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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

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

In accordance with 10 CFR 50.59, the Report of Facility Changes, Tests, and Experiments for the Beaver Valley Power Station, Unit No. 2, is attached. This report provides a brief description of facility and procedure changes which required a 50.59 safety evaluation and a summary of the safety evaluations. The report covers the period of November 1, 1998, through October 25, 2000.

Each change was evaluated to determine (1) if the probability of occurrence or the consequences of an accident or the malfunction of equipment important to safety previously evaluated in the Updated Final Safety Analysis Report may be increased, or (2) if a possibility for an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report may be created, or (3) if the margin of safety as defined in the basis for any technical specification is reduced. In each case, it was determined that the change did not constitute an unreviewed safety question as defined in 10 CFR 50.59.

If you have any questions regarding this report, please contact Mr. Thomas S. Cosgrove, Manager, Regulatory Affairs at 724-682-5203.

Sincerely,

Lew W. Myers

Attachment

c: Mr. L. J. Burkhart, Project Manager
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Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

TABLE OF CONTENTS

Operating Manual 2OM-8.3.B.1, Valve 2BRS-575 Out of Normal Position For Greater Than 18 Months	1
Operating Manual 2OM-15, Change Normal System Arrangement of Valve 2CCP-28 From Open to Closed.....	2
Operating Manual 2OM 15.3.B.1, Option to Manually Control Valves for Component Cooling Water Subsystem	3
Operating Manual 2OM-33.3.B and C, 2OM-39.5.B.4, Fire Protection Water Distribution Network	3
Operating Manual 2OM-20.4.J, Circulating the RWST Through the Fuel Pool Ion Exchanger	4
Operating Manual 2OM-22A.4.F, Condensate System Shutdown.....	4
Operating Manual 2OM-27B.3.B.6 [2FOA], Valve List.....	5
Operating Manual 2OM-39.4.K [DC-SWBD2-5, 2-6], Cross-Tie for Maintenance or Loss of Battery Charger	6
Operating Manual 2OM-44A.4.F, Control Building Ventilation - Startup.....	7
Operating Manual 2OM-6.3, Valve List - 2RCS	8
Operating Manual 2OST-2.3, Nuclear Source Range Channel Functional Test	8
Operating Manual 1/2OST-30.21, Flood Door Seal System Operability Check	9
Operating Manual 1/2OM-53C.4A, AOP 1/2.75.1, Acts of Nature - Tornado	10
Chemistry Manual 2-3.37, Reactor Coolant Specifications and Guidelines for the Reactor Coolant System During Power Operation	11
Refueling Procedure 2RP 2.10 (2RP 2.6), Remove Guide Studs, Reactor Vessel Stud Installation and Tensioning.....	11
Administrative Procedure NPDAP 3.5, Fire Protection	12
Administrative Procedure NPDAP 3.5, Fire Protection	12
Maintenance Programs Unit Administrative Manual, Fuel Repair Box and Inspection Box Safe Load Paths.....	13
Test 2RST-2.1 and 2.2, Initial Approach to Criticality after Refueling and Core Design Check Test.....	14

Beaver Valley Power Station Unit 2
 Facility Changes, Tests, and Experiments
 November 1, 1998 - October 25, 2000

TABLE OF CONTENTS

Evaluation Performed To Increase The Ventilation In The Main Steam Valve House.....	15
Storage of Lead Blanket Shielding in Reactor Containment Building	15
Basis for Continued Operation BCO 2-99-001, Seismic Monitoring Instrumentation	16
2TOP-98-17, Operation of Steam Generator Start-up Feed Pump Seal Water Pump.....	16
2TOP-99-03, Discharging the Unit 2 Gaseous Waste Surge Tank to Atmosphere for Maintenance.....	17
2TOP-99-05, Sodium Hypochlorite Addition to the Unit 2 Circulating Water System.....	18
2TOP-99-07, Auxiliary Building/SLCRS Ventilation Alignment to Allow System Testing and Maintenance	19
2TOP-99-09, Leakage Testing of Valve [2SIS*130]	20
2TOP-99-10, Atmospheric Dump Valve Stroking at Power.....	21
2TOP-99-11, Troubleshooting Gas Leaks.....	21
Temporary Modification, Installation of Communications Connection at Unit 2 Air Lock.....	22
Temporary Modification, Installation of Temporary Non-intrusive Ultrasonic Flow Equipment.....	22
Temporary Modification, Jumper Smoke Detector 2FPM-DI358	23
Temporary Modification, Temporary Water Supply for Turbine Generator Work	23
Temporary Modification, Temporary Fire Protection Water Supply to Turbine Deck.....	24
Temporary Modification, Capping of Valve 2RCS-50 Due To Ruptured Diaphragm.....	24
Temporary Modification, Installation of Mechanical Clamps on Atmospheric Steam Dump Valve 2SVS-PCV101C	25
DCP 1103, Spent Resin Hold Tank Instrument Problems	25
DCP 1303, Upgrades to Solid State Protection System.....	26
DCP 1403, Pressurizer Power Operated Relief Block Valve Open/Not Open Contact Indication.....	28

Beaver Valley Power Station Unit 2
 Facility Changes, Tests, and Experiments
 November 1, 1998 - October 25, 2000

TABLE OF CONTENTS

DCP 1957, Permanent Bypass of the Main Turbine Gland Sealing System (GSS) Exhaust Filters	28
DCP 2146, Alternate Source of Filtered Water to the Cooling Tower Pumps	29
DCP 2179, Circulating Water Chemical Injection System.....	29
DCP 2229, In Mast Sipping	30
DCP 2251, Recirculation Spray System Modifications To Prevent Water Hammer	30
DCP-2261, Spent Fuel Pool Level Transmitter 2FNC-LT102B Replacement.....	31
DCP 2309, Replace Valves 2SWS*SOV130A & B With Air Operated Valves	32
DCP 2327, Seismic Monitoring System Upgrade	33
DCP 2385, 2SWS-1103, 1104 Repeat Failures	34
DCP 2393, Installation of a Permanent Reactor Cavity Water Seal	34
Maintenance Programs Unit Administrative Manual, Handling of NUREG 0612 "Heavy Loads"	35
Maintenance Programs Unit Administrative Manual, Intake Structure Pump Cubicle Roof Safe Load Path.....	35
SMR 2872, Modification of Secondary Plant Component Cooling Water Isolation Valves (2SWS-MOV107B and C).....	36
TER 8369, Service Water System	36
TER 9336, Revision 1, Reactor Vessel Head Closure Studs No. 25, No. 37, and No. 51 Stuck in the Vessel Flange	37
TER 10747, Replacement valves for 2GNS-70, 71, and 72.....	37
TER 10825, Retirement of Seal Injection System for 2CWA-P21A, B, C, D and 2CWA-P22A, B, C, D With Installation of SLADE Packing In All Of The Pumps	38
TER 11171, Reinstallation of Needle Valves on 2HDH-LCV 103A2, B2	38
TER 11949, Reactor Coolant System Temporary Level Instrumentation	39
TER 12085, Overtemperature Differential Temperature and Overpressure Differential Temperature Reactor Trip Function Administrative Controls	39

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

TABLE OF CONTENTS

TER 12266, Turbine Bypass System Load Rejection Controller Deadband	40
TER 12395, BVPS-2 Cycle 8 reactor core fuel reload evaluation.....	40
TER 12449, Update of BV-2 Breaker Coordination Curves (FPSSR, Appendix A5)	41
TER 12452, Edward Auxiliary Steam Globe Valve Model and UFSAR Symbol Change.....	41
TER 12464, Removal of Valve 2GMH-308 From Plant Documentation	42
TER 12473, Acceptance Criteria for Response Time Testing.....	42
TER 12488, Update Plant Documentation for 2IAC-772 From Open To Close.....	43
TER 12543, Update to Fire Protection Safe Shutdown Report	43
TER 12579, 2FWE*STRT100 & 101 Temporary Strainers.....	44
TER 12608, Shake Space Identification Updates - Fire & Flood Seal Programs.....	44
TER 12658, Revise Fire Protection Safe Shutdown Report to Delete Description of Annunciators.....	45
TER 12697, VOND Drawing 10080-RM-427B-1, Rev. 4	45
TER 12763, Fire Protection Safe Shutdown Report Analysis Criteria for Manual Actions.....	46
TER 12798, Administrative Controls to Reduce Heat Flux Hot Channel Factor Fq Limit From 2.4 to 2.3	46
TER 12955, Upgrade Meteorological Tower Delta Temperature Processor Boards - Elevations 500' to 35' and 150' to 35'	47
TER 13066, Fire Protection Safe Shutdown Report Clarification	47
TER 13123, QA Category Determination for 2HVC-CLC219	48
TER 13217, Modification of the BVPS Administrative Limit for RCS/PRZR Cool-down	48
TER 13374, Revise Unit 2 Spent Fuel Crane Restricted Operating Area Limits	49
TER 13389, BVPS-2 Main Generator Hydrogen Dryer Replacement.....	49
TER 13539, Containment Penetration 2X-99 Evaluation To Prevent Overpressurization with Partially Filled Piping	50
TER 13568, IEEE 383-74 Cable Flame Test Comparative Analysis.....	50

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

TABLE OF CONTENTS

UFSAR Change, Section 9.2.1.1.5, and Section 3.4.1	51
UFSAR Change, Section 9.1.3.3 and Section 1.8, Table 1.8-1(RG 1.13)	52
UFSAR Change, Section 9.2.1.1.5	52
UFSAR Change, Condensate Pump Flow	53
UFSAR Change, Describe the Use of Hydrogen Peroxide in the Reactor Coolant System.....	53
UFSAR Change, Discrepancy in Maximum River Water Temperature	54
UFSAR Change, Figure 10.2-10, Turbine Generator H ₂ and CO ₂ Supply System.....	54
UFSAR Change, Figure 8.3-1, Sheet 2, Terminology Change to Match BV-1 in 4160 V Distribution System.....	55
UFSAR Change, Figures 10.4-25, 10.4-26, and 10.4-26A, Auxiliary Steam and Condensate System.....	56
UFSAR Change, Figures 7.3-7, 7.3-13, 7.3-14, and 7.3-37, Functional & Logic Diagrams	56
UFSAR Change, Primary Grade Water System Operation	57
UFSAR Change, Reactor Coolant System	57
UFSAR Change, Safety Injection System	58
UFSAR Change, Section 1.2.5, Turbine Generator Loading.....	58
UFSAR Change, Section 4.2.2.2.2, Conditional Use of Fuel Assemblies with Potentially Fractured Top Nozzle Holddown Spring Screws - Rev. 1	59
UFSAR Change, Section 10.4, Tables Revised To Reference Section 10.3.5 For Water Chemistry Parameters.....	59
UFSAR Change, Section 10.4.9.2.1, Replace "Hydrazine And Morpholine" With "Chemical Treatment"	60
UFSAR Change, Section 12.5, Remove Requirements For A TLD and Annual Whole Body Count	60
UFSAR Change, Section 13.2.2.1, General Employee Training	61
UFSAR Change, Section 15.0.3.2, T _{avg} Variations at Low Power Levels.....	62
UFSAR Change, Section 15.4.6.2, Safety Analysis Chapter.....	63
UFSAR Change, Section 15.6.5.5, Radiological Consequences of a Small Break LOCA	63
UFSAR Change, Section 6.4.2.2, Revision to state that no batteries are in the control room envelope.....	64

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

TABLE OF CONTENTS

UFSAR Change, Section 7.2.2.2.3, References Technical Specifications as the source for set-points for the Reactor Trip System.....	64
UFSAR Change, Section 7.7.1.3, Rod Insertion Limit Monitor.....	65
UFSAR Change, Section 8.3.1, Clarification of Master Equipment List as Source for QA Category Determination	65
UFSAR Change, Section 8.3.1.1.10, Revise Statement that Class 1E Supply Breakers And Feeder Breakers Have Control Board Indication And Control	66
UFSAR Change, Section 8.3.1.1.11.5, Number of 480 V Motor Control Centers	66
UFSAR Change, Section 8.3.1.1.3, Removal of Pressurizer Heater Operation Limitations.....	67
UFSAR Change, Section 8.3.2.1.2, Essential Bus Rectifiers Not Supplied From MCC-2-23 and MCC-2-26	67
UFSAR Change, Section 8.3.2.1.6, Deletion of Battery Charger Timer Setting Testing.....	68
UFSAR Change, Section 9.2.2.1.2, Change to Allow CCP Chemical Addition Tank To Be Normally Isolated.....	68
UFSAR Change, Section 9.3.1.2.2, Condensate Polishing Air System Cross-Connection	69
UFSAR Change, Section 9.5.1.8.4, Plant Computer Room Fire Protection System.....	69
UFSAR Change, Section 9.5.3.5, Delete Backup AC Lighting Subsystem Testing	70
UFSAR Change, Sections 3.10B and 3.10N, Clarification of Design Bases Regarding Appropriate Combinations of Accident Conditions With The Effects of An Earthquake.....	70
UFSAR Change, Sections 5.4.12.1, 6.3.2.2 Simplify Description of RCS and ECCS Valve Design	71
UFSAR Change, Sections 8.1 and 8.3, Initial Fast Bus Transfer.....	72
UFSAR Change, Sections 9.2.3.1, 10.4.9.2, and App. 5A, Correct Demineralized Water Storage Tank Information	72
UFSAR Change, Sections 9.5A.1.2.1.5.4, and 9.5A.1.2.1.7.2a, Control Circuit Fault Current; Section 9.5A.1.2.1.5.2, Incorporate Missing Text	73
UFSAR Change, Service Water System Figure Simplification.....	74

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

TABLE OF CONTENTS

UFSAR Change, Service Water System Figure Simplification.....	74
UFSAR Change, Steam Generator Blowdown Control Valve.....	75
UFSAR Change, Table 5.2-5, Non-Technical Specification Chemistry Parameters	75
UFSAR Change, Table 9.1-1, Correct Spent Fuel Pool Purification Filter Differential Pressure.....	76
UFSAR Change, Table 9.5A-3, Service Water Valve Pits (VP-1 & VP-2) Do Not Have Installed Fire Detection.....	76
UFSAR Change, Revision to Gaseous Waste Disposal System Normal System Operation Description	77
UFSAR Change, Revise Figures 7.3-41 and 7.4-33 per TER 10161	78
UFSAR Change, Fire Protection Program Revision Controls, Clarifications and Inspection Frequency Changes	79
UFSAR Change, Elimination of Reference to Hand-Pump as a Secondary Means to Operate the Main Feedwater Isolation Valve	80
UFSAR Change, Pressurizer Code Safety Valve Operability	81
Licensing Requirement Manual (Unit 1 and Unit 2), Addition of Surveillance Criteria	82
Licensing Requirements Manual (Unit 1 and Unit 2), Addition of Operating Criteria For Atmospheric Steam Release Valves.....	83
Licensing Requirements Manual (Unit 1 and Unit 2), Addition of User Rules and Meteorological Instrumentation	84
Licensing Requirements Manual (Unit 1 and Unit 2), Clarification of Bases for Containment Penetrations	85
Licensing Requirements Manual, Heat Flux Hot Channel Factor Fq Limit Reduced From 2.4 to 2.3.....	86
Licensing Requirements Manual, Revision of Seismic Monitor Setpoints	86
Licensing Requirements Manual, Cycle 9 Reactor Core Fuel Reload Evaluation	87
Licensing Requirements Manual, Increase in Seismic Monitor Trigger Setpoint.....	88
Licensing Requirements Manual, Engineered Safety Features Response Times.....	89

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Operating Manual 2OM-8.3.B.1, Valve 2BRS-575 Out of Normal Position For Greater Than 18 Months

CHANGE

The position of valve 2BRS-575 is identified on UFSAR Figure 9.3-26 as open. However, this valve was being maintained shut since level control valve 2BRS-LCV101B leaked. Attempts to repair both valve 2BRS-LCV101A and B had been unsuccessful. Valve 2BRS-575 remained out of Normal System Alignment (NSA) for greater than 18 months. Valve 2BRS-575 remained out of NSA until a successful correction to 2BRS-LCV101B could be made.

Valves 2BRS-LCV101A and B, and 2BRS-575 are non-safety-related. The valves are downstream of the RCS pressure boundary class break Category 1 valves 2BRS-AOV100A and B. There are no safety functions performed by these valves. As such, the position of valve 2BRS-575 does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the UFSAR. There are neither malfunctions nor accidents of a different type known to be created, and no Technical Specification changes are involved. No unreviewed safety questions are involved.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Operating Manual ZOM-15, Change Normal System Arrangement of Valve 2CCP-28 From Open to Closed

CHANGE

Normal System Arrangement (NSA) position of valve 2CCP-28 was changed from open to closed. Prior to the NSA change, Molybdate based corrosion inhibitors, which require the presence of oxygen for effective passivation, were used in the primary component cooling water (CCP) system. Valve 2CCP-28 was maintained open to allow circulation through the surge tank to oxygenate the system.

A nitrite component was added to the CCP system to enhance corrosion inhibition properties in areas of the system with low dissolved oxygen. Molybdates used with nitrites do not require the presence of dissolved oxygen for passivation. Therefore, the need to continuously recirculate the CCP through the surge tank was no longer necessary.

The NSA change of valve 2CCP-28 from open to closed reduced the susceptibility of system contamination from aerobic microbiological activity caused by continuous flow through the atmospheric surge tank. There are no credible failure modes associated with the change. The change does not involve a new type of accident because the change does not affect the operating limits of the system. Plant response was not modified as a result of the change. The change does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Operating Manual 2OM 15.3.B.1, Option to Manually Control Valves for Component Cooling Water Subsystem

CHANGE

As a means of facilitating leak identification in the Component Cooling Water Subsystem and to minimize liquid waste generation as the result of an identified leak, the text was changed to the following: "Makeup from the demineralized water system or primary grade water system is admitted to each tank through individual air-operated valves controlled automatically or by the control room operator." Thus permitting manual control of the valves.

The evaluation concludes that this change does not involve an unreviewed safety question since the component cooling water subsystem is not a part of the engineered safety features, and safe shutdown of the reactor can be achieved without dependence on the component cooling water system. The plant may be maintained in the hot standby condition without the component cooling water system indefinitely.

CHANGE TITLE

Operating Manual 2OM-33.3.B and C, 2OM-39.5.B.4, Fire Protection Water Distribution Network

CHANGE

The Normal System Arrangement (NSA) of valves 2FPW-130 and 2FPW-129 was changed to closed and associated breakers 8-10 & 8-14 of panel PNL-DC2-12 were changed to open. This isolated the fire suppression for the charcoal contained in the Gland Steam Filter Banks.

Temporary Modification 2-92-0021 removed the charcoal from these filter banks, thereby removing the fire hazard for which the deluge systems were installed. Isolating these deluge systems eliminated the need to perform routine surveillance testing associated with in-service deluge systems and eliminated spurious alarms associated with the fire detectors installed in the filter housing.

This change is not an Unreviewed Safety Question because the fire hazard was removed from the fire area and therefore these deluge systems no longer provide a fire protection benefit. In addition the fire area that contains the Gland Steam Filter Banks is not a safety related fire area.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Operating Manual 2OM-20.4.J, Circulating the RWST Through the Fuel Pool Ion Exchanger

CHANGE

This procedure change permits the temporary installation of a clamp-on ultrasonic flow indicator, when flow transmitter [2FNC-FT101] is out of service. The ultrasonic flow indicator is installed external to the piping and is used to adjust flow through the fuel pool purification system ion exchanger.

The Fuel Pool Purification Subsystem is non-safety related. The only risk significant function of the Fuel Pool Purification Subsystem is emergency make-up to the Refueling Water Storage tank (RWST). In this function the ion exchanger and flow indicator are bypassed to maximize the make-up flow rate. No failure mode of the ultrasonic flow indicator can impact this function or create a new unanalyzed type of equipment malfunction. The change does not involve an unreviewed safety question.

CHANGE TITLE

Operating Manual 2OM-22A.4.F, Condensate System Shutdown

CHANGE

This procedure change inserted instructions to connect a temporary pump and associated hoses between the Condensate System, Service Water System, and Circulating Water System. This connection facilitated the transfer of water that would otherwise accumulate in the condenser hotwell during a station shutdown. This water was transferred to the Service Water System and Circulating Water System for discharge by way of the Unit 2 Cooling Tower Blowdown System.

The condenser hotwell and the Circulating Water System are considered "non-safety related"; the connections to the Service Water System are located in a non-safety-related portion of the system. There are no safety-related structures, systems or components in the turbine building. The discharge of the temporary pump is not rated at a higher pressure than the hose; therefore, the probability of rupturing the hose is low. This activity does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Operating Manual 2OM-27B.3.B.6 [2FOA], Valve List

CHANGE

The normal system alignment of valves 2FOA-159 and 160 was change from open to closed. These valves isolate the Fuel Oil Day Tank [2FOA-TK2] from the fuel tank mounted on the SOSB and PAF Emergency Diesel Generator [2HVO-EG1]. When the valves are left in the open position, the fuel tank mounted on 2HVO-EG1 overflowed from the fill cap. The valves will now be kept closed and will be administratively opened to fill the fuel tank mounted on the diesel.

Changing the NSA of valves 2FOA-159 and 160 from open to closed isolates the diesel-mounted fuel tank from the Day Tank supply. In the event that the diesel is operating, with this change, the diesel mounted fuel tank fuel supply will now be required to be periodically monitored. When level drops to a predetermined value, valves 2FOA-159 and 160 are to be opened to allow fuel level to return. Failure to open these valves would eventually result in the shut down of the diesel and the loss of the emergency backup power. SOSB and PAF Emergency Diesel Generator [2HVO-EG1] does not supply safety related loads. Loss of the diesel would not alter plant response to accidents as described in the UFSAR. The UFSAR does not describe the SOSB and PAF Emergency Diesel Generator, or its function. An unreviewed safety question is not involved.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Operating Manual 2OM-39.4.K [DC-SWBD2-5, 2-6], Cross-Tie for Maintenance or Loss of Battery Charger

CHANGE

New procedure 2OM-39.4.K installs a temporary jumper between the two non-Class 1E DC systems to allow one of the two battery chargers to be removed from service with the remaining charger maintaining a float voltage on both batteries during maintenance or a failure of one battery charger. Unit 2 UFSAR Section 8.3.2.1.6 requires clarification since it may be interpreted to require the spare charger be installed when the normal charger is removed from service on the non-Class 1E DC systems. By not using the spare 2-7 battery-charger on the non-Class 1E systems, it will be readily available for use on the Class 1E systems, as described in UFSAR Section 8.3.2.2.

Independence of the two non-Class 1E DC systems is not required. Regulatory Guide 1.75 and the remaining documents listed in UFSAR Section 8.3.2.2 apply only to the independence of Class 1E systems. This temporary modification does not conflict with Unit 2 UFSAR Section 8.3.2.1.2 in that there continues to be no interaction, sharing or interface between the non-Class 1E and Class 1E DC systems, their equipment, raceways, loads and support systems. UFSAR Section 8.3.2.1.6 may be clarified to state that only the Class 1E DC systems are required to use the spare charger when removing the normal charger from service for preventive maintenance. An unreviewed safety question is not involved.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Operating Manual 2OM-44A.4.F, Control Building Ventilation - Startup

CHANGE

Procedure 2OM-44A.4.F, "Control Building Ventilation - Startup" was revised to provide steps to allow purging of Control Building atmospheric contaminants (fumes, etc.) with ventilation in the 100% outdoor air mode (no recirculation). UFSAR Section 9.4.1 describes the 100% outdoor air mode for high space temperature conditions, upon loss of instrument air and for smoke purge, however, it does not describe the purge mode for removal of atmospheric contaminants. This 50.59 was prepared to evaluate the use of the 100% outside air mode for purging of atmospheric contaminants.

The Control Building Ventilation system will be placed in the 100% outdoor air mode of operation (no recirculation) to assist in the removal of atmospheric contaminants in the affected areas. To accomplish this alignment, instrument air will be isolated to the associated dampers. This outside air alignment occurs automatically on high area temperature and on loss of air (UFSAR Section 9.4.1.5.2) and is described in UFSAR Section 9.4.1.2.2 for purging of smoke. The ventilation system is not being operated outside of its design and is being aligned to its fail-safe alignment. The affected areas are not in radiological controlled areas. This change does not affect the Control Room Ventilation/Pressurization System. An unreviewed safety question is not involved.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Operating Manual 2OM-6.3, Valve List - 2RCS

CHANGE

The Normal System Alignment (NSA) position of valve 2RCS*AOV101 was changed from open to shut in procedure 2OM-6.3.B.1 valve list. This is different from the UFSAR Table 3.9N-10, Table 6.2-60, and drawing 5.4-8 which lists the normal position for the valve as open.

Research indicates that the current NSA position of shut is acceptable, because the valve is in the safeguards fail-safe position, receives a containment isolation signal, and fails in the closed position. Also, the safety evaluation in UFSAR Section 5.4.11.3 states: "Furthermore, complete failure of the auxiliary systems serving the PRT will not impair the capability for safe shutdown." Therefore no unreviewed safety question is involved.

CHANGE TITLE

Operating Manual 2OST-2.3, Nuclear Source Range Channel Functional Test

CHANGE

2OST-2.3, "Nuclear Source Range Channel Functional Test," was modified to permit performance during power operation, and was scheduled to be performed quarterly. In this manner, test performance immediately after a plant shutdown to demonstrate operability is no longer necessary. Additionally, since this equipment is not required by Technical Specifications in Mode 1, testing can be performed without entering any action statements. When performed at power, the test will be performed by temporarily disconnecting the source range detector from the high voltage power supply, so that the detector will not be damaged when high voltage is energized for the test.

Disabling one Source Range (SR) Nuclear Instrumentation (NI) channel while in Mode 1 to conduct testing, does not involve an unreviewed safety question. No SR NI channels are required operable in Mode 1. Disabling is accomplished using design features provided by the manufacturer for that purpose, and it has been determined that the equipment is durable enough to preclude damage or excessive wear. The SR NIs are not an initiator of any event in Mode 1, nor are they credited as a means of detection or mitigation of any event occurring in that mode.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Operating Manual 1/2OST-30.21, Flood Door Seal System Operability Check

CHANGE

This evaluation provided criteria to allow opening of the Intake Structure pump cubicle interior flood doors between cubicles A & B and between cubicles C & D for testing purposes. The evaluation also addressed the impact of an internal flood on the Unit 2 Service Water Pumps seal water motor operated strainers.

This evaluation did not alter any Intake Structure pump cubicle fire or flood door normal system arrangement position. A pump cubicle interior door must be temporarily opened in order to conduct 1/2OST-30.21. Opening a pump cubicle interior flood door negates the design protection provided to ensure that the consequences of an internally generated flood could affect only one River Water/Service Water System train (i.e., ensures the independence of the two system trains).

This OST revision will provide four options to temporarily allow opening an Intake Structure pump cubicle interior flood door. The criteria utilized in this OST for opening an interior cubicle flood door would apply any time that the Technical Specification for the River Water and/or Service Water System applies. The change does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Operating Manual 1/2OM-53C.4A, AOP 1/2.75.1, Acts of Nature - Tornado

CHANGE

This procedure change involved a revision to abnormal operating procedure AOP 1/2.75.1 "Acts of Nature - Tornado". This procedure change established administrative controls and provided instructions. In the event of a Tornado Watch, excavations where safety-related components and systems are affected will be refilled.

Condition Report 992330 identified a domestic water pipeline leak. In order to excavate, locate and repair the water leak, it was necessary to remove or reduce the overlaying earth cover from the safety-related electrical circuit duct lines and service water piping. The overlaying earth provided passive protection from tornado-generated missiles in accordance with licensing and design basis information.

When the possibility of a tornado arises, temporary measures for protecting the safety-related structures and systems are required. The temporary measures will be provided in the Work Order installation requirements. The AOP was revised to have the NSS direct that measures be implemented in a timely manner.

This change is not an unreviewed safety question. By providing for procedural actions to recover the excavation in the event of a tornado watch, the design basis is maintained.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Chemistry Manual 2-3.37, Reactor Coolant Specifications and Guidelines for the Reactor Coolant System During Power Operation

CHANGE

The UFSAR will be revised to support operation with a core load that requires a boron concentration in excess of 1200 ppm. The Reactor Coolant System (RCS) boron upper limit will be increased from 1200 ppm to 1910 ppm. The lithium range will be changed from "0.7 - 2.2 ppm" to "0.71 to 3.68 ppm." These changes were also reflected in Chemistry Procedure CM 2-3.37, *Reactor Coolant*.

No unreviewed safety question is involved. Industry experience with lithium concentrations up to 3.68 ppm in coordination with boron concentrations up to 1910 ppm have been evaluated and are recommended by EPRI as described in the NEI endorsed EPRI Primary Water Chemistry Guidelines, Revision 4. By maintaining the coordinated boron-lithium relationship within the specified ranges, the reactor coolant system pH is maintained within EPRI guideline limits.

CHANGE TITLE

Refueling Procedure 2RP 2.10 (2RP 2.6), Remove Guide Studs, Reactor Vessel Stud Installation and Tensioning

CHANGE

The UFSAR provided that three tensioners are used for reactor vessel stud tensioning with 2 sets of passes. This change will update this description to change the number of tensioners allowed from three to two using a one and a half pass method. The optimized method increases the pressure but has reduced the number of sets to reduce the time and dose for the task.

The reactor closure head will function as intended and the reactor vessel closure studs will remain within the acceptable elongation band. Therefore, the change does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Administrative Procedure NPDAP 3.5, Fire Protection

CHANGE

This change revised the operability and surveillance requirements for fire rated assemblies contained in Administrative Procedure NPDAP 3.5. The previous requirements did not differentiate safety-related areas from non-safety-related areas. The change separated Attachment 2, "Operability Requirements," into items for safety related areas, and for non-safety-related areas. The Attachment 2 wording of items in safety related areas was clarified. Attachment 5, "surveillance requirements," was correspondingly revised and periodic maintenance for fire doors was added.

The change does not involve an unreviewed safety question. This change is editorial in nature and does not affect the ability of the plant to achieve and maintain safe shutdown. The change does not affect the operability or surveillance requirements as delineated in the former Fire Protection Technical Specifications incorporated into Administrative Procedure NPDAP 3.5.

CHANGE TITLE

Administrative Procedure NPDAP 3.5, Fire Protection

CHANGE

Administrative Procedure NPDAP 3.5 was revised to address issues identified by an assessment of the Unit 2 Fire Protection System surveillance requirements. The changes principally provide for better compliance with NFPA code requirements and insurance requirements. Operability requirements were added for some components required to support alternate safe shutdown, specifically the Backup Indicating Panel (Unit 1) and Alternate Safe Shutdown Panel (Unit 2). Additional editorial and administrative changes are made to address changes in the plant work control process, changes to 29 CFR 1910, and other site administrative changes.

The changes made to Administrative Procedure NPDAP 3.5 do not increase the probability of occurrence or the consequences of an accident or malfunction of any post-fire safe shutdown equipment as previously evaluated in the UFSAR. Also, since the changes only affect the administrative controls of the Fire Protection Program, and do not change the plant design or how the plant operates during a design basis fire scenario, the changes do not affect the ability to achieve and maintain safe shutdown in the event of a fire. The changes to the Fire Protection Surveillance Program are consistent with NFPA code guidance and insurance requirements. The change does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Maintenance Programs Unit Administrative Manual, Fuel Repair Box and Inspection Box Safe Load Paths

CHANGE

This change allowed lifting of fuel inspection and/or repair equipment boxes which can weigh up to 3000 pounds apiece, and provided a safe load path to the storage area.

The evaluation concluded that this change does not involve an unreviewed safety question since the fuel inspection and/or repair equipment boxes do not pass over spent fuel in the fuel pool, no safety related equipment is located along the path, and the loads are not lifted high enough to cause structural damage or a radiological release.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Test 2RST-2.1 and 2.2, Initial Approach to Criticality after Refueling and Core Design Check Test

CHANGE

This procedure change will allow the use of a backup (redundant) flux signal during the performance of low power physics testing. This signal will be an input to the reactimeter by connecting a test cable from one intermediate range channel computer input in the Nuclear Instrumentation System (NIS) rack to the reactimeter.

The proposed change does not involve an Unreviewed Safety Question because:

1. The new connection will employ a standard coaxial cable that is used in various test applications including the existing connections provided in the test. Half lug connections will be used in the NIS rack to prevent inadvertent disconnection and subsequent shorting of other signals in the vicinity of the test connection (SR and PR benchboard indicators, Delta Flux meters, and other computer inputs which are all non-safety related).
2. The RMAS Reactimeter has a high input impedance (greater than 1.5 Mohm in the energized or de-energized state) so it will not place a load on the system at any time.
3. Failure of the test connection or reactimeter will not effect Intermediate Range Detector or bistable operation since the computer connection is down stream of Isolation Amplifiers 2NMI*NM35B (36B). This isolation amplifier protects the safety-related portions of the intermediate range detectors. The only indications that may be affected by a short circuit are the computer, recorder 2NME-NR45, the benchboard indicators, and the startup rate meters
4. There are no Design Basis Accidents in which the Intermediate Range Detectors or bistables are credited. The Intermediate Range High Level Trip is a backup trip to the Low Range High Flux Trip of the Power Range Detectors for the Uncontrolled RCCA Withdrawal at Subcritical Conditions.
5. No new failure modes have been created.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Evaluation Performed To Increase The Ventilation In The Main Steam Valve House

CHANGE

The modification involved the sealing off of the Supplementary Leak Collection Release System (SLCRS) in the Main Steam Valve House (MSVH) and providing the capability to open the vent panels located near the roof of the MSVH. The purpose of this modification is to maintain the temperature inside the MSVH within the required temperature range as required by the equipment environmental qualification for this area.

There is no radioactive source served by this system that is impacted by these modifications. There is no leakage into this area from the subatmospheric containment. The SLCRS is only taken credit for in a Fuel Handling Accident (FHA) and the Loss of Coolant Accident (LOCA). A FHA occurs in the Fuel Building but does not result in radioactive effluents entering this area. LOCA analyses take credit for leakage from Engineered Safeguards Feature (ESF) equipment, but there is no piping in this area which contain post LOCA fluids. It has been determined that this change does not involve an unreviewed safety question.

CHANGE TITLE

Storage of Lead Blanket Shielding in Reactor Containment Building

CHANGE

Lead blanket shielding is utilized inside containment to support ALARA dose reduction activities. Some of this shielding will be stored in approved containers at locations designated within the Containment Building.

Lead blanket storage within the Containment Building will not cause or create a situation adverse to Safety. Through proper packaging and storage, there will be no increase in the permissible combustible material loading. By specifying designated storage locations, there will be no effect to any operable equipment or systems or equipment relied upon for safe shutdown of the plant. This change does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Basis for Continued Operation BCO 2-99-001, Seismic Monitoring Instrumentation

CHANGE

Setpoint administrative controls described in BCO 2-99-001 were made permanent along with the process for making minor editorial changes. The relocation of Technical Specification Section 3/4.3.3.3, Seismic Monitoring instrumentation to the Licensing Requirements Manual (LRM) was also completed in accordance with License Amendment 107.

The setpoints listed in the LRM are nominal setpoints and the inequalities are shown to establish direction of conservatism. The recommendations established in Calculation 10080-DEC-0207 (Seismic Instrumentation Uncertainty Evaluation) with regards to nominal field setpoints are met. The seismic monitoring instrumentation is not used to control any plant equipment, or to mitigate any design basis accident; therefore, this change is not an unreviewed safety question.

CHANGE TITLE

2TOP-98-17, Operation of Steam Generator Start-up Feed Pump Seal Water Pump

CHANGE

This procedure provides for alignment and controlled operation of Steam Generator Start-up Feed Pump Seal Water Pump [2FWS-P26] to verify proper operation after maintenance. The procedure provides for installation of a temporary jumper in the pump start circuit to enable pump operation with the pump secured.

Neither the Steam Generator Start-up Feed Pump, or its' Seal Water Pump are safety related and the failure or malfunction of the system will not adversely affect the essential steam generator systems or components necessary for safe shutdown. There are no structures, systems or components important to safety affected by the change. This change does not result in an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

2TOP-99-03, Discharging the Unit 2 Gaseous Waste Surge Tank to Atmosphere for Maintenance

CHANGE

A pressurizer code safety valve was leaking and causing a rise in Pressurizer Relief Tank (PRT) temperature, pressure, and level. Spraying with primary grade water, which contains oxygen, cooled the PRT. The oxygen was being stripped from the water and accumulating in the Gaseous Waste Disposal System (GWDS). The station was brought to Mode 3 prior to the use of the TOP. This TOP is intended to be used when oxygen is a concern in the GWDS and not for discharges under normal conditions.

The temporary operating procedure provides instructions to discharge the Unit 2 GWDS surge tank, pressurizer, primary drains tank 21, primary drains tank 22, boron recovery degasifiers, volume control tank, and waste gas charcoal delay beds directly to the atmosphere by way of the Unit 1 GWDS disposal header without decay. The Unit 2 GWDS and surge tank may contain oxygen at greater than 2%. The oxygenated gas is to be discharged before the gas accumulates in the GWDS storage tanks or the Unit 1 GWDS decay tanks.

Discharging the Unit 2 GWDS surge tank directly to the atmosphere by way of the Unit 1 GWDS disposal header does not increase the probability of an accident previously analyzed. Unit 2 UFSAR Section 15.7.1, "Waste Gas System Failure" and Unit 1 UFSAR Section 14.2.3, "Accidental Release of Waste Gases", envelop the previously analyzed accidents. No new type of accident is created. This procedure does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

2TOP-99-05, Sodium Hypochlorite Addition to the Unit 2 Circulating Water System

CHANGE

The change incorporated a procedure for the operation of an interim treatment system to add sodium hypochlorite to the Unit 2 Circulating Water System. The installed method of gaseous chlorine injection was replaced by a liquid sodium hypochlorite injection system (DCP 2179) that will service both units. The use of an interim treatment system to inject sodium hypochlorite directly into the Unit 2 Cooling Tower Basin will perform the function of inhibiting organic growth in the Unit 2 Circulating Water System.

The Unit 2 Circulating water System is a non-safety-related system and is independent of emergency core cooling requirements. The area in which all equipment associated with the Unit 2 interim treatment system is located more than 300 feet from the nearest safety-related structure. Sodium hypochlorite is permitted for use as a biocide in accordance with the NPDES permit. Sodium hypochlorite is inherently safe; it has a low vapor pressure and there is no flash point or auto ignition temperature associated with it. Sodium hypochlorite does not present the potential hazard of generating a toxic cloud or plume as is associated with the gaseous chlorine system. Incorporation of a procedure to operate the interim treatment system at Unit 2 does not constitute an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

2TOP-99-07, Auxiliary Building/SLCRS Ventilation Alignment to Allow System Testing and Maintenance

CHANGE

This Temporary Operating Procedure (TOP) was written to provide procedural guidance for aligning the SLCRS system in the "Reactor Trip" mode of operation as described in Unit 2 UFSAR Table 6.5-8. The system needs to be aligned in this configuration to permit maintenance and system testing activities that will cause Auxiliary Building flow paths "A" and "B" to be isolated. Failure to align the system in the "Reactor Trip" mode of operation will cause SLCRS fans to be operated with only the Fuel Building flow path "E" and Auxiliary Building flow path "C" (charging pump cubicles) in service. The "Reactor Trip" mode will place reactor containment contiguous area flow path "F" onto the filtered SLCRS flow path.

Aligning the SLCRS system in the "Reactor Trip" mode of operation per the TOP is not an unreviewed safety question, since the "Reactor Trip" mode of operation is recognized in Unit 2 UFSAR Table 6.5-8. While the system is aligned in this mode of operation all required system functions are maintained.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

2TOP-99-09, Leakage Testing of Valve [2SIS*130]

CHANGE

This test performs a reactor coolant system pressure isolation valve leakage test for valve [2SIS*130], as required by Technical Specification 4.4.6.3.1. This valve is the Low Head Safety Injection (LHSI) pump combined discharge check valve in the line to loop 21B and 21C hot legs. Two temporary test rigs, each consisting of a temporary hose and a vent valve, are installed. One test rig is installed between [2SIS*110] and [2SIS*465], and is used to apply LHSI pump pressure to leak-check valve [2SIS*130]. This test rig was not previously analyzed or approved for use.

A second test rig is installed between valves [2SIS*131] and [2SIS*396]. This connects check valve leakage to a point in the system where it can be measured by a permanently installed flow indicator. This method is identical to that already approved for use in 2OST-11.16; the same indicator is used, and the same two valves are connected. This method does not differ in any respect from that used in 2OST-11.16, and was not evaluated further.

This change does not increase the probability of occurrence of an accident or equipment malfunction previously evaluated in the UFSAR, since the failure mode of the test rig is not listed as an initiating event for any accident, and the Liquid Containing Tank Failure bound the consequences of such a failure. This change does not create the possibility of a new type of accident or malfunction; the installation meets or exceeds the design parameters for the system on which it is installed, and all events considered possible (RCS dilution, RCS overpressurization, and loss of inventory) have been previously analyzed. The margin of safety is not affected. An unreviewed safety question is not involved.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

2TOP-99-10, Atmospheric Dump Valve Stroking at Power

CHANGE

This TOP provides instructions for full stroke post maintenance testing of [2SVS*PCV101A, B, and C], Atmospheric Dump Valves (ADV)s, one at a time during power operation. Main Turbine load is adjusted as each ADV is operated, in order to minimize the plant transient. The method employed to operate each ADV differs from that normally used in that each ADV is operated with its inlet isolation valve throttled only partially open; this permits rapid isolation of the ADV if it should stick open during testing.

The failure mechanisms of an ADV are not affected by throttling the upstream manual isolation valve during ADV testing; therefore, there is no increase in the probability of any accident listing ADV failure as an initiating event, nor is there an increase in either the probability or the consequences of a malfunction of the ADVs. The analyzed accidents that would involve ADV failure during this test either have no radiological consequences, or they have consequences that are bounded by the analysis that assumes a fully open and unisolated ADV; therefore, there is no increase in the radiological consequences of any of these accidents. No unreviewed safety question is involved.

CHANGE TITLE

2TOP-99-11, Troubleshooting Gas Leaks

CHANGE

This TOP provides a method for identifying gas leaks in the Gaseous Waste System, by aligning sections of pipe and monitoring surge tank pressure. In preparation for the test, the Gaseous Waste System is removed from service, and the degasifiers are isolated from the waste gas compressors and the surge tank. The Gaseous Waste System is returned to service following the test.

This test does not increase the probability of an accident previously analyzed, since the Gaseous Waste Disposal System (GWDS) is removed from service for the test, no pressure or activity is added to the isolated portion of the system during the test, pressure relief protection for installed components remains in place, and the system can be restored to service at any time. This test does not involve an Unreviewed Safety Question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Temporary Modification, Installation of Communications Connection at Unit 2 Air Lock

CHANGE

This temporary modification utilized existing phone lines into the containment air lock area for temporary use as a modem/communications link for Operations clearance tracking and/or to permit individuals to change radiation work permits (RWPs) without leaving the containment area. The existing phone lines were hooked up to phones which were moved to a "party" line configuration with other phones in the area.

This temporary modification involves minor modifications to non-safety related phone lines. A technical evaluation has concluded that the small amount of additional telephone cabling required for this modification adds insignificant fire loading to the cable vault area where it is being routed, is fire retardant, does not penetrate any fire or pressure barriers, and is not routed with any safety related cabling. The small amount of power to be drawn by the computers is from an existing non-safety related source. There is no interaction between the site communications system and plant operation of any safety-related components. No unreviewed safety question is involved.

CHANGE TITLE

Temporary Modification, Installation of Temporary Non-intrusive Ultrasonic Flow Equipment

CHANGE

Temporary non-intrusive clamp-on ultrasonic flow equipment is periodically installed to gather system flow data. The Ultrasonic flow equipment is not used to provide a control function and is merely installed for data gathering purposes.

Temporary installation of non-intrusive clamp-on ultrasonic flow equipment to gather system flow data is not an unreviewed safety question. Installation of ultrasonic flow equipment was previously evaluated via Engineering Memorandum (EM) 22760. It has been determined that the installation of ultrasonic flow equipment does not affect the seismic qualifications of the piping when the guidelines of EM 22760 and the seismic clearance requirements of procedure PIPS G02.3 are followed. The Ultrasonic flow equipment's installation is controlled as described in Administrative Procedure NPDAP 7.4 with a jumper and lifted leads tag.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Temporary Modification, Jumper Smoke Detector 2FPM-DI358

CHANGE

This temporary modification removes smoke detector 2FPM-DI358 from Zone 44 of the fire protection early warning detection system. Zone 44 is the main steam valve room. The number of smoke detectors left in service in this zone exceeds the minimum number specified for operability in the applicable administrative procedure. This change will prevent a single malfunctioning detector from rendering an entire zone of fire detection inoperable while it is in the alarm condition.

This temporary modification is not an unreviewed safety question because this zone of detection will remain operable in accordance with the requirements of the applicable administrative procedure. The operability requirements in the administrative procedure were transcribed from the former technical specifications on fire protection. Therefore, the fire detection system remains in compliance with the licensing basis and the change does not increase the probability of an accident.

CHANGE TITLE

Temporary Modification, Temporary Water Supply for Turbine Generator Work

CHANGE

The Demineralized Water System supplied cooling water needed to support turbine generator work during 2R7. A fire hose provided water from a Demineralized Water System drain valve in the turbine-building basement to a heat exchanger on the turbine deck. The demineralized water exiting the heat exchanger was routed to a storm sewer drain located on the south side of the turbine building. The demineralized water distribution pump discharge piping operates at 87 psig. Therefore, failure of the hose was considered unlikely.

An unreviewed safety question is not involved because the demineralized water system is not safety related and the failure or malfunction of this system will not adversely affect the essential systems or components necessary for safe shutdown.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Temporary Modification, Temporary Fire Protection Water Supply to Turbine Deck

CHANGE

A temporary connection from the Unit 2 Fire Protection System supplied water to the sprinkler systems in the temporary outage trailers located on the turbine deck. The installed sprinkler systems in the temporary trailers provided acceptable fire suppression capability to protect plant structures and components.

The temporary modification is not an unreviewed safety question because the installed additional piping met the Fire Protection System design pressure of 175 psi, complied with the guidance of NFPA 13, "Sprinkler Systems," and sprinkler loading is within the capability of either fire pump. Therefore, fire protection is maintained within the design basis.

CHANGE TITLE

Temporary Modification, Capping of Valve 2RCS-50 Due To Ruptured Diaphragm

CHANGE

Valve 2RCS-50 is a drain valve on the common pressurizer spray line from the 21C reactor coolant loop. This valve was leaking due to a ruptured diaphragm. This valve is normally locked shut. Repair required fuel offload. This temporary modification contained the leakage until the valve was repaired during the eighth maintenance and refueling outage.

Defeating the manual operation of valve 2RCS-50 while it is in its normal system alignment locked shut position, installing a bonnet cap, and seal welding it on this valve does not involve an unreviewed safety question. This change does not create any new or unanalyzed accident conditions. Since the valve remained in its normally shut position, it continued to perform its safety related function of providing a pressure boundary for the reactor coolant system. The added cap was designed to supplement this function. The seismic integrity of the valve assembly remained within the design basis.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Temporary Modification, Installation of Mechanical Clamps on Atmospheric Steam Dump Valve 2SVS-PCV101C

CHANGE

The purpose of this temporary modification is to allow the "C" Atmospheric Steam Dump Valve 2SVS-PCV101C to be disabled in the open position credited during UFSAR accident analyses through the use of mechanical clamps. The associated normally open manual isolation valve 2SVS-25 was closed and acts as the isolation point for the "C" Steam Generator heat release pathway.

The change maintained the accident analysis design function of valve 2SVS-PCV101C as described in UFSAR Section 15.6.3. Sufficient decay heat removal capability for post-SGTR cool down still exists. Manual operation of valve 2SVS-25 to control the rate of heat releases from the "C" steam generator is permissible in accordance with the bases of the Unit 2 Licensing Requirements Manual Item 6.1. This modification does not impact the ASME Code requirements because the "C" steam generator atmospheric steam dump valve is not considered a relief device necessary to protect the SC-2 main steam piping in accordance with ASME III. The main steam line safety relief valves provide this function. This change does not involve an unreviewed safety question.

CHANGE TITLE

DCP 1103, Spent Resin Hold Tank Instrument Problems

CHANGE

This modification corrects the operation of the water level instrumentation loop for the Solid Waste Disposal System Spent Resin Hold Tank level transmitter and indicator 2WSS-LT160 and 2WSS-LI160. This involves replacing the existing 0-10V DC indicator with a 4-20mA indicator, disconnecting loop wiring from the 0-10 V DC terminals and reconnecting to the 4-20mA output terminals, and adjusting the loop setpoint accordingly.

This modification is acceptable to implement under the provisions of 10 CFR 50.59. There is no unreviewed safety question and no changes to the UFSAR or the Technical Specifications are required. This modification allowed proper operation of level instrument 2WSS-LI160, and the operating conditions of the Spent Resin Hold Tank were not changed.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

DCP 1303, Upgrades to Solid State Protection System

CHANGE

There are nine (9) items associated with this design change:

1. Changing the AC power distribution for the redundant 48VDC and 15VDC power supplies increased the reliability of SSPS by improving redundancy. Relocation of the filters, which were previously installed in the qualified cabinets, to similar locations in other qualified cabinets did not subject them to a seismic environment for which they are not qualified. There are no new failure modes associated with this change.
2. Monitoring the loss of output cabinet power increases the reliability of SSPS by improving protection system failure modes as described in GDC 23. Although fourteen (14) fuses will be replaced by one (1) in both auxiliary relay cabinets, this allows monitoring of fuse failure and is no different than the SSPS output cabinet which has one fuse for the slave relays. The one fuse will be sized to accommodate the inrush of all fourteen (14) relays so it is no more likely to blow than any individual fuse. The addition of two (2) relays for each Train is required to perform this monitoring. A short across the coil would actuate the overcurrent protection device and an open coil would cause the contacts to fail safe, both of which will input into the General Warning Reactor Trip. Relays will be qualified for use in Class 1E systems.
3. By completing the loop of 120VAC power on the slave relays and their latching coils, any relay will be able to be removed for maintenance without deenergizing the other relays currently downstream. There are no new failure modes associated with this change.
4. By eliminating the RCS Loop Stop Valve position interlock to SSPS which defeats the Lo-Lo Steam Generator Level Reactor Trip and low Steamline Pressure SI functions for the isolated steam generator, a failure of the limit switch or relay in the Loop Stop Valve cabinet, which could defeat a needed actuation of these protective functions, will be eliminated. The UFSAR may be updated to remove unnecessary information on N-1 loop operation or it may be clarified/treated as historical information because BV2 is not licensed to operate with less than three loops. There are no new failure modes associated with this change.
5. Replacing incandescent lamps with LEDs will provide internal resistance inherent in LEDs that will limit the current if a short circuit occurs in the LED. Existing failures in the base of the LED are similar to incandescent lamps. Removing the neon lights that indicate 120 VAC Channel power is available will eliminate a load on the channel that is unnecessary since status lights in the control room perform the same function. There are no new failure modes associated with this change.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

6. Rewiring the master relay test switch for the Containment Spray relays will permit testing to prove that master relay contacts have returned to the open state after the relay is deenergized. Although, this failure is unlikely, detection could prevent an inadvertent Containment Spray actuation.
7. The addition of the interposing time delay relay in the Safeguards Test Cabinet, will prevent a relay race from occurring between the existing interlock relay and the latching test relays by allowing enough time for the test relay contacts to stabilize in the operate position. The time delay is of no consequence, although it will be very short, and there are no new failure modes associated with this change.
8. The kickplate will be seismically mounted to prevent it from damaging any equipment during an earthquake. It will be designed so access to the latch attachments is easily obtained and replacement of the relays on the bottom row will be maintainable. The kickplate will enable work in the cabinets without the need to be concerned with accidentally kicking a slave relay on the bottom.
9. A multiplexer test switch modification that would have exchanged the switch positions for A+B and Inhibit was removed because the switch is a break-before-make and an input to the General Warning Alarm would still be made regardless of the switch positions.

This design change does not result in an Unreviewed Safety Question for the reasons noted above.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

DCP 1403, Pressurizer Power Operated Relief Block Valve Open/Not Open Contact Indication

CHANGE

This design change modified the indication circuitry to provide the open/not open indication no matter which mode the cold overpressure mitigation system is in. The design change affected the computer annunciator indications for pressurizer power operated relief block valves 2RCS-MOV535 and 536.

This change does not involve an unreviewed safety question. This design change maintained the reliability and performance of the block valves, and will have no affect on any other equipment. No new hazards are introduced by the change.

CHANGE TITLE

DCP 1957, Permanent Bypass of the Main Turbine Gland Sealing System (GSS) Exhaust Filters

CHANGE

The design change permanently bypassed the GSS exhaust system filters but continued to route the GSS exhaust to the Auxiliary Building ventilation stack through piping instead of ductwork. The GSS exhaust system filters and associated equipment was retired and/or removed. This modification also replaced the GSS exhaust fan housing carbon steel drain lines with stainless steel to eliminate plugging caused by corrosion. Sections 6.5, 9.4, 9.5, 10.4, 11.3, 12.3, and Appendix 9.5A and related tables and figures will be changed to reflect this design change.

The modification did not create an unreviewed safety question because analysis has demonstrated that the filters are not necessary during normal reactor operation or anticipated operational occurrences, and the monitored discharge flow path to the Auxiliary Building Stack is unchanged. The consequences of a seismic event resulting in the loss of the Auxiliary Building pressure boundary, because of GSS exhaust pipe failure, are acceptable. This modification has no effect on environmentally qualified equipment in the Auxiliary Building. The modified GSS remains in compliance with RG 1.26 because the system is designed and installed to ANSI B 31.1 Power Piping Code. Analysis also shows that the modified GSS remains in compliance with RG 1.29 concerning offsite dose.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

DCP 2146, Alternate Source of Filtered Water to the Cooling Tower Pumps

CHANGE

The change installed two 100% capacity local filtration units to supply seal injection water to the BVPS-2 Cooling Tower Pumps and cooling water to the pump and motor bearing coolers. This was done because the Filtered Water line supplying the Unit 2 Cooling Tower Pumps was composed of carbon steel and had become severely corroded. UFSAR Section 10.4.5.5, and UFSAR Figures 10.4-4 and 9.2-22 will be revised.

Since the Circulating Water System does not perform a safety function, the changes being made will not affect the performance of any safety systems. The assumptions or radiological consequences of Design Basis Accidents (DBA) are not affected. The probability of occurrence of a DBA is not increased as a result of this change. Plant response will not be impacted to the point where it can be considered a new type of accident, and failure modes of equipment important to safety will not be affected by this change. This change, therefore, does not involve an Unreviewed Safety Question.

CHANGE TITLE

DCP 2179, Circulating Water Chemical Injection System

CHANGE

This change removed the gaseous chlorination system and removed various systems and components that are not required to support chlorination.

An unreviewed safety question does not exist for the change because failures of components in these systems are not an initiating event for any of the accidents evaluated in the UFSAR. This change will not increase the radiological dose to the public in the event of a malfunction of any equipment. Removing the Control Room Emergency Breathing System (CREBAS) will not have any effect on the control room habitability system's function or components. Other proposed changes are limited to non-safety related systems and changes located in non-safety related areas. Therefore, due to physical separation, interaction with safety related system components will not occur.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

DCP 2229, In Mast Sipping

CHANGE

The In-Mast Sipping (IMS) hardware was added to the mast of the existing Refueling Crane to permit the injection of air into the bottom of the mast, collection of the air at the top of the mast and passing it through a radiation monitoring system.

The IMS Modification or the IMS process will not create the possibility of an accident, which is different than that already evaluated in the UFSAR. IMS does not alter the interface of the Refueling Crane with a fuel assembly or the capabilities of the Refueling Crane. Any hypothetical fuel handling accident involving the Refueling Crane (with the addition of the IMS components) is bounded by previously analyzed accidents. An unreviewed safety question is not involved.

CHANGE TITLE

DCP 2251, Recirculation Spray System Modifications To Prevent Water Hammer

CHANGE

This design change modified the Recirculation Spray Heat Exchangers (2RSS-E21A, 2RSS-E21B, 2RSS-E21C and 2RSS-E21D) and associated heat exchanger shell side inlet piping (2-RSS-012-9-2, 2-RSS-012-1-2, 2-RSS-012-10-2 and 2-RSS-012-2-2, respectively). The modifications were made to prevent water hammer damage during testing of the RSS system.

The modifications to the Recirculation Spray Heat Exchangers and inlet piping are safe and do not involve an unreviewed safety question. No new failure modes are introduced. The radiological consequences of accidents are not adversely affected, as the performance of the Recirculation Spray System and Emergency Core cooling System are unaffected. There is no possibility of creation of an accident of a different type than any previously evaluated in the UFSAR, as the modification will not change plant response to any accident.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

DCP-2261, Spent Fuel Pool Level Transmitter 2FNC-LT102B Replacement

CHANGE

This design change replaced an existing level instrument with one of a different type. The existing Unit 2 Spent Fuel Pool (SPF) level transmitter, 2FNC*LT102B, is Fluid Components, Inc. Model 8-66 MA (a submerged set of detection elements). This array will be "Retired in Place" and replaced with an Inventron, Inc. Model 9140 Controller/Transmitter and Model 9200 ultrasonic range finder. Since this plant variable monitor is: a.) Not required to meet IEEE-279-1971, b.) Not listed in the BV2 UFSAR as Safety Related instrumentation, c.) Not taken credit for in any accident analyses, d.) Not a required variable per Reg. Guide 1.97 (not a PAM variable) and, e.) Not required to support any design basis accidents pursuant to the Standard Review Plan, this DCP will also downgrade the function of this instrument loop to a Non-Safety Related designation.

The implementation of DCP-2261 will not create an unreviewed safety question. The SPF level loop 2FNC-L102B will be placed back into service. BV2 UFSAR Section 9.1.3.5, "Fuel Storage and Handling - Instrumentation Requirements" remains satisfied by the restoration of this instrument loop.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

DCP 2309, Replace Valves 2SWS*SOV130A & B With Air Operated Valves

CHANGE

This modification replaced the solenoid operated globe valves (2SWS*SOV130A & B) with stainless steel bodied air-operated ball valves, which have demonstrated successful reliability in a Service Water application. The Service Water Pump seal water piping was modified to achieve the same flange-to-flange dimension for both trains, which permits interchangeability of the valves or installation of a common spare. New instrument air tubing was installed from the new AOV to the tie-in to the existing intake structure instrument air system lines, a non-safety related system that currently supplies air to Unit 2 Intake Structure AOVs. The electrical power/ control raceway as well as the logic to the AOV will remain unchanged. Existing power/ control cable will be de-terminated and spliced into the new pilot air SOV.

The modifications to the Unit 2 Service Water Seal Water System and Unit 1 Intake Structure Instrument Air System are safe and do not involve an unreviewed safety question. The results of the FMEA analysis that demonstrates compliance with single failure criteria identified in UFSAR Section 9.2.1.1.3 are unchanged. There is no possibility of creation of an accident of a different type than any previously evaluated in the UFSAR, as the modification will not change the plant response to any accident.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

DCP 2327, Seismic Monitoring System Upgrade

CHANGE

This design change modified the Seismic Monitoring System as follows:

- Replaced (upgraded) the electronic controller/recorder assembly in each of three triaxial time-history accelerographs 2ERS-RRA-1, 2 & 3.
- Replaced the Control Accelerograph Recorder 2ERS-CAR-1, the Response Spectrum Analyzer 2ERS-RSA-1 and the Magnetic Playback System 2ERS-MPS-1 in the Control Room with an upgraded Central Recorder and a Data Analysis and Plotting System (laptop computer and printer). Additionally, minor modifications to the Central Control Cabinet 2ERS-CCC-1 were made to accommodate the replacement (upgraded) equipment.

This system provides indication to the operators of a seismic event, to allow for a determination of the plant response to that event. This system has no affect on any previously evaluated Design Basis Accident (DBA) and will not create a new DBA. The capability of the plant to withstand a seismic event is determined by the initial design of the plant. Because of this, there will be no affect on any radiological consequences. Not only will the upgrade replace obsolete equipment, but will offer enhanced analysis features to better determine the effect of an earthquake on the plant, such as Cumulative Absolute Velocity (CAV). There will be no impact on the margin of safety as defined in Technical Specification 3/4.3.3.3. There is no unreviewed safety question involved with this proposed plant modification.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

DCP 2385, 2SWS-1103, 1104 Repeat Failures

CHANGE

This design change replaced the Safety Related Cooling medium of Service Water System (SWS) to the Main Steam Valve Coolers (2HVR*CLC206A & B) with the non-safety related cooling medium of the Chilled Water System (CDS) thus downgrading the coolers. Chilled Water is a chemically treated system and has been successfully used to cool similar coolers, such as the Containment Air Recirculation Coolers. This design change also removed the internals of the SWS related check valves. Applicable equipment including piping, valves, and components were downgraded from QA Category I, Seismic Category I to Non Safety Related, Seismic Category II System. UFSAR Figures 9.2-4, 9.2-17, 9.4-12, Table 9.2-2, and Section 9.4.9 will be revised to incorporate this change.

Since the Coolers have no safety function for normal plant operation and safe shutdown of the plant, the cooling medium change from Safety Related SWS to non-safety related CDS does not constitute an unreviewed safety question.

CHANGE TITLE

DCP 2393, Installation of a Permanent Reactor Cavity Water Seal

CHANGE

This design change installed a new permanently welded-in-place reactor cavity water seal (RCWS) and replaced the existing RCWS. The welded seal replaced the existing neoprene seals, and eliminated the installation and removal of these seals prior to each flooding and subsequent draining of the refueling canal. Sections 6.2, 9.1, 14.2 and applicable tables and figures of the UFSAR are revised or deleted to reflect this modification and the removal of reactor cavity subcompartment pressure analysis. Leak Before Break methodology does not require reactor cavity subcompartment pressure analysis to be maintained.

The permanent RCWS would not create any new accidents, have no effect on the mitigation of any accidents, or increase the probability of an existing accident. This is demonstrated by analysis and maintaining compliance with original design codes. This change does not constitute an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Maintenance Programs Unit Administrative Manual, Handling of NUREG 0612 "Heavy Loads"

CHANGE

This change added safe load paths for the movement and temporary storage of the ALARA Bench at the Operating Deck and Refueling Cavity. The ALARA bench is a tank filled with water to provide shielding during refueling operations. The empty weight of this tank is approximately 800 pounds. When filled with water, its weight is approximately 3,100 pounds.

Since existing, approved load paths and limitations will be used for movement of the ALARA Bench, this change does not constitute an unreviewed safety question.

CHANGE TITLE

Maintenance Programs Unit Administrative Manual, Intake Structure Pump Cubicle Roof Safe Load Path

CHANGE

The safe load path for the intake-structure pump cubicle roof area (730' elevation) was revised to permit maximum loads of 10,000 lbs (previously 7,500 lbs) with a maximum load height of 48 inches. A statement will also be added so that additional load and height limits may be applied if it is verified that the load and height limit is within the scope of the original dropped load analysis calculation. This statement is being added to prevent the need for further MPUAM revisions that are within the scope of the original dropped load analysis.

This change is based on a review of the original analytical basis for the load lift restrictions for this area. Based on this original design analysis, at a maximum load height of 48 inches, application of a maximum load limit of 10,000 lbs will still maintain the potential dropped load energy below the originally analyzed maximum. Other combinations of load and height limits may also be allowable as long as they are within the scope of the original dropped load analysis calculation. Therefore, this change is within the scope of the original design analysis and as such does not present an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

SMR 2872, Modification of Secondary Plant Component Cooling Water Isolation Valves (2SWS-MOV107B and C)

CHANGE

This change removed the automatic closure of 2SWS-MOV107B and C on low Service Water Header Pressure. SMR 2872 revised control circuitry such that only the header experiencing low pressure will be isolated, leaving the redundant unaffected header available to supply the secondary Heat Exchangers.

The pre-existing design automatically isolated secondary plant cooling water on loss of pressure in either Service Water Header. For a loss of only one (1) header, there is no need to isolate the secondary plant as the redundant header will provide cooling water. The proposed change will not affect protection features or the safety related function of this system. The Service Water System will continue to function as described in the Accident Analysis. There is no unreviewed safety question involved with this proposed plant modification.

CHANGE TITLE

TER 8369, Service Water System

CHANGE

Motor operated valves [2SWS-MOV153-1, 153-2, 154-1, 154-2] will be positioned closed in their fail-safe condition and deenergized. This will ensure pipe break isolation and maintain containment isolation. These valves will remain in the current Type-C program, thereby continuing to meet Technical Specification 3.6.3.

There is no change in the system's capacity to perform its intended function. The change will not affect the system's capability of maintaining containment bulk temperature less than 105 degrees F as required by Technical Specification 3.6.1.5. The change does not create a new type of accident since the valves will become passive in the closed position and deenergized to prevent mispositioning. This change does not represent an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 9336, Revision 1, Reactor Vessel Head Closure Studs No. 25, No. 37, and No. 51 Stuck in the Vessel Flange

CHANGE

The normal plant condition was changed such that the stuck Unit 2 reactor vessel head closure stud Nos. 25, 37 and 51 remain in place for the remainder of plant life without the requirements to perform inservice inspections. All studs are to be normally tensioned. These changes have been evaluated and justified by Engineering Report R-4505-00-1, Revision 0, dated April 1995. The proposed change also includes updating the Unit 2 UFSAR to identify that reactor vessel head closure studs have been evaluated to remain stuck in place and that a volumetric NDE examination will be performed for stud Nos. 25, 37, and 51 as required per the ASME XI code.

The report noted above concludes that it is technically acceptable to operate Unit 2 for the remainder of the plant life with the three currently stuck studs remaining in place because 1) the remaining undamaged threads meet the original design criteria, 2) the tensioning operation acts as some level of "proof test" for operating conditions, and 3) the vessel and other 55 studs all still meet the applicable ASME Boiler and Pressure Vessel Code stress limits even in the unlikely event that all three studs were to fail completely during operation. This change does not involve an unreviewed safety question.

CHANGE TITLE

TER 10747, Replacement valves for 2GNS-70, 71, and 72

CHANGE

This Technical Evaluation Report (TER) evaluated the replacement of diaphragm style globe valves at 2GNS-70, 71 and 72 (nitrogen supply line isolation valves to the Seal Injection System (SIS) accumulators), with metal bellows sealed globe valves. UFSAR Figure 9.5-13 will be revised since Westinghouse did not supply the new valves.

The probability of system failure is not increased due to the valve replacement. The valve replacement will not contribute to an initiating event for a Design Basis Accident (DBA). There is not a potential for a new type of accident associated with the installation of these valves, nor is there a new unanalyzed type of malfunction. The TER valve replacement has no impact on the acceptance limits for the Technical Specification on the accumulators. Therefore, there is no unreviewed safety question associated with this valve replacement.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 10825, Retirement of Seal Injection System for 2CWA-P21A, B, C, D and 2CWA-P22A, B, C, D With Installation of SLADE Packing In All Of The Pumps

CHANGE

SLADE packing will be used in place of the presently used mechanical seals and/or ARGO packing for the Circulating Water System Amertap pumps 2CWA-P21A, B, C, D and 2CWA-P22A, B, C, D. Since SLADE packing does not require seal injection, the elimination and subsequent retirement in place of the seal water injection piping is also being done.

The Amertap system is QA Category 2 and does not have or perform a safety function. No adverse effect on the pumps or the system will result from the use of SLADE packing. An unreviewed safety question has not been created with the implementation of this modification.

CHANGE TITLE

TER 11171, Reinstallation of Needle Valves on 2HDH-LCV 103A2, B2

CHANGE

This TER was originally issued to reinstall needle valves to slow down valve closure for heater drain level control valves. Rev. 1 of TER 11171 was written after it was determined that acceptable closure times were obtainable without the needle valves installed. Design and UFSAR drawings were revised accordingly to document the non-presence of the needle valves.

This acceptable variation in providing control of the heater drain system first point heater levels does not impact safety related equipment, nor does it cause or affect any analyzed accident described in UFSAR Chapter 15. Therefore an unreviewed safety question is not involved with this equivalent control change in the Heater Drain System.

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 11949, Reactor Coolant System Temporary Level Instrumentation

CHANGE

This change is to the Reactor Coolant System (RCS) "C" hot leg piping used for the temporary level measurement of water in the RCS during refueling and maintenance operations. Included is the addition of a pipe "tee" and related piping fittings upstream of the hot leg level glass 2RCS-LG101, and a pipe "tee" and related piping and fittings to be installed in a pipe spool piece. The spool piece is only to be installed during refueling. The added piping is isolated from the RCS by removing the piping spool piece and installing blank flanges (i.e., once the spool piece is removed).

This piping is only used during refueling for temporary RCS level indication, is not part of the RCS pressure boundary, and as such the piping has no safety function to mitigate an event. The piping materials being installed by this change meet the design requirements for the line in which they are being installed. Pipe stresses are maintained within the limits established for non-nuclear safety Seismic Category II piping and components. The change does not involve an unreviewed safety question.

CHANGE TITLE

TER 12085, Overtemperature Differential Temperature and Overpressure Differential Temperature Reactor Trip Function Administrative Controls

CHANGE

TER 12085 has been generated in order to 1) establish the design requirements necessary to be maintained for certain Reactor Protection System (RPS) actuation functions at Unit 2 in response to issues identified in Westinghouse Technical Bulletin (TB) ESBU-TB-96-07, and 2) document that a revision to the Overtemperature Differential Temperature maximum limit is necessary.

TER 12085 established administrative controls which will ensure that the allowable values are maintained at values that are more restrictive than the current Technical Specifications. Additionally administrative controls are being established for certain Reactor Coolant System (RCS) parameters. The proposed changes do not involve any hardware modifications and the function of these trips remains unchanged. No design limits are changed, and the RPS will continue to function as designed providing protection against reactor core and RCS safety limits. This changed does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 12266, Turbine Bypass System Load Rejection Controller Deadband

CHANGE

An error signal exceeding a set value of reactor coolant T_{avg} minus T_{ref} fully opens all of the steam bypass valves in 3 seconds (relieving steam to the condenser). The turbine bypass system steam dump load rejection controller deadband was reduced to 2°F.

The Turbine bypass system is not credited within the plant safety analysis for providing primary/secondary over-pressure protection. This change does not involve an unreviewed safety question because the change does not change any safety analysis result. This change does not introduce any new plant hardware or degrade any existing plant hardware.

CHANGE TITLE

TER 12395, BVPS-2 Cycle 8 reactor core fuel reload evaluation

CHANGE

The evaluation concludes that there are no unreviewed safety questions associated with this reload design change. The reload design meets the existing reactor core design requirements and no accidents described in the UFSAR are adversely affected by this change. No Technical Specification changes are required and there is no impact on the Final Environmental Statement - Operating License phase. The Cycle 8 reactor core reload design was performed in accordance with Westinghouse methodology as licensed by the NRC.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 12449, Update of BV-2 Breaker Coordination Curves (FPSSR, Appendix A5)

CHANGE

This change revised the Fire Protection Safe Shutdown Report (FPSSR), Appendix 5A, Breaker Coordination Study, by replacing twenty-eight coordination curves with the latest coordination curves. References in Appendix A5 were also revised to reflect the current DC short circuit and 120 VAC fault current calculation numbers.

The changes to the FPSSR, Appendix A5, Breaker Coordination, do not involve an unreviewed safety question. The change to FPSSR, Appendix A5 replaces out of date coordination curves with the latest revision. This change does not make any changes to any existing relay or breaker settings. The changes reflected in the updated coordination curves do not adversely affect breaker coordination as required for fire protection safe shutdown.

CHANGE TITLE

TER 12452, Edward Auxiliary Steam Globe Valve Model and UFSAR Symbol Change

CHANGE

During approval of an equivalent valve replacement of the strainer flush drain valve at the auxiliary steam line serving the condenser steam jet air-ejectors, a discrepancy in the symbolic depiction of the valve style (type) in UFSAR Figure 10.4-25 was found (existing globe valve was shown as a gate valve symbol). This evaluation is written to evaluate treating the valve style symbol representation on UFSAR flow diagrams (or equivalent diagrams) as below the level of system design detail intended or appropriate for the UFSAR for a group of valve applications defined herein.

Depiction of valve symbols associated with the style of valve for normally closed maintenance vent and drain valves in the auxiliary steam and condensate system figures is determined to be below the level of detail associated with the NRC review as indicated in NRC Safety Analysis Report (SAR) content guidance documents. The vent and drain valves within the defined scope have no significant functional impact on the system associated with the valve style, and thus do not involve an unreviewed safety question. The plant asset equipment list as well as system operating manuals provide valve style information.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 12464, Removal of Valve 2GMH-308 From Plant Documentation

CHANGE

This Category 2 gate valve is described as isolating the hydrogen supply pressure on the Unit 2 Main Generator Hydrogen Supply System. This valve is not actually installed on the system and all associated documentation requires update.

This change does not present an unreviewed safety question because the subject valve does not perform any crucial function that is not otherwise accomplished by existing equipment.

CHANGE TITLE

TER 12473, Acceptance Criteria for Response Time Testing

CHANGE

Calculations for overtemperature ΔT response time testing have identified acceptance criteria based on separately developed inputs from pressurizer pressure, nuclear power input for $f(\Delta I)$ penalty, T_{avg} , and ΔT . Calculations for overpower ΔT reactor trip function response time testing have identified acceptance criteria based on separately developed inputs from T_{avg} , and ΔT . It was found, based on these calculations, that plant response time acceptance criteria were non-conservative in some cases.

The LRM and plant test procedures were revised to reflect the results of the calculations. Revision of the electronic response times brings them in line with the acceptance criteria used in the safety analysis. This change does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 12488, Update Plant Documentation for 2IAC-772 From Open To Close

CHANGE

Drawing 10080-RK-2B was updated to the current as-built instrument air configuration, which included closing valve 2IAC-772, but related documentation was not changed. This safety evaluation updates Figure 9.3-4 in order to show valve 2IAC-772 as closed, whereas it is currently depicted as open on this figure.

This change does not present an unreviewed safety question because the Containment Instrument Air System supply is not safety-related nor is it required for safe shutdown. This particular valve performs no function that supports Category I systems or equipment.

CHANGE TITLE

TER 12543, Update to Fire Protection Safe Shutdown Report

CHANGE

This change updated the Fire Protection Safe Shutdown Report (FPSSR) to include corrections, which were identified in the performance of a fire protection self-assessment. The FPSSR was updated to include changes in manual actions for fires in certain fire areas.

The changes to the FPSSR resolve discrepancies between the FPSSR and the Fire Prevention and Control Procedures, 2OM 56B. These changes do not constitute an unreviewed safety question because these manual actions will enhance the operating Procedures 2OM 56B to safely shutdown the plant following a fire.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 12579, 2FWE*STR100 & 101 Temporary Strainers

CHANGE

Design basis documents need to be revised to reflect that the strainer bodies were retained in the piping system. It has been determined from documentation that the screen elements were removed from the strainer bodies under programs in place during start-up. The design basis analyses for pipe fluid flow did not include these strainers in the fluid system. Because there is a negligible impact on Auxiliary Feedwater System (AFWS) fluid flow, the analyses need not be updated to document that the "Y" type strainer bodies are retained in the piping system.

An unreviewed safety question is not involved because this change updates drawings to reflect the As-Built condition. The AFWS with the 2 "Y" type strainer bodies (without screen elements) retained in the piping system is capable of functioning as intended during accident conditions. The "Y" type strainer bodies retained in the piping system have a negligible effect on AFWS flow and are acceptable from a design perspective.

CHANGE TITLE

TER 12608, Shake Space Identification Updates - Fire & Flood Seal Programs

CHANGE

The change revised the Fire Hazards analysis in Section 9.5A of the UFSAR to reflect the evaluation of material left in situ behind building columns and at the edges of floor slabs for its contribution to area fire loads, and made editorial changes to individual fire area discussions to make cross reference information more accurate.

There is no impact to fire safe shutdown capability due to increases in the combustible loads in fire areas, and no impact to alternate safe shutdown capability. Methods of detection and suppression remain appropriate to the hazards of each area providing reasonable assurance that a fire would be extinguished well before all combustibles within a fire area are consumed. Alternate train equipment, or alternate safe shutdown capability in other area(s) remains available to safely shut down the plant in the event of a fire. Impact due to a fire in any given area, or to fire protection design basis (which is defense-in-depth), that have been previously reviewed are not changed. This change does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 12658, Revise Fire Protection Safe Shutdown Report to Delete Description of Annunciators

CHANGE

This change to the Fire Protection Safe Shutdown Report (FPSSR) deletes references to annunciator alarms in the safe shutdown system descriptions.

The description of annunciators will be deleted from the safe shutdown system descriptions in the FPSSR because they are not essential to the safe shutdown function. This is a clarification rather than a change in methodology because the original analysis never included alarms associated with any of the safe shutdown equipment. Post-fire operating procedures in Operating Manual Chapter 56B and 56 C do not rely on or make any reference to these alarms. The description of the safe shutdown systems in UFSAR Appendix 9.5A and in the NRC Safety Evaluation Report and supplementary safety evaluation reports do not make reference to the alarms.

CHANGE TITLE

TER 12697, VOND Drawing 10080-RM-427B-1, Rev. 4

CHANGE

This TER evaluated the as-installed piping system attached to the auxiliary boiler steam header. This system is shown in VOND drawing 10080-RM-427B-1, Rev. 4 and Operating Manual Chapter 27B. The arrangement is utilized for Auxiliary Boiler System startup from hot standby condition and also during Auxiliary Boiler System shutdown to hot standby condition. UFSAR Figure 10.4-25 does not show this arrangement.

The configuration of piping shown on VOND drawing 10080-RM-427B-1, Rev. 4 is acceptable to be incorporated into UFSAR Figure 10.4-25 and does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 12763, Fire Protection Safe Shutdown Report Analysis Criteria for Manual Actions

CHANGE

This change updates the Fire Protection Safe Shutdown Report (FPSSR) to include specific criteria for manual actions in Appendix A4, and incorporates various editorial and administrative changes in Appendix A4 and A6.

This change does not involve an unreviewed safety question. Update of the FPSSR to include criteria for manual actions and to incorporate various editorial and administrative changes does not increase the probability of occurrence or the consequences of an accident or malfunction of any post-fire safe shutdown equipment as previously evaluated in the UFSAR. Also, since this change only involves an update of the FPSSR, and does not change the plant design or how the plant operates during a design basis fire scenario, the possibility of an accident or malfunction of post-fire safe shutdown equipment that is different from that previously evaluated in the UFSAR is not created.

CHANGE TITLE

TER 12798, Administrative Controls to Reduce Heat Flux Hot Channel Factor Fq Limit From 2.4 to 2.3

CHANGE

The purpose of this change is to implement an administrative control to reduce the Fq limit at both Unit 1 and Unit 2 from a limit of 2.4 to a limit of 2.3 and make corresponding changes to the Fxy surveillance requirements in the Core Operating limits Report (COLR) for both units. This change was necessary to reclaim safety analysis Peak Clad Temperature (PCT) margin lost due to an error in the code used to calculate cladding temperatures during a Loss of Coolant Accident (LOCA). The reduction in Fq ensures that the calculated PCT, including conservative model assessments per 10CFR50.46, remains below 2200 degrees Fahrenheit.

There are no unreviewed safety questions associated with this change. The Fq value reduction is conservative with respect to the safety analysis limit. The reduction of the Fq limit allows a 100°F margin to be applied to the Peak Clad Temperature, thereby maintaining PCT below the 2200F safety analysis limit. The present core load is designed not to exceed the 2.3 Fq limit for the duration of the current operating cycle and also bounds cycle operation to date.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 12955, Upgrade Meteorological Tower Delta Temperature Processor Boards - Elevations 500' to 35' and 150' to 35'

CHANGE

The range of the Delta Temperature-1 and Delta Temperature-2 processor boards is currently -6 degrees F to +12 degrees F. This causes these sensors to be declared out of service when the difference in temperatures increases to greater than +12 degrees F or decreases to less than -6 degrees F. This change increases the range of the processor boards to -8 degrees F to +20 degrees F.

There is no unreviewed safety question since this change does not cause an increase in the consequences of an accident. The change will allow the measuring system to detect, record and display the delta temperature indications over an increased range of -8 degrees F to +20 degrees F, rather than the present -6 degrees F to +12 degrees F.

CHANGE TITLE

TER 13066, Fire Protection Safe Shutdown Report Clarification

CHANGE

The Unit 2 Fire Protection Safe Shutdown Report (FPSSR) was changed to delete reference to operations response to potential spurious openings of valves 2RCS-MOV557A, B, or C due to a fire-induced signal, and to add a summary of analysis results. The response for the spurious valve opening was to “. . . manually close either 2CHS-MOV201 or 2CHS-HCV137.” It was determined that manual closing of these valves would be impractical due to lighting and accessibility concerns. An analysis was performed to determine the impact of spurious opening of any or all of the referenced valves. The results indicate that the resultant worst-case excess letdown flow path was bounded by the charging pumps' capability to restore inventory. Therefore, the requirement to be able to achieve cold shutdown conditions within 72 hours can be met without the capability of isolating the letdown flow path.

The change removes inaccurate information from the Unit 2 FPSSR and adds clarification regarding analyzed letdown flow rates. An unreviewed safety question is not involved because the analysis demonstrates that excess letdown flow is limited such that safe shutdown can be achieved after a fire without the manual actions previously specified in the FPSSR.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 13123, QA Category Determination for 2HVC-CLC219

CHANGE

This change downgrades the QA Category from 1 to 2 of the Control Building & Cable Tunnel Cooling Coil (2HVC-CLC219) so that it correctly reflects the installed component's QA Category. Unit 2 UFSAR sections 9.4.1 and 9.2.2.2 support this change. 2HVC-CLC219 is not required to provide cooling so that the Control Building Air Conditioning System (except Main Control Room Area) can meet its summer time normal operating temperature limit of 104 degrees F and the post Design Basis Accident (DBA) temperature limit of 120 degrees F. The critical safety function of cooling these areas after a DBA is done by two supply fans (2HVC-FN 266A & B) and two return/exhaust fans (2HVC-FN265A & B).

This change does not constitute an unreviewed safety question since no discussion of the operation of 2HVC-CLC219 is found within the Unit 2 UFSAR related to the capability to function for emergency shutdowns.

CHANGE TITLE

TER 13217, Modification of the BVPS Administrative Limit for RCS/PRZR Cool-down

CHANGE

This change removed the administrative limits for the Reactor Coolant System (RCS) and Pressurizer, and allows cool-down rates up to the Technical Specification (T.S.) 3.4.9.1.b limit of 100 degrees F per hour (for the RCS) and up to the T.S. 3.4.9.2.b limit of 200 degrees F per hour (for the Pressurizer). This change also revises UFSAR sections 5.4.7, 5.3.3, 3.9N, and Figures 5.4-5 and 5.4-6.

There is no unreviewed safety question as a result of this change because these limits remain with the licensing basis limits of T.S. 3.4.9.1.b and T.S. 3.4.9.2.b. There is no increase in the consequences of a Design Basis Accident. In addition, there is no potential for creation of a new type of unanalyzed event, and no impact on margin of safety.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 13374, Revise Unit 2 Spent Fuel Crane Restricted Operating Area Limits

CHANGE

Changes were made to allow the crane to park closer to the upender. This significantly reduces refueling cycle time, and thus reduces the duration of a refueling outage. The text in Sections 9.1.4.3.1, 9.1.4.3.1.5, and 9.1.5.5.2.3 will be changed to denote that the upender can not operate only when the crane's east hoist is in the transfer canal / upender restricted area.

There is no unreviewed safety question as a result of this change because: The design basis accident is a dropped spent fuel pool assembly in the spent fuel pool. The likelihood of the design basis accident is not increased by this change. The radiological effluents and consequences of their release are not increased by this change. Reliability of systems important to safety is not degraded by this change. Probability of equipment malfunction is not increased. No new failure modes or new equipment malfunctions are created by this change. No new accident other than the design basis accident is created by this change. No Technical Specifications are affected by this change.

CHANGE TITLE

TER 13389, BVPS-2 Main Generator Hydrogen Dryer Replacement

CHANGE

The existing hydrogen dryer for the Unit 2 main generator was replaced with a more efficient model. The new unit requires a cooling water supply (Turbine Plant Component Cooling Water) to permit the tower to cool down quickly to meet the 8-hour switchover. In addition, the automatic switchover requires an instrument air supply to operate the solenoid valve in the new unit. The existing unit does not require instrument air or cooling water to function.

This change does not include an unreviewed safety question for the following reasons: 1) Based on the technical evaluation documented by TER 13389, the new hydrogen dryer is an acceptable replacement and meets the design, material and construction standards applicable to the existing dryer as well as the site standards, and 2) The hydrogen dryer is a non-safety related, non-seismic piece of equipment and does not interface with any safety related, seismic systems or components and is located in the turbine building (non-seismic building).

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

TER 13539, Containment Penetration 2X-99 Evaluation To Prevent Overpressurization with Partially Filled Piping

CHANGE

UFSAR Table 6.2-60 is being changed to alter the medium within containment penetration 2X-99. This change reflects the current piping configuration and overpressure analysis provided by TER 13539. Penetration 2X-99 is provided for the fire protection hose rack water supply inside containment. This change recognizes that during each cycle of operation, water in-leakage through the outside containment isolation valve 2FPW-AOV206 may partially fill the water supply system inside containment. The medium of penetration 2X-99 may at times during the operating cycle not be dry as indicated in UFSAR Table 6.2-60. TER 13539 analyzed the consequences of this postulated occurrence.

It has been determined that there is no unreviewed safety question associated with the postulated in-leakage. Overpressure of containment penetration 2X-99 will not occur during design basis events due to the postulated leakage. The medium within penetration 2X-99 as stated in the UFSAR can be revised from "dry" to "dry or water and air" or equivalent wording.

CHANGE TITLE

TER 13568, IEEE 383-74 Cable Flame Test Comparative Analysis

CHANGE

The objective of TER 13568 is to demonstrate that non-safety related cables, having been tested to industry flame retardancy tests UL-1581 are acceptable alternatives to the flame testing of IEEE 383-74. This 50.59 is for all non-safety related cable applications and communication cables, which are not used in any safety related applications. Cables installed in safety related applications need to be purchased in accordance with IEEE 383-74 which invokes IEEE 323-74 for environmental qualification. Appropriate BVPS-2 UFSAR sections are being revised as delineated in the safety evaluation.

There is no unreviewed safety question because all non-safety related cables having passed the industry flame testing have demonstrated self-extinguishing qualities that meet or exceed the flame testing delineated in IEEE 383-74.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 9.2.1.1.5, and Section 3.4.1

CHANGE

This safety evaluation is written to justify two UFSAR changes. Change 1 is being made to page 3.4-1 and consists of stating that the service water pump cubicles "can be" sealed instead of "are" sealed and deletes text indicating that the vent ducts used to vent the cubicles to the atmosphere are portable. Change 2 is being made on page 9.2-12 to correctly identify control room service water system pressure indication. Service water header pressure indication is provided in the control room. Service water pump suction and discharge pressure indication is provided locally. Excessive detail identifying the location of indicators within the control room was also deleted.

Regarding change 1. Whether the service water pump cubicles are vented using portable or permanent vent ducts has no affect on the ability to ventilate the service water pump cubicles, because neither the design or ventilation capacity of the vent ducts has changed. If the cubicles are sealed or can be sealed has no affect on the ability to protect the service water pumps from flooding because sufficient time exists to seal the cubicles in the event of a flood as required by Technical Specification 3.7.6.1.

Regarding change 2. This change is being made to specify that service water header pressure is indicated in the main control room. These indicators provide the operator with the necessary service water system pressure information.

Neither of these changes will affect the service water system's ability to perform its normal or accident mitigation functions. These changes will not introduce any new failure modes or malfunctions, or increase the probability or consequences of an accident presently evaluated in the UFSAR. Therefore they will not result in an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 9.1.3.3 and Section 1.8, Table 1.8-1(RG 1.13)

CHANGE

A statement made on page 9.1-12a of the Unit 2 UFSAR states that there is a local and main control room alarm for spent fuel pool low water level. The change is being made to delete the mention of the local alarm. The alarm is only in the main control room. This can be seen on the Unit 2 Operating Manual drawing LSK-29B. This will also necessitate a revision to UFSAR Section 1.8 concerning the regulatory position for RG 1.13 (R1). The position will be modified to address the revision concerning the lack of the local fuel pool low-level alarm.

The absence of a local alarm for spent fuel water level is not a regulatory or license requirement for Beaver Valley Unit-2. This item was not relied upon by the NRC to license the safe operation of Beaver Valley Unit-2. In addition, this revision to the UFSAR does not introduce any new failure modes or malfunctions not presently evaluated in the UFSAR because it does not involve a change to any components. The water level is monitored and a low level alarm is provided in the main control room. The absence of a local low-level alarm will also not increase the probability of an accident because alarms do not initiate accidents. Accident consequences are also unaffected by this change because the spent fuel pool low level alarm is not relied upon for design basis accident mitigation. Therefore, this change does not involve an unreviewed safety question.

CHANGE TITLE

UFSAR Change, Section 9.2.1.1.5

CHANGE

The proposed change is being made to remove a statement from the UFSAR that control switches for the seal water injection strainer backwash motors are provided on the main control board.

The proposed change will not result in a unreviewed safety question because the change will not introduce any new failure modes or malfunctions or increase the probability or consequences of an accident presently evaluated in the UFSAR. This is because it involves removing a statement that main control board mounted control switches exist for the seal water injection strainer backwash motors. The existence, or non-existence, of main control board switches has no affect on accident probabilities, equipment failure modes or performance, or the consequences of an accident or equipment malfunction. Local control switches are provided to adequately control the backwash motors. In addition, control room switches to start or stop the backwash motors are not relied upon to mitigate the consequences of an accident.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Condensate Pump Flow

CHANGE

The last sentence of the first paragraph on UFSAR page 10.4-27 which states that "A minimum flow of 7500 gpm (total) for the operating Condensate pumps is maintained by a flow-controlled circulation valve." This detail is not required to be in the UFSAR.

The condensate recirculation flow control valve is not safety related, is not discussed in the NRC SER, and failure of this system will not affect safety-related system functions. The condensate recirculation flow operation will not result in an unreviewed safety question.

CHANGE TITLE

UFSAR Change, Describe the Use of Hydrogen Peroxide in the Reactor Coolant System

CHANGE

This change adds a description of the use of hydrogen peroxide in the Reactor Coolant System (RCS). Hydrogen peroxide is added to the RCS to oxygenate the system when shutting down for refueling. The Chemical and Volume Control System ion exchangers are available to remove the corrosion products that are consequently released from system surfaces. This prevents these products from depositing in areas where refueling or other work is to be performed, and avoids associated exposure to workers.

The evaluation concludes that this change does not involve an unreviewed safety question since the change is adding a description of when and why hydrogen peroxide is added to the Reactor Coolant System. The added description regarding the oxygenation of the system, and how it prevents corrosion products from being deposited does not constitute an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Discrepancy in Maximum River Water Temperature

CHANGE

Temperature discrepancies between the Unit 2 Design Basis Document and the UFSAR, and internal discrepancies between the Unit 2 UFSAR regarding maximum river water temperature are being evaluated, resolved, and the appropriate text updated.

None of the changes adversely affect design basis accidents, radiological consequences, probability of occurrence, failure modes, or probability of failure of safety related structures, systems, and components. All of the affected design basis accident mitigation components have been evaluated for adverse conditions stemming from the increase in river temperature. There is no impact on Technical Specifications or environmental issues. No unreviewed safety question is involved.

CHANGE TITLE

UFSAR Change, Figure 10.2-10, Turbine Generator H₂ and CO₂ Supply System

CHANGE

The figure is being deleted since the text adequately discusses H₂ and CO₂ Turbine Generator Supply and the figure is not necessary for the reader to understand the system. This system is not safety related.

An unreviewed safety question is not involved since: 1) no design or operating parameters are affected, 2) no accident analysis is affected, 3) no physical or administrative control changes are being made to the plant, and Section 10.2.2 addressing this data was deleted from the Standard Review Plan (NUREG 0800).

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Figure 8.3-1, Sheet 2, Terminology Change to Match BV-1 in 4160 V Distribution System

CHANGE

Unit 2 UFSAR Figure 8.3-1, Sheet 2 of 2 is revised to change the terminology from "load center" to "substation" and to identify the substation numbers and locations in accordance with the reference drawing (RE-1GB). These changes result in consistency between the Unit 1 and Unit 2 UFSAR Figures and the control drawings, and do not change the design or function of the 4160 Volt Distribution System.

An unreviewed safety question is not involved for the following reasons: 1) the proposed changes do not change any equipment or equipment operation or system configurations in any way that would affect the Licensing Basis or Operational conditions, 2) the proposed changes do not affect the accident analysis, and 3) the proposed changes are administrative and there are no physical changes being made to the Station.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Figures 10.4-25, 10.4-26, and 10.4-26A, Auxiliary Steam and Condensate System

CHANGE

In order to reduce excessive detail these figures are being deleted. Reference to these figures in the UFSAR text is also removed. The UFSAR text description is adequate to convey to the reader the system design. No physical plant changes are proposed.

An unreviewed safety question is not involved since: 1) no design or operating parameters are affected, 2) no accident analysis is affected, and 3) no physical or administrative control changes are being made to the plant.

CHANGE TITLE

UFSAR Change, Figures 7.3-7, 7.3-13, 7.3-14, and 7.3-37, Functional & Logic Diagrams

CHANGE

Figure 7.3-7 was changed to add low flow notation, and to delete a general warning alarm; Figure 7.3-13 was changed to add chlorine detector logic; Figure 7.3-14 was changed to add ΔT and T_{avg} logic; and Figure 7.3-37 was changed to add reactor trip logic.

An unreviewed safety question is not involved since the proposed change does not affect any design or operating parameters, does not affect any accident analysis, corrects figures to agree with the approved QA Program documents, and no physical or administrative control changes are being made to the plant.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Primary Grade Water System Operation

CHANGE

The second sentence of the first paragraph on page 9.2-42 was revised to state that the normal mode of operation of the primary grade water system is with both tanks aligned to one pump normally in service. Changing the UFSAR text corrects the UFSAR description of the normal system alignment.

An unreviewed safety question is not involved since: 1) the primary grade water system is not safety related, with the exception of the containment isolation valves and the piping between them, which are Seismic Category I, 2) the NRC SER states that the system was evaluated and found to perform no functions necessary for achieving safe reactor shutdown or for accident prevention or mitigation and is therefore acceptable, and 3) failure of the system will not affect safety related system functions. Therefore, the primary grade water tank pump alignment, and system operations will not result in an unreviewed safety question.

CHANGE TITLE

UFSAR Change, Reactor Coolant System

CHANGE

This change replaces Reactor Coolant System UFSAR figures 5.1-2, 5.1-3, 5.1-4, 5.1-5, 5.1-6, and 5.1-7 with a simplified figure and deletes figures 5.1-1, Sheets 1 and 2, 5.4-8, and 5.4-9, and removes or revises references to figures on Table 5A-1, pages 2 and 3, in order to reduce excessive detail in the UFSAR. The text will be revised to reflect these changes. The simplified figure replaces excessively detailed figures that are not necessary to understand system design. The figures being deleted do not contain design information related to nuclear safety, or that information is contained elsewhere in the UFSAR text.

An Unreviewed Safety Question is not involved for the following reasons: 1) the proposed changes do not affect any design or operating parameters, 2) the proposed changes do not affect any accident analysis, and no physical or administrative controls changes are being made to the plant.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Safety Injection System

CHANGE

This proposed change replaces Safety Injection System figures 6.3-1, 6.3-2, sheet 1, 6.3-2, sheet 2, and 6.3-3 with two simplified figures and revises references to the figures. The text is to convey the system design. The simplified figure replaces excessively detailed figures that are not necessary to understand system design. No physical plant changes are proposed.

An unreviewed safety question is not involved for the following reasons: 1) the proposed change does not affect any design or operating parameters, 2) the proposed change does not affect any accident analysis, 3) no physical or administrative controls changes are being made to the plant, and 4) figure details being deleted do not communicate system design criteria or system performance criteria used as a basis for UFSAR safety analysis.

CHANGE TITLE

UFSAR Change, Section 1.2.5, Turbine Generator Loading

CHANGE

The last sentence in Section 1.2.5, stating that the turbine generator loading is stopped, is being deleted since it is not specifically done.

An Unreviewed Safety Question is not involved for the following reasons: 1) the turbine generator control system is not safety related, 2) the NRC SER does not discuss the relationship between reactor coolant low operating temperature and automatic turbine generator loading, and 3) failure of the system will not affect safety-related system functions.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 4.2.2.2.2, Conditional Use of Fuel Assemblies with Potentially Fractured Top Nozzle Holddown Spring Screws - Rev. 1

CHANGE

This UFSAR change is being implemented to allow Beaver Valley Unit 2 to operate with potentially fractured top nozzle spring screws. Following investigations into this condition, Westinghouse issued SECL 00-002, "Reuse of Fuel Assemblies with Potentially Fractured Top Nozzle Spring Screws (Generic)". This generic safety evaluation allowed the reuse of fuel assemblies provided certain inspections and evaluations were completed. Westinghouse has issued a Beaver Valley Unit 2 plant specific SECL (SECL-00-117) to document the reuse of fuel assemblies with potentially fractured top nozzle spring screws at Beaver Valley Unit 2. This degraded or non-conforming condition is subject to a 10CFR 50.59 safety evaluation, per the requirements of NRC Generic Letter 91-18.

This change will not increase the probability of occurrence or the consequences of an accident previously evaluated in the UFSAR, and is within the limits of the current design analysis. Additionally, this change will not create the possibility of an accident of a different type than any evaluated previously in the UFSAR. There is no unreviewed safety question associated with the reuse of assemblies with potentially fractured top nozzle holddown spring screws.

CHANGE TITLE

UFSAR Change, Section 10.4, Tables Revised To Reference Section 10.3.5 For Water Chemistry Parameters

CHANGE

This change replaces non-Technical Specification chemistry parameters in Tables 10.4-5, 10.4-9, and 10.4-13 with a reference to UFSAR Section 10.3.5, "Water Chemistry."

The evaluation concludes that the change does not involve an unreviewed safety question. Non-Technical Specification chemistry parameters will continue to be applied as described by the BVPS Chemistry Manual. The NRC SER states that the chemistry-monitoring program as described in UFSAR Section 10.3.5 meets GDC 14 and applicable regulatory guidance.

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 10.4.9.2.1, Replace "Hydrazine And Morpholine" With "Chemical Treatment"

CHANGE

This change replaces the words "hydrazine and morpholine" with the words "chemical treatment".

The evaluation concludes that the change does not involve an unreviewed safety question. The specific naming of the chemicals is needless detail. The actual chemicals used will meet the original intent of scavenging oxygen and/or raising the pH of the water in the primary plant demineralized water storage tank. The chemicals used for these purposes are specified in the BVPS Chemistry Manual. The Chemistry Manual bases such requirements on industry guidance from documents such as the EPRI PWR Secondary Water Chemistry Guidelines. In addition, any changes to the chemicals used in any plant system are evaluated and approved by Engineering.

CHANGE TITLE

UFSAR Change, Section 12.5, Remove Requirements For A TLD and Annual Whole Body Count

CHANGE

Removed the requirement for needing a TLD since 10CFR20.1502 requires individual monitoring devices but does not specify the number or type. Removed the requirement for whole body counts since there is no regulatory requirement for any specific frequency of performing bioassay. The UFSAR still maintains a requirement to have a program that meets the intent of the applicable regulatory guides.

This change does not result in an unreviewed safety question because it involves only changes to the Health Physics Program for personnel monitoring. This change does not affect the design or operation of any structure, system, or component, and therefore cannot affect design basis accident conditions, assumptions, probability or consequences.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 13.2.2.1, General Employee Training

CHANGE

The overview description of General Employee Training (section 13.2.2.1) will be expanded to address the broad categories of training required for all personnel who are authorized for unescorted access to the protective areas at Beaver Valley. Also included in this section will be an overview of the Radiation Worker Training. The more detailed program descriptions of the Station Orientation Training (subsection 13.2.2.1.1) and Radiation Worker Training Program (subsection 13.2.2.1.2) will be eliminated. The specific details for the implementation of the General Employee Training will reside in the Nuclear Training Administrative Manual. Further evaluation of the specifics for implementation of the General Employee Training will be performed under the Systems Approach to Training. The updated description in Unit 2 UFSAR section 13.2.2.1 for Radiation Worker Training conforms with 10CFR 19.12 and Regulatory Guide 8.8.

There is no unreviewed safety question associated with this change because the updated Unit 2 UFSAR section 13.2.2.1, Radiation Worker Training conforms to Regulatory Guide 8.8.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 15.0.3.2, T_{avg} Variations at Low Power Levels

CHANGE

Unit 2 UFSAR Section 15.0.3.2 is being revised to recognize that during startup operation from 0 to approximately 18% power, the steam dump system is operated in steam pressure mode with a constant steam pressure control setpoint corresponding to no-load T_{avg} (approximately 1005 psig). Reactor power is increased by pulling rods until a power level is reached where the turbine can be engaged. During this time, T_{avg} increases along with the power to approximately 559 °F at approximately 18% power as indicated by nuclear instrumentation. Since the program T_{avg} is calculated based on decreasing steam pressure as power increases, a T_{avg} higher than program is required to be maintained in order to compensate for the constant steam pressure and temperature. Thus the plant is operated above the program T_{avg} during this period. At 18% power, the deviation from program T_{avg} is approximately 7 °F. Throughout this evaluation, the terms T_{avg} variation or T_{avg} deviation refer to operation with T_{avg} at temperatures other than the program T_{avg} for a specific power level.

The variations in T_{avg} from program T_{avg} at low power level represent a transitory startup condition and has no affect on any SSC, operating or design parameter, does not affect failure modes or initiate any event, does not affect the probability or radiological consequences of any accident, create no new type of accident or malfunction, has no effect on plant response, does not alter or affect any acceptance limit, margin to safety, Technical Specification or plant Bases and has no impact on effluents, the plant power level, or the environment No unreviewed safety question is involved as a result of this revision to the Unit 2 UFSAR.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 15.4.6.2, Safety Analysis Chapter

CHANGE

The change deletes reference to the Technical Specifications since there is no requirement in the Technical Specifications to determine the estimated critical position of the control rods prior to reaching criticality.

An Unreviewed Safety Question is not involved for the following reasons: 1) site procedures control the approach to criticality and include provisions to estimate the critical position of the control rods, 2) the statement to be deleted does not provide information related to structures, systems, and components performance requirements or evaluations required to show that safety functions will be accomplished, 3) deletion of the sentence does not affect the discussion provided in the same UFSAR paragraph regarding protection provided in the event power escalation occurs too fast due to an unknown dilution, and 4) the proposed change does not affect the accident analysis addressed in the Unit 2 UFSAR.

CHANGE TITLE

UFSAR Change, Section 15.6.5.5, Radiological Consequences of a Small Break LOCA

CHANGE

The change deletes small break LOCA radiological consequence description added in 1995.

An Unreviewed Safety Question is not involved. The re-calculated dose consequences for the small break LOCA are less than those calculated for a large break LOCA.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 6.4.2.2, Revision to state that no batteries are in the control room envelope

CHANGE

Section 6.4.2.2 states that there cannot be an introduction of noxious gases from station batteries since there are no batteries installed in the control room envelope. The Unit 1 No. 5 battery is, however, within the shared control room envelope. The UFSAR is being revised to take credit for the ventilation in the process instrument room as the means to prevent buildup of noxious gases from the battery.

Calculation 8700-DEC-4, Bat 1-5 Ventilation Requirements, forms the basis for concluding that the introduction of noxious gases from the batteries installed within the control room envelope is not possible due to adequate ventilation. Thus, the revision will not result in an unreviewed safety question because the change will not introduce any new failure modes or malfunctions or increase the probability or consequences of an accident presently evaluated in the UFSAR.

CHANGE TITLE

UFSAR Change, Section 7.2.2.2.3, References Technical Specifications as the source for set-points for the Reactor Trip System

CHANGE

UFSAR Section 7.2.2.2.3 is changed to delete reference to the precautions, limitations, and set-points documentation and referencing the Technical Specifications as the source for the set-points.

An unreviewed safety question is not involved for the following reasons: 1) the proposed change does not change any equipment or equipment operation or system configuration in any way which would affect the Licensing or Operational conditions, and 2) the proposed change does not affect the accident analysis addressed in the Unit 2 UFSAR.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 7.7.1.3, Rod Insertion Limit Monitor

CHANGE

UFSAR Section 7.7.1.3, "Control Bank Rod Insertion Monitoring," indicates that the value for E is an alarm limit. This statement is incorrect. The value for E represents the insertion limit for the bank and the indication of the approach to the limit is made by the value of D. It is also physically impossible to set this alarm as described in the UFSAR. The BVPS Technical Specifications was revised with License Amendment Request 2A-99 to reflect current licensing basis information for the control bank rod insertion limit. This change will make the UFSAR consistent with the Technical Specifications and other design documents.

The change serves to remove inaccurate information from the Unit 2 UFSAR, and will not impact the performance of equipment in any safety system or system important to safety. Therefore, the proposed change does not result in an unreviewed safety question.

CHANGE TITLE

UFSAR Change, Section 8.3.1, Clarification of Master Equipment List as Source for QA Category Determination

CHANGE

This change revises several statements in UFSAR Section 8.3.1 to provide clarification that equipment identification numbers cannot be used to determine that equipment is safety related. This position reflects the BVPS response to Generic Letter 83-28, Item 2.2.1, Equipment Classification Programs for all safety-related components.

The removal of the capability to determine the safety significance of a component by its equipment identification number does not affect the ability of any component to perform its safety function. The QA category of the component remains readily available through the Asset Equipment List (AEL) for any work that has to be performed. No accident or equipment malfunction can be affected or created by this change to the procedure identified in the UFSAR. An unreviewed safety question is not involved.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 8.3.1.1.10, Revise Statement that Class 1E Supply Breakers And Feeder Breakers Have Control Board Indication And Control

CHANGE

The proposed revision removes excessive detail and reference to the supply breakers and indicates that some loads have control and indication at the breaker or other panel. Supply breakers and certain loads, specifically the Hydrogen Recombiners and Control Room Air Conditioner Refrigeration Compressor - Condenser Units, do not have control board indication and control.

These changes bring consistency to the UFSAR and do not change any of the assumptions in the UFSAR. The refrigeration compressors are QA Cat II and are not relied upon to mitigate the consequences of postulated accidents. Thus, this revision does not affect any of the assumptions in the accident analysis. The revisions will not result in an unreviewed safety question because the changes will not introduce any new failure modes or malfunctions or increase the probability or consequences of an accident presently evaluated in the UFSAR.

CHANGE TITLE

UFSAR Change, Section 8.3.1.1.11.5, Number of 480 V Motor Control Centers

CHANGE

Delete the sentence that states the number of normal and emergency 480 V Motor Control Centers (MCCs), since it contains excessive detail. This detail is not required by regulations to be in the UFSAR.

There are no physical plant changes proposed by this change. The NRC's SER is silent regarding the number of MCCs. The number of MCCs is not a precursor or initiator to any accident in UFSAR Chapter 15. The numbers of MCCs is not important to providing an understanding of the plant's design and operation from either a general or system functional perspective. Therefore, this UFSAR text change will not introduce any new failure modes or malfunctions or increase the probability of an accident presently evaluated in the UFSAR and an unreviewed safety question is not involved.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 8.3.1.1.3, Removal of Pressurizer Heater Operation Limitations

CHANGE

This change deletes the UFSAR statement that pressurizer heaters powered from the two Class 1E busses should not be operated simultaneously since these loads are non-Class 1E. No basis for this statement could be located. Sufficient power is available to the pressurizer heaters via the emergency busses and sufficient indication of heater current is available. There was no commitment to limit any combination of loads on either or both busses.

Although the pressurizer heaters are non-Class 1E loads, they are connected to the busses via Class 1E breakers; therefore bus availability and independence will be maintained in case of failure of the non-Class 1E loads. Since sufficient capacity is provided on each bus to power the loads individually, there is sufficient capacity to support concurrent operation of the heater loads. Thus, the concurrent operation of heater loads has no adverse affect on the ability of any safety system to perform its function. No new failure modes or accidents are created by the concurrent operation of heater loads versus operation of individual loads. No unreviewed safety question is involved by this change.

CHANGE TITLE

UFSAR Change, Section 8.3.2.1.2, Essential Bus Rectifiers Not Supplied From MCC-2-23 and MCC-2-26

CHANGE

The rectifiers for the essential bus inverters are supplied directly from 480 V ac switchgear [480VUS-2-5], bus 2J and 2K, and not MCC-2-23 and MCC-2-26.

The essential bus does not power equipment important to safety. Additionally, the rectifiers for the essential bus inverters are supplied directly from the same source that powers the incorrectly identified MCC-2-23 and MCC-2-26. The fact that the MCCs and associated breakers do not exist between the 480 V ac switchgear breakers and the rectifiers will not introduce any new failure modes or malfunctions or increase the probability or consequences of an accident presently evaluated in the UFSAR. Therefore, an unreviewed safety question is not involved.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 8.3.2.1.6, Deletion of Battery Charger Timer Setting Testing

CHANGE

The time to complete an equalizing charge is in the order of 100 hours. The 24-hour automatic timer function features are therefore not used, so there is no need to check the accuracy of the timer. Therefore the UFSAR statement specifying testing of the timer settings and charging current is being deleted.

The fact that the timer is not used in these procedures has no effect on the ability of the safety-related batteries to perform their safety function. The procedure change does not result in an unreviewed safety question because the change will not introduce any new failure modes or malfunctions or increase the probability of an accident presently evaluated in the UFSAR.

CHANGE TITLE

UFSAR Change, Section 9.2.2.1.2, Change to Allow CCP Chemical Addition Tank To Be Normally Isolated

CHANGE

This change will delete two sentences in UFSAR section 9.2.2.1.2 that refer to flow being normally maintained through the chemical addition tank. The chemical addition tank will now be put in service to add chemicals but will be kept isolated normally. A nitrite compound has been added to the component cooling water chemistry regimen. With this new chemical, there is no need to recirculate the water to add oxygen.

No unreviewed safety question is involved. The system does not physically change. The only difference is to keep the chemical addition tank normally isolated, as described above. There is no change in equipment that might affect the probability of failure or create a new type of accident. There is no significant change in flow, so the pumps and the supplied loads are not affected. There is no impact on the Technical Specifications or on the environmental effects.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 9.3.1.2.2, Condensate Polishing Air System Cross-Connection

CHANGE

This change will delete the last sentence of UFSAR Section 9.3.1.2.2 stating that there will be a cross-connection from the condensate polishing air system (in Unit 2) to the Unit 1 compressed air system. A crossover line is provided from the station service air system.

The condensate polishing air system is not safety related. Failure of the system will not affect safety related system functions; therefore, the system itself and system operation will not result in an unreviewed safety question.

CHANGE TITLE

UFSAR Change, Section 9.5.1.8.4, Plant Computer Room Fire Protection System

CHANGE

The description of Fire Protection features for the Unit 2 Plant Computer Room specifies the portable fire extinguisher will be located in the room. In actuality, the extinguisher is located outside the room, mounted on the wall beside the entrance. Having the extinguisher outside the room allows fire-fighting personnel to access the area with an extinguisher in hand, rather than trying to find it after the entry. The extinguisher was moved to this location prior to original plant startup.

There is no adverse affect on the ability to achieve or maintain safe shutdown in the event of a fire because 1) the portable fire extinguisher in question is not the primary means of fire suppression, 2) the installed location makes the extinguisher more readily available to fire fighting personnel in the event of a fire and 3) there are no components used to achieve safe shutdown located in the plant computer room. Therefore this change does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Section 9.5.3.5, Delete Backup AC Lighting Subsystem Testing

CHANGE

The UFSAR statement that "no specific testing for the backup AC lighting system is required since the system is normally energized and there are no transfer switches involved to power the system from the diesel" was never revised. The UFSAR statement regarding specific testing of the lighting system is being deleted by this change.

The backup lighting system is normally in operation and there are no active components within the subsystem involved in the changeover to diesel driven power so no specific testing is required. Therefore the change will not introduce any new failure modes or malfunctions or increase the probability or consequences of an accident presently evaluated in the UFSAR and an unreviewed safety question is not involved.

CHANGE TITLE

UFSAR Change, Sections 3.10B and 3.10N, Clarification of Design Bases Regarding Appropriate Combinations of Accident Conditions With The Effects of An Earthquake

CHANGE

The incorporation of licensing/design bases assumptions will clarify the design bases assumptions regarding the simultaneous imposition of a limiting seismic event (termed a Design Basis Earthquake {DBE} at Unit 1 and a Safe Shutdown Earthquake {SSE} at Unit 2; hereafter referred to as a DBE) with a Design Basis accident (DBA), by explicitly stating no such simultaneous DBE/DBA is ever assumed for accident analysis purposes. However, a DBE and DBA are assumed to occur simultaneously when determining the allowable stress criteria and design loading for Seismic Category I structures, piping, and supports.

All structures, systems, and components (SSC) will continue to meet their design requirements, which require a combination of DBE and DBA loads for piping, but not a simultaneous qualification for active mechanical and electrical components. Therefore all SSCs will function as originally designed, which includes their post-DBA mitigation function, as specified in the applicable licensing bases. Therefore, no unreviewed safety question is involved with this change.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Sections 5.4.12.1, 6.3.2.2 Simplify Description of RCS and ECCS Valve Design

CHANGE

The UFSAR provided information regarding the internal design of various valves used in the Reactor Coolant System and Emergency Core Cooling System that is excessively detailed. This change deleted this excessively detailed information and added information from the Beaver Valley Power Station motor operated valve (MOV) program used to respond to Generic Letter 98-10. This program ensures that safety related MOVs are capable of performing their safety-related function.

There are no physical changes being made to the facility as a result of this change. This change simplifies the UFSAR by removing details not required by NUREG 0800 or Regulatory Guide 1.70, Revision 3. Design basis presented in UFSAR Section 5.4.12, and 6.3.1 remain unchanged. Suitability of the design, performance of the valves, and future repairs or replacements (to meet the design bases as identified in UFSAR Sections 5.4.12 and 6.3.1), is ensured by the maintenance and design change programs. Therefore, the changes will not introduce any new failure modes or malfunctions or increase the probability or consequences of an accident evaluated in the UFSAR. No new type of accident is created since the design and function of the components remains unchanged. This change does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Sections 8.1 and 8.3, Initial Fast Bus Transfer

CHANGE

System Engineering reviewed UFSAR Sections 8.1 and 8.3 with respect to DCP 1818 and concluded that the descriptions of the automatic fast bus transfer capability could be misinterpreted. The proposed changes incorporate recognition of the design change noted in DCP 1818, and associated administrative controls. In brief, to ensure a trip signal is maintained to the circuit breaker after a trip signal has occurred, the self-reset relays will be replaced with the lockout type relays. To prevent the breakers from reclosing on a transfer from onsite to offsite power, a reclosure blocking scheme was added to the circuit. This was accomplished by adding knife switches to the closing circuit that are administratively controlled.

There were no safety implications due to this event as all emergency equipment functions as per design. This event was within the bounds of FSAR Section 15.2.6, Reactor Trip from 100% Power Coincident with Loss of Offsite Power. This change does not involve an unreviewed safety question.

CHANGE TITLE

UFSAR Change, Sections 9.2.3.1, 10.4.9.2, and App. 5A, Correct Demineralized Water Storage Tank Information

CHANGE

Section 9.2.3.1 was rewritten to better state the required availability of and the storage capacity for demineralized water, and to correct how much demineralized water is available for use.

The proposed UFSAR change does not constitute an unreviewed safety question. This is an administrative change to the UFSAR description of the demineralized water system; a system that is not safety related and is used if available, but not required for other systems to perform their safety related functions.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Sections 9.5A.1.2.1.5.4, and 9.5A.1.2.1.7.2a, Control Circuit Fault Current; Section 9.5A.1.2.1.5.2, Incorporate Missing Text

CHANGE

For Non-Class 1E 480 V MCCs having Control Power Transformers (CPT) without fuses on the 120 VAC secondary, the fault current is limited by the inherent design except for MCC-2-03, cubicle 5F, which has a 1000 VA CPT. A fault on the control circuit connected to this 1000 VA CPT may result in control cable fires in multiple fire areas. Additionally, the analysis also determined a fuse size and type, which if installed in the 120 V AC control circuit will preclude a fire in control cables. The design was modified by adding protective fuse (same size and type as determined by the analysis) on the secondary of this CPT. The description in UFSAR Section 9.5A.1.2.1.5.4 needs updated to reflect the above. UFSAR Section 9.5A.1.2.1.7.2a also needs update to include 120 V AC circuits without fuses used in Non-Class 1E MCCs at Unit 2.

During the incorporation of changes in Unit 2 UFSAR for Revision 1, two lines of text in the second paragraph of Section 9.5A.1.2.1.5.2 were inadvertently missed due to pagination. Except for the missing text, the wording for the second paragraph of Section 9.5A.1.2.1.5.2 in Unit 2 UFSAR (Rev. 1) and Unit 2 FSAR are identical. This missing text also needs to be reinstated in the UFSAR as an administrative change.

The update of UFSAR sections 9.5A.1.2.1.5.4 and 9.5A.1.2.1.7.2a for description of 120 V AC control circuits connected to control power transformers (CPT) in non-Class 1E 480 V MCCs does not result in an unreviewed safety question due to the following: The description of the CPT in 480 V MCCs is used to support the assumption (9.5A.1.2.1.2.5) in Fire Protection Evaluation Report (FPER) in UFSAR, Appendix 9.5A. The description indicates that either a fuse or the fault current limited by CPT protects the control cables from igniting due to a fault in the control circuit. For non-Class 1E 480 V MCCs, the fault current limit provided by CPT is described. Due to a large size CPT (1000 VA) installed in non-Class 1E MCC-2-03, cubicle 5F, a protective fuse sized to protect the control cables has been installed. This fuse will ensure that a fault on the control cables connected to the 1000 VA CPT will not result in multiple area fires due to control cable ignition. This update for the description of 120 V AC control circuits connected to 480 V MCCs does not change the assumption or the evaluation contained in the FPER but provides clarity and agreement between the sections 9.5A.1.2.1.5.4 and 9.5A.1.2.1.7.2a. This change does not involve an unreviewed safety question.

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Service Water System Figure Simplification

CHANGE

The change replaces Service Water System UFSAR figures 9.2-1, 9.2-2, 9.2-3, 9.2-4, and 9.2-5 with a simplified figure, and deletes figures 9.2-6, 9.2-7, 9.2-8, and 9.2-9 in order to consolidate information and reduce excessive detail in the UFSAR. The text will be revised to reflect these changes. The simplified figure replaces excessively detailed figures that are not necessary to understand system design. The figures being deleted do not contain design information related to nuclear safety, or that information is contained elsewhere in the UFSAR text.

An unreviewed safety question is not involved for the following reasons: 1) the proposed changes do not affect any design or operating parameters, 2) the proposed changes do not affect any accident analysis addressed in the UFSAR, 3) no physical or administrative controls changes are being made to the plant, and 4) figure details being deleted do not communicate system design criteria or system performance criteria used as a basis for UFSAR safety analysis.

CHANGE TITLE

UFSAR Change, Service Water System Figure Simplification

CHANGE

This change replaces Service Water System figures 9.2-10, 9.2-11, 9.2-12, 9.2-13, 9.2-14, 9.2-15, and 9.2-16 with a simplified figure in order to consolidate information and reduce excessive detail in the UFSAR. The simplified figure replaces excessively detailed figures that are not necessary to understand system design. No physical plant changes are proposed.

An unreviewed safety question is not involved for the following reasons: 1) the proposed change does not affect any design or operating parameters, 2) the proposed change does not affect any accident analysis addressed in the UFSAR, 3) no physical or administrative controls changes are being made to the plant, and 4) figure details being deleted do not communicate system design criteria or system performance criteria used as a basis for UFSAR safety analysis.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Steam Generator Blowdown Control Valve

CHANGE

The reference in the UFSAR referring to the position of the valve controlling the processing of steam generator blowdown is being deleted since valve positions are identified in the Operating Manual.

An unreviewed safety question is not involved for the following reasons: 1) the portion of the steam generator blowdown system discussed is not safety related, 2) the NRC review of the portion of the steam generator system operation is not discussed by the level of detail proposed to be deleted, and 3) failure of the system will not affect the safety-related system functions.

CHANGE TITLE

UFSAR Change, Table 5.2-5, Non-Technical Specification Chemistry Parameters

CHANGE

This change removes chemistry parameters from Table 5.2-5 and replaces them with a reference to the Technical Specifications.

The evaluation concludes that the change does not involve an unreviewed safety question. The affected chemistry parameters will be controlled in accordance with Technical Specifications.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Table 9.1-1, Correct Spent Fuel Pool Purification Filter Differential Pressure

CHANGE

The new vendor specification states that the design differential pressure of the Fuel Pool Filters is 25 psi rather than 15 psi.

The change to the maximum design differential pressure across the filters has no safety implications as the ability to remove decay heat is not impacted. The proposed change does not increase the probability of failure or failure modes, does not impact the margin of safety presently in the system, and does not create any new form of accident or increase the effects of an already analyzed accident. The proposed change does not constitute an unreviewed safety question based on the findings of this evaluation.

CHANGE TITLE

UFSAR Change, Table 9.5A-3, Service Water Valve Pits (VP-1 & VP-2) Do Not Have Installed Fire Detection

CHANGE

This change involves the inclusion of the valve pits (VP-1 & VP-2) in the listing of Unit 2 UFSAR Table 9.5A-3, "Areas Containing Safety-Related Piping Required for Safe Shutdown which do not contain or present a Fire Hazard (Fire Detection not Provided)."

An unreviewed safety question is not involved in this change since this change is acceptable based on the valve pit areas meeting the requirements stated in Unit 2 UFSAR Section 9.5A.2, Item c.6.a(1), "Fire Detection". This change to the Table 9.5A-3, to include the valve pits (VP-1 & VP-2), will not affect the ability to achieve and maintain safe shutdown since there are no physical changes being made and the function of the safety-related service water system (SWS) equipment located within the valve pits is unaffected.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Revision to Gaseous Waste Disposal System Normal System Operation Description

CHANGE

This change deletes one sentence and revises two sentences in the UFSAR that identify the normal system alignment of the Gaseous Waste Disposal System. The revised wording states that 1) the air ejector charcoal delay beds are normally in service instead of bypassed, and 2) one gaseous waste storage tank is normally in service. This proposed change brings the UFSAR into conformance with the normal system alignment identified in Operating Manual Chapter 19 (2OM-19).

There are no physical plant changes proposed by this change. Revising the statement of the system alignment does not alter the design and has no affect on the accident analysis. Therefore, an unreviewed safety question is not involved.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Revise Figures 7.3-41 and 7.4-33 per TER 10161

CHANGE

During the UFSAR Verification Project it was discovered that emergency diesel generator (EDG) logic diagrams, Figures 7.3-41 and 7.4-33, had not been updated to incorporate changes made to the shutdown circuitry per TER 10161. TER 10161 corrected an original design deficiency in the control circuitry that could have caused the EDGs to become inoperable for 140 seconds after manually stopping them. Per the original design logic, if the EDGs auto started for a safety injection signal, but without a concurrent loss of offsite power, and were then manually shutdown, a 140 second time delay would have prevented the EDGs from successfully restarting and auto loading should a loss of offsite power occur during this time delay. TER 10161 corrected this problem by wiring a set of blocking contacts within the EDGs breaker closing circuit scheme, and the appropriate design drawings were updated to show the changes. However, the two UFSAR figures that depicted the EDG logic were not updated to show the changes. This change will therefore revise Figures 7.3-41 and 7.4-33 to show the new logic and bring them into conformance with the current plant design configuration.

This change does not involve an unreviewed safety question. The changes made to the EDG control logic corrected an original design deficiency so that an EDG would auto start and load as intended whenever a diesel start signal was received. Per Unit 2 UFSAR Section 8.3.1.1.15, the EDGs were specified to comply with the requirements with IEEE Std. 387-1972 and 1977. A principal design criterion of this IEEE Std. required that a diesel start signal override all other operating modes and return control of the EDG to automatic control. The circuit changes that were implemented by TER 10161 have brought the EDGs back into compliance with the IEEE Standard and the stated, correct design configuration per the UFSAR. As such, the change does not increase the probability of occurrence or the consequences of an accident or malfunction of the EDGs as previously evaluated in the UFSAR; nor does it create the possibility of any new accident or malfunction than any previously evaluated in the UFSAR. Since the bases for Technical Specification 3/4.8.1 (i.e., requirements for demonstrating the operability of the EDGs) are based on the recommendations of Regulatory Guide 1.9, Revision 2, which endorses IEEE Standard 387, correcting the EDG control logic to comply with the IEEE Standard will not reduce the margin of safety as defined in the basis for the Technical Specification.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Fire Protection Program Revision Controls, Clarifications and Inspection Frequency Changes

CHANGE

The administrative procedure for the Fire Protection Program, UFSAR, and Fire Protection Safe Shutdown Report were revised to identify Unit 2 fire area SB-5 as an area that contains equipment that performs a safety related function. The term "safety related fire area" used in the administrative procedure for the Fire Protection Program was corrected to read "Shutdown/App. R Fire Area." The responsibilities of fire watch personnel were revised to clarify duties regarding use of fire extinguishers. The frequency for inspections of fire dampers that separate fire areas that do not contain safety related or safe shutdown components is changed from 18 months to 36 months. Administrative controls for revision of the Unit 1 Fire Protection Appendix R Review Report and the Unit 2 Fire Protection Safe Shutdown Report, specified in the administrative procedure for the Fire Protection Program, were revised to simplify the process and eliminate duplicate reviews (Note: This change is considered editorial and does not lessen the extent of reviews performed).

Based on the results of the evaluation it was concluded that this change does not involve an unreviewed safety question. The changes made to administrative procedure for the Fire Protection Program do not increase the probability of occurrence or the consequences of an accident or malfunction of any post-fire safe shutdown equipment as previously evaluated in the UFSAR. Also, since this change only affects the administrative controls of the Fire Protection Program, and does not change the plant design or how the plant operates during a design basis fire scenario, the changes do not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Elimination of Reference to Hand-Pump as a Secondary Means to Operate the Main Feedwater Isolation Valve

CHANGE

This change eliminates the reference in UFSAR Table 6.2-60 to a hand-pump as a secondary manual means to operate the Main Feedwater Isolation Valves. This rectifies a discrepancy between the as-built plant and the current UFSAR, which has existed since the BVPS Unit 2 FSAR was initially drafted to support the initial BVPS Unit 2 operating license. This change involves no physical modifications to the Main Feedwater Isolation Valves (2FWS*HYV157A, B, C) or the Unit.

No credit is taken in any safety analysis for a secondary manual means of operating the Main Feedwater Isolation Valves (MFIVs). Credit was taken for MFIV operation solely by its main hydraulic pressure valve operator. Safety analyses never assumed nor credited any secondary means of MFIV operation. This change does not invalidate any safety analysis assumptions or conclusions involving the Main Feedwater System, main feedwater flow, main feedwater isolation, or containment isolation.

Removal of reference to a hand-pump (which was never physically installed in the plant) in the UFSAR as a secondary manual means to operate the Main Feedwater Isolation Valves, does not increase the probability or consequences of any accident described in the UFSAR. Adequate means for automatic main feedwater isolation remain without any secondary manual hand-pump operation. No unreviewed safety question is involved.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

UFSAR Change, Pressurizer Code Safety Valve Operability

CHANGE

In response to industry concerns about the potential for pressurizer safety valves sticking open, certain UFSAR accident analyses were re-analyzed. The change being reviewed consists of UFSAR changes necessary to reflect the inputs, assumptions and results arising from the reanalysis.

Review of the changes indicates that no unreviewed safety question is involved. The analysis shows that there is no increase in the probability of an existing accident and no degradation of equipment reliability. The reanalysis has no effect on radiological consequences of any accident, introduces no new accidents, failure modes, or equipment malfunctions, and does not reduce the margin of safety defined by any Technical Specification.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Licensing Requirement Manual (Unit 1 and Unit 2), Addition of Surveillance Criteria

CHANGE

This revision will revise the Beaver Valley Power Station (BVPS) Unit 1 and Unit 2 Licensing Requirements Manuals to 1) add surveillance criteria on the Axial Flux Difference (AFD) Monitor Alarm that was deleted per Technical Specification Amendment Numbers 225/102 for Unit 1/2, respectively, 2) to add surveillance criteria on the Quadrant Power Tilt Ratio (QPTR) Monitor Alarm that was deleted per Technical Specification Amendment Numbers 225/102 for Unit 1/2, respectively, and 3) to revise LRM criteria 1.0.2 to include Licensing Requirements Surveillance (LRS) criteria in addition to the Licensing Requirements (LR) criteria already specified.

The NRC approved Technical Specification Amendment Numbers 225/102 respectively for both BVPS Units to remove the AFD and QPTR monitor alarm information, with the understanding that it would be included in each Unit's LRM. Therefore this addition is not an Unreviewed Safety Question (USQ) since the information location transfer was approved in Technical Specification Amendments No. 225/102. The addition of LRS to the scope of LRM Section 1.0.2 will not deviate from the rules and controls already set up in the LRM. Section 1.0.2 already requires that a Condition Report be written addressing any failure to comply with LR criteria within the LRM. This change adds LRS criteria to within the scope of this section, which would also require a Condition Report be written for any failure to comply with LRS criteria within the LRM. Therefore this addition to the LRM is not an unreviewed safety question since this expectation was understood by the NRC when Technical Specification Amendments No. 225/102 was approved by the NRC.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Licensing Requirements Manual (Unit 1 and Unit 2), Addition of Operating Criteria For Atmospheric Steam Release Valves

CHANGE

This revision will add operating criteria for the atmospheric steam release valves on the steam generators to the Licensing Requirements Manual (LRM) for both Unit 1 and Unit 2. These valves include the Atmospheric Dump Valve on each steam generator and the Residual Heat Release Valve connected to at least two steam generators. These additional criteria added to the LRM acknowledge the safety significant role that the atmospheric steam release valves perform in UFSAR safety analyses and ensures that the Unit is operated consistent with those UFSAR safety analyses assumptions.

This is not an unreviewed safety question because this criteria is consistent with the information currently used and described in the UFSAR. The new operating criteria for these atmospheric steam release valves are consistent with the current UFSAR description of these valves and how they are used in design basis accident safety analyses. Thus, no UFSAR changes are necessary.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Licensing Requirements Manual (Unit 1 and Unit 2), Addition of User Rules and Meteorological Instrumentation

CHANGE

This revision will revise the BVPS Unit 1 and Unit 2 Licensing Requirements Manuals 1) to add the Meteorological Instrumentation information that was deleted per Technical Specification Amendment Numbers 220/97 for Unit 1/2, respectively, 2) to add the usage rules {administrative controls} that are based on the rules for using Technical Specifications {Tech Spec Sections 3.0/4.0} to give the user guidance for the Licensing Requirement (previously the LCO), Action (previously the Action Statement), and Licensing Requirement Surveillances (previously the Surveillance Requirements), 3) change the Action Statement from submitting a Report to the NRC to presenting a report to the BVPS Nuclear Safety Review Board, and 4) to revise the Unit 1 Meteorological Instrumentation Table to be consistent with the Unit 2 Meteorological Instrumentation Table regarding the minimum number of required sensors.

The Meteorological Monitoring Instrumentation information being added to the Licensing Requirements Manual (LRM) is exactly the same technical information previously included in the BVPS Unit 1 and Unit 2 Technical Specifications (there are minor format numbering differences to be consistent with the LRM format). The NRC approved Technical Specification Amendment Numbers 220/97 respectively for both BVPS Units to remove the Meteorological Monitoring Instrumentation information, with the understanding that it would be included in each Unit's LRM. Therefore this addition is not an Unreviewed Safety Question (USQ) since the information location transfer was approved in Technical Specification Amendments No. 220/97.

The addition of user rules or administrative controls is consistent with the rules and controls already set up in the Unit 1 and Unit 2 Technical Specifications in Sections 3.0/4.0. This addition provides written guidance for user to address Meteorological Monitoring Instrumentation conditions associated with the Licensing Requirement (LR), Action, and Licensing Requirement Surveillances (LRS) and their compliance. These user rules are the same as in the current Unit 1 and Unit 2 Technical Specifications (with the exception of minor format differences and the changes incorporated via Technical Specification Amendments 220 and 97). Therefore this addition is not a USQ since this information has already been approved by the NRC in current Technical Specifications or via Amendments No. 220/97.

The Action Statement will be revised to require presenting a Report to the BVPS Nuclear Safety Review Board (NSRB)* for their review within the following 30 days addressing the condition of one or more required meteorological monitoring channels inoperable for more than 7 days. The UFSAR does not specify the administrative controls to be followed for inoperable

* Note: The "Nuclear Safety Review Board" was subsequently changed to "onsite safety review committee" by LRM Revision 14 for Unit 1 and Revision 11 for Unit 2.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

meteorological monitoring channels. Thus, the revised administrative controls are not a USQ since these revised controls do not conflict with current Unit 1 or Unit 2 UFSAR or License criteria.

The Unit 1 Meteorological Monitoring Instrumentation Table criteria for the minimum number of required sensors was not as strict as the Unit 2 Meteorological Monitoring Instrumentation Table criteria, even though there is only one meteorological tower shared for both Units. The Unit 1 Meteorological Monitoring Instrumentation Table is being revised to be consistent with the Unit 2 Meteorological Monitoring Instrumentation Table. This is a conservative change with regard to minimum Meteorological Monitoring Instrumentation requirements. Therefore this addition is not a USQ since the Unit 2 information has already been approved by the NRC in current Unit 2 Technical Specifications and is more restrictive than the current Unit 1 Technical Specifications.

CHANGE TITLE

Licensing Requirements Manual (Unit 1 and Unit 2), Clarification of Bases for Containment Penetrations

CHANGE

This revision of the BVPS Unit 1 and Unit 2 Licensing Requirements Manuals (LRMs) clarified wording in the Bases Section B.5.1 on Containment Penetrations. The clarified wording explains the intent of administrative controls to be used for various containment isolation valves.

This revision is not a technical change, only an administrative change to clarify LRM requirements. This change is not an unreviewed safety question since no new criteria is added/deleted nor are any requirements changed.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Licensing Requirements Manual, Heat Flux Hot Channel Factor Fq Limit Reduced From 2.4 to 2.3

CHANGE

The purpose of this change is to replace temporary Unit 2 Core Operating Limits Report (COLR) pages, inserted in the COLR to establish administrative controls, with revised COLR pages.

The total heat flux hot channel factor, Fq, is defined as the ratio of the maximum to average core heat flux. Administrative controls were placed in the COLR to reduce the Fq limit from 2.4 to 2.3 for the remainder of fuel Cycle 8. This change was necessary to reclaim safety analysis Peak Clad Temperature (PCT) margin lost due to an error in the code is used to calculate cladding temperatures during a Loss of Coolant Accident (LOCA). The reduction in Fq ensures that the calculated PCT, including conservative model assessments per 10CFR50.46, remains below 2200 degrees Fahrenheit.

There are no unreviewed safety questions associated with the lower Fq value. This change will be the same as the existing administrative control and will be in place for the same time period (until the Cycle 9 reload COLR is incorporated). The Fq reduction is conservative with respect to the safety analysis limit. The reduction of the Fq limit allows a 100F margin to be applied to the Peak Clad Temperature, maintaining PCT below the 2200F safety analysis limit. The present core load is designed not to exceed the 2.3 Fq limit for the duration of the current operating cycle and also bounds cycle operation to date.

CHANGE TITLE

Licensing Requirements Manual, Revision of Seismic Monitor Setpoints

CHANGE

Evaluation of this change is documented in Technical Evaluation Report (TER) 13300. The change revised the seismic monitoring triaxial time-history accelograph setpoints. The setpoints are expressed as inequality values above which the seismic monitoring instrumentation will provide actuation. The setpoints were limited to 0.01g which is the lower limit endorsed by regulatory Guide 1.12. The purpose of this evaluation is to provide the basis for raising the trigger setpoint to 0.02g, which is the upper limit endorsed by Regulatory Guide 1.12.

The seismic monitoring instrumentation is not used to control any plant equipment or mitigate any design basis accident. Therefore, this change does not involve an unreviewed safety question.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

CHANGE TITLE

Licensing Requirements Manual, Cycle 9 Reactor Core Fuel Reload Evaluation

CHANGE

This report documents the effects of the changes to the BVPS-2 reactor core for Cycle 9 operation. The Cycle 9 core configuration features a low-low-leakage loading pattern. The feed assemblies are similar in design to the Region 10 feeds from last cycle.

The annular axial blanket pellets and Low Pressure Rod Design Phase I are being utilized to provide additional volume needed to accommodate the additional gas generated in IFBA rods. This reduces the rod internal gas pressure in response to the gap reopening issue. The increase in enrichment of the axial blankets will reduce the overall feed enrichment requirements for this and future fuel cycles.

The top nozzle hold-down spring screws will be bead-blasted for improved primary water stress corrosion cracking (PWSCC) resistance. This process is being implemented due to screw fractures at several reactor sites.

The feed fuel region will also incorporate a cast composite top nozzle with the instrumentation thimble plug eliminated. The existing top and bottom grid design is being replaced with a 3-tab inner-to-outer joint configuration.

Westinghouse Fluid Systems Engineering has recommended one change to Section 9.3.4.3.1 of the UFSAR. Westinghouse recommends that the time to borate through the reactor coolant pump seals to establish required shutdown margin at hot standby conditions be increased from 3.5 to 6 hours; this time is much less than the 25 hours needed for xenon to decay to the level requiring boration. No safety analyses are affected by this change since this statement is a claimed capacity of the boration system.

Westinghouse has identified that the Region 9 fuel assemblies to be reinserted for Cycle 9 (32 in all) may have top nozzle hold-down springs that are susceptible to failure due to stress corrosion cracking. These assemblies will be reinserted under the terms of a conditional use safety evaluation that is being prepared separately from this evaluation.

This 10 CFR 50.59 evaluation concludes that there are no Unreviewed Safety Questions associated with this reload design change. The reload design change meets the existing core design requirements and no accidents described in the UFSAR are adversely affected by this change. This change does not impact the margin of safety that forms the basis for the Technical Specifications. The Core Operating Limits Report (COLR) is being updated for Cycle 9 operation.

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

UFSAR changes to Sections 4.1.1, 4.2.2.1, Figures 4.2-2b and 4.2-3b, and Table 4.1-1 are being made to incorporate the fuel design changes described above. The Westinghouse recommended UFSAR change to Section 9.3.4.3.1, increasing the time to borate via the reactor coolant pump seals after a trip to offset xenon decay from 3.5 to 6 hours is much less than the 25 hours needed for xenon to decay to the level requiring boration. No safety analyses are affected by this change since this statement is a claimed capacity of the boration system. The Cycle 9 reactor core reload design was performed in accordance with Westinghouse methodology as licensed by the NRC.

CHANGE TITLE

Licensing Requirements Manual, Increase in Seismic Monitor Trigger Setpoint

CHANGE

Evaluation of this change is documented in Technical Evaluation Report (TER) 13523. This change revised seismic monitoring triaxial time-history accelograph setpoint for the "A" steam generator support monitor 2ERS-RRA-1. The setpoint is expressed as an inequality value above which the seismic monitoring instrumentation will provide actuation. The upper setpoint established by TER 13300 was limited to $\leq 0.02g$. The purpose of this evaluation is to provide the basis for raising the trigger setpoint to $\leq 0.03g$. The higher setpoint is intended to prevent monitor recording at activation due to non-seismic motion events such as those experienced during the eighth fuel cycle.

The seismic monitoring instrumentation is not used to control any plant equipment or mitigate any design basis accident. Therefore, this change does not involve an unreviewed safety question. The "A" steam generator support monitor 2ERS-RRA-1 neither alarms nor is used in plant shutdown determinations. This is a self-contained unit that starts and records induced motion levels at its location for later evaluation of design margin adequacy in support of plant restart. The trigger setpoint of $\leq 0.03g$ complies with the intent of Regulatory Guide 1.12, Rev. 1 and its endorsed standard, ANSI 18.5/ANS 2.2. ANS 2.2, section 6.4.2, Actuating Level, sets the trigger level at 0.02 g maximum ground motion. This evaluation shows that the $\leq 0.03g$ setpoint is proportionately lower (conservative direction) relative to its building location motion, than the 0.02g ANS 2.2 threshold for ground motion.

CHANGE DESCRIPTIONS

CHANGE TITLE

Licensing Requirements Manual, Engineered Safety Features Response Times

CHANGE

This revision changes the Table 3.2-1, *Engineered Safety Features Response Times*, Item 6.a, *Turbine Trip - Reactor Trip*, response time on Steam Generator Water Level - High - High. The listed response time of " ≤ 2.5 " seconds was replaced with "Not Applicable" for turbine trip. UFSAR Section 15.1.2 does not require revision since it already states that: "the conclusions stated in Section 15.1.2.4 would not change if the high steam generator water level function is assumed not to actuate and the transient is terminated by the operator."

Eliminating the response time requirement for turbine trip on high-high steam generator water level from the LRM does not result in an Unreviewed Safety Question because it will not adversely impact the results of the design basis accidents discussed in the UFSAR. Section 15.1.2 of the UFSAR discusses feedwater system malfunctions causing an increase in feedwater flow. The full power case analyzed for this accident has the largest reactivity feedback and results in the greatest power increase. A turbine trip and subsequent consequential reactor trip is actuated when the steam generator level reaches the high-high level setpoint. The transient results shown on UFSAR Figures 15.1-1 and 15.1-2 for the N loop case show that prior to the point where the high-high level is reached, the DNBR settles at a new steady state condition above the limit value. The transient conditions reach this new equilibrium state and will remain there until turbine trip and feedwater isolation occurs. Therefore, the conclusions of the safety analysis would not be adversely affected by any delay in obtaining a turbine trip from a high-high steam generator water level.

The steam generator high-high level trip function provides two basic functions for the plant: turbine trip and feedwater isolation. Based on Westinghouse analyses, the turbine trip function on high-high steam generator level does not need to be credited in safety analyses as currently described in the UFSAR.

The turbine trip function is provided, as additional protection to the feedwater isolation function, to prevent water droplets from being entrained within the steam flowing from the steam generator to the steam system. This liquid can damage steam piping, valves, or the turbine. Damage to the turbine is the primary consideration because of the potential economic impact of the damage. BV-2 UFSAR safety analyses remain valid if no credit is taken for this turbine trip function.

The feedwater isolation is necessary to prevent overflow of the steam generators. Failure to isolate feedwater could add a large amount of liquid into the steam system piping. This could increase the possibility of damaging the steam lines due to the hydraulic loads of water filled pipes. This could lead to the possibility of a steam line break occurring which would violate the ANS 18.2

Beaver Valley Power Station Unit 2
Facility Changes, Tests, and Experiments
November 1, 1998 - October 25, 2000

CHANGE DESCRIPTIONS

criterion that a Condition II event should not propagate to a more serious Condition IV event. The feedwater isolation function on high-high steam generator water level, occurring by itself, would terminate the event discussed in UFSAR Chapter 15.1.2 and provides adequate protection against the steam generator overfill. Therefore the time response for feedwater isolation is still required.

This change does not involve an unreviewed safety question.