity to high frequency vibration. As a result, a potential exists where essential busses C1 and D1 may not be properly isolated from their normal and alternate feed, during an earthquake concurrent with a loss of offsite power, when the Emergency Diesel Generators (EDG) are required.

SAFETY EVALUATION SUMMARY:

The new 52X relay has been evaluated for electromagnetic and radio frequency interference and it has been concluded that the new 52X relay is acceptable for use in this application. The design of the new 52X relay has also been evaluated and concluded that it provides the same function as the old relay.

Due to the seismic ruggedness of the new 52X relay, it is ensured that the essential buses will remain isolated during an undervoltage condition as previously evaluated in the USAR.

The reliability of the 4160 volt system is increased by this modification in that the new 52X relay is qualified to ensure proper operation and prevent contact chatter during a seismic event.

Based on the above, the changes proposed by Modification 95-0022 are considered safe and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 95-0028 (SE 97-0002)

TITLE:

Replace Relays in Emergency Diesel Generator Voltage Regulator & Exciter Circuits in Panels C3617 & C3618

CHANGE:

Replace nonqualified relays in panels C3617 & C3618 with seismically qualified relays.

REASON FOR CHANGE:

Relays CR3-X, FSS-X, R3X-1 & R3X-2, BUR-1 & BUR-2, and V/F were part of a qualified package but do not have any seismic test data. Some of the relays are obsolete. As a result, a potential exists where the Emergency Diesel Generators may not properly start during an earthquake concurrent with a loss of offsite power, when they are required.

SAFETY EVALUATION SUMMARY:

The new relays have been seismically tested under the Seismic Qualification Reporting and Testing Standardization program and have been evaluated for qualification under these applications. Due to the seismic ruggedness of the new relays and the fact that the function of the replacement relays has not changed, it is ensured that the EDGs will be able to start and perform their intended function.

The new relays are either qualified for electromagnetic and radio frequency interference or are considered rugged and not susceptible to electromagnetic and radio frequency interference.

Reliability of the EDG system is increased during a seismic event by this modification in that the new relays are qualified to ensure proper operation and prevent contact chatter.

Based on the above, the changes proposed by Modification 95-0028 are considered safe and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 95-0052 (SE 97-0024 Rev. 1)

TITLE:

Connection of Domestic Water to the Carroll Township Water Supply System

CHANGE:

This modification is to change the Domestic Water supply from the in-house treatment facility to the Carroll Township Water System.

REASON FOR CHANGE:

This modification will eliminate the processing, sampling and reporting as required for Drinking Water Process Facilities as mandated by the Ohio EPA.

SAFETY EVALUATION SUMMARY:

The location of the Carroll Township Water intake was reviewed for potential radiological impact. A calculated dilution factor for Carroll Township intake is bounded by the factor for the Erie Industrial Park water intake.

In the event of a line rupture, the automatic isolation valves will still close on low pressure to isolate the Domestic Water lines in the Turbine or Auxiliary Buildings. The pressure switch setpoint is reduced to account for a slightly lower Carroll Township System pressure while still being able to detect a line rupture.

A new concern is that the connection to Carroll Township water provides more water to flood the service water tunnel than currently described in USAR. The volume of water is considered as infinite since the Township water tower would be refilled as soon as it reached its low level setpoint. Analysis of this leak determined that the flood water would rise at a rate of approximately 1.25 feet per hour, until it reached about 3.5 feet when the flow out of a ventilation louver to the water treatment building would equal the 850 gpm flood rate. However, operators would be alerted by three separate indications and could take immediate action even though no Operator action is necessary. No safety related equipment will be impacted. The lowest equipment in the tunnel is located 52 inches above the floor. Electrical controls are spray shielded, thus any low pressure water stream in the overhead of the valve room will have no adverse effects. The above analysis does not include the sump pumps operating which could remove up to 400 gpm of the leakage until they flood out at about 1 foot in the room. Domestic Water can be isolated from the Carroll Township supply by shutting one of two valves in the protected area. The water leakage into the Water Treatment Building will not impact any safety related equipment. This new off-site source of Domestic Water is judged to be equal to or better than the on-site Domestic Water Pumps and Tank and does not create an unreviewed safety question.

SAFETY EVALUATION SUMMARY
FOR
MOD 96-0007 (SE 99-0007)

TITLE:

Eliminating High Speed Overload Indication for the CAC Fan Motors

CHANGE:

Modification 96-0007 eliminates the high speed overload-indicating function for the three Containment Air Cooler (CAC) fan motors.

REASON FOR CHANGE:

The overload indication for the fan motors' high speed winding is unreliable. Overload indications are being given during normal motor starts.

SAFETY EVALUATION SUMMARY:

The motor overload indication circuitry is functionally independent of the CAC control circuit's ability to change motor speed or initiate movement of a cooler inlet or outlet valve. Thus, elimination of the high speed overload indication will not alter the manner in which the control circuit initiates a motor speed change or a valve position change. Also, the motor overload indication is not relied upon to terminate power flow through an over-loaded cable. The USAR credits circuit breakers and fuses for providing circuit protection.

Motor shutdown is not required based on receipt an overload indication. Rather, receipt of the overload indication alerts operators to monitor motor stator temperature via analog computer points. Shutdown of the CAC fan motor is based on stator temperature.

Based on the above, it is concluded that elimination of the CAC fan motor high speed overload indication is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 97-0003 (SE 98-0054)

TITLE:

Replace Several Service Water Valves Associated With the ECCS Room Coolers

CHANGE:

The purpose of this modification is to replace or eliminate certain gate valves associated with the Service Water to the Emergency Core Cooling Systems (ECCS) Room Coolers and to provide spool pieces in the Service Water piping near these valves to allow for inspection and cleaning of the interior of the piping. This change also revises drawing E-6 sheets 1 and 2 to show that breakers associated with the removal of motor operated valves will be spared out.

REASON FOR CHANGE:

These valves were identified by PCAQR 95-0712 as being at the end of their service life.

SAFETY EVALUATION SUMMARY:

A design code, material and specification reconciliation has been performed for the valves being installed via this modification to ensure that they will function as well or better than the valves they are replacing. The Service Water System will continue to supply adequate cooling to the other engineered safeguards components it cools. This will be verified by post modification testing.

The design of the Essential 480 V Distribution System permits maintaining breakers in a spare status. Therefore, sparing out Breakers BE1135, BE1136, BF1165 and BF1166 has no effect on the remainder of the Essential 480 V Distribution System and has no effect on safety.

Use of replacement piping that does not include the thermowells and flow sample points is acceptable because these are no longer used.

Pipe stress analyses have been performed for the configuration where all the spool pieces are installed and the piping arrangement has been found to be acceptable.

Based on the above discussion, it is concluded that the proposed action is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 97-0042 (SE 99-0013)

TITLE:

Transformer Deluge Permissive Interlock

CHANGE:

Add a permissive in the actuation circuit of the deluge system such that the water will flow only when the main transformer is deenergized as sensed by undervoltage relays.

REASON FOR CHANGE:

In 1997, there was a plant trip as a result of an inadvertent actuation of the deluge system for the main transformer and the transformer was replaced. This modification will modify the deluge systems for transformers with exposed bushings at the 345 kV potential.

SAFETY EVALUATION SUMMARY:

The load on the DC system is increased due to the addition of undervoltage relays to sense the voltage on the Main Transformer. This increase has been evaluated and determined to be acceptable.

This modification does not change the station 125 VDC distribution system failure analysis. A failure of the DC power to the new relays will be alarmed in the control room via the fire detection system. The circuit interlock will be supervised such that any break in the circuit path to the solenoid that actuates the system will be alarmed in the Control Room.

The change does not affect the transformers in anyway that would impact their contribution to the probability of a Loss Of Offsite Power.

In the event a fire detector is in alarm or the fire detector contacts are failed in the closed position while starting a large motor, the resulting voltage dip due to motor starting may be sufficient to actuate the fire deluge system. Indications will be present in the control room through the fire detection system to alert the operators, and procedures will contain precautionary statements with regard to starting large motors while the fire detection system for the affected transformer is in alarm.

The potential time delay imposed by the circuit interlock will be small and is outweighed by the improved safety to the plant by not actuating the deluge system on an energized transformer.

Based upon the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 97-0043 (SE 99-0004)

TITLE:

Air Condition Room 517A, Security Battery Rack Room

CHANGE:

Remove S66 Window Air Conditioning unit from the south wall of Room 517A and replace it with split Air Conditioning unit S70 mounted on the room's roof.

REASON FOR CHANGE:

This A/C unit is designed to operate in the high ambient conditions of the Turbine Building. The removal of the window air conditioner will also allow fire damper FD1332 to close.

SAFETY EVALUATION SUMMARY:

The replacement of S66 by S70 does not affect the function to provide for cooling of Room 517A. The increased capacity and ability to operate in a higher ambient are improvements and will ensure that the room temperatures are maintained within design. The air conditioner fan for S70 will also provide for continuous exhaust to control buildup of hydrogen gas from the battery.

The fire area barriers will be maintained by making sure that the openings to the new A/C unit are protected by fire dampers and that the non-conforming dampers are either removed or reworked to meet FHAR requirements.

Based on the above, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 97-0074 (SE 99-0025, Rev. 4)

TITLE:

Post-LOCA Boric Acid Precipitation Control (BPC)

CHANGE:

To provide enhanced BPC flow, the HPI Pump 2 discharge line is connected to the auxiliary spray line via an added 2-1/2" tie-in line. The line includes two 2-1/2 inch manual gate valves, HP209 and HP210. In addition, two 1-1/2 inch manual gate valves, DH200 and DH201 will be installed in the DHR system between valve DH178 and the connection to the new tie-line. During power operation, the systems will be lined-up in the BPC mode, with valves DH200 and DH201 locked closed and valves HP209 and HP210 locked opened. During normal shutdown cooling operation, valves DH200, DH201, HP209 and HP210 will be procedurally controlled to assure the HPI and DH system will not cross connect.

REASON FOR CHANGE:

To provide enhancement of post-LOCA boric acid precipitation control capabilities.

SAFETY EVALUATION SUMMARY:

An improved auxiliary pressurizer spray method will serve as the new primary active BPC method. Under the current backup BPC method, a DHR/LPI Pump is utilized to supply water to the pressurizer via the auxiliary spray line. The new method will utilize HPI Pump 2 to supply water to the auxiliary spray line via a newly installed tie-line. Use of an HPI pump rather than a DHR pump for the auxiliary spray BPC method will provide a much greater flow rate to the pressurizer so that the BPC flowrate exceeds the core boil off inhibiting the boric acid concentration from reaching the solubility limit. The excess spray flow initiates a reverse core flow that will reduce the core boric acid concentration and preclude potential precipitation concerns by transporting the fluid with high boric acid concentrations backward through the downcomer and out the break. The installation of the cross connection between the HPI discharge line and the auxiliary pressurizer spray portion of the Decay Heat system will have no adverse effects on the safety functions of the HPI or DHR systems. To accommodate the higher primary BPC flow rate and pressure, the affected portion of the DH auxiliary pressurizer spray line piping diameter will be increased and upgraded. Because this primary BPC method is only connected to one train of HPI, it is subject to failure if any single active component in the flowpath fails. In this event, the backup method of BPC (described below) would be implemented, if not affected by the primary BPC method failure. The NRC granted an exemption from single failure requirements.

The new backup active BPC method will utilize a flowpath similar to the current DHR drop line primary method. One of the two operating DHR pumps will take

suction from the DHR drop line and will discharge a low (throttled) flow rate into the reactor vessel via the core flood nozzles. The second pump will be unthrottled and will continue to take suction from the emergency sump. The flow through the drop line will allow forward flow through the reactor vessel, so that any amount of flow of relatively low concentration water from the train aligned to the sump will enter and dilute the boric acid in the core. FTI has performed calculations to define conditions and flow rates that will not result in vapor entrainment for the pump taking suction from the drop line. Specific guidance will be provided to control room operators to ensure that no vapor entrainment will damage the DHR pump. Analysis of the backup BPC methodology has determined that the boric acid concentration in the DHR drop line coming from the core could quickly exceed the solubility limits for the temperatures found in the DHR cooler. It was determined that, the presence of small gaps between the hot leg nozzles and the upper plenum cylinder would permit flow between the concentrated core outlet region and the relatively dilute vessel inlet region. This flow has been analyzed and found to be sufficient to limit the concentration to below the cooler solubility limit. Once flow through the backup flow path is initiated, the concentration entering the cooler will be diluted quickly by ECCS Emergency Sump water, and no credit for flow through the gaps is needed to show protection against precipitation in the core region or in the DHR coolers. The backup BPC method reliance on the hot leg nozzle gaps is considered very reliable, but it has not received NRC approval for 10CFR50, Appendix K analytical requirement compliance. Therefore the backup BPC method has been granted an Exemption from the 10CFR50, Appendix K analytical requirements by the NRC.

The MOD adds a safety function for DH1517 and DH1518 valves by requiring them to remotely open in post-LOCA and degraded voltage conditions. The valves were modified to support the new safety function, by ensuring that motor brake failures will not prevent DH1517 and DH1518 from opening during BPC operation. Since these valves could potentially be subject to pressure locking due to ambient temperature changes attributable to the LOCA, a pressure equalization path was added from between the valve disks to the RCS side of each valve. Also, the bypasses around valves DH-1517 and DH-1518 will be isolated via closure of valves DH-10 and DH-26, and the existing flow indication in each bypass line will no longer be available.

As a part of the supporting analysis of the new backup BPC methodology, it was determined the boric acid concentration in the DHR drop line coming from the core could exceed the solubility limit when the solution reached the DHR cooler, due to the cooling effect of the cooler. Therefore, additional analyses were performed, using more realistic assumptions to demonstrate that boric acid precipitation in the DHR cooler will not occur. As a result of the analysis, the MOD changes the operator action to manually throttle Service Water (SW) flow rate to the CCW heat exchangers for Post LOCA backup BPC operation to assure the CCW inlet to the DHR cooler is at least 95°F, but below 120°F.

Based on the above evaluation, the implementation of this modification is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 97-0076 (SE 98-0012)

TITLE:

Motor Operated Valve Modifications

CHANGE:

Modification 97-0076 will:

- Revise the thrust range of torque controlled MOV's for the use of "Pullout Efficiency" in the place of "Run Efficiency" when used in thrust calculations.
- Re-rate the Limitorque Actuators for CC5095 and CC5096.
- Re-calculate the Seismic Limit for CC4100, CC4200, CC4300, and CC4400.
- Back-seat valves CF1A and CF1B using the Limitorque operator limit switch to control the forces on the back seat.

REASON FOR CHANGE:

The above changes are being made based upon:

- Information Notice 96-48 suggested that "Pullout Efficiency" is more representative than "Run Efficiency" when calculating the torque capacity of an actuator.
- Re-rating the valve actuator allows operation of these valves at design conditions without exceeding the actuator limit.
- To obtain an acceptable thrust range, the seismic limit was revised using the as-built configuration rather than the generic method described in the USAR.
- The valves are experiencing packing leakage due to pitting on the stem.

SAFETY EVALUATION SUMMARY:

The above changes are considered safe and does not involve a USQ based upon:

- Use of Pullout Efficiency instead of run efficiency in the Limitorque procedure is more conservative in ensuring that there is sufficient force available to operate the MOV.
- The re-rating allows for a thrust of 162 percent of the original rating for 2000 cycles where it successfully completed 4000 cycles at 200 percent during testing.
- Calculations concluded that the maximum stem thrust could be increased from 11,100 to 13,500 lbs. while maintaining the stress levels within the specified allowables and with a resultant valve/operator natural frequency of over 60 cps. This will increase the reliability of the affected equipment.
- The back seating is controlled by the limit switch to a value which is within the stress limits of the valve yet will be sufficient to prevent most of the leakage past the packing.

SAFETY EVALUATION SUMMARY
FOR
MOD 97-0085 (SE 99-0001)

TITLE:

Pressurizer Code Safety Valve Discharge Rupture Disc

CHANGE:

Install single rupture discs between the Code Safety Valves and the discharge tees, eliminating the potential for unbalanced loading.

REASON FOR CHANGE:

The Pressurizer Code Safety valve discharge configuration of a discharge tee on the valve outlet with a rupture disc on each end of the tee, was determined to be unacceptable since it could impose an unbalanced load on the Pressurizer nozzle if only one rupture disc was burst during safety valve blowdown.

SAFETY EVALUATION SUMMARY:

The redesign of the Code Safety Valve discharge tee assembly will have no adverse effects on the safety functions of the systems involved. By eliminating the potential unbalanced load and reducing the extended mass, the Pressurizer nozzle and Code Safety valve stress intensities will be within the specified USAR allowables.

The RCS pressure boundary and specified overpressure protection are maintained since there are no adverse effects associated with the new discharge assembly installed.

All materials used in the new installation are ASME in accordance with the specified pipe class of GCC. The discharge assembly is installed seismically. The rupture discs and temperature elements are non-safety related components and will be identical to those currently in use.

This change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
Mod 98-0002 (SE 99-0003)

TITLE:

Installation of High Density Spent Fuel Storage Racks in the Cask Pit

CHANGE:

Install two high density spent fuel storage racks into the cask pit to add 153 additional storage locations.

REASON FOR CHANGE:

Beginning with Cycle 12, the DBNPS has insufficient storage capacity in the Spent Fuel Pool to fully offload the entire reactor core.

SAFETY EVALUATION SUMMARY:

The temporary storage of the rack sections on the Auxiliary Bldg. mezzanine will not adversely impact any system, structure or component (SSC). The rack sections have been reviewed for seismic loads, and determined that they will not overturn. The rack sections are to be placed so that they will not adversely impact any plant SSCs. The design and fabrication of the cask crane and the vendor supplied auxiliary hoist and rigging, were designed to conform with NUREG 0612 which minimizes the possibility of a rack drop accident. The safe load path, plant procedures, and mechanical interlocks combine to preclude the possibility of dropping a rack section onto a spent fuel assembly.

The impact of lowering the cask pit water level to a minimum elevation of 583'-0" has been evaluated. If the SFP gate would fail or be damaged during rack installation, the water elevation in the SFP would fall to approximately elevation 598'-3". This is substantially more than the 9 feet of minimum cover described in the USAR. The materials used for the fabrication and installation of the racks were evaluated and will not adversely impact the pool water quality.

The cask pit structure/liner plate was reviewed for a postulated dropped rack. The dropping of a rack section may cause localized damage and/or puncturing of the liner plate which would cause water to flow into leak chase channels that are connected to a piping system that is isolated by closed valves. The water lost through leakage can be made up, in accordance with existing procedures. The drop of a rack section will not impact any spent fuel or the spent fuel pool.

Based on the above determination, the "installation only" of the cask pit high density spent fuel storage racks will not adversely affect the safety function of the spent fuel pool, spent fuel assemblies, or any other plant SSC. Therefore, an unreviewed safety question does not exist and the modification is safe.

SAFETY EVALUATION SUMMARY
FOR
MOD 98-0015 (SE 98-0041)

TITLE:

Class IE / Non-Class IE Separation for Circuits in Panels Y1 and Y2

CHANGE:

Move the Non-Class IE circuits for panels CFPP17Q and CFPP18Q to fuses currently supplying Non-Class IE loads.

REASON FOR CHANGE:

PCAQR 98-0929 identified a deficiency in the separation of two Class 1E circuits from Non-Class 1E circuits.

SAFETY EVALUATION SUMMARY:

Freeze protection panels CFPP17Q and CFPP18Q have previously been designated as non-Q. The safety function of essential distribution panels Y1 and Y2 is not affected by this modification. Fuses in panels Y1 and Y2 provide electrical isolation meeting the criteria of IEEE Standard 308-1971. The fuses are sized to carry the expected load current and provide protection for the feeder conductors. Calculations were reviewed to ensure proper electrical coordination is maintained such that failure of any Non-Class IE load will not cause loss of function of any Class IE loads.

Based on the above, the proposed change is safe and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 98-0022 (SE 99-0012)

TITLE:

Changes to the Emergency Diesel Generator Load Tables

CHANGE:

This modification changes two Gai-Tronics stations, two 480V receptacles and 6 lighting panels. The Gai-Tronics stations, 480V receptacles and lighting panels are located within containment. Changes to the 6 lighting panels involve adding additional 120V convenience outlets. The 120V convenience outlets are being added to several non-essential containment lighting panels. These lighting panels are capable of being supplied from the plant's essential 480V distribution system and therefore, could be loaded onto an emergency diesel generator (EDG).

REASON FOR CHANGE:

These modifications will facilitate work in the containment during refueling and maintenance outages.

SAFETY EVALUATION SUMMARY:

Changing the orientation of the 480V outlet at ZR4902, adding a 480V outlet to ZR3902A, adding plugs to Gai-Tronics hand stations and adding 120 V convenience outlets to the containment lighting panels will not affect the safety function of any SSC. Additionally, the additional electrical load caused by adding the 120V convenience outlets will not cause either EDG to exceed its continuous rated output. Therefore, these outlets will not overload their respective EDG.

Based on the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 98-0034 (SE 99-0029)

TITLE:

SPDS/DADS Replacement

CHANGE:

Replace the Safety Parameter Display System (SPDS) and the Data Acquisition Display System (DADS) computers with ones that will have new displays and utilize personal computers.

REASON FOR CHANGE:

The previous SPDS hardware and software and the DADS computers were becoming obsolete.

SAFETY EVALUATION SUMMARY:

The SPDS and the DADS are used as operator aids in evaluating the status of the plant. The new SPDS meets the requirements established in NUREG 0737, Supplement 1. The SPDS does not perform any safety functions, or adversely affect any safety functions. Operators are trained to identify unsafe conditions without the use of the SPDS.

This modification increases the load on channel 1 batteries. This increase in load is within the allowable design margin and the DC Load List for the station batteries. As such, the load change on the station battery does not have an adverse effect on safety. There is no effect on the station 125 volt DC distribution failure analysis.

There is no adverse effect on Fire Protection or Operations as a result of these design changes.

This change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 98-0036 (SE 99-0034)

TITLE:

Replace Control Room Humidifiers

CHANGE:

Replace the existing Control Room (CR) Humidifiers (S19-1 and S19-2)

REASON FOR CHANGE:

The current evaporative pan type humidifier units are obsolete, unreliable and do not maintain required humidity levels in the Control Room. The installation of new steam type humidifiers with a larger capacity will be able to humidify the Control Room, Cabinet Room and the Cable Spreading Room.

SAFETY EVALUATION SUMMARY:

The replacement humidifiers will provide for better humidification of the CR. This will reduce the static electricity that is often associated with dry air, thus making the environment better for the electronics installed in the space and creating a healthier environment for the operators.

The new humidifiers will be relocated outside the Control Room Q boundary which will improve the Control Room Pressure Boundary integrity.

The amount of hot water used by the humidifiers is not a hazard to the equipment or personnel in the room since it is not pressurized. It will not create a flooding hazard.

The replacement Humidifiers are designed to maintain the Control Room humidity at a value of greater than 30% RH as is described in the USAR and will not be a hazard to either personnel or to equipment in the Equipment Room.

This change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 98-0037 (SE 99-0002 Rev. 2)

TITLE:

RE8433 Upgrade – Effluent Sampling Station

CHANGE:

Add a new rate meter in the Effluent Sampling Station (beach house) and provide a master/slave configuration between the new beach house rate meter and the control room rate meter.

REASON FOR CHANGE:

The communication loop between detector RE8433 and the control room rate meter is unreliable due to the long distance between them.

SAFETY EVALUATION SUMMARY:

There are no functions of the Process Radiation Monitoring System affected by this action.

The new rate meter will be powered from a local rate meter which is powered from a non-essential interruptible circuit versus the current non-essential uninterruptible power source. There is no applicable design criteria requiring uninterruptible power for non-essential radiation monitoring channels. Control functions have been placed on the upstream undiluted effluent line that will terminate the release prior to exceeding concentration for Unrestricted Areas.

This change is considered safe and is not an unreviewed safety question.

SAFETY EVALUATION SUMMARY
FOR
MOD 98-0039 (SE 99-0022)

TITLE:

Closure of Gaps at Emergency Sump Screen Base Plates

CHANGE:

Close the gaps at the bottom of the sump screen and containment floor by permanently placing lead bricks on the containment floor around the perimeter of the sump.

REASON FOR CHANGE:

PCAQ 98-1151 identified gaps between the bottom of the sump screen and the containment floor. These gaps are approximately ½" high by 8 inches long. The size of these openings could potentially allow items into the sump that would not pass the ¼ inch square wire screen that protects the suction for the Decay Heat and Containment Spray pumps.

SAFETY EVALUATION SUMMARY:

The installation of the non-safety related lead bricks has been evaluated for all applicable loading conditions, including seismic. This evaluation determined the lead bricks may move slightly during simultaneous seismic and loss-of-coolant accident (LOCA) design conditions. This movement is sufficiently small enough to ensure that no debris, larger than that which can pass through the ¼ inch square wire screen, can enter the sump. Also, the sump screen, including the base plates will not be adversely impacted by any loads from the lead bricks. Therefore, the lead bricks will continue to close the openings at the base plates of the sump screen under all design loading conditions.

The lead bricks will not be moved away from the sump screen structure due to pipe break jet forces or a postulated missile. The lead bricks will also not be adversely affected by post-LOCA water that will be flowing to the sump.

The lead bricks are part of the Emergency Core Cooling System, and they are required when this system is operable. Therefore, the lead bricks may be temporarily removed when ECCS is not required to be operable.

The proposed change has no effect on safety and is not an unreviewed safety question.

SAFETY EVALUATION SUMMARY
FOR
MOD 98-0045 (SE 00-0020)

TITLE:

Evaluation of the Steam Generators at the Completion of the 12th Operating Cycle

CHANGE:

The purpose of this safety evaluation is to evaluate Modification 98-0045 postulated repairs to the steam generators.

REASON FOR CHANGE:

The need to perform a written safety evaluation is based on changes to the steam generator analyses performed during the 12th operating cycle.

SAFETY EVALUATION SUMMARY:

This change adds a new reference to Framatome Technologies Incorporated (FTI) calculation 32-5002623-05, "OTSG Transient Analysis." This document contains new transient steam generator tube loads and tubesheet tube hole dilations which supercede existing analyses. The calculation contains a reexamination of the main steam line break (MSLB) and pressurizer surge line break analysis. The limiting MSLB load described in FTI 32-5002623-05 is also being added to the USAR MSLB analysis. The safety evaluation examined the effect of the revised tube loads and hole dilations on steam generator tubes and hardware and demonstrated that the revised tube loads and hole dilations were acceptable.

Additionally, the change revises the description of the steam generators to state that the steam generator tube and tube-to-tubesheet joint are based on ASME Code, Section III, Appendix F, 1995 Edition, for faulted conditions. This edition of the code is approved for use under 10CFR50.55a. Therefore, this change is acceptable and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 98-0050 (SE 99-0024)

TITLE:

Overpressure Protection for CCW to the Letdown Coolers

CHANGE:

The purpose of this modification is to modify the means of providing overpressure protection for the Component Cooling Water (CCW) to the Letdown Coolers. Overpressure protection is currently provided by four rupture disks. These will be replaced with blank disks and a relief valve will be installed.

REASON FOR CHANGE:

Benign operational pressure transients in the CCW System have actuated the rupture disks and caused undesired loss of CCW System reliability. It has not been found feasible to provide the necessary overpressure protection using rupture disks, while preventing undesired actuation of the rupture disks.

SAFETY EVALUATION SUMMARY:

Based on the results of several calculations, the proposed relief valve will fulfill the intent of the original rupture disks. It will also improve the CCW System reliability by not remaining open following actuation due to minor operational transients.

The relief valve is designed, manufactured and tested to the requirements of ASME Section III. It will be periodically tested in accordance with Davis-Besse's test program for ASME relief valves.

The relief valve will discharge directly to the surrounding area in Room 316 of the Containment Building. An engineering evaluation has been performed that determines that no essential equipment in Room 316 would be adversely affected by the discharge from the new relief valve.

Using a relief valve instead of rupture disks has no effect on the containment isolation function of the CCW and Make Up & Purification systems.

Based upon the above, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 98-0056 (SE 99-0044)

TITLE:

Eliminate Time Delay for Opening Component Cooling Water System (CCW) Nonessential Header Isolation Valves

CHANGE:

Eliminate the thirty-second time delay for the automatic opening of each set of isolation valves when low CCW flow is detected in the opposite channel and low level is not detected in the surge tank.

REASON FOR CHANGE:

The thirty second delay is believed to be responsible for damaging rupture discs on the letdown coolers.

SAFETY EVALUATION SUMMARY:

The instantaneous fixed time relay selected to replace the time delay relay is qualified for use in Class 1E circuits.

To evaluate the effect on the CCW system by eliminating the thirty-second time delay several different cases involving low flow at the operating CCW pump were considered. The evaluations determined that opening the isolation valves thirty seconds earlier does not affect any safety function.

Eliminating the thirty-second delay increases the durations of the overlaps to that of the valves' stroke time, but does not adversely affect the safety function of the nonessential header isolation valves. Automatically closing these valves at a 35-inch level in the CCW surge tank already assumes the valves are fully open and therefore, a closing time that is equal to the valves' stroke time.

Eliminating the thirty-second delay does not adversely affect any safety functions. It does not require any additional operator actions. It does not challenge the capability of CCW pump to start and provide maximum flow allowed by the system load. It will reduce the letdown coolers' outlet CCW peak temperature and therefore, minimize waterhammer effects.

Based on the above reasons, eliminating the thirty-second delay on opening the nonessential header isolation valves on low flow is considered safe, and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 98-0061 (SE 99-0006 Rev. 1)

TITLE:

Modifications Due to Emergency Diesel Generator Room High Temperature Concerns

CHANGE:

This modification will replace the north side air duct on the side of each generator with a duct directing all the flow upward and east into the room, add ventilation holes in the top of the generator control cabinets, and replace the ventilation system temperature controller.

REASON FOR CHANGE:

It was discovered that the temperatures in the Emergency Diesel Generator (EDG) rooms are predicted to be higher than anticipated from previous evaluations. To alleviate or handle the higher room temperatures modifications were made to the EDG's and the EDG room ventilation systems

SAFETY EVALUATION SUMMARY:

The design of this ductwork is such that there will be minimal reduction in discharge airflow. By redirecting the air upward, the hot air will assist in the flow due to natural convection. An elbow will be installed at the duct discharge to prevent foreign material from dropping and entering the generator housing. The ductwork will be commercial grade material and will be seismically mounted. This meets all applicable design criteria for this installation. The holes which are cut into the top of the cabinets have been evaluated to insure the structural integrity of the cabinet is not affected and that the seismic qualification is still valid. The installation of a metal guard will protect the panel internals from dripping water and foreign materials from entering the cabinet.

The new analog controller will be dedicated for the safety application and be seismically qualified. The new controller will also eliminate the need for an input signal converter, since it will be able to take a Resistance Temperature Detector (RTD) input directly. A new RTD element will be installed on the wall. The operating characteristics of the new control loop equipment are equivalent or better than the existing equipment.

Post modification testing will be conducted to determine if these changes resolve or reduce the high temperature hot spot concerns. The changes being done by this modification will not affect the EDG's ability to provide an onsite standby power source for safety-related loads required to mitigate the effects of an accident combined with a loss of offsite power.

These changes are considered safe and do not create any unreviewed safety questions.

SAFETY EVALUATION SUMMARY
FOR
MOD 99-0006 (SE 00-0004)

TITLE:

Reverse Direction of SA237, IA/SA Cross Tie Check Valve

CHANGE:

Remove SA237, Instrument Air/ Station Air (IA/SA) Cross Tie Check Valve, and reinstall it to allow flow in the reverse direction.

REASON FOR CHANGE:

During 12 Refueling Outage both stations air receivers will be depressurized and their associated compressors secured to allow cleaning and repair. Temporary air compressor will be installed at SA57, Temporary Compressor Outlet Isolation Valve, to supply air if required to the Emergency Instrument Air Compressor receiver, to maintain instrument air.

SAFETY EVALUATION SUMMARY:

While this Temporary Modification is installed, the Station Air Receivers will not provide air to the Emergency Instrument Air Receiver. An evaluation of the risk associated with securing station air determined that although an increase in the probability of a loss of instrument air will result, the probability was still low overall, and the maintenance would not produce an unacceptable level of risk during the outage.

The temporary compressor is compatible with existing piping and receiver design.

All safety-related air-operated valves that are required for safe shutdown are designed to assume a safe position by spring actuation and/or by a Q-listed accumulator system following a loss of Instrument Air. These fail-safe functions are not affected by this temporary modification

Based on the above, it is concluded the proposed activity is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
MOD 99-0050 (SE 99-0045)

TITLE:

Condensate Removal In Containment Normal Range Radiation Element (RE4597AA) Sample Line

CHANGE:

Install Containment Normal Range Radiation sample line drain piping off each low point in the upper and lower containment atmosphere sample lines to collect and remove condensed moisture.

REASON FOR CHANGE:

The containment atmosphere sample lines leading to the Normal Range Particulate Radiation Skid have had a history of condensing and collecting sample moisture in the line lower points, resulting in its removal from service to facilitate draining of the moisture.

SAFETY EVALUATION SUMMARY:

The installation of the Containment Normal Range Radiation sample line drain/collection piping off each low point in the upper and lower containment atmosphere sample lines has no adverse effects on the safety functions of the Containment Gas Analyzing & Radiation Monitoring System or the Floor and Equipment Drain System.

The containment atmosphere sample piping meets the design requirements of the containment atmosphere sample header piping in material selection, pressure and temperature. The use of single valve arrangements for system isolation is consistent with the design requirements of the system and do not pose the potential of any single failure issues.

Based on the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
SCR 94-5010 (SE 97-0052)

TITLE:

Core Flood Tank Isolation Valve Interlock Bistables

CHANGE:

This change lowers the nominal reset value of the Core Flood Tank (CFT) Isolation Valve SFAS interlock from 785 psig to 770 psig.

REASON FOR CHANGE:

This setpoint change is to account for instrument inaccuracies, drift, and to support a 24 month refueling cycle while ensuring compliance with Technical Specification 4.5.1.d. In addition, revisions will be made by lowering the setpoints of alarm modules to avoid overlapping alarm settings.

SAFETY EVALUATION SUMMARY:

The change will enable the Core Flood System earlier during startup, by having operators open the CFT isolation valves, and isolate the CFT's at a later point during shutdown and cooldown. This means that during startup, with RCS pressure increasing, alarms will occur at a lower pressure, reminding operators to open the isolation valves. The reset point, at which the isolation valves automatically open, will also be lowered to ensure compliance with the Technical Specification requirement of section 4.5.1.d. Although the setpoint is being lowered, it is still sufficiently high to permit the operator to close these valves during normal shutdown before RCS pressure is reduced below core flood tank pressure. Since the change will result in greater margin between the Technical Specification limit and the field setpoint, the ability of the SFAS to perform any of its required capabilities will not be adversely impacted in any way. Also, since the setpoint change is in the conservative direction, the ability of the RCS to perform any of its required capabilities will not be impacted in any way.

This change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
SCR 97-5002 (SE 97-0048)

TITLE:

Increase Temperature Setpoints for the Low Voltage Switchgear Rooms

CHANGE:

Setpoint Change Request (SCR) 97-5002 raises the upper and lower setpoints of temperature switches TS5315 and TS5318 for Low Voltage Switchgear Rooms 428 and 429, respectively.

REASON FOR CHANGE:

PCAQR 96-1576 documented the failure of Room 428 temperature switch TS5315 and brought up the issue of reliability of the safety related ventilation fans for both Rooms 428 and 429. A failure of a safety related ventilation fan in the summer could potentially render the equipment in its respective room inoperable due to high temperature.

SAFETY EVALUATION SUMMARY:

The previous setpoints of 84°F and 65°F were changed to 90°F and 70°F. The upper and lower setpoints each have a tolerance of ±5°F. Calculations demonstrate that the new setpoints will maintain the temperature in the Low Voltage Switchgear, Isolation, and Battery rooms between the design limits of 104°F and 60°F when the outside temperature range is between the design limits of-10°F and +95°F.

The new setpoints will not adversely affect the operation of the heating and ventilation systems, and will maintain the Low Voltage Switchgear, Isolation, and Battery rooms temperature within the design limits as previously evaluated in the USAR.

The reliability of the safety related ventilation system for Rooms 428 and 429 will increase as a result of reduced operating time for the safety related ventilation fans. This change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
SE 00-0015

TITLE:

Decay Heat Pump 1-1 and 1-2 Bearing Test with Cold CCW Cooling

CHANGE:

Conduct special test procedure, which runs the Decay Heat Pumps with cold component cooling water (CCW), to the bearing housing coolers during Mode 4 while taking suction from the RCS drop line. This test provides added assurance that the pumps will function properly following a LOCA by running DHP1 and DHP 2 (separately) for approximately one hour monitoring oil temperature, motor amps, and bearing vibration.

REASON FOR CHANGE:

INPO Operating Experience Report OE 10684 described an event where Arkansas Nuclear One experienced a common mode failure of both DHPs due to high pump inboard bearing temperatures during February 2000.

SAFETY EVALUATION SUMMARY:

The effects of operating the DHPs with the bearing housings chilled to approximately 50°F while pumping water greater than 120°F have been analyzed by Engineering. When the DHPs are pumping water from the BWST, with CCW temperatures as low as 38°F, there is no axial loading and no concern for bearing binding. These analyses show that, with a CCW temperature of 50°F, the bearing would function properly even when an axial load is applied.

During the conduct of the test, the DHPs will be closely monitored to assess whether the inboard bearing is being over loaded. Adequate time is available to shutdown the pumps if the bearings do not stabilize as anticipated. Limits will be used to verify satisfactory operation of both the outboard and inboard bearings.

The following essential equipment was reviewed for operation with approximately 50°F CCW cooling and found either within the equipment design or would have no effect on the operation of the equipment: DH Coolers, HPI Pumps, CTMT Gas Analyzers Heat Exchanges, CCW Heat Exchanges, EDGs and Makeup Pumps. This test will be performed on one DH train at a time ensuring the other train is in compliance with TS 3.5.3. An engineering evaluation has been conducted to assess the impact on channel separation, signal noise, seismic qualification and electrical noise for the temporarily installed test instrumentation and concluded there was no impact. No adverse impact is expected on plant equipment during performance of this test.

Based on the analyses performed, the test is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
SE 00-0016 Rev. 1

TITLE:

Chemical Cleaning of the Once Through Steam Generators During 12RFO

CHANGE:

The secondary side of the Once Through Steams Generators (OTSGs) were chemically cleaned during 12RFO.

REASON FOR CHANGE:

Chemical cleaning extracts the bulk corrosion products and packed crevice deposits in the Tube Support Plate (TSP) crevices that contribute to SG tube degradation and pressure drop.

SAFETY EVALUATION SUMMARY:

Tests performed by B&W confirmed the effectiveness and non-aggressiveness of the selected solvent and process. Monitoring during chemical cleaning at other sites has shown that the average total corrosion met the corrosion acceptance criteria for each plant. Structural analyses based on an assumed corrosion during chemical cleaning were performed for other sites ensure that the OTSG internals would remain structurally adequate and capable of performing their original design function accounting for the assumed corrosion during chemical cleaning. Chemical cleaning does not affect the inconel tubing diameter or the integrity of the tube, however it does remove a small amount of base metal from the surface of each TSP, thus affecting the land areas of the broached holes. An evaluation of the susceptibility of the lower region OTSG tubes to fluid-elastic instability (FEI) was performed by modeling the OTSG lower region geometry and flow conditions. The evaluation determined an increase in the diametrical clearance for up to six chemical cleanings of a single OTSG was found to have no significant effects on FEI or on random turbulent response. A Davis-Besse specific corrosion monitoring and qualification plan was developed to ensure that the pre-determined corrosion limits are not exceeded, to accurately measure the chemical cleaning process induced corrosion, and to minimize Steam Generator corrosion. The secondary side visual inspection and tube eddy-current testing performed following the completion of chemical cleaning activities provides further confirmation of no adverse effects from the cleaning activities.

The majority of the Chemical Cleaning process equipment is contained in a containment berm. The berm volume was evaluated and is designed sufficiently large to accommodate the rupture of the largest tank within the berm on a day where the highest rainfall accumulation has occurred. Chemical cleaning and waste processing activities present no hazard to control room personnel.

Based on the above, the activities required to perform chemical cleaning of the SGs are considered safe and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
SE 00-0019

TITLE:

Cycle 13 Reload and Core Operating Limits Report

CHANGE:

Cycle 13 core loading and analyses consists of the following:

- 1 batch 9, a re-insert from Cycle 8, Mark B8A (Mk B8A) Fuel Assembly (FA). It contains fuel rods with zircaloy cladding and with an initial uranium 235 (U-235) fuel enrichment of 3.38 weight percent (w/o), positioned in the core's center,
- 2 batch 10, re-inserts from Cycle 9, Mk-B8A FAs, containing fuel rods with zircaloy cladding, and an initial U-235 fuel enrichment of 3.69 w/o,
- 26 batch 13 Mk B10A FAs, containing fuel rods with zircaloy cladding and an initial U-235 fuel enrichment of 4.46 w/o,
- 76 batch 14, Mk B10M FAs, containing fuel rods with zircaloy cladding and an initial U-235 fuel enrichment of 4.47 w/o,
- 72 batch 15, Mk B10K FAs that contain urania and urania-gadolinia fuel rods, with M5™ cladding, and with uranium enriched up to 4.88 w/o,
- 53 Extended Life Control Rod Assemblies (ELCRAs) and a total of 1616 urania-gadolinia ("Gd rods") fuel rods in batches 14 and 15.

There are several unique aspects to this fuel cycle: 1) Because of the Gd rods in batch 15 reload, there are no Burnable Poison Rod Assemblies; 2) Batch 15 Mk B10K FAs contain a heavier loaded fuel rod design with M5™ cladding and end caps; 3) The batch 15 Mk B10K FAs incorporate a fine mesh debris filter; 4) There are 4 Mk B10K Structural (S) FAs, with M5™ guide tubes and two M5™ upper intermediate spacer grids; and 5) LOCA analyses were performed with the RELAP5 Evaluation Model.

REASON FOR CHANGE:

This is to assure that operation of the core with the configuration as described in the Reload Report will not violate operating and safety limits.

SAFETY EVALUATION SUMMARY:

The reference fuel cycle for Cycle 13 is Cycle 12. The nuclear and thermal-hydraulics analysis and operating strategy were based on Cycle 12. Cycle 13 was analyzed to a licensed length of 683 EFPDs and the Operating Limits and Setpoints reflect that design length. Cycle 13 core is a Very-Low-Leakage design.

Reactivity control consists of 53 ELCRAs as well as the GAPSRAs. The design lifetime of the GAPSRAs of 10 EFPY would have been exceeded during cycle 13. Because of consideration of higher initial pre-pressurization of the GAPSRAs' rodlets, FCF was able to justify extension of their design lifetime to 15 EFPY.

The new feed batch for Cycle 13 is Batch 15 which are a Mk B10K design, which is

still a 15 x 15 fuel rod array, with 16 guide tubes and one instrument tube. However, design modifications from the Mk B10M design include the following: 2.5 w/o enriched, 6.05 inch top and bottom "axial blankets" in B10K type urania fuel rods, M5™ fuel cladding/fuel rod end caps, 4 Mk B10K-(S) Structure FAs containing M5™ guide tubes and two M5™ Upper Intermediate Spacer Grids, a new fuel rod with a higher fuel loading which required a re-design of the plenum springs, and replacement of the anti-debris long end cap with a short M5™ end cap. Debris resistant protection is now provided by a fine mesh debris filter, that is installed in the lower end fitting, and a total of 928 Urania-gadolinia rods distributed by sub-batch and standard urania rods.

The issuance of NRC's topical report for M5™ in conjunction with License Amendment 239 and the 10CFR50.44, 50.46 and Appendix K exemption approval allows use of the M5™ material in batch 15.

To preclude any concerns for a potential of Incomplete Rod Insertions, the hold down force due to the Mark B10's cruciform hold down spring has been reduced on Batch 15 during the manufacturing process. The hold down force is also reduced with a plastic setting procedure on the Batch 13 and 14 irradiated FAs being returned to operation for Cycle 13.

The dose consequences for the Fuel Handling Accidents, Inside and Outside Containment (FHAIC and FHAOC) have also been re-analyzed for Cycle 13 with a cycle specific radial power peaking factor. The re-analysis showed an increase in dose for the FHAIC. The increases were anticipated and are the result of increases in peaking factors. The dose consequences remain below the SRP acceptance criterion.

The Cycle 13 LOCA analyses were performed at 2966 MWt (to allow a future potential uprate of up to 107%) for each Mk B 10 fuel type. The analyses used the NRC approved LOCA Evaluation Model (EM) with the RELAP5 code. No new operator actions were added to support the EM usage. The revised limiting Large Break LOCA (LBLOCA) Peak Cladding Temperature (PCT) was calculated to be 2102°F at the 9.536 ft elevation at BOL. The revised limiting Small Break LOCA (SBLOCA) PCT was computed as 1408°F for a double-ended HPI break. For all cases the LOCA temperatures were computed to be less than 2200°F, as required by 10CFR50.46. Therefore, although the peak cladding temperature are calculated to be higher, the acceptance criteria are met. Another 10CFR50.46 criterion verified was the total hydrogen generation during LOCAs. For LBLOCAs, the maximum whole-core of Mark B10K fuel result was estimated as <0.6 % for all cases and for Mark B10A fuel the result was estimated as <0.4% for all cases. For the SBLOCA, the maximum whole-core hydrogen generation rate was estimated to be <0.1%. It was verified that the 10CFR50.46 criterion was complied with since the total mount of hydrogen generated from the cladding/water reaction did not exceed 1% of the theoretical amount of all of the cladding.

The following were analyzed and found to be acceptable for Cycle 13 operation Core design and loading, reactivity controls, fuel system design, nuclear design/core physics, thermal-hydraulic design, accident and transients analyses, operating limits and allowable values, startup program physics testing and chemistry issues. Based on this, it has been determined that this core design and operation does not constitute an unreviewed safety question.

SAFETY EVALUATION SUMMARY
FOR
SE 95-0060 Rev. 1

TITLE:

Fuel Repairs

CHANGE:

This safety evaluation revision removes reference to a specific Refueling Outage (10 RFO) from the title of the original Safety Evaluation, updates the fuel vendor's name, and updates a calculation that addresses use of the Spent Fuel Pool pedestals for repairs for fuel enriched to 5 w/o and a burnup up to 60 Gigawatt-Days/Metric Ton Uranium (GWD/MTU).

REASON FOR CHANGE:

Fuel repairs are performed by recaging and/or reconstitution to allow extraction of remaining energy from defective fuel assemblies that have no structural damage. The repairs are accomplished by the removal of defective fuel rods in a controlled process. This safety evaluation addresses the safety aspects of that repair process and the controls imposed by use of vendor procedures.

SAFETY EVALUATION SUMMARY:

This revision addressed a new Framatome Cogema Fuel (FCF) calculation regarding thermal hydraulic analysis for the use of the spent fuel pool repair pedestal. The results of the analysis determined that fuel repairs shall be performed only after a minimum cooling period, or decay heat days, for a Fuel Assembly with up to 5 w/o enriched fuel, with a maximum Allowable Decay Heat Thermal Power of < 112.24 Watts/KG IHM.

The conclusion of the original safety evaluation is still valid for this revision. There is no effect on safety, since this fuel repair is controlled with proven procedures, performed by FCF personnel with fuel handling experience, uses tested fuel handling tools, quality components, and repair techniques and hardware. The repaired fuel will meet all of the requirements of the FCF field Change Authorization (FCA). FCAs document compliance with the FCF Quality Assurance Program for Fuel Design Control, which ensures that the repaired fuel assemblies meet all fuel design requirements. The modification consisting of repair by recaging and/or reconstitution based on the above is, therefore, considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
SE 97-0033 Rev. 2

TITLE:

Fuel Assembly Grid Repositioning

CHANGE:

The purpose of revision 2 of this safety evaluation is to identify the procedure and equipment limitations required for the on site performance of grid repositioning on batch 1 through 13 fuel assemblies.

REASON FOR CHANGE:

This will enable future grid repositioning campaigns without a revision to this safety evaluation due to vendor procedure revisions or equipment modifications within the identified limitations.

SAFETY EVALUATION SUMMARY:

The limitation of the air supply pressure to the air cylinders limits the maximum applied forces. These loads are below the limits identified in Framatome Technologies Engineering Information Record 51-1263441-02, Mk-B Spacer Grid Repositioning Safety Evaluation, to prevent fuel rod or grid damage. The repositioning process does not affect the spacer grid's integrity and is acceptable.

The loads applied to the fuel assembly and spacer grid during the repositioning process have been evaluated and: 1) do not affect the spacer grid's integrity; 2) will not cause fuel rod or spacer grid damage due to grid cocking during the repositioning process; and 3) will not cause fuel rod damage due to lifting a rod against the upper end fitting.

The worst case scenario above is bounded by the fuel handling accident in section 15.4.7 of the USAR, which assumes the failure of 56 fuel rods in a fuel assembly having a fission product decay time of only 72 hours. The fission products in the fuel assemblies being repaired during and after an outage would have at least 150 hours decay time as assumed in USAR Section 9.1.3. This significantly reduces the radiological consequences associated with the loss of fuel rod integrity.

Pursuant to the above, repositioning spacer grids on a fuel assembly does not constitute an unreviewed safety question and is a safe plant activity.

SAFETY EVALUATION SUMMARY
FOR
SE 98-0037 Rev. 1

TITLE:

Modified Use of Deborating and Purification Demineralizers

CHANGE:

This evaluation addresses the following changes: 1) the use of a batching process as the preferred alternate means to facilitate RCS lithium control; 2) temporarily converting one of the two Deborating Demineralizers from an anion resin to a cation resin demineralizer, thus providing a second alternate means for control of RCS lithium concentration; and 3) having only one Deborating Demineralizer available for boron removal during the latter stages of a fuel cycle. Also addressed are the unavailability of #3 Purification Demin during Cycle 13 and the placing into service a fresh mixed bed Purification Demineralizer.

REASON FOR CHANGE:

The #3 Purification Demineralizer (PD) has been removed from service due to apparent damage to its internal retention element while shutting down for 11 RFO. It is intended that #3 PD will remain isolated until repairs can be implemented.

SAFETY EVALUATION SUMMARY:

Based on Cycle 7, 11 and 12 chemistry data and the new fuel design containing gadolinia poison, lithium saturation of the standby PD (#2 PD) is expected to occur during Cycle 13. When the standby PD becomes lithium saturated, one of the PD's must then be recharged with fresh resin to permit recovery of long term control of RCS lithium concentration for the remainder of the operating cycle. Replacement of a PD's resin requires that the PD be removed from service for a limited period of time. During this time, two alternate means of Lithium control are available. One means is by repeated batch additions to the MU Tank coordinated with the diversion of letdown to a Clean Waste Receiver Tank (CWRT). A second means is to use a Deborating Demineralizer, loaded with cation resin, to remove lithium from the letdown water.

The first alternative, letting down to a CWRT and batching to the MU tank, is similar to routine batch additions performed during normal plant operations. The batching process will be utilized while observing the existing operating limitations for Control Rod position limits as specified in Technical Specifications.

The second alternative, using a Deborating Demineralizer loaded with cation resin instead of anion resins, has been reviewed and concluded to be acceptable. With one Deborating Demin loaded with cation resin, the remaining Deborating Demin will still remain available with anion resin capability and will perform the intended function of

removing boron from the RCS during the latter stages of the operating cycle. If required, the Deborating Demin could be replaced in a short period of time.

Placing a fresh mixed bed PD into service will be conducted in a controlled manner. The PD mixed bed resin will initially be unborated and unlithiated. Consequently, when the PD is initially placed into operation the demin will be removing both boron and lithium. Therefore, in order to eliminate the possibility of an undesired deboration of the RCS, the fresh PD will be initially boron saturated prior to placing it into normal operation. Routine chemistry sampling techniques will be used to determine when the PD is essentially boron saturated.

Operation during Cycle 13 without #3 PD will not adversely affect the plant operation because the #1 PD and #2 PD are available for RCS purification. The lack of availability of the #3 PD will also not adversely impact plant operations associated with radioactive materials.

Based on the above, the changes described in this evaluation do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
SE 99-0035

TITLE:

Safety Tagging of SA6446, SA Header Auto Drain Valve

CHANGE:

Tag out of service, for repair and replacement, the Station and Instrument Air System.

REASON FOR CHANGE:

SA6446, Station Air Header Auto Drain Valve is blowing by and causing a loss of air from the Station and Instrument Air System.

SAFETY EVALUATION SUMMARY:

Operating the Station and Instrument Air System with an Auto Drain Valve isolated will not affect the ability of the Station and Instrument Air System to supply air for maintenance, testing, instrumentation, and pneumatically operated valves.

Operation of the Instrument Air Dryers, will prevent any potential buildup of moisture in the air lines and will not affect instrumentation or pneumatic valves. No adverse effect is created by operating with an Auto Drain Valve isolated, either on the Station and Instrument Air system, or on the components served by this system.

Based on the above, this change is safe.

SAFETY EVALUATION SUMMARY
FOR
TM 00-0001 and 0002 (SE 00-0008)

TITLE:

Installing Torque Thrust Cell and Quick Test Cable Assembly on CCW Nonessential Header Isolation Valves CC2645 and CC2649

CHANGE:

Temporary Mods (TM) 00-0001 and 00-0002 install test equipment on valves CC2645 and CC2649 to record data during differential pressure testing.

REASON FOR CHANGE:

The differential pressure testing is required to fulfill DBNPS Generic Letter 96-05 commitment to participate in the Joint Owner's Group (JOG) Periodic Verification Program. The equipment will remain installed on the valve actuators until the completion of the JOG testing in the first quarter of 2002.

SAFETY EVALUATION SUMMARY:

The installation does not affect the control or functionality of the valve to operate on demand. The capability of the power and control circuitry will not be adversely impacted by the installation of the current probes of the Quick test cable assembly. The close torque switch, open limit switch, open torque switch bypass and the motor will function normally and as designed. The current probes are electrically passive and constructed with a non-conductive exterior coating and can not cause an effect on the control circuitry. The additional weight of the installed Torque Thrust Cell will cause no adverse impact on the seismic evaluation of the valve and actuator.

The test that will be performed to meet JOG requirements will be performed with approved procedures. The post Temporary Modification installation testing will verify the valve will function as designed.

Based on this evaluation, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
TM 00-0004 (SE 00-0014)

TITLE:

Temporary Change in Configuration of Some of the Normal Flow Path Components of the Service Water System

CHANGE:

Temporary Modification (TM) 00-0004 installs SW17 (SW Pump 1 downstream check valve) in the reverse flow direction, SW Pump 1 discharge head (without pump internals to function as a 90 degree elbow), a Q blind flange on the stuffing gland flange and a 2.5 inch fire hose.

REASON FOR CHANGE:

By altering the configuration of some of the normal flow path components of the Service Water (SW) system during Mode 6 or during core off load of 12 RFO, rework of the Component Cooling Water (CCW) heat exchanger discharge valve, SW43 will be allowed.

SAFETY EVALUATION SUMMARY:

Technical Specification 3.9.8.1, which requires one functional SW train and one operable Decay Heat Removal train, will continue to be satisfied with the implementation of this TM. The SW alignment during the installation of the TM will supply SW cooling water to both CCW heat exchangers 1-2 and 1-3. Either of the two CCW heat exchangers can be used for cooling the CCW system heat loads because adequate SW flow will be provided to ensure CCW heat exchangers 1-2 and 1-3 are functional. The heat removal capability of CCW heat exchanger 1-3 in a reverse flow condition under Mode 6 loss of offsite power conditions was evaluated. The most limiting analysis determined that heat exchanger will be functional for SW intake temperatures of 70 °F or less.

The fire hose is rated for a pressure which is approximately twice that of normal SW system pressure. If the hose should fail, the lost flow would not affect the functionality of the SW system. The installation of SW17 in the reverse direction will not degrade the design of the SW system because the valve orientation does not change the system design requirements. The blind flange installed on the SW pump is of sufficient thickness to maintain system pressure boundary integrity and seismic requirements.

To ensure ECCS Room #2 temperature is not exceeded, room temperature should be monitored. If room temperature approaches 104°F, the containment purge system will be used to cool the room.

When TM 00-0004 is implemented, SW will be returned to the intake bay of SW pump 1. The SW inlet and outlet temperature should be trended to determined if the average

forebay temperature is stabilizing. If not, then the Dilution Pump (or Cooling Tower Makeup Pump) can be started with returns aligned to Lake Erie If trending with the additional pumps in service does not maintain the projected average forebay temperature below 70 degrees F, the TM lineup must be terminated.

Based on the information provided TM 00-0004 is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
TM 00-007 (SE 00-0011)

TITLE:

Supply Temporary Cooling to Station Air Compressor 1-1 from Domestic Water

CHANGE:

Provides temporary cooling to Station Air Compressor (SAC) 1-1 using Domestic Water.

REASON FOR CHANGE:

During 12 RFO, maintenance on the Service Water System (SW) and electrical buses will remove the ability to operate any installed air compressor. In the event maintenance is performed on the either the Turbine Plant Cooling Water (TPCW) system or the SW that requires TPCW to be secured, only the Emergency Instrument Air Compressor would be available since it uses a self-contained cooling water system. In this condition, providing temporary cooling to SAC 1-1 would ensure that at least two compressors are available.

SAFETY EVALUATION SUMMARY:

The TPCW supply and return lines to SAC 1-1 will be isolated and the supply and return flexible hoses will be removed while this temporary modification (TM) is installed. This will ensure there will be no cross contamination of the TPCW system from Domestic Water. Water pressure supplied from Domestic Water is higher than the normal water pressure supplied from TPCW, however it is still less than the design pressure of the TPCW supply piping. This TM will not affect the proper operation or functioning of the Station Air/Instrument Air System Containment Isolation valves. This modification provides water from domestic water to the compressor through a rubber hose. Based on the design pressure of Domestic Water, there is reasonable assurance that the hose will not be over pressurized and rupture. Should the temporary hose rupture there is no concern for pipe whip since domestic water is not considered high energy. Rupture of this hose could result in minor flooding in the turbine building. However, the compressor and the supply line are located on the 585' elevation (ground level) and no equipment problems would be expected. An inlet hose rupture would result in compressor overheating. Alarms in the Control Room would alert the plant operators of a potential cooling problem. A rupture of the outlet hose is not expected. Should the hose rupture, the water would be expected to drain to the sump via the floor drains, the service water pipe tunnel, or condenser pit, which have already been evaluated for flooding. There is no equipment required for safe shutdown in the vicinity of the temporary hose.

Based on the above review, this TM to provide alternate cooling to Station Air Compressor 1-1 from Domestic Water is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
TM 00-019 and TM 00-020 (SE 00-0018)

TITLE:

Control Room Normal Ventilation System Isolation Dampers during 12RFO

CHANGE:

Temporary Modifications TM 00-019 and TM 00-020 keep the Control Room Normal Ventilation System (CRNVS) Isolation Dampers open when the SFAS cabinets are de-powered for a SQUG Modification during the 12th Refueling Outage.

REASON FOR CHANGE:

For environmental habitability concerns, it is desirable to keep the Control Room Normal Ventilation System in service.

SAFETY EVALUATION SUMMARY:

Closure of the CRNVS isolation dampers to accomplish isolation of the control room is described in USAR Section 15.4, Class 3 - Design Basis Accidents. The TMs are restricted to Modes 5 and 6 only; therefore, the need for system isolation for accidents during power operation does not apply. Based upon the assumptions used, the waste gas decay tank rupture accident (WGDTRA) and the fuel handling accident (FHA) results in larger radiation releases in Modes 5 and 6. The WGDTRA mainly results in the release of noble gases; therefore, operation of Control Room Emergency Ventilation System (CREVS) is not required since the gases are non reactive. The CRNVS will be isolated by the station vent radiation monitors. Evaluations performed showed that the control room doses are below GDC 19 guideline values even if the control room is not isolated.

For the FHA, the evaluations relied upon the isolation of CRNVS by the station vent radiation monitors. During installation of the TMs, this automatic isolation will not occur on the train which has the TM installed. The redundant train will still be able to perform this function, but does not allow for a single failure. This is acceptable for the TM conditions due to the following reasons: 1) The time that the system will be in this condition is very short. 2) Technical Specifications allows one channel of station vent radiation monitors to be inoperable for 7 days before an action is required. 3) The TM is not complex and if the need should arise for isolation of that train, it could occur in a short time. 4) The system will be operating in the recirculation mode, with the outside air supply dampers closed. This mode of operation provides additional margin for control room habitability since outside air would not be introduced into the control room.

The proposed temporary modifications are acceptable for implementation and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
TM 00-0021 (SE 00-0017 Rev. 1)

TITLE:

Auxiliary Domestic Hot Water Heater Alternate Supply

CHANGE:

BE318 will be used as a temporary supply breaker.

REASON FOR CHANGE:

Auxiliary Domestic Water Heater is normally powered from 480V Unit Substation E3 through breaker BE303. BE303 has a broken racking mechanism; therefore BE318 will be used as a temporary supply breaker.

SAFETY EVALUATION SUMMARY:

This TM shifts the electrical load from BE303 to a breaker to be installed in BE318. Breaker BE303 will be installed at BE318, with the same settings as were used at the original location. Since BE318 will be fed from the same substation, the plant electrical distribution will be unaffected. BE303 and BE318 are not important to safety. Cubicle BE318 is presently unused, so no loads will be displaced when this TM is implemented.

Based on the above, this TM is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
TM 98-0034 (SE 98-0044)

TITLE:

Gag Main Steam Safety Valve SP17B7

CHANGE:

Temporary Modification (TM) 98-0034 installs a gag on Main Steam Safety Valve (MSSV) SP17B7.

REASON FOR CHANGE:

MSSV SP17B7 developed a seat leak. The valve is considered inoperable and may lift at a setpoint below 1050 psig.

SAFETY EVALUATION SUMMARY:

Installing a gag on a MSSV reduces the total relieving capacity of the MSSVs. Technical Specification 3.7.1.1 permits continued operation with inoperable MSSVs provided that the high flux trip setpoint is reduced. The reduction in high flux trip setpoint, which is a function of the operable relieving capacity, restricts the maximum thermal power at the initiation of a turbine trip. The total design relieving capacity of the MSSV's exceeds the minimum required relieving capacity.

The liquid relief capacity of the MSSVs is credited with preventing overpressurization of the steam generators in the event of a failed open feedwater control valve. In USAR section 15.2.10.2.4, it is concluded that four MSSVs per steam generator are sufficient to handle the transient feedwater flow. Gagging of SP17B7 will not affect the consequences of this accident because eight MSSVs remain available.

Technical Specification 3.7.1.1 requires that there be at least one operable MSSV per steam generator set at 1050 psig. The basis for this requirement is the ASME Section III Code requirement that at least one of the pressure relief devices be set no greater than the maximum allowable working pressure of the system at design temperature. Installation of a gag on one 1050 psig set MSSV with two still set at 1050 psig on a steam generator has no effect on safety because the system meets ASME Code requirements.

Based on the above, it is concluded that the proposed TM does not have an adverse effect on safety and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
TM 98-0036 (SE 98-0045)

TITLE:

Pressurizer Code Safety Valve Discharge Rupture Disc

CHANGE:

TM 98-0036 removes the rupture disc pressure diaphragm from PSE 5461, 5462, 5463 and 5464, Pressurizer Safety Valve Rupture Disks, by intentionally bursting both rupture discs on each valve discharge tee.

REASON FOR CHANGE:

The current configuration has a discharge tee on the valve outlet with a rupture disc on each end of the tee. This was deemed unacceptable since it could impose an unbalanced load on the Pressurizer nozzle if only one rupture disc was burst during safety valve blowdown.

SAFETY EVALUATION SUMMARY:

The Pressurizer Relief Valve Systems safety function is unimpaired by this TM provided it does not affect the valve lift set point or capacity. RC13A and RC13B are spring safety valves with internal bellows that prevent backpressure from affecting the operation of the valve. The drain lines for the discharge piping maintained the backpressure on the valve between 25 psig and 90 psig. The removal of the rupture disks reduces the backpressure to atmospheric pressure. This change does not affect valve function because the new pressure is within the 700 psig rating of the bellows. Bursting the rupture discs assures adequate flow area and equal distribution of flow in the discharge piping. Therefore, the achieving of critical pressure ratio at the valve nozzle is unaffected and blowdown forces are minimized and reduced to an acceptable level. Based on the above the TM does not affect the setpoint and does not affect the overpressure protection of the RCS.

Removal of the drain line from the quench tank removes a small heat load from the tank. The capping of the drain line allows for the maintenance of the nitrogen blanketing. The TM does not affect the ability of the Pressurizer Quench Tank to perform it functions.

After installation of the TM, Pressurizer Code Safety Valve seat leakage will become a portion of the unidentified leakage and will be quantified by the RCS inventory balance. Safety valve seat leakage will be fluid from the Pressurizer steam space. The leakage will result in a dispersion of dry boric acid crystals to the containment with the potential for a lesser amount of liquid dripping on the mirror insulation on top of the Pressurizer that would evaporate and result in a dry residual of boric acid on the mirror insulation. These conditions do not pose an increased risk for boric acid corrosion for any carbon steel components.

Based on the above discussion, this TM is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
TM 99-0007 (SE 99-0031)

TITLE:

EDG Ventilation Dampers Locked to Full Outside Air Configuration

CHANGE:

The Emergency Diesel Generator (EDG) Room supply, return, and exhaust dampers will be mechanically locked in the full outside air position, while its temperature element and controller are being replaced.

REASON FOR CHANGE:

To keep the EDG and its Ventilation System available for service, while the existing faulty temperature element and the associated temperature controller are being replaced, the supply, return, and exhaust dampers will be mechanically locked in the full outside air position. This alignment provides for maximum cooling capability when the Diesel Generator is started.

SAFETY EVALUATION SUMMARY:

The EDG Specification provides a low temperature limit of 50°F for the EDG room to ensure the EDG is warm enough to start within 10 seconds with no equipment damage. By disconnecting the damper operator mechanisms and using clamping mechanisms, the proposed temporary modification maintains the supply and exhaust dampers open. This will allow some potentially colder outside air mixing with the room air. With the limitation that outdoor temperatures are above 32°F, with the EDG in standby, the room will be maintained acceptably warm for subsequent EDG operation. With the EDG in operation, the Ventilation System normally has no capability to limit the high temperatures of the room, other than automatically opening the supply and exhaust dampers and closing the return damper. Since this is the same configuration as that proposed, there will be no effects during high outdoor temperatures.

As the EDG room temperature drops to 50°F, which can be determined locally by operators, the temporary configuration will not ensure the capability of the engine to perform a 10-second start. As the outdoor temperature drops to 32°F, which can also be determined by operators with existing plant indications, the temporary configuration described may not keep fluid pipes in the room from freezing if the engine starts and the fans operate. For these reasons, actions will be taken to either restore the configuration to normal, or remove the EDG and its ventilation system from service when the limits are met.

Based upon the above evaluation, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
TM 99-0022 (SE 99-0026)

TITLE:

Portable Filtration Units in Containment

CHANGE:

This TM will install four portable HEPA filtration units in containment and a portable air sampler.

REASON FOR CHANGE:

The change is intended to reduce the particulate concentration in the containment atmosphere. The particulate material, is clogging the filters for the containment radiation monitors, RE4597AA and RE4597BA, which results in a low flow condition every 24 to 48 hours. Normal filter change interval is weekly or even monthly.

SAFETY EVALUATION SUMMARY:

The 480/120 Power Pac and HEPA filters in the portable filtration units are enclosed and are secured and will not result in any debris generation that could potentially cause ECCS sump blockage in a post-LOCA condition. In addition, the location of the units will not be near any high energy lines which could expose the units to jet impingement or pipe whip. The 480/120 Power Pac and HEPA unit also do not contain any significant amount of galvanized steel or aluminum which would result in post-LOCA hydrogen generation.

The HEPA filter units will be located more than 20 feet away from the closest radiation monitor sample point to ensure the monitor continues to have a representative sample of the atmosphere.

The electrical system design provides both primary and backup fault protection for power circuits which are energized during plant operation and are routed through electrical penetrations. Should the primary protection fail to act, the backup will act in sufficient time to preclude thermal and mechanical damage to the penetration assembly under fault conditions.

This TM is intended to reduce the particulate concentration in the containment atmosphere. The availability of the Containment Radiation Monitors will increase once the particulate concentration is reduced.

In summary, there are no effects on safety as a result of TM 99-0022, and no USQ is involved.

SAFETY EVALUATION SUMMARY
FOR
TM 99-0023 (SE 99-0028)

TITLE:

Removal of Fire Damper FD1164 and Installation of Temporary Ductwork For the Lab Hood Exhaust Fan C61

CHANGE:

Remove the ductwork that contains Fire Damper FD1164 and install a temporary piece of ductwork constructed out of duct board.

REASON FOR CHANGE:

This Temporary Modification will allow the return to service of the Lab Hood Exhaust Fan C61 and its associated filter unit with Fire Damper FD1164 removed.

SAFETY EVALUATION SUMMARY:

This TM will have no impact on the safety functions of the Auxiliary Building Radioactive Area Ventilation System.

FD1164 is not required to mitigate an Auxiliary Feed Water Pump Turbine (AFWPT) Supply Line break.

Removing the Lab Hood Exhaust Fan from service to install and remove this TM will affect the air balance in the Auxiliary Building. When the Lab Hood Fan is removed from service, the total supply to the radwaste area will be slightly greater than the exhaust. This would create a slight positive pressure and could result in the spread of contamination. To prevent this, the Radwaste Area Ventilation System shall be shutdown in accordance with the system procedure, DB-OP-06512, during the installation and removal of this TM.

The Station EVS ability to obtain a negative pressure in the Shield Building and filter any ESF leakage will not be impacted by the TM. However, when the ductwork is opened or removed, the ability of the Station EVS to obtain a negative pressure in the Fuel Handling Area after a fuel handling accident will be affected. This situation will be addressed by the work order, which requires entry into TS 3.9.12 when the duct is removed or the access door is opened.

Based on the above, the implementation of this TM is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
TM 99-0030 (SE 99-0047)

TITLE:

Provide a Parallel Flow Path For Providing Water to the Intake Canal

CHANGE:

Install a temporary parallel flow path to the normal Lake Erie intake crib/conduit to intake canal flow path. This parallel flow path will consist of a pump submersed in a trench that has been dug in the Lake Erie shoreline, a tractor with a power take off, for powering the pump a diesel fuel supply staged for the tractor at the lake shoreline, and a 16" diameter discharge made-up of segments of rigid and flexible plastic pipe to provide a flow path over the dike at the end of the intake canal and into the intake canal.

REASON FOR CHANGE:

To provide an additional flow path for water from Lake Erie to the intake canal [to compensate for potential frazil ice blockage of the Lake Erie offshore intake crib].

SAFETY EVALUATION SUMMARY:

The pump will be continually manned when in use and the personnel manning the pump will be in communication with the Operations staff.

The pump's suction elevation, low velocity, and its discharge elevation will ensure that no debris is introduced into the intake canal/forebay that could adversely affect the safety related equipment that is cooled via the intake canal/forebay.

Actions will be taken to preclude erosion of the side of the intake canal and the transfer of the debris that such erosion could produce. Also, any sediment or debris that could fill in the canal/intake would be deposited in the intake canal and would not be transported to the intake forebay. Therefore, there will be no introduction of debris into the intake forebay that would decrease the volume of water available for the ultimate heat sink.

The additional flow path will not flood the intake canal/forebay nor will it cause detrimental effects to the intake canal or forebay structures.

Based on the above, it is concluded that there are no adverse effects on the functions important to safety of the affected SSCs and a USQ is not involved.

SAFETY EVALUATION SUMMARY
FOR
UCN 00-001 (SE 00-0001)

TITLE:

Staffing Changes in the Work Management Organization

CHANGE:

Create two new positions, Superintendent-Maintenance Services and Superintendent-Maintenance Support and eliminate the positions of Supervisor-Outage Management and the Supervisor-Operations Work Control Management.

REASON FOR CHANGE:

To enhance the structure of the Work Management organization, several job responsibilities require realignment.

SAFETY EVALUATION SUMMARY:

The realignment of responsibilities described in this change is solely administrative, as it enhances the structure of the Work Management organization. All functions and activities described in the USAR continue to be performed. The proposed actions are therefore considered safe and do not involve an unreviewed safety question (USQ).

SAFETY EVALUATION SUMMARY
FOR
UCN 00-005 (SE 00-0005)

TITLE:

Revise Configuration of Fan C46 (Elevator Machine Room Exhaust Fan)

CHANGE:

Revise the USAR to state that Fan C46 (Elevator Machine Room Exhaust Fan) will be kept normally shutdown.

REASON FOR CHANGE:

PCAQR 97-0248 indicated that there is some potential for the fan to draw steam-laden air into the Component Cooling Water (CCW) pump room if a high energy line break (HELB) should occur in the turbine building.

SAFETY EVALUATION SUMMARY:

Fan C46 has no safety related function. Operation of the plant for several years without fan C46 in service has shown that the fan is not needed to supply heat to the Component Cooling Water system in operation. Also, no air balance problems have occurred due to operation of the Turbine Building Roof Exhaust Fan. Although it is not a safety related function, adequate air exchange is provided by the safety related CCW ventilation system, which is normally in operation. Therefore, there is no safety related impact due to shutting down fan C46 and closing its damper, HV5709, and there is no safety related impact to the CCW system.

Based on the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 00-010 (SE 00-0006)

TITLE:

Correction to USAR Statement Regarding Service Water Pressure

CHANGE:

UCN 00-010 makes clarifications by deleting statements that the service water pressure is higher than containment pressure post LOCA and is higher than containment design pressure.

REASON FOR CHANGE:

Condition Report 1999-2084 describes a concern that the USAR did not take into account a single failure, which could leave one train of Service Water depressurized and consequently at a lower pressure than Containment atmosphere after a LOCA. Also the USAR did not take into account Containment Air Cooler return header pressure is lower than Containment pressure post LOCA during certain conditions.

SAFETY EVALUATION SUMMARY:

In the event of a single failure, a service water train could be left depressurized. However, the Service Water System piping and components in containment are designed to be seismic category 1 and are protected from jet impingement effects, and therefore will remain intact during a SSE and a LOCA. This will prohibit radioactivity from leaking into the system regardless whether or not the service water pressure is higher or lower than containment pressure. Therefore there are no effects on safety from the proposed change in the USAR wording of UCN 00-010, and no USQ is involved.

SAFETY EVALUATION SUMMARY
FOR
UCN 00-015 (SE 00-0009)

TITLE:

Reclassifying Penetration 4 as an EVS Bypass Leakage Penetration

CHANGE:

The proposed UCN changes the classification of penetration 4, CCW containment return header, from an EVS non-bypass penetration to a bypass penetration.

REASON FOR CHANGE:

A review of the design of the CCW containment supply and return header, penetration 3 and 4, against the USAR described criteria for bypass leakage identified that Penetration 4 should be classified as a bypass penetration. This conclusion was based on the fact that leakage through the CCW containment return header isolations valves has the potential to migrate to the essential CCW header. Any subsequent leakage would enter areas that are not served by the EVS system.

SAFETY EVALUATION SUMMARY:

Changing the classification of penetration 4 from a non-EVS bypass penetration to a bypass penetration has no effect on safety. Reclassifying penetration 4 as a bypass leakage path does not affect the Technical Specification (TS) allowed bypass leakage limit or the dose consequences associated with the Maximum Hypothetical Accident described in USAR section 15.4.6.4 because the bypass leakage criteria limit of $\leq 0.03La$ is not affected. TS requirements, the USAR assumptions, and the resultant dose consequences will still be met. The acceptance criteria for penetration 4 will be changed to a more restrictive leak rate, which is conservative. Also, the individual penetration leak rate criteria has no effect on the TS and USAR assumptions or requirements.

Based on the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 00-018 (SE 00-0013)

TITLE:

Manually Operate Cask Crane Main Hook Interlock Limit Switch

CHANGE:

Manually operate the cask crane main hook interlock limit switch to allow the use of the main hook over the cask pit or transfer pit.

REASON FOR CHANGE:

The spent fuel cask crane is electrically interlocked to prevent the crane from inadvertently traveling over irradiated fuel. If this interlock is bypassed, the main hook becomes inoperative; only the auxiliary hook can be used. This interlock was originally located between the cask pit and the spent fuel pool area. To allow irradiated fuel to be stored in the cask pit, the physical location of the interlock was changed to comply with the USAR commitment related to use of main hook over irradiated fuel. The use of the main hook is needed to assist in moving certain heavy loads over the transfer pit or cask pit when no fuel is in the respective pit. Since the main hook is inoperative due to relocation of the interlock, the main hook needs to be made operative using administrative controls.

SAFETY EVALUATION SUMMARY:

With no irradiated fuel in the cask pit or fuel transfer pit area, there is no safety concern regarding the use of the main hook to move heavy loads over these pits. However, with the interlock defeated, additional administrative controls will be necessary to prevent unintended movement of the main hook over irradiated fuel with loads hanging. These administrative controls are similar to the administrative controls that are credited for DBNPS in the NUREG 0612, Phase I evaluations.

The proposed change has no effect on plant safety and does not involve an unreviewed safety question.

SAFETY EVALUATION SUMMARY
FOR
UCN 00-019 (SE 00-0012)

TITLE:

Fuel/Control Component Shuffle

CHANGE:

DB-NE-06101, Revision 3 and UCN 00-019 implement a method of manually transporting control components, including Burnable Poison Rod Assemblies, Axial Power Shaping Rods, and Control Rods.

REASON FOR CHANGE:

In some cases, control components may not be able to be transported by conventional methods, due to bowing/twisting of the host fuel assembly, distortion of the control component, a combination of both, etc. In these rare cases, it is necessary to transport the control component using an alternate method.

SAFETY EVALUATION SUMMARY:

There are two potential events that may occur during the manual transport of control components: dropping the component, or raising the component too close to the surface of the water.

In the event that a control component is dropped during transport, it will not impact any safety related active components, or adversely effect any safety related passive components, such as the fuel racks, refueling canal liner, spent fuel pool liner, or fuel cladding.

Administrative controls will exist to ensure adequate shielding is maintained when using alternate manual methods to transport control components. Administrative controls will exist to ensure that excessive force is not applied to control components when using alternate manual methods.

Based on the above, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 00-026 (SE 00-0022)

TITLE:

CNRB Meeting Frequency

CHANGE:

Revise USAR Section 13.4.2 regarding CNRB meeting frequency and the time to issue CNRB meeting minutes.

REASON FOR CHANGE:

This UCN changes Davis-Besse requirements for CNRB meeting frequency and the time to issue CNRB meeting minutes to be in literal compliance with the requirements of ANSI/ANS-3.2-1982 Section 4.3.2.2 (Meeting Frequency) and Section 4.3.2.4 (Meeting Records) as referenced in the FENOC Quality Assurance Program Manual (QAPM).

SAFETY EVALUATION SUMMARY:

The proposed changes do not affect the safety function of any SSCs and are considered to be safe. The changes are solely administrative and pertinent existing USAR requirements are not being reduced. These changes do not involve an unreviewed safety question.

SAFETY EVALUATION SUMMARY
FOR
UCN 00-036 (SE 00-0028)

TITLE:

Changes to the Fire Hazard Analysis Report

CHANGE:

UCN 00-036 will revise the FHAR Operating Specifications to clarify that the Diesel Fire Pump (DFP) starts after the sequential start relay times out.

REASON FOR CHANGE:

The Operating Specifications Surveillance Requirements states that the Diesel Fire Pump starts on decreasing water system pressure of at least 95 psig and "after the automatic start signal on the electric fire pump." It is believed that the additional words were put in to account for the time delay that had been added by Modification 88-0084. While a decreasing system pressure will result in an "automatic start signal on the electric fire pump" these words lead to confusion in the context of testing the DFP.

SAFETY EVALUATION SUMMARY:

This change to the FHAR will correct some confusing wording that carried over from the original version of the Operating Specifications. The change does not change the limiting condition for operation (LCO). The existing wording in SR 8.1.2.E.4.1 states that the pump starts on decreasing water system pressure of at least 95 psig and "after the automatic start signal on the electric fire pump." The change removes reference to the electric fire pump start signal and adds wording that the DFP starts "after the sequence starting relay has timed out." The electric fire pump should not be included in the discussion of the DFP starting functions since they are not directly tied to each other.

The proposed change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 96-180 (SE 99-0020)

TITLE:

Clarify USAR Section 7.2, Reactor Protection System

CHANGE:

This USAR change corrects discrepancies within USAR Section 7.2, Reactor Protection System (RPS).

REASON FOR CHANGE:

During a cycle review of the USAR several deficiencies were identified for USAR Section 7.2.

SAFETY EVALUATION SUMMARY:

The discrepancies with USAR Section 7.2 involve the level of detail maintained in the USAR and are strictly administrative in nature. This change adds information that is already accounted for in the design that is described in the USAR, corrects a contradictory description regarding the capabilities of the station annunciator to indicate power range detector power supply fault, and clarifies the extent of testing that is performed. There is no effect on safety, and the design bases of the plant is unaffected by these issues.

Based on the above, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 96-184 (SE 98-0052)

TITLE:

Safety Related Equipment in Turbine Building

CHANGE:

Remove the statement that there is no safety-related equipment located within the turbine building from USAR Section 10.4 and revise USAR Section 3.6 with respect to condensate and circulating water system flooding of essential equipment.

REASON FOR CHANGE:

A PCAQR identified that contrary to a USAR statement, there were various safety related equipment located within the turbine building.

SAFETY EVALUATION SUMMARY:

FSAR/USAR Section 3.6.2.7.2.13, postulated line rupture considerations for the Circulating Water System, describes the levels at which various components are flooded. It states that there is "no other major equipment of consequence" (other than what was listed) below the 585'elevation. At the time it was written, this statement was correct. The section was revised after addition of the motor driven feedwater pump (MDFP). However, although the MDFP was listed as being flooded, the pump accessories/valves were not listed. These accessories or valves do not need to be listed individually for loss of function because loss of the MDFP discharge valve (for example) is clearly not significant after loss of the pump itself. Thus, the MDFP will be listed as the MDFP "system" to imply inclusion of peripheral equipment. This change does not affect the reliability of the MDFP system.

USAR Section 3.6.2.7.2.13 will also be revised to indicate that the ARTS switches which detect trips of the Main Feedwater Pump Turbines (MFPTs) will be flooded in the event of a large circulating water system rupture, and that this is an acceptable condition. The ARTS was added in response to IE Bulletin 79-05B and NUREG 0737 item II.K.2.10, with the intent of lessening the frequency of challenges to the pressurizer Pilot Operated Relief Valve. When ARTS was added to the plant, USAR Section 3.6.2.7.2.13, was not updated. However, submergence of the ARTS pressure switches will not defeat the design intent of the ARTS. Based upon the review of the ARTS design basis, it is concluded that the ARTS switches which sense loss of MFW were neither required nor designed to be protected from internal flooding. Therefore this UCN does not affect the reliability of the ARTS system.

Based on the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 96-202 (SE 98-0046)

TITLE:

Revise USAR Section 3.9.2.6.1, Functional Testing of Active Pumps and Valves

CHANGE:

UCN 96-202 will replace USAR Section 3.9.2.6.1 with a general description that the Inservice Testing (IST) Program meets the requirements of the section. In addition, even though other activities presently listed in the section are not required to meet the intent of the section, UCN 96-202 will discuss plant programs that control these other activities.

REASON FOR CHANGE:

The specific functions cited in USAR Section 3.9.2.6.1 is a partial list of testing activities which were performed, as required, to satisfy original ASME Code fabrication testing requirements, and testing activities which are performed as required on an ongoing basis to satisfy current ASME Code requirements for both installed components and to meet engineering specifications for new, repaired and replaced components. Because Davis-Besse is now in the operational phase, the plant startup activities will not be repeated. As such, testing conducted to meet current ASME Code requirements more accurately demonstrates operational readiness for Class 1, 2, and 3 active pumps and valves than the present description.

SAFETY EVALUATION SUMMARY:

Since the plant programs to be discussed in UCN 96-202 encompass all activities presently described in Section 3.9.2.6.1, no testing presently described in the section will be discontinued, nor will any new testing be required, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 97-001 (SE 98-0049)

TITLE:

Purchase Specifications

CHANGE:

Revise USAR Section 8.3.1.2.28 to eliminate the requirement of a purchase specification when procuring safety-related electrical items.

REASON FOR CHANGE:

The procurement process was revised to use procurement packages to ensure that appropriate technical requirements are associated with each safety-related purchase.

SAFETY EVALUATION SUMMARY:

USAR Section 8.3.1.2.28 ensures that technical and programmatic requirements are identified and documented during procurement activities. This USAR section also incorporates the requirements of 10 CFR 50 Appendix B, Criterion IV, Procurement Document Control. The procedure for Material Engineering Evaluations provides for development of a procurement package when needed, completion of technical evaluations when quality classification must be performed, assignment of technical and quality requirements using a Data Assignment Sheet, identification of testing requirements, and incorporation of standard program requirements. Several years of experience with this process have proven that when the procedure is followed, the process creates appropriate, detailed documentation of all procurement requirements without using procurement specifications.

This change has no effect on safety and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 97-004 (SE 00-0010)

TITLE:

Add Specification M-367Q to USAR Section 7.4.1.4

CHANGE:

UCN 97-004 clarifies USAR Section 7.4.1.4, Anticipatory Reactor Trip System (ARTS), by noting that specification E-241Q only applies to the ARTS cabinets and adding a reference to specification M-367Q for the ARTS pressure switches.

REASON FOR CHANGE:

Specification E-241Q was written for the ARTS system only and does not cover the requirements for the sensors (pressure switches) which are also included in the system boundary.

SAFETY EVALUATION SUMMARY:

Adding specification M-367Q to USAR Section 7.4.1.4 will complete the referenced information in the section by including the information for the pressure switches. The omission of M-367Q was an oversight since the referenced specification does not include any information for the pressure switches.

Based on this, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 97-070 (SE 97-0022)

TITLE:

Correcting Resin Volume For Spent Fuel Pool Demineralizer

CHANGE:

This USAR change corrects the resin volume for the Spent Fuel Pool Demineralizer in USAR Table 9.1-1, Spent Fuel Pool Cooling System Design Parameters and Major Equipment Data.

REASON FOR CHANGE:

PCAQR 96-0969 identified inconsistencies in design basis documents for the Spent Fuel Pool System.

SAFETY EVALUATION SUMMARY:

The systems and component affected by this USAR change do not perform functions important to safety. Increasing the reported volume of resin in the in the Spent Fuel Pool Deminerailizer, has no effect on any system or component performance. This change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 98-004 (SE 98-0048)

TITLE:

USAR Table 5.1-8 Transient Cycle

CHANGE:

Add a footnote to the design cycles column, of USAR Table 5.1-8, indicating the High Pressure Injection (HPI) System elbolets for test connections PP746 and PP748 are limited to 13 design cycles for the Rapid Depressurization transient.

REASON FOR CHANGE:

Teledyne Engineering Services (TES) identified the Rapid Depressurization transient is estimated to occur 40 times during the life of the plant. TES found in a stress calculation, that if the HPI PP746 and PP748 elbolets were subjected to 40 Rapid Depressurization cycles they would not meet the rules of ASME Section III, NB-3650. In lieu of a detailed analysis of the elbolets, Bechtel requested TES reduce the number of cycles to a point that would meet the NB-3650 rules.

SAFETY EVALUATION SUMMARY:

Decreasing the elbolets Rapid Depressurization transient design cycles to 13 is safe because the requirements of the Allowable Operating Transients Cycles Program will ensure the elbolets design cycle limits and ASME Section III cumulative fatigue usage factors are not exceeded. There are currently 8 Rapid Depressurization cycles or their transient equivalent on the HPI elbolets. The 8 cycles is considered conservative based on information contained in the Allowable Operating Transient Cycles logs and files.

These changes have no effect on safety and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 98-009 (SE 98-0042)

TITLE:

Additional Containment Penetrations Classified as Bypass Penetrations

CHANGE:

Reclassify Penetrations P17, P32, P41, P48, P42B, P71B and P73B as Containment Bypass Penetrations.

REASON FOR CHANGE:

PCAQR 97-0545 initiated an evaluation to review how Containment Penetrations are categorized as "bypass" or "non-bypass" penetrations and to determine if the USAR was properly identifying which penetrations are "bypass penetrations."

SAFETY EVALUATION SUMMARY:

The addition of seven penetrations to the containment bypass classification has no effect on the safety function of the penetrations to perform their intended design or safety function. This administrative change merely increases the number of penetrations whose leakage is being summed to calculate a bypass leakage value. This change will continue to satisfy the Technical Specification for secondary containment bypass leakage paths.

Based on the above, the proposed change is safe and does not involve a USQ.

SAFETY EVALUTION SUMMARY
FOR
UCN 98-012 (SE 99-0011)

TITLE:

Emergency Diesel Generator Fuel Oil System

CHANGE:

Add the following list of exceptions to the USAR discussion on the design of the Emergency Diesel Generator Fuel Oil Storage and Transfer System:

- Fuel samples are analyzed in accordance with diesel manufacturer recommendations. Out of specification conditions are corrected by filtration, water removal or fuel replacement as appropriate.

- Fuel Oil Storage Tanks are drained and cleaned at a maximum interval of ten years.

REASON FOR CHANGE:

The existing USAR section did not distinguish between design requirements and maintenance requirements.

SAFETY EVALUATION SUMMARY:

Cleaning of the Fuel Oil Storage Tanks at a maximum interval of ten years has no effect on safety because fuel oil quality is monitored through periodic sampling. Actual cleaning intervals are based on experience and fuel quality. The use of manufacturer specifications for fuel quality and compliance with Technical Specifications for fuel quality ensures that this change does not adversely affect reliability of the Emergency Diesel Generator Fuel Oil Storage and Transfer System.

Based on the above, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 98-022 (SE 99-0008)

TITLE:

Seismic Qualification of Valves SW1424, SW1429, and SW1434

CHANGE:

Revise the USAR to reflect the seismic re-analysis of Service Water control valves SW1424, SW1429, and SW1434.

REASON FOR CHANGE:

It was discovered that the nozzle loads were not considered in the qualification of the Component Cooling Water (CCW) heat exchangers. In order to reduce the applied nozzle loads on the CCW heat exchangers, the associated piping system was modeled with the heat exchangers. This refined modeling technique altered the system frequency of the piping analysis and the acceleration on the Service Water System control valves SW1424, SW1429, and SW1434.

SAFETY EVALUATION SUMMARY:

An evaluation on valves SW1424, SW1429, and SW1434 revealed that the allowable acceleration values were conservative in the original qualification report.

The new pipe stress analysis, that included piping associated with the three CCW heat exchangers, resulted in an increase in the seismic demand on the SW1424, SW1429, and SW1434 valves. However, the seismic capacity of these valves exceeds the seismic demand identified in this new analysis. Therefore, these valves will continue to perform their design function during a seismic event, as proven by modeling the heat exchangers as part of the piping system.

Based on the above, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 98-030 (SE 00-0003)

TITLE:

Revise the USAR Regarding the Effective Leakage Area in the Shield Building

CHANGE:

Change the effective leakage area in the shield building negative pressure boundary given in USAR section 6.2 from 2.8 ft^2 to the original value of 2.4 ft^2.

REASON FOR CHANGE:

The 2.8 ft^2 leakage area value was based on extrapolation of the results of Davis-Besse Units 2 and 3 calculations for leakage areas of 0.4 ft^2, 0.8 ft^2, 1.6 ft^2 and 2.4 ft^2. There were no evaluations at 2.8 ft^2 leakage area. Since the negative pressure drawdown time markedly increases as a function of leakage area when the leakage area is greater than 2.4 ft^2, it is considered that the use of extrapolation is not an appropriate method to establish a design basis value. Therefore, the allowable leakage area is being changed to the original value of 2.4 ft^2.

SAFETY EVALUATION SUMMARY:

Technical Specification (TS) 4.6.5.2.2 verifies that the EVS produces a negative pressure greater than or equal to 0.25 inches of water gauge in the annulus within 4 seconds after the fan attains full flow. The 4 seconds value was based on a leakage area of 2.4 ft^2. Thus, the plant was always verifying that the leakage area did not exceed 2.4 ft^2. The 4 second value is based on an original Bechtel Calculation.

USAR pages 6.2-42, 6.2-43 and 6.2-45 were revised to state a leakage from 2.8 ft^2 was acceptable based on a Bechtel safety evaluation from 1982. This safety evaluation was to support core drills through the negative pressure boundary during facility modifications. The justification in the safety evaluation for increased allowable leakage area was based on the extrapolation of results from a Units 2 and 3 calculation. The changes as part of that revision were not complete. In order to be complete, USAR figure 6.2-42 should have been revised. In addition, TS surveillance requirement 4.6.5.2.2 was not relaxed. Without a change to the TS, if the allowable leakage area exceeded the 2.4 ft^2 value, the surveillance requirement of TS 4.6.5.2.2 could not have been met.

Changing the allowed leakage area described in portions of the USAR from 2.8 ft^2 back to the original design leakage area of 2.4 ft^2 ensures that the specified function of the EVS and shield building of pulling a negative pressure is accomplished within the time period assumed in the analysis.

Based on the above, the proposed change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 98-032 (SE 98-0027)

TITLE:

Change to USAR Table 7.7-2 and Section 7.7.1.2.1

CHANGE:

Revise the maximum allowable ΔTc from 1°F to 3°F and add a discussion of plant operation with unbalanced OTSGs (i.e., non-zero ΔTc) to USAR.

REASON FOR CHANGE:

During off-normal conditions (e.g., fouled OTSG) it may be desirable to allow the steady-state feedwater flowrates to be ratioed to produce a non-zero ΔTc.

SAFETY EVALUATION SUMMARY:

The 3°F limit is based on engineering judgment and corresponds to the value that can be implemented without the need for any design verification calculations, provided all plant parameters remain within current limits. Evaluations were performed on the following factors to ensure that any ΔTc increases can be implemented safely and will not cause any unsafe operating conditions: Effects on the Core, Operation with Unbalanced OTSG Flows (or intentional ΔTc) (including the OTSGs, MFS, MSS and RCS), Accident Analyses with Unbalanced OTSG Flows (or intentional ΔTc), Steam Relieving Capacity, Transient Response with Elevated Feedwater Flowrate, Power Range NI Calibration, and Implementation. Based on the results of the evaluations, the proposed maximum allowable ΔTc of 3°F is safe and does not constitute an unreviewed safety question.

SAFETY EVALUATION SUMMARY
FOR
UCN 98-116 (SE 98-0040)

TITLE:

Staffing Changes in the Operations and Outage Management Organizations

CHANGE:

The USAR will be changed to describe the responsibilities of the Manager – Work Control and to identify the Supervisor - Work Control Unit as reporting to the Manager - Work Control.

REASON FOR CHANGE:

To restructure the Work Control and Outage Management organization.

SAFETY EVALUATION SUMMARY:

This organization change has no effect on any structures, systems, and components or their associated safety functions. The proposed change is administrative in nature, and does not affect the operation of any plant system. The proposed change to the USAR will allow the maintenance organization to integrate Outage Management and the Work Control Unit into a centralized organization.

The changes are considered safe and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 98-131 (SE 99-0046)

TITLE:

Remove Description of Interlock Associated With the RCP Control Circuitry

CHANGE:

Remove the USAR description of the interlock that prevents starting two or more Reactor Coolant Pumps (RCPs) simultaneously.

REASON FOR CHANGE:

This interlock is not installed in the plant or utilized by any USAR accident. Plant procedures and operator training eliminate the possibility that an operator would attempt to simultaneously start two or more RCPs.

SAFETY EVALUATION SUMMARY:

Evaluations have been performed to ensure that the change can be implemented safely and will not cause any unsafe operating conditions.

The proposed action will rely on the actions of the operators to ensure that the simultaneous startup of two or more RCPs does not occur, rather than relying on plant equipment to prohibit the accident. This is acceptable since: 1) prohibiting the startup of a RCP does not constitute the actuation of a safety system that would function to mitigate an accident, 2) the proposed activity is not modifying existing operator actions assumed by any accident analysis, 3) the proposed activity is not modifying any operator response times assumed by any accident analysis and, 4) no new operator actions will be required as a result of the proposed activity. Also, operators understand that two RCPs cannot be started simultaneously due to the large starting current needed for just one RCP. Because of this, the probability that one or more operators would simultaneously start two or more RCPs is considered to be zero.

Based on the above, this change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 98-134 (SE 98-0055)

TITLE:

Reconfigure Offsite Communications Between Control Room and Load Dispatcher

CHANGE:

Update the USAR to accommodate the new offsite communications reconfiguration between the Davis-Besse Control Room and the new FirstEnergy Load Dispatcher

REASON FOR CHANGE:

During the implementation of a Switchyard/Relay House Transmission and Distribution modification, the Offsite Communications was reconfigured between the control room and the new load dispatcher.

SAFETY EVALUATION SUMMARY:

The Davis-Besse Control Room to/from FirstEnergy Load Dispatcher Communications System is not tied in any way to the other communications systems that would affect safety. This change is considered safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 98-135 (SE 99-0023)

TITLE:

SFAS Response Times

CHANGE:

UCN 98-0135 proposes changing the required response times for pressurizer sample valves RC240A and RC240B from 48 seconds to 45 seconds as listed in Table 3.3-5 of the Technical Requirements Manual (TRM).

REASON FOR CHANGE:

This change will correct an apparent typographical error and make the response time listed in section 2.i.5 of TRM Table 3.3-5 consistent with the response time given in section 4.i.5 of the Table for the same valves. Section 2.i.5 currently list a response time of 48 seconds and section 4.i.5 lists 45 seconds.

SAFETY EVALUATION SUMMARY:

The SFAS safety function affected is containment vessel isolation. Reducing the required response time as listed in the TRM for pressurizer sample line isolation valves RC240A and RC240B under a containment pressure – high trip from 48 seconds to 45 seconds is a conservative change. The test that verifies the response time currently lists the acceptance criterion as 45 seconds. Test records show that these valves typically respond within 20 seconds. Correcting a typographical error in the TRM will not prohibit the SFAS from performing any of its safety functions.

There is no pressurizer safety function affected by this change. Reducing the required response time for pressurizer sample line isolation valves as stated in the TRM has no effect on the ability of the pressurizer to form a barrier against the release of reactor coolant and radioactive material to the environs. Reducing the required response time as stated in the TRM is a conservative change.

Based on the above, the proposed action is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 99-003 (SE 99-0010)

TITLE:

Changes to the Fire Hazards Analysis Report

CHANGE:

The areas being changed are related to revising the National Fire Protection Association (NFPA) code year of record for the fire detectors in the plant; revising the description of the fire area OF (Office Building), changes to the safe shutdown circuits associated with the Emergency Diesel Generators (EDGs) and Makeup Pumps (MUPs), revising the location of the local connections for monitoring reactor coolant temperature (Th and Tc), and revising a discussion of the manual suppression in the Containment Building.

REASON FOR CHANGE:

These changes to the Fire Hazards Analysis Report (FHAR) will correct discrepancies within the FHAR.

SAFETY EVALUATION SUMMARY:

The changes being made to the FHAR are clarifying the FHAR to reflect changes made by previous modifications, and to make different sections of the FHAR consistent. These changes are administrative in nature, do not affect the safe shutdown of the plant, and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 99-010 (SE 99-0017)

TITLE:

Delete Reference to NT-ST-07042, "Nuclear Security Force Training" From Section 13.2 of the USAR

CHANGE:

Cancel procedure NT-ST-07042, Nuclear Security Force Training, and remove reference to it from the USAR.

REASON FOR CHANGE:

Organizational responsibility for security force training is being realigned from Nuclear Training to Nuclear Security.

SAFETY EVALUATION SUMMARY:

This is an administrative procedure that while changing the source of security training records identified in the USAR, does not affect design bases or single failure criteria analyzed in the USAR.

The change of records capture from NT-ST-07042 to IS-DP-07000 does result in a reduction of the retention period of Security Training records for an individual, from the lifetime retention established by NG-NA-00106, to three years after termination of employment. This reduction does not decrease the level of safety because three years after termination is the record retention requirement established by 10CFR73.55, and is therefore within the acceptance limit established by regulation.

Based on the above, this change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 99-022 (SE 99-0021 Rev.1)

TITLE:

Emergency Diesel Generator (EDG) Room Ventilation

CHANGE:

Revise the USAR to change the EDG room temperature from 120°F to 134°F.

REASON FOR CHANGE:

A Bechtel calculation erroneously established the EDG room temperature of 120°F with 95°F outside air temperature. A new calculation was performed to correct the previous errors in inlet air density and EDG heat load.

SAFETY EVALUATION SUMMARY:

Further evaluation of the EDG and associated components was performed for the conditions when the design temperature may be exceeded. The American Society of Heating, Refrigerating and Air-Conditioning Engineers design temperature selection stipulates that 1% of the time the design temperature can be exceeded. Past history shows that the design temperature is exceeded very infrequently and for a short duration in a day.

The EDG room temperature was calculated both for the 100 % and 110% load using outside air temperature excursion limit of 104°F based on the historical data and the probability of occurrence. The resulting EDG room temperatures were 141°F and 143°F respectively. An extensive evaluation of the EDG and its components determined that the EDG will remain functional at 110% load and outside air temperature of less than or equal to 101°F. EDG will also remain functional with 2600 kW load or less and outside temperature less than or equal to 104°F. The design basis diesel load for the loss of coolant accident with loss of off site power is less than 2600 kW. Therefore, these outside air temperature limits are conservative. A precautionary step has been added to a procedure to notify Engineering the EDG room temperature exceeds 120°F for an evaluation of the high temperature effects on the EDG components.

An evaluation of the operability of required equipment for the increased outside air temperature was performed on rooms which had not been previously evaluated as harsh environments and have no independent cooling method. The results determined the high temperature excursions will not cause a failure of the electrical equipment but will only induce thermal aging. The pumps are not expected to be adversely impacted by this short duration temperature excursions.

Based on the above discussions, it is concluded that the proposed changes are safe and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 99-038 (SE 99-0036)

TITLE:

Changes to the DBNPS Nuclear Group Organization

CHANGE:

The proposed change will: 1) eliminate the position of Director – Nuclear Support Services and reassign the associated responsibilities (Quality Services, Security, and Nuclear Training; 2) Create the position of Director – Work Management with the responsibility for Maintenance and Work Management; 3) Change the position of Director – Nuclear Assurance to Director – Support Services and add the responsibility for Quality Services and Security; 4) Separate the Chemistry activities from the Radiation Protection Section and the create the new position of Manager – Chemistry; 5) Change the position of Director – Engineering and Services to Director - Technical Services and add the responsibility for Nuclear Training.

REASON FOR CHANGE:

Facilitates organizational realignment at the DBNPS.

SAFETY EVALUATION SUMMARY:

The proposed change is an administrative realignment of responsibilities and reporting relationships to the Vice President and site Directors. The proposed change does not directly or indirectly affect the safety of any SSCs. This reorganization does not eliminate any functions or procedural activities currently being performed which could affect an SSC.

Commitments to Regulatory Guides and ANSI Standards such as Regulatory Guide 1.8 (9/75), ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel," continue to be met. Procedures required by Reg. Guide 1.33, "Quality Assurance Program Requirements," Appendix A are a minimum set of procedures for plant operation, including maintenance activities. This change does not affect procedural actions described in this listing of RG 1.33 recommended procedures.

These changes are safe and do not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 99-040 (SE 99-0041)

TITLE:

Correct Discrepancies Between Vendor Drawing and USAR Figure for Decay Heat Pump 1-1

CHANGE:

Correct discrepancies between Vendor Drawing M-517-23-3 and USAR Figure 6.3-4 for the Decay Heat Pump 1-1.

REASON FOR CHANGE:

PCAQR 98-0993 identified discrepancies between the vendor drawing and USAR figure.

SAFETY EVALUATION SUMMARY:

The comparison of head versus flow for DH Pump 1-1 shown in the USAR Figure with the vendor drawing showed no differences between the two curves. However, the comparison of the BHP versus flow curves showed a lower than 400 BHP for 4000 gpm in the USAR figure while the vendor drawing indicated about 410 BHP at 4000 gpm. The Emergency Diesel Generator 1-1 load table listed a value of 420 BHP for this pump. Therefore correcting the USAR figure to match the vendor drawing for BHP-Flow curves will not impact the function of the DH Removal System. Also, there are slight differences between the NPSH curves shown in the USAR figure and the vendor drawing. A calculation evaluated the available margin between the required NPSH and the available NPSH head when the DH Pump is drawing suction from the emergency sump. It references the vendor drawing. This calculation was reviewed to determine if the use of the values shown in the vendor drawing would create a problem. The results of this calculation verified that sufficient margin exists between the required and available NPSH. Therefore, revising the NPSH curve in the USAR figure to match the vendor drawing will not impact the function of the DH Removal System.

Based on the above, this change is considered safe and do not involve a unreviewed safety question.

SAFETY EVALUATION SUMMARY
FOR
UCN 99-041 (SE 99-0042)

TITLE:

Realignment of the Nuclear Training Section from the Director -Technical Services to the Plant Manager

CHANGE:

Revises the reporting responsibility of the Manager - Nuclear Training from the Director - Technical Services to the Plant Manager.

REASON FOR CHANGE:

Facilitates the organizational realignment at DBNPS.

SAFETY EVALUATION SUMMARY:

The proposed change is an administrative realignment of responsibilities and reporting relationship of the Nuclear Training Section. The proposed change does not directly or indirectly affect the safety of any Structures, Systems and Components (SSC's); nor eliminate any functions or procedural activities currently being performed which could affect any SSC.

The change is solely administrative as it revises the Nuclear Training Section reporting relationship. All activities currently being performed, as described in the USAR will be maintained in the new organization.

It is determined that the proposed change is safe and does not involve a USQ.

SAFETY EVALUATION SUMMARY
FOR
UCN 99-046 (SE 00-0002)

TITLE:

Removing HV2548 from USAR Table 9.3-1: Safety Related Air Operated Valves Required for Safe Shutdown

CHANGE:

The proposed change to the USAR removes HV2548 (the normal vent path isolation valve for the Reactor Coolant Drain Tank (RCDT) to the waste gas surge tank) from USAR Table 9.3-1.

REASON FOR CHANGE:

USAR Table 9.3-1 provides a tabulation of safety related air operated valves that are required for safe shutdown of the plant. Condition Report (CR) 1999-1503 questioned the basis for including HV2548 in Table 9.3-1.

SAFETY EVALUATION SUMMARY:

The function of the Reactor Coolant Drain Tank (RCDT) normal vent path is to allow for the displacement of RCDT cover gas to the Waste Gas Surge Tank during effluent additions to the RCDT. HV2548 is the normal vent path isolation valve. HV2548 is normally open providing a vent path for the RCDT. HV2548 fails closed on a loss of power or loss of instrument air. The function of HV2548 and the RCDT system is not a function important to safety and is not required for safe shutdown of the plant. Since HV 2548 is not required for safe shutdown of the plant and does not perform a function important to safety, removal of HV 2548 from Table 9.3-1 has no effect on safety and does not involve a USQ.

Docket Number 50-346
License Number NPF-3
Serial Number 2677
Enclosure 1

COMMITMENT LIST

THE FOLLOWING LIST IDENTIFIES THOSE ACTIONS COMMITTED TO BY THE DAVIS-BESSE NUCLEAR POWER STATION (DBNPS) IN THIS DOCUMENT. ANY OTHER ACTIONS DISCUSSED IN THE SUBMITTAL REPRESENT INTENDED OR PLANNED ACTIONS BY THE DBNPS. THEY ARE DESCRIBED ONLY FOR INFORMATION AND ARE NOT REGULATORY COMMITMENTS. PLEASE NOTIFY THE MANAGER – REGULATORY AFFAIRS (419-321-8450) AT THE DBNPS OF ANY QUESTIONS REGARDING THIS DOCUMENT OR ANY ASSOCIATED REGULATORY COMMITMENTS.

COMMITMENTS	DUE DATE
None	N/A