



**BEAVER VALLEY POWER STATION  
UNIT NO. 1**

**DOCKET NO. 50-334  
LICENSE NO. DPR-66**

**ATTACHMENT 2**

**1990 REPORT OF FACILITY  
CHANGES, TESTS, AND EXPERIMENTS**

Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments

Table of Contents

<u>Testing Procedures</u>	<u>Page</u>
1BVT 2.24.10, Chemtrac Flow Test	1
1BVT 11.26.6, Unit 1 Baseline Test	2
1BVT 1.60.6, HELB Temperature Detection System Operability Verification	3
 <u>Operating Procedures</u>	
Temporary Operating Procedure TOP-1-90-04, Placing Letdown In Service After Maintenance	4
Temporary Operating Procedure TOP 1-90-8, Tanks 1LW-TK-3B and 3A Resin Flush	5
Temporary Operating Procedure TOP 1-90-7, BV-1 Asiatic Clam Chemical Treatment Program	6
Temporary Operating Procedure TOP 1-90-9, Transfer PAB South Sump to a HIC	7
Operating Manual Procedure OM 1.32.4AG, Tank 1WT-TK-26 Fill Through Temporary Demineralizer Train	8
Temporary Operating Procedure TOP 1-90-16, Condenser Hotwell Polishing	9
Temporary Operating Procedure TOP 1-90-11, Domestic Water Supply to WT-TK-13 and the 6 Way Flow Splitting Box	10
Temporary Operating Procedure TOP 1-90-12, Temporary Water Supply to CCR Heat Exchanger Cleaning Equipment	11
Operating Manual Procedure OM 1.6.4A, RCP Startup	12
Temporary Modification - Blank Flange on Discharge Piping for Pump 1SW-P-4	13
Operational Surveillance Test OST 1.24.13, Overspeed Trip Test of Turbine Driven AFW Pump 1FW-P-2	14

Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments

Table of Contents

<u>Operating Procedures (Continued)</u>	<u>Page</u>
Operating Manual Procedure OM 1.35.4M, Alarm Response Procedures A8-40, A8-48 - Bulk Hydrogen Storage Tanks Pressure Low/Low-Low	15
Operating Manual Procedure OM 1.7.4, Alarm Response Procedure A3-60, Loop Fill Header Pressure High	16
Operating Manual Procedure OM 1.7.4, Alarm Response Procedures A3-47, A3-48 - Boric Acid Batching Tank Temperature Hi-Lo, Boric Acid Batching Tank Level Low	17
Temporary Operating Procedure TOP 1-90-17, River Water Supply To 6-Way Flow Splitting Box	18
Temporary Operating Procedure TOP 1-87-18, Revision 1, Chemical Scrubbing of Water Treating Mixed Bed Resin	19
Temporary Modification - Provide Temporary Power To Domestic Water Duotrol Controller	20
Temporary Operating Procedure TOP 1-90-08, Revision 2, Tank 1LW-TK-3B/3A Resin Flush	21
Operational Surveillance Test OST 1.24.4, Steam Turbine Driven AFW Pump 1FW-P-2 Test Revision	22
Operating Manual Section OM 1.27.3, Valve List Revision	23
Temporary Operating Procedure 1TOP-90-22, Valve TV-1SS-102A1 Closure, De-energization and Energization	24
Temporary Operating Procedure 1TOP-90-23, Reverse Flush of 1C or 1A Recirculation Spray Heat Exchanger	25
Temporary Operating Procedure 1TOP-90-27, K641 Slave Relay Contact Test	26

Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments

Table of Contents

<u>Operating Procedures (Continued)</u>	<u>Page</u>
Temporary Operating Procedure 1TOP-90-25, Steam Line Data For Flow Transmitter Modification	27
Operational Surveillance Test OST 1.24.2, 3 and 4, Motor Driven Auxiliary Feed Pump Test 1FW-P-3A, 1FW-P-3B and 1FW-P-2	28
Operating Manual OM 1.10.3, Safety Injection System Valve List	29
Temporary Modification - Fire System Tank FP-TK-1 To Fire Header Tie Line Bypass	30
Operating Manual Section OM 1.26.3, Main Steam Valve List	31
 <u>Maintenance Procedures</u>	
Installation of Temporary Hourmeters on SA-C-1A, 1B, and 1C	32
Installation of Temporary Contaminated Oil and Sludge Removal Filtration System	33
Jumper and Lifted Lead (J&LL) Tags for Steam Dump System	34
Jumper and Lifted Lead (J&LL) Tags for RM-VS-107B	35
Jumper and Lifted Lead (J&LL) Tags for RM-GW-108A	36
Jumper and Lifted Lead (J&LL) Tags for RM-VS-106	37
Jumper and Lifted Lead (J&LL) Tags for RM-VS-107A	38
Jumper and Lifted Lead (J&LL) Tags for RM-LW-116	39
Temporary Modification of Station Air Compressor Control Switch Wiring	40



Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments

Table of Contents

<u>Maintenance Procedures (Continued)</u>	<u>Page</u>
Temporary Modification to Acid Distribution Header in Water Treatment	41
Temporary Modification for Running Temporary Cable For Rod Position Indicator (RPI) D-12	42
Relief Valve RV-BD-118 Setpoint Change	43
Connecting Recording Equipment to Operating Equipment	44
Addition of a Metal oxide Varistor (MOV) to RM-LW-116/Relay k25	45
Addition of a Metal Oxide Varistor (MOV) to RM-LW-104/Relay k23	46
Addition of a Metal Oxide Varistor (MOV) to RM-GW-108A/Relay k4 and RM-GW-108B/Relay k9	47
Temporary RCS Level Indication (for C Loop) During Refueling	48
 <u>UFSAR Changes</u>	
Supplementary Leak Collection & Release System Filter Design and Leak Testing	49
Nuclear Group Administrative Procedure 3.5 - Fire Protection	51
 <u>Chemistry Procedures</u>	
Asiatic Clam Chemical Treatment Program	53
 <u>Facility Changes</u>	
<u>Design Change</u>	
DCP-558, Rev. 0, Crane Globe Valves	54
DCP-655, Rev. 0, CO and ITE Relays Replacement	55
DCP-713, Rev. 0, Containment Instrument Pit Level Switches	56
DCP-854, Rev. 0, Filtered Water Piping	58

Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments

Table of Contents

<u>Facility Changes (Continued)</u>	<u>Page</u>
<u>Design Change</u>	
DCP-872, Rev. 0, High Mast, High Pressure Sodium Lighting	59
DCP-895, Rev. 0, Roof Vents - ERF Substation Oil Transfer Pump Housing	60
DCP-1185, Rev. 0, Installation of Air Filter in Diesel Generator Air Start Piping	61
DCP-1187, Rev. 0, Replacement of Flow Transmitter FT-VS-112	63
DCP-1270, Rev. 0, Permanent Utility Tie-Ins for the Outage Trailer Complex	65
<u>Technical Evaluation Report (TER)</u>	
TER-4817, Rev. 0, LT-RC-459, Pressurizer Level Transmitter Sealed Reference Leg	66
TER-6064, Rev. 0, Change The Normal System Arrangement For Valve 1FO-81 As Shown On Drawing 8700-RM-53A To Be Consistent With The Operating Manual	68

Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments  
Page 1 of 69

CHANGE TITLE

1BVT 2.24.10, Chemtrac Flow Test

CHANGE DESCRIPTION

1BVT 2.24.10, "Chemtrac Flow Test", is a new procedure that was written to measure the feedwater flow rates supplying each steam generator to verify feedwater flow instrumentation accuracy, and to determine the moisture carryover of the steam exiting each steam generator. This was performed by using a non-radioactive Lithium tracer technique. During the test it was necessary to place each loop's feedwater steam flow/feed flow bistable (one at a time) into the TRIP position in order to remove from service the non-controlling channel feedwater flow transmitter. This was done to inject the Lithium tracer into the transmitter's root valve (only available access point into the feedwater line).

SAFETY EVALUATION SUMMARY

The design basis accident considered here would be a reactor trip due to loss of feedwater flow. The test is performed with one out of two reactor trip signals in place. There is no potential for creation of a new type of unanalyzed event because the plant is put into a condition that utilizes the design safety feature (two out of three feed flow/steam flow mismatches to trip the reactor). There is no change to the impact on the margin of safety because the use of the reactor trip setpoints is not changed. Based on the above, the Safety Evaluation concluded that this test procedure posed no unreviewed safety questions.

Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments  
Page 2 of 59

CHANGE TITLE

1BVT 11.26.6, Unit 1 Baseline Test

CHANGE DESCRIPTION

1BVT 11.26.6, "Unit 1 Baseline Test", is a new procedure that was written to obtain baseline heat rate performance data for calculations of Unit 1 heat rate. To obtain electrical output data for the test it was necessary to install a watthour meter into the generator output circuitry. The watthour meter was connected to non-safety related category II plant equipment.

SAFETY EVALUATION SUMMARY

The safety evaluation was written to evaluate the potential for a loss of onsite power due to a turbine trip. The only accident scenario to consider here would be a loss of onsite power due to a turbine trip caused by the installation of the watthour meter. Offsite power is available and unaffected by this test. There is no potential for creation of a new type of unanalyzed event because reliable offsite power is available.

There is no change to the impact on the margin of safety because turbine trip availability was unchanged. Based on the above, the Safety Evaluation concluded that this test procedure posed no unreviewed safety questions.

CHANGE TITLE

1BVT 1.60.6, High Energy Line Break Temperature  
Detection System Operability Verification

CHANGE DESCRIPTION

1BVT 1.60.6, "High Energy Line Break (HELB) Temperature Detection System Operability Verification", was revised on December 20, 1989 to include test changes made during the seventh refueling outage. The test changes included revision of the HELB isolation valves stroke time requirements for Blowdown Trip Valves (TV-1BD-101-A1,A2,B1,B2,C1,C2) from  $\leq 5.0$  seconds to  $\leq 6.0$  seconds.

SAFETY EVALUATION SUMMARY

A Safety Evaluation was not required to change the test, but was written to support a UFSAR change to Sections 10.3.2.3 and 10.3.8.3. The UFSAR revision changed the time required to close the Blowdown Trip Valves from within 5.0 seconds of receiving a signal to within 10 seconds after ambient temperatures in the Auxiliary and Safeguards Buildings exceeds 110°F (isolation time includes sensor response time, signal processing time, and valve stroke time). 1/2 design basis accidents are associated with a HELB failure mode. The revision to the UFSAR maintained the existing total HELB isolation time of 10 seconds. It only permitted the increase in valve stroke time as long as the total HELB isolation time requirements of 10 seconds could be met.

There is no potential for creation of a new type of unanalyzed event because the total HELB isolation time requirements within the presently analyzed envelope, were not changed. There is no change to the impact on the margin of safety because the total HELB isolation time requirements were not changed.

Based on the above, the Safety Evaluation concluded that the change in HELB isolation valves stroke time requirements posed no unreviewed safety questions.

CHANGE TITLE

Temporary Operating Procedure TOP-1-90-04,  
Placing Letdown In Service After Maintenance

CHANGE DESCRIPTION

A new temporary procedure was developed to fill and pressurize the letdown lines following maintenance, to allow letdown to be placed in service.

SAFETY EVALUATION SUMMARY

Letdown is not safety related and the manipulations in this procedure will not affect any safety related equipment described in Updated Final Safety Analysis Report (UFSAR) Section 9.1. During this procedure an operator will be stationed in close proximity of letdown piping to monitor for water hammer concerns to minimize the possibility of a malfunction. All failures of letdown components will be bound by UFSAR Section 14.2.2 "Accidental Release of Waste Liquid," with any liquid leakage being accumulated in the sumps. No Technical Specifications are affected by this procedure. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure TOP 1-90-8, [1LW-TK-3B/3A] Resin Flush

CHANGE DESCRIPTION

A new temporary procedure was written to provide instructions to flush resin from the Low Level Waste Drain Tanks [1LW-TK-3A/3B], to the Liquid Waste Demineralizer [1LW-I-2]. Water from the High Level Waste Drain Tank [1LW-TK-2A/2B], used to flush the resin will be collected in an Evaporator Test Tank [1LW-TK-5A/5B].

SAFETY EVALUATION SUMMARY

The new procedure operates the Liquid Waste System as described in Updated Final Safety Analysis Report (UFSAR) Section 11.2.4. The consequences of an accident have been previously analyzed in UFSAR Sections 11.2.4 and 14.2.2. This new procedure is based on previously existing procedures. No Technical Specifications are affected by this Temporary Operating Procedure. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure TOP 1-90-7,  
BV-1 Asiatic Clam Chemical Treatment Program

CHANGE DESCRIPTION

A new temporary procedure was generated to provide a means of extermination of Asiatic clams in the BV-1 River Water and Circulating Water Systems, in order to maintain design heat transfer and flow path conditions of those systems. Two temporary hoses are to be used for injection of clamicide into the Reactor Plant River Water (RPRW) and Turbine Plant River Water (TPRW) chlorination headers.

SAFETY EVALUATION SUMMARY

The clamicide feed process is similar to the chlorination process of the RPRW and TPRW Systems described in Updated Final Safety Analysis Report (UFSAR) Section 9.11.2. The RPRW flow requirements of UFSAR Table 9.9-3 will be met in the event of a Containment Isolation Phase B (CIB) signal. The Turbine Plant Component Cooling Water System described in UFSAR Section 10.3.9 will not be affected by this procedure. In the event of a Safety Injection Signal (SIS), Containment Isolation Phase A (CIA) or CIB, the RPRW System and Reactor Plant Component Cooling Water (CCR) System will perform its safety related function as described in UFSAR Sections 9.9 and 9.4. If either temporary hose used to transport clamicide to the chlorination headers would fail, the spill would be collected in the Turbine Building floor drains which are clamicide monitored. The margin of safety as defined in the basis of the Technical Specification is not reduced. No unreviewed safety questions exist.



CHANGE TITLE

Temporary Operating Procedure TOP 1-90-9, Transfer PAB South Sump to a HIC

CHANGE DESCRIPTION

A new temporary procedure was developed to transfer the contents of the Primary Auxiliary Building (PAB) South Sump to a High Integrity Container (HIC) located in the Solid Waste Area using an air operated diaphragm pump and temporary hoses. This procedure also provides instructions to dewater the HIC during transfer.

SAFETY EVALUATION SUMMARY

The Service Water System (SWS) and Primary Vents and Drain System are not safety related. No safety related equipment is located in South East PAB elevation 722' or in the east trench or Solid Waste Building. In the event a temporary component would leak or fail, the failure would be similar to installed component failure and would be bound by Updated Final Safety Analysis Report Section 14.2.2 and 14.2.3 analysis. No Technical Specifications are affected by this procedure. No unreviewed safety questions exist.

CHANGE TITLE

Operating Manual Procedure OM 1.32.4AG,  
[1WT-TK-26]\* Fill Through Temporary Demineralizer Train

CHANGE DESCRIPTION

An existing procedure was modified to change the monitoring point for the sample panel from the installed mixed bed demineralizer effluent to the temporary demineralizer effluent through the use of temporary tubing. This will improve chemistry monitoring of the temporary demineralizer and provide alarms when the demineralizer is depleted.

SAFETY EVALUATION SUMMARY

No Systems important to safety as described in Updated Final Safety Analysis Report Sections 9.6 and 9.11 are affected by this procedure change. No radiological systems are involved. There are no design basis accidents related to this system. Technical Specifications are not affected. No unreviewed safety questions exist.

\* 600,000 gallon Demineralized Water Storage Tank.

CHANGE TITLE

Temporary Operating Procedure TOP 1-90-16, Condenser Hotwell Polishing

CHANGE DESCRIPTION

A new temporary procedure was developed to recirculate hotwell condensate through the steam generator blowdown high output capacity demineralizers to obtain water chemistry specifications as determined by the Chemistry Department. Condensate is to be transferred to the suction of the blowdown transfer pumps [1BD-P-1A/1B] through temporary piping. The blowdown transfer pumps normally take suction on the steam generator blowdown flash tank [1FW-TK-3] and discharge to the blowdown drain heat exchanger [1FW-E-9].

SAFETY EVALUATION SUMMARY

During the performance of this Temporary Operating Procedure, the plant is shutdown. If the temporary modification would fail, the loss of condensate would not affect the plant response to an accident. No safety systems or systems important to safety are affected by this procedure as described in Updated Final Safety Analysis Report Sections 10.3.5.2, 10.3.6 and 10.3.8.3. Radiological systems are not affected by this procedure. No Technical Specification are involved with this new procedure. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure TOP 1-90-11,  
Domestic Water Supply to WT-TK-13 and the 6 Way Flow Splitting Box

CHANGE DESCRIPTION

A new temporary procedure was developed to install temporary hoses from the TLD Building Domestic Water System to the Domestic Water Storage Tank [1WT-TK-13] in the Unit 1 Turbine Building and the 6 way flow splitting box in the Water Treatment Room.

SAFETY EVALUATION SUMMARY

The domestic water system serves no safety related equipment as described by Updated Final Safety Analysis Report (UFSAR) Section 9.11. If the temporary modification should fail, the amount of water which would leak would be very small compared to the flood analysis in UFSAR Section 2.3. No Technical Specifications are involved in this procedure. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure TOP 1-90-12,  
Temporary Water Supply to CCR Heat Exchanger  
Cleaning Equipment

CHANGE DESCRIPTION

A new temporary procedure was developed to install and remove a temporary hose and spool pieces for tube cleaning of reactor plant component cooling water (CCR) heat exchangers (1CC-E-1A/1B/1C).

SAFETY EVALUATION SUMMARY

The temporary modification does not affect any safety related system. The design basis accident described by Updated Final Safety Analysis Report Section 14.1.14 is not affected by this change. No radioactive or potentially radioactive systems are involved. The amount of water resulting from a hose rupture would be very small and bounded by the flood analysis. Technical Specifications are not affected by this new procedure. No unreviewed safety questions exist.

CHANGE TITLE

Operating Manual Procedure OM 1.6.4A, RCP Startup

CHANGE DESCRIPTION

An existing procedure, OM-1.6.4A RCP Startup, was modified to allow a Reactor Coolant Pump (RCP) to be started while the Number 1 seal differential pressure indication is out of service. Two temporary pressure gauges will be installed to determine differential pressure.

SAFETY EVALUATION SUMMARY

Accidents identified by Updated Final Safety Analysis Report Sections 14.1.6, 14.2.7, 14.2.9 and 14.3.1 assume the reactor is operating, however the pump will be started while the reactor is shutdown. Although the Number 1 seal may fail and cause a locked rotor or small Loss Of Coolant Accident (LOCA), the reactor is shutdown and the probability of failure is low due to reduced reactor coolant system pressure and temperature. If the Number 1 seal would fail, the Number 2 seal would become the pressure boundary. In the event the temporary pressure gauge would fail, leakage would be enveloped by the small break LOCA accident. The margin of safety as defined in basis of the Technical Specifications is not reduced. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Modification - Blank Flange on Discharge Piping for [1SW-P-4]

CHANGE DESCRIPTION

A blank flange is to be installed in the discharge piping of Decontamination Pump [1SW-P-4] in order for the pump to be removed for repairs. The pump does not have a discharge isolation valve. This pump [1SW-P-4] is currently out of service.

SAFETY EVALUATION SUMMARY

If the flange would fail, the contents of Decontamination Tank [1SW-TK-4] would drain to the Solid Waste Area Sump. The maximum volume of the tank (1,400 gallons) would be contained in the Solid Waste Sump. The pump is located in the Solid Waste Area and no safety related equipment is located in this area. Technical Specifications are not affected by this temporary modification. No unreviewed safety questions exist.



Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments  
Page 14 Of 69

CHANGE TITLE

Operational Surveillance Test OST 1.24.13,  
Overspeed Trip Test of Turbine Driven AFW Pump [1FW-P-2]

CHANGE DESCRIPTION

A new surveillance test was developed to demonstrate the operability of the overspeed trip mechanism of the turbine driven Auxiliary Feed Water (AFW) pump [1FW-P-2]. This test is similar to the previously approved overspeed Operational Surveillance Test (OST) 2.24.9, Overspeed Trip Test of Turbine Driven AFW Pump [2FWE\*P22], developed for Unit 2.

SAFETY EVALUATION SUMMARY

In order to avoid overpressurizing of safety related AFW piping and components, the test is performed while the pump is uncoupled from the turbine drive, thus the AFW System will function as described in Updated Final Safety Analysis Report (UFSAR) Sections 10.3.5.1.2 and 10.3.5.2.2. The accidents described in UFSAR Sections 14.1.8, 14.1.11, 14.2.5, 14.2.4, 14.3.1 and 14.2.5.2 will not be adversely affected by the temporary loss of the turbine driven AFW pump since the other two trains of AFW pumps are required to be operable during the test (if performed in Modes 1-3). Placing this pump in an inoperable state is allowed by BV-2 UFSAR probability risk assessment and the AFW system is similar in design and function to the Unit 2 AFW system. The margin of safety as defined in the basis for the Technical Specification is not reduced. No unreviewed safety questions exist.



CHANGE TITLE

Operating Manual Procedure OM 1.35.4M, Alarm Response Procedures A8-40,  
A8-48 - Bulk Hydrogen Storage Tanks Pressure Low/Low-Low

CHANGE DESCRIPTION

In accordance with the darkboard concept of NUREG-Q706, Annunciators A8-40 and A8-48 (which are normally lit green) are to be disabled by maintaining the knife switch open. The original intention of the alarms assumed that a Hydrogen bottle was continuously lined up to supply the Volume Control Tank (VCT) and Main Generator. The current operating practice, started about 10 years ago, is to lineup Hydrogen on an as needed basis.

SAFETY EVALUATION SUMMARY

Hydrogen supply to the VCT and the Main Generator is not important to safety, or used to mitigate the consequences of any accident. Disabling of the bulk Hydrogen pressure low and low-low alarms does not affect the performance of the bulk Hydrogen system. No Technical Specifications are affected. No unreviewed safety questions exist.

CHANGE TITLE

Operating Manual Procedure OM 1.7.4, Alarm Response Procedure A3-60,  
Loop Fill Header Press High

CHANGE DESCRIPTION

In accordance with the darkboard concept of NUREG-0700, Annunciator A3-60 (which is normally lit green) is to be disabled by maintaining the knife switch open. The alarm is normally lit due to leakage through loop fill header flow control valve [FCV-1CH-160], and/or Reactor Coolant System leaking through the loop fill valves [MOV-1RC-556A,B,C].

SAFETY EVALUATION SUMMARY

The affected portion of the Chemical and Volume Control System (CVCS) is not safety related. Disabling of the alarm will not change the performance of this portion of CVCS. No accident analysis described in Updated Final Safety Analysis Report Chapter 14 is affected by this change. The fill header is not a Technical Specification related item. No unreviewed safety questions exist.

CHANGE TITLE

Operating Manual Procedure OM 1.7.4, Alarm Response Procedures A3-47,  
A3-48 - Boric Acid Batching Tank Temp Hi-Lo,  
Boric Acid Batching Tank Level Low

CHANGE DESCRIPTION

In accordance with the darkboard concept of NUREG-0700, Annunciators A3-47, A3-48 (which are normally lit green) are to be disabled by maintaining the knife switches open. The level alarm is normally lit because the batching procedure completely drains the batching tank after flushing. The temperature alarm can be lit depending on ambient temperature in the Primary Auxiliary Building (PAB).

SAFETY EVALUATION SUMMARY

The boric acid batching procedure does not refer to these alarms. Acid batching is used only on an intermittent basis with a local operator present. Local indication is used in the batching procedure. The boric acid batching tank is not a safety related piece of equipment. No accident analysis described in Updated Final Safety Analysis Report Chapter 14 is affected by this change. Boric acid batching tank level and temperature are not Technical Specification related. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure TOP 1-90-17,  
River Water Supply To 6-Way Flow Splitting Box

CHANGE DESCRIPTION

A new temporary procedure was developed to install a temporary hose from the discharge of the Chilled Water Condenser Booster Pumps [1VS-P-2A/2B] to the 6-way flow splitting box in Water Treatment. This is required because the water treatment clarifier is out of service.

SAFETY EVALUATION SUMMARY

No safety systems or systems important to safety are affected by this change as described in Updated Final Safety Analysis Report Section 2.3. Any flow directed out of the flow splitting box is very small compared to the flood analysis. Technical Specifications are not affected by this new procedure. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure TOP 1-87-18, Revision 1,  
Chemical Scrubbing of Water Treating Mixed Bed Resin

CHANGE DESCRIPTION

An existing temporary procedure was revised to treat the mixed bed resin with a brine solution. The brine solution removes excess regeneration products from the resin so that a normal rinse of the resin will be effective and the demineralizer can be returned to service.

SAFETY EVALUATION SUMMARY

No safety systems or systems important to safety are affected by this change as described by Updated Final Safety Analysis Report Section 9.11. The amount of water released by a temporary hose rupture would be very small compared to the flood analysis. Technical Specifications are not affected by this procedure change. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Modification -  
Provide Temporary Power To Domestic Water Duotrol Controller

CHANGE DESCRIPTION

The normal power supply (provided by MCC-12 via 120 VAC (PNL-AC-4)) to the domestic water duotrol controller is currently out of service. The temporary modification provides power to the controller from a normal wall socket outlet.

SAFETY EVALUATION SUMMARY

No safety systems or systems important to safety are affected by this temporary modification. Overcurrent protection is still available from the outlet breaker. Technical Specifications are not affected by this temporary modification. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure TOP 1-90-08, Revision 2,  
[1LW-TK-3B/3A] Resin Flush

CHANGE DESCRIPTION

An existing temporary procedure was revised to allow the bypassing of high level waste drain tank low level trip so that the tank level can be lowered for cleaning. Also the procedure allows the removal of the tank manway and the use of a water lance.

SAFETY EVALUATION SUMMARY

The high and low level waste drain tanks are not safety related and they are not located adjacent to safety related equipment. In the event the tank overflowed, the water would be collected in sumps and the radiological consequences of the accident would be enveloped by the analysis of Updated Final Safety Analysis Report Section 14.2.2. The margin of safety defined in the basis of Technical Specifications is not reduced by this procedure change. No unreviewed safety questions exist.



CHANGE TITLE

Operational Surveillance Test OST 1.24.4,  
Steam Turbine Driven AFW Pump Test [1FW-P-2] Revision

CHANGE DESCRIPTION

A revision to OST 1.24.4 was made to install a temporary pressure test gauge on drain valve 1FW-360 to measure Auxiliary Feed Water (AFW) header discharge pressure for post maintenance testing of AFW pump discharge valve 1FW-36. The change also lifted a lead to remove train A auto-open signal to AFW motor-operated throttle valves MOV-1FW-151B, D and F from Main Steam System trip valve TV-1MS-105A.

SAFETY EVALUATION SUMMARY

The performance of the AFW system, as described in Updated Final Safety Analysis Report (UFSAR) Section 10.3.5.2.2, is unchanged since the other two AFW pumps are operable per Technical Specification 3.7.1.2. The Engineered Safety Feature system is unchanged since throttle valves MOV-1FW-151B, D and F will open if AFW pump 1FW-P-3A starts as described in UFSAR Sections 7.3.1.1.2, 7.4.1.2.2, 7.4.1.3 and 10.3.5.2.2. The AFW flow path is not altered; if the temporary gauge would fail, it is to be isolated by a locally stationed operator, and the lifted lead has no affect on operable pumps 1FW-P-3A and 3B. The margin of safety as defined in the basis for the Technical Specifications is not reduced. No unreviewed safety questions exist.



CHANGE TITLE

Operating Manual Procedure OM 1.27.3, Valve List Revision

CHANGE DESCRIPTION

The normal system arrangement position of Air Ejector Suction Lines Cross Connect valve [1AS-260] was changed from shut to open. This valve position change supports a change to Temporary Operating Procedure (TCP) 1-86-36 for measuring discharge flowrate (prevents daily stroking of valve).

SAFETY EVALUATION SUMMARY

No safety systems or systems important to safety as described by Updated Final Safety Analysis Report Section 10.3.6 are affected by this position change. The change does not affect air flow from the air ejectors and the ability of radiation monitor [RM-1SV-100] to detect increased radioactivity in the main condenser. Technical Specifications are not affected by this valve position change. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure 1TOP-90-22, Valve  
[TV-1SS-102A1] Closure, De-energization and Energization

CHANGE DESCRIPTION

A new temporary procedure was developed to time stroke and verify closed reactor coolant loop cold leg sample line inside containment isolation valve [TV-1SS-102A1], with remote valve position indication unavailable. The procedure will remove the fuse for isolation valve [TV-1SS-102A1] to ensure the valve remains in the closed position. Procedure steps are added to re-energize the valve should an accident occur which would require the use of the Post Accident Sample System (PASS).

SAFETY EVALUATION SUMMARY

With the fuse to the valve removed, the valve remains in the safe (CLOSED) position should a Containment Isolation Phase A (CIA) signal occur. If valve [TV-1SS-102A1] is required to be opened, (for a PASS sample), steps are given to re-install the fuses. The PASS is not required for safe plant shutdown as described in Updated Final Safety Analysis Report Section 14.1. Technical Specifications are not affected by this new procedure. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure 1TOP-90-23,  
Reverse Flush of 1C or 1A Recirculation Spray Heat Exchanger

CHANGE DESCRIPTION

A new temporary procedure was generated to backflush the recirculation spray heat exchangers [1RS-E-1C(1A)] while the plant is in Mode 1,2,3 or 4. The flushing will be accomplished while the affected recirculation spray heat exchanger is on clearance.

SAFETY EVALUATION SUMMARY

Both headers of the River Water System will be capable of supplying their respective loads during performance of the Temporary Operating Procedure (TOP), except for recirculation spray heat exchanger 1C. At least 1 train of recirculation spray will remain operable during the TOP to assure minimum containment depressurization requirements. Recirculation spray capacity does not affect the amount of safety injection flow and therefore does not impact peak clad temperature. The containment analysis in Updated Final Safety Analysis Report (UFSAR) Section 14.3.4 only assumes 2 of the 4 Recirculation Spray subsystems are available. There are no UFSAR Chapter 14 design basis accidents for which failure modes associated with this TOP can be an initiating event. The margin of safety as defined in the basis for Technical Specifications is not reduced. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure 1TOP-90-27, K641 Slave Relay Contact Test

CHANGE DESCRIPTION

A new Temporary Operating Procedure (TOP) was generated to perform post-maintenance testing for the replacement of contacts on Slave Relay K641 - Train B. The procedure will install a jumper to complete the circuit so that Low Head Safety Injection (LHSI) pump discharge recirculation valve MOV-1SI-885B actuation can be verified.

SAFETY EVALUATION SUMMARY

In the event the jumper would fail (open), the Safety Injection System/Solid State Protection System circuit would be unaffected, and the system would function if actuated by accident conditions. During the test, recirculation valve MOV-1SI-885B will close; if the LHSI pump started, the pump would not have a minimum recirculation flowpath available. The TOP has a precaution to stop all testing if conditions develop where the Solid State Protection System (SSPS) or Safety Injection is needed or actuated. The TOP uses normally installed test switches to test the circuit after the jumper is installed. No other part of SSPS will be altered by the performance of the TOP. The margin of safety as defined in the basis of the Technical Specifications is not reduced. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Operating Procedure 1TOP-90-25,  
Steam Line Data For Flow Transmitter Modifications

CHANGE DESCRIPTION

A new temporary procedure was developed to obtain steam line data for several flow transmitter modifications. The test consists of installing pressure gauges on existing test connections and drain valves. Pressure and temperature data will be recorded from the test instrumentation and installed plant instrumentation.

SAFETY EVALUATION SUMMARY

The heater drains system is the only system affected. In accordance with Updated Final Safety Analysis Report Chapters 10 and 14, no safety systems or systems important to safety are affected by this procedure. Technical Specifications are not affected by this procedure. No unreviewed safety questions exist.

CHANGE TITLE

Operational Surveillance Test OST 1.24.2, 3 and 4,  
Motor Driven Auxiliary Feed Pump Test 1FW-P-3A,  
1FW-P-3B and 1FW-P-2

CHANGE DESCRIPTION

Existing Operational Surveillance Tests 1.24.2, 3 and 4 (Motor Driven Auxiliary Feed Pump Test 1FW-P-3A, 1FW-P-3B and 1FW-P-2) have been revised to change the acceptance criteria for the pressure drop requirements on recirculation flow to incorporate the Minimum Operating Point (MOP). The flow control valve is also being failed open to ensure full flow. The new MOP is taken from an Engineering Calculation Package (#8700.24.46).

SAFETY EVALUATION SUMMARY

The pump is inoperable during the test due to the closure of the manual isolation valve. With the flow control valve failed open, the operator would have to open the manual isolation valve if the pump was required. The other two pumps remain operable. The new MOP curve will verify that the pump is running acceptably. The new MOP limits will verify that the basis of the Technical Specifications are met. No unreviewed safety questions exist.



CHANGE TITLE

Operating Manual OM 1.10.3, Safety Injection System Valve List

CHANGE DESCRIPTION

The normal system arrangement position of Nitrogen Supply Header Isolation Valve (1NG-325) in the supply line to Unit 2 was changed from shut to open. This is the normal position of the valve during operation.

SAFETY EVALUATION SUMMARY

There is no change to the probability of failure; Unit 2 Updated Final Safety Analysis Report (UFSAR) Section 9.5.9 states that Unit 1 can supply Nitrogen through the cross connect piping and isolation valve 1NG-325. In the event of a Nitrogen supply failure, the safety injection accumulators are protected by redundant normally closed valves on the supply lines. No accidents are identified in Unit 1 UFSAR Chapter 14 or Unit 2 UFSAR Chapter 15. Technical Specifications are not affected by this change. No unreviewed safety questions exist.

CHANGE TITLE

Temporary Modification - Fire System Tank FP-TK-1  
To Fire Header Tie Line Bypass

CHANGE DESCRIPTION

The line from the fire system hydropneumatic tank FP-TK-1 to the distribution system is plugged, which degrades system pressure inventory control and causes fire system pump FP-P-1 to run continuously. A temporary hose will be run from valve FP-40 to valve FP-338 to bypass the flow restriction.

SAFETY EVALUATION SUMMARY

The temporary modifications will enhance reliability since it mimics permanently installed equipment which has degraded. Updated Final Safety Analysis Report (UFSAR) Chapter 14 contains no accident relevant to implementation or failure of this modification. The worst case failure would be equivalent to a 1 inch break in the fire system which is enveloped by UFSAR Section 9.10.1. This temporary modification does not affect the Technical Specifications. No unreviewed safety questions exist.



CHANGE TITLE

Operating Manual OM 1.2<sup>1</sup> - Main Steam Valve List

CHANGE DESCRIPTION

Change the normal system arrangement position of auxiliary steam to gland steam isolation valve IMS-42 from closed to open, and change main turbine gland steam control valve MOV-IMS-201 from open to closed. The auxiliary steam header will supply the gland steam system, with the main steam supply available as a backup.

SAFETY EVALUATION SUMMARY

No safety systems or systems important to safety are involved or affected by this change as described in Updated Final Safety Analysis Report (UFSAR) Sections 10.3.2.1, 10.3.2.3 and 10.3.3.1. The accident analysis described by UFSAR Section 14.1.7 is unaffected since the failure mode of auxiliary steam supply is no more likely than failure of main steam supply and main steam supply status is readily available in the Control Room. Technical Specifications are not affected by this change. No unreviewed safety questions exist.

CHANGE TITLE

Installation of Temporary Hourmeters on SA-C-1A, 1B, and 1C

CHANGE DESCRIPTION

This temporary modification was needed to determine run times on the Station Air Compressors so that a predictive maintenance schedule could be established for compressor overhauls. This change was initiated to increase the reliability of the Station Air Compressors. This modification did not alter the performance of the compressors and/or their associated control circuitry.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased because the Station Air Compressors do not provide a safety function and their failure will not affect the safety functions of other equipment (Reference UFSAR Section 9.8.1). Failure of the Station Air Compressors will not increase the radiological consequences of an accident because they are not used to mitigate an accident. All air operated valves fail closed (Reference UFSAR Section 9.8.1).

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the modification utilizes existing circuitry of the Station Air Compressors. The only malfunction would be failure of the Station Air Compressors.

No Technical Specification bases are affected by this modification since safety related air operated valves do not require air to close.

No unreviewed safety question is involved.

CHANGE TITLE

Installation of Temporary Contaminated Oil and Sludge  
Removal Filtration System

CHANGE DESCRIPTION

This temporary modification was in affect for one week on each chiller. The filtration system removed sludge which was detrimental to the operation of the chiller. While one chiller was being cleaned the other was carrying the station load.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased because chiller failure does not contribute to any analyzed accidents (Reference UFSAR Section 9.4.3.2).

Failure of the Chiller will not increase the radiological consequences of an accident since river water can be used as an alternative cooling mechanism. (Reference UFSAR Section 9.4.3).

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the modification is in the secondary side of the plant and will not affect the function of any safety related equipment in the vicinity of the chillers. If the backup supply of river water does not maintain ambient air temperature in containment, Unit operation can be curtailed (Reference UFSAR Section 9.4.4)

No Technical Specification bases are affected by this modification since the backup supply of river water is adequate to cool station loads if the chillers fail. No margin of safety will be reduced.

No unreviewed safety question is involved.

CHANGE TITLE

Jumper and Lifted Lead (JLL) Tags for Steam Dump System

CHANGE DESCRIPTION

This temporary modification was made to disable valve PCV-MS-106A and to recalibrate I/P for PCV-MS-106B1 to act as the first valve to open. With one steam dump valve disabled there is still a sufficient steam dump capacity with the remaining condenser steam dump valves and atmospheric valves.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased because the recalibration of a condenser steam dump and isolation of another does not increase the probability of an accidental depressurization (Reference UFSAR Section 14.1.13).

Even with valve PCV-MS-106A disabled, sufficient steam dump capacity exists with the remaining condenser dump valves and the atmospheric dump valves. Two condenser dump valves will still be available for cooldown capabilities. The consequences of an accidental depressurization or a steam line break remain unchanged and are covered in UFSAR Sections 14.1.13 and 14.2.5.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the modification is in the secondary side of the plant and even if one condenser steam dump is out of service sufficient steam dump capacity exists with the remaining condenser dump valves and the atmospheric dump valves.

No Technical Specification bases are affected by this modification since the condenser steam dump valves are not mentioned in the Technical Specifications.

No unreviewed safety question is involved.

CHANGE TITLE

Jumper and Lifted Lead (J&LL) Tags for RM-VS-107B

CHANGE DESCRIPTION

This radiation monitor design was upgraded to allow necessary adjustment capabilities. This modification affects indication only.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased since the modification affects indication only and has no effect on any safety function of this monitor. The electronic components added are in the circuit which provides indication. The alarm and/or trip functions are unaffected by this modification.

Failure of the monitor will not increase the radiological consequences of an accident since equipment reliability is unaffected by this modification.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the modification affects indication only.

No Technical Specification bases are affected by this modification since the monitor still performs its safety function as before.

No unreviewed safety question is involved.

CHANGE TITLE

Jumper and Lifted Lead (J&LL) Tags for RM-GW-108A

CHANGE DESCRIPTION

This radiation monitor design was upgraded to allow necessary adjustment capabilities. This modification affected indication only.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased since the modification affects indication only and has no effect on any safety function of this monitor. The electronic components added are in the circuit which provides indication. The alarm and/or trip functions are unaffected by this modification.

Failure of the monitor will not increase the radiological consequences of an accident since equipment reliability is unaffected by this modification.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the modification affects indication only.

No Technical Specification bases are affected by this modification since the monitor still performs its safety function as before.

No unreviewed safety question is involved.

CHANGE TITLE

Jumper and Lifted Lead (J&LL) Tags for RM-VS-106

CHANGE DESCRIPTION

This radiation monitor design was upgraded to allow necessary adjustment capabilities. This modification affected indication only.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased since the modification affects indication only and has no effect on any safety function of this monitor. The electronic components added are in the circuit which provides indication. The alarm and/or trip functions are unaffected by this modification.

Failure of the monitor will not increase the radiological consequences of an accident since equipment reliability is unaffected by this modification.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the modification affects indication only.

No Technical Specification bases are affected by this modification since the monitor still performs its safety function as before.

No unreviewed safety question is involved.



CHANGE TITLE

Jumper and Lifted Lead (J&LL) Tags for RM-VS-107A

CHANGE DESCRIPTION

This radiation monitor design was upgraded to allow necessary adjustment capabilities. This modification affected indication only.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased since the modification affects indication only and has no effect on any safety function of this monitor. The electronic components added are in the circuit which provides indication. The alarm and/or trip functions are unaffected by this modification.

Failure of the monitor will not increase the radiological consequences of an accident since equipment reliability is unaffected by this modification.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the modification affects indication only.

No Technical Specification bases are affected by this modification since the monitor still performs its safety function as before.

No unreviewed safety question is involved.

CHANGE TITLE

Jumper and Lifted Lead (J&LL) Tags for RM-LW-116

CHANGE DESCRIPTION

This radiation monitor design was upgraded to allow necessary adjustment capabilities. This modification affected indication only.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased since the modification affects indication only and has no effect on any safety function of this monitor. The electronic components added are in the circuit which provides indication. T<sub>1</sub> alarm and/or trip functions are unaffected by this modification.

Failure of the monitor will not increase the radiological consequences of an accident since equipment reliability is unaffected by this modification.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the modification affects indication only.

No Technical Specification bases are affected by this modification since the monitor still performs its safety function as before.

No unreviewed safety question is involved.

CHANGE TITLE

Temporary Modification of Station Air Compressor Control Switch Wiring

CHANGE DESCRIPTION

This modification permitted a rapid restart of the air compressors in the event of a low pressure condition. It did not alter the performance of the station air compressor just enhanced their operability.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased because the Station Air Compressors do not provide a safety function and their failure will not affect the safety functions of other equipment (Reference UFSAR Section 9.8.1).

Failure of the Station Air Compressors will not increase the radiological consequences of an accident because they are not used to mitigate an accident (Reference UFSAR Section 9.8.1). No safety related equipment requires the supply of compressed air for shutdown.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the modification does not introduce any new failure modes. Loss of station air is bound by the turbine trip analysis (Reference UFSAR Section 14.1.7), and spurious safety injection analysis (Reference UFSAR Section 14.1.16). This modification will enhance the reliability of the Station Air System.

No Technical Specification bases are affected by this modification since safety related air operated valves do not require air to close.

No unreviewed safety question is involved.

CHANGE TITLE

Temporary Modification to Acid Distribution Header in Water Treatment

CHANGE DESCRIPTION

The acid header was replaced as a maintenance repair. The Operations Department requested elimination of unused valves from this train to simplify operation and reduce subsequent maintenance. This system is not addressed in the Updated Final Safety Analysis Report (UFSAR) or Technical Specifications. The function of the header remained the same. This change eliminated parallel flow paths which were not used.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the UFSAR will not be increased since this change is limited to the water treating area which does not directly or indirectly contribute to any design basis accident scenarios. There is no safety related equipment in the vicinity of the change.

The only credible failure mode is an acid line leak. The likelihood of an acid line leak would be less, since there will be fewer components in the line.

There are no radiological consequences associated with acid header failures.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the only failure mode is external leakage and this would not affect any safety systems. There are no safety systems in the area of water treating.

No Technical Specification bases are affected by this modification since this system is not listed in the Technical Specifications.

No unreviewed safety question is involved.

CHANGE TITLE

Temporary Modification for Running Temporary Cable  
For Rod Position Indicator (RPI) D-12

CHANGE DESCRIPTION

A cable was run from the operating deck to the coil stack of rod position indicator D-12. This was to eliminate excess noise in the circuit and erratic indicator operation. This modification affected indication only and had no affect on reactor protection or control.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased since the RPI System provides indication only, is not a safety related system, and there is no safety related equipment in the immediate area of the temporary cable.

Failure of the temporary cable will not increase the radiological consequences of an accident because the system provides indication only, and there are no design basis accidents which would be initiated by the system.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the temporary cable does not create or change any failure mode based on the fact that it is an identical cable to the one presently installed.

No Technical Specification bases are affected by this modification since the temporary cable will enable the  $\pm 12$  step acceptance criteria to be met for the D-12 position.

No unreviewed safety question is involved.

CHANGE TITLE

Relief Valve RV-BD-118 Setpoint Change

CHANGE DESCRIPTION

The setpoint of relief valve RV-BD-118 was changed from 80 psig to a maximum of 120 psig to obtain the proper flow for radiation monitor RM-BD-101 and make it more reliable.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased because the system piping is pressure rated higher than the new relief valve setting.

Failure of RM-BD-101 will not increase the radiological consequences of an accident because this radiation monitor has no automatic functions to mitigate any consequences of an accident. The radiation monitor provides indication and alarms only (as stated in UFSAR Section 11.3.3.3.30).

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the relief valve will still open before the blowdown system piping or radiation monitor RM-BD-101 is over-pressurized.

The relief valve and radiation monitor are not Technical Specification related.

No unreviewed safety question is involved.

CHANGE TITLE

Connecting Recording Equipment to Operating Equipment

CHANGE DESCRIPTION

This safety evaluation was for a new procedure to install, control, evaluate, and remove recording equipment to monitor plant parameters while equipment is in service. The procedure is generic.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased because the procedure requires a failure analysis for each application to ensure safety system performance will not be degraded. In addition, the failure modes applicable to this procedure have been previously analyzed or assumed in accident analyses. Procedure controls minimize the effect of malfunctions which may occur.

The radiological consequences of an accident will not increase because the procedure requires a failure analysis for each application to ensure safety system performance will not be degraded.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since the failure modes applicable to this procedure have been previously analyzed or assumed in accident analyses. Procedure controls minimize the effect of malfunctions which may occur.

This procedure is generic in nature but contains sufficient controls to preclude exceeding acceptance limits for the licensing basis. The change will have no effect on the acceptance limits which form the basis for the Technical Specifications due to proper procedure controls.

No unreviewed safety question is involved.



CHANGE TITLE

Addition of a Metal oxide Varister (MOV) to RM-LW-116/Relay k25

CHANGE DESCRIPTION

A metal oxide varister was installed across the coil of relay k25 in order to eliminate voltage spikes on the A.C. supply to radiation monitor RM-LW-116. This change reduced the time required to close trip valve TV-LW-116 in the event of a detector or power supply failure, and will reduce potential off-site releases. The change did not affect the response on a hi-hi alarm.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased because the change reduced the time required to close trip valve TV-LW-116 in the event of a detector or power supply failure, and terminate the off-site liquid waste discharge.

Short circuit of the MOV removes the voltage across k25 which causes trip valve TV-LW-116 to close and terminates the liquid waste discharge. Open circuit of the MOV returns the unit to its original design. Thus, failure of the MOV will not increase the radiological consequences of an accident.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since no operating or design parameters are affected by addition of the MOV.

The proposed change will reduce the amount of time required to close trip valve TV-LW-116 on a detector or power supply failure, and thereby reduce potential off-site releases. Therefore, the change will not reduce the margin of safety as defined in the basis for any Technical Specification.

No unreviewed safety question is involved.

CHANGE TITLE

Addition of a Metal Oxide Varistor (MOV) to RM-LW-104/Relay k23

CHANGE DESCRIPTION

A metal oxide varistor was installed across the coil of relay k23 in order to eliminate voltage spikes on the A.C. supply to radiation monitor RM-LW-104. This change reduced the time required to close trip valve TV-LW-105 on a detector or power supply failure and reduced potential off-site releases. The change did not affect the response on a hi-hi alarm.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased because the change reduced the time required to close trip valve TV-LW-105 in the event of a detector or power supply failure, and terminate the off-site liquid waste discharge.

Short circuit of the MOV removes the voltage across k23 which causes trip valve TV-LW-105 to close and terminates the liquid waste discharge. Open circuit of the MOV returns the unit to its' original design. Thus, failure of the MOV will not increase the radiological consequences of an accident.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since no operating or design parameters are affected by addition of the MOV.

The proposed change will reduce the amount of time required to close trip valve TV-LW-105 on a detector or power supply failure, and thereby reduce potential off-site releases. Therefore, the change will not reduce the margin of safety as defined in the basis for any Technical Specification.

No unreviewed safety question is involved.

CHANGE TITLE

Addition of a Metal Oxide Varister (MOV) to RM-GW-108A/Relay k4  
and RM-GW-108B/Relay k9

CHANGE DESCRIPTION

A metal oxide varister was installed across the coil of relay k4 and relay k9 in order to eliminate voltage spikes on the A.C. supply to RM-GW-108A and RM-GW-108B respectively. This change reduced the time required to close valves TV-GW-103 and TV-GW-103A2-C2 on a detector or power supply failure and reduced potential off-site releases. The change did not affect the response to a hi-hi alarm.

SAFETY EVALUATION SUMMARY

The probability or consequences of an accident described in the Updated Final Safety Analysis Report (UFSAR) will not be increased because the changes reduce the time required to close trip valves TV-GW-103 and TV-GW-103A2-C2 in the event of a detector or power supply failure, and terminate the off-site discharge.

Short circuit of the MOV removes the voltage across k4 and k9 which causes trip valves TV-GW-103 and TV-GW-103A2-C2, respectively, to close and terminates the discharge. Open circuit of the MOV returns the unit to its original design. Thus, failure of the MOV will not increase the radiological consequences of an accident.

The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created since no operating or design parameters are affected by the addition of the MOV.

The proposed change will reduce the amount of time required to close trip valves TV-GW-103 and TV-GW-103A2-C2 on a detector or power supply failure, and thereby reduce potential off-site releases. Therefore, the change will not reduce the margin of safety as defined in the basis for any Techn. Specification.

No unreviewed safety question is involved.

CHANGE TITLE

Temporary RCS Level Indication (for C Loop) During Refueling

CHANGE DESCRIPTION

A new procedure, 1CMP 06RC-LT-TEMP-1C-3I, was written to provide temporary indication of Reactor Coolant System (RCS) level in the Control Room for mid-loop operation during refueling outages. Steam Generator level channel L-FW-496 will be used as a reactor vessel level system.

SAFETY EVALUATION SUMMARY

Level indicator LI-FW-496 and recorder TR-RC-408 will indicate reactor vessel level, instead of their normal steam generator level indications. Narrow range steam generator level channels are not required in refueling mode (or modes 4 & 5). No actuations will result from alarms unless a redundant steam generator level channel trips, and safety systems are aligned for automatic actuation. These systems must be controlled by Operations.

The probability or consequences of an accident described in the Updated Final Safety Analysis Report will not be increased because the affected safety system (Steam Generator Narrow Range Level Channel) will be out of service for the modes in which the procedure is used.

Reactor trip and auxiliary feed pump start actuations (also turbine trip actuations) may result from failure of the temporary configuration. However, in the applicable modes, these systems are normally disabled. These are not accidents, just safety system actuations. The probability of occurrence of inadvertent actuations will not change provided safety systems are properly controlled.

Failure of the temporary RCS level indication will not increase the radiological consequences of an accident because there are no pertinent accidents.

No new type of accident can occur. Inadvertent safety system actuations are possible but will not occur if redundant systems and safety systems are properly controlled.

No Technical Specification bases are affected by this modification since the affected safety related system (Narrow range steam generator level channels) are not required for operation during Modes 4, 5, or 6.

No unreviewed safety question is involved.

#### CHANGE TITLE

Supplementary Leak Collection & Release System  
Filter Design and Leak Testing

#### CHANGE DESCRIPTION

Two changes to the Updated Final Safety Analysis Report (UFSAR) were evaluated. The first change was related to the Supplementary Leak Collection and Release System (SLCRS) carbon adsorber design efficiency. The second change revised the SLCRS carbon adsorber leak test criteria. Both changes are described below.

##### Carbon Adsorber Design Efficiency

Safety System Functional Evaluation (SSFE) observation SLC-ME-033 identified an incomplete design basis for the Supplementary Leak Collection and Release System (SLCRS) iodine filter efficiency. The SSFE evaluation concluded that the UFSAR should be updated to specify the minimum design efficiency for radioiodine removal.

This proposed change adds a sentence to UFSAR Section 6.6.2 that reflects the purchase specification requirements, and thus the design requirements, for SLCRS filter efficiency.

##### Carbon Adsorber Leak Testing

Carbon adsorber leak testing criteria referenced in the UFSAR (i.e. DP-1082) is different from that provided in the Technical Specifications (i.e. ANSI N510-1975). This proposed change revises the UFSAR to reference Technical Specifications instead of DP-1082. The following paragraphs describe documents reviewed as part of this evaluation.

DP-1082 is a United States Atomic Energy Commission Report entitled "Standardized Nondestructive Test of Carbon Beds for Reactor Confinement Application." The report was prepared by the Savannah River Laboratory and is dated July, 1967.

Regulatory Guide 1.52, dated June 1973, references DP-1082 as providing an acceptable in-place leak test criteria for the carbon adsorber section of atmosphere cleanup systems.

Regulatory Guide 1.52, Rev. 2, dated March 1978, references ANSI N510-1975 as providing an acceptable in-place leak test criteria for the carbon adsorber section of atmosphere cleanup systems.

SLCRS Filter Design & Leak Testing (Continued)

Technical Specification surveillance requirement 4.7.8.1.b.1 references ANSI N510-1975 for in-place testing of the charcoal adsorber section of the SLCRS filters.

UFSAR Section 6.6.2 states that: "Charcoal cells are leak tested using procedures outlined in DP-1082."

Charcoal cells are currently tested in accordance with ANSI N510-1975 as required by Technical Specifications. As indicated above, ANSI N510-1975 provides the most recent criteria found acceptable to the NRC. Therefore, to resolve the conflict between the UFSAR and Technical Specifications, this change proposes to delete the reference to DP-1082 in the UFSAR, and add in its place a reference to Technical Specifications (for leak test criteria).

SAFETY EVALUATION SUMMARY

The changes will not affect the probability of failure of the SLCRS or its components. Therefore, the changes will not increase the probability of occurrence of a malfunction of equipment important to safety.

The performance of the safety system (i.e. the SLCRS) is not affected by the changes. Thus, the consequences of a malfunction of equipment important to safety will not increase.

The changes will have no impact on the assumptions and radiological consequences of the Loss Of Coolant Accident (LOCA) and Fuel Handling Accident. Therefore, the consequences of a previously evaluated accident will not be increased.

Since there are no failure modes associated with the changes, the probability of occurrence of the design basis accidents (i.e. Loss of Coolant Accident, and Fuel Handling Accident) will be unaffected.

The proposed changes will not affect the plant response. Therefore, the possibility of a new type of accident is not created.

There are no failure modes associated with the changes. Thus, a malfunction of equipment important to safety of a different type is not created.

The changes will have no effect on the operability or surveillance requirements for the SLCRS and thus, will have no effect on the Technical Specification Basis or the margin of safety as defined therein.

No unreviewed safety question is involved.



CHANGE TITLE

Nuclear Group Administrative Procedure 3.5 - Fire Protection

CHANGE DESCRIPTION

This change involved the conversion of Site Administrative Procedure (SAP) 9D to Nuclear Group Administrative Procedure (NGAP) 3.5. The following list identifies specific changes.

1. SAP 9D was reformatted to the new Nuclear Group Administrative Manual format.
2. Organizational changes were incorporated in Figure 1 of NGAP 3.5.
3. Definitions provided in SAP 9D were relocated to NGAP 10.1 Definitions.
4. A requirement was added to inspect temporary fire penetration seals on a weekly basis until permanent seals are installed (Reference: Quality Assurance Audit 89-14).
5. A new form, "Hot Work/Fire Barrier Permit Form," to be used by all station groups instead of individual department procedures/forms was included in NGAP 3.5. The form will require Control Room notification prior to start of hot work.
6. A form, "Fire Protection Impairment/System Out Of Service Form," was relocated to Attachment 16 of NGAP 3.5. This form requires a work party supervisor to obtain authorization from the Nuclear Shift Supervisor or Nuclear Station Operating Foreman.
7. A requirement was added to indicate that temporary site facilities (fabrication shops, trailers, etc.) which have fire protection provided, shall be evaluated by the Fire Protection Engineer.
8. A requirement was added to indicate that brigade members must dress-out in full gear to receive drill credit.
9. Tables 1 and 3 of SAP 9D (Operability Requirements for the Fire Protection System; NRC required and ANI required) were incorporated into Attachment 2 of NGAP 3.5.
10. Tables 2 and 4 of SAP 9D (Surveillance Requirements for Fire Protection System; NRC required and ANI required) were incorporated into Attachment 5 of NGAP 3.5.
11. The smoke detector testing frequency was changed from Semi-annual to Annual per the revised NFPA Code 72E.
12. References to SAP 9D in the Updated Final Safety Analysis Report (UFSAR) were revised to reference NGAP 3.5.



NGAP 3.5 - Fire Protection (Continued)

SAFETY EVALUATION SUMMARY

The design and operation of fire protection equipment and components remains the same. There are no credible failure modes associated with the change. In addition, the performance of safety systems will be unchanged.

Since no changes to the Fire Protection System are being made, the assumptions and radiological consequences of accidents identified in the UFSAR or Fire Hazards Analysis are unchanged.

Since there are no credible failure modes associated with the change, the probability of occurrence for design basis accidents will be unchanged.

Administrative changes will not affect equipment or components of the Fire Protection System or systems important to safety. The administrative changes will not change the probability of failure.

The accident analyses in Section 14 and Section 15 of the UFSAR's for Unit 1 and Unit 2, respectively, are not affected. The Appendix R fire hazards analyses for Unit 1 and Unit 2 (Updated Fire Protection Appendix R Report and Fire Protection Safe Shutdown Report) are not affected by this change.

No unreviewed safety question is involved.

CHANGE TITLE

Asiatic Clam Chemical Treatment Program

CHANGE DESCRIPTION

Temporary modification to support alternate biocide additions to Unit 1 River Water Systems. This modification provides for:

- 1) injection of biocide through an existing fitting at the suction of the chlorination pumps, and
- 2) routing a service water sample (taken from a low point drain downstream of a radmonitor) through a container of clams used for monitoring biocide effects.

This modification is to be performed after the Pennsylvania Department of Environmental Resources gives approval for use of the Clam-Trol CT-1 used in the treatment program. New biocide is added to better kill Asiatic clams to prevent river water heat exchanger fouling and potentially improve heat exchanger performance.

SAFETY EVALUATION SUMMARY

The implementation of this temporary modification is considered to be safe. No change to the Technical Specifications is required. No changes to the Updated Final Safety Analysis Report (UFSAR) are required.

The probability of an occurrence or the consequences of an accident will not be increased. All temporary modifications are outside safety related component and safety actuation boundaries.

The probability of an occurrence or the consequences of a malfunction of equipment important to safety will not be increased. All equipment will be run as routine cycling or performance of Temporary Operating Procedures (TOP's).

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

This temporary modification does not involve an unreviewed safety question.

CHANGE TITLE

DCP-558, Rev. 0, Crane Globe Valves

CHANGE DESCRIPTION

This modification entails the repair or replacement of crane globe valves originally purchased via P.O. Numbers BV-154 and BV-155.

TECHNICAL EVALUATION SUMMARY

It has been determined that this modification will not increase the probability of occurrence, or consequences of an accident or malfunction of ~~the~~ important to safety as previously evaluated in the UFSAR. The modification will not create an accident different than any previously evaluated in the Updated Final Safety Analysis Report.

This modification will not adversely affect the margin of safety as defined in the basis for any Technical Specification.

The probability of occurrence or consequence of an accident will not be increased. For each valve repair or replacement a technical evaluation will ensure that the new valve meets or exceeds the original design requirements.

The margin of safety defined in the basis for any Technical Specification is not reduced since the replacement valves will ensure that original design requirements are met or exceeded.

No unreviewed safety question is involved.

CHANGE TITLE

DCP-655, Rev. 0, CO and ITE Relays Replacement

CHANGE DESCRIPTION

The purpose of this modification is to replace relays 51-106, 51-107, 51-108, and 51-109 on the 4KV station service system. The existing CO-6 and ITE-511 type relays will be changed to CO-11 and ITE-51E type relays. By performing this modification the new variable range relays should permit the starting of the feedwater pumps at rated load condition and prevent subsequent tripping of the system station and unit station service transformer feeds to buses 1A, 1B, 1C, and 1D. (The plant experienced this type of trip on October 18, 1982).

SAFETY EVALUATION SUMMARY

This design change is considered to be safe and does not constitute an unreviewed safety question nor does it effect the bases of Technical Specifications 3/4.8.1 and 3/5.8.2.

By performing this modification, tripping of the system and unit station service transformer feeds to buses 1A, 1B, 1C, or 1D should be eliminated when the feedwater pumps are started at rated conditions. However, even in the event that all A-C power is lost, no adverse conditions would occur in the reactor core as stated in UFSAR Section 14.1.11 "Loss of Off-site Power to the Station Auxiliaries (Station Blackout)". Therefore, the probability of an occurrence or the consequence of an accident or malfunction of equipment important to safety as previously evaluated in Updated Final Safety Analysis Report (UFSAR) Section 8.4.2 and 14.1.11, will not be increased.

This modification is limited to the replacement of CO-6 and ITE-511 type relays with CO-11 and ITE-51E type relays and will not create the possibility for an accident or malfunction of a different type than previously evaluated in UFSAR Sections 14.1.8 and 14.1.11.

The margin of safety as defined in Technical Specification Basis 3/4.8.1 and 3/4.8.2 will not be reduced since the replacement relays should make the operability of the system station and unit station service system more reliable.

No unreviewed safety question is involved.

CHANGE TITLE

DCP-713, Rev. 0, Containment Instrument Pit Level Switches

CHANGE DESCRIPTION

At the present time, the level switches (LS-DA-121 and 122) for the containment instrument pits cause grounds on the annunciator system. While this switch is partially protected from the weather, it is still subjected to significant amounts of moisture. The inside of the pit has heavy condensation all the time. Also, rain water is running down the containment's exterior wall into the instrument pits due to an inadequate seal between pit covers and the containment wall.

This design change is to replace the present electrical contact switches, LSDA-121 and 122, in their general purpose enclosures with sealed mercury contact switches housed in water tight enclosures. Replacement switches under consideration are Mercoild level control NEMA 3 or 4 with new stainless steel cable and floats. Rain gutters or flashing will be installed on the containment wall directly over the pit's concrete covers to divert rain from running down the containment wall into the instrument pits. It may be necessary to form and pour new concrete pit covers with proper horizontal slope and proper cover to containment radius fit.

SAFETY EVALUATION SUMMARY

The probability of an occurrence of an accident previously evaluated in the safety analysis report will not be increased because the new equipment will be better than the existing ones due to the fact that they are moisture-proof. There is no impact on the function of the safety-related portion of the annunciator system and containment system in Updated Final Safety Analysis Report (UFSAR) Section 7.8.1 and Section 6.4.

The consequence of an accident previously evaluated in the safety analysis report will not be increased because this design change is in the non-safety portion of the annunciator system that has no effect on the consequences of an accident previously evaluated in UFSAR Chapter 14.

The probability of a malfunction of equipment important to safety as previously evaluated in the safety analysis report will not be increased because the modification of this portion is non-safety-related and does not create a situation which would increase the probability of malfunction.

The containment instrument level switches are lightweight. A failure, resulting in the switches falling into the pit, is inconsequential. Therefore, there is no seismic hazard.

The consequence of a malfunction of equipment important to safety as previously evaluated in the safety analysis report will not be increased because the portion of this design change in the annunciator system and containment system is not used to prevent or mitigate the consequences of an accident. There should be no effect on the consequences of malfunction of equipment important to safety as previously evaluated in the UFSAR.

DCP-713, Containment Instrument Pit Level Switches (Continued)

There are no UFSAR Chapter 14 accidents affected by this non-safety portion of annunciator system and containment system.

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

The possibility for an accident of a different type than previously evaluated in the safety analysis report will not be created because there is no configuration change such that an accident of a different type is created. With the proposed modifications, the containment instrument pits will not cause grounds on the annunciator system.

The possibility for a malfunction of equipment important to safety of a different type than previously evaluated in the safety analysis report will not be created because the failure of this equipment has no effect on safe plant operation and shutdown of the plant.

Failure modes of the proposed design change which were reviewed included equipment failure in the annunciator system and containment system. This portion of the design change is non-safety-related.

The margin of safety as defined in the basis for any Technical Specification will not be reduced because the containment instrument pit level switches are not addressed in the Technical Specifications.

No changes in parameters that affect the course of any accident analysis, or supporting Technical Specification basis, or could result in exceeding the acceptance criteria for fuel cladding, RCS boundary, or containment boundary are being made by this modification.

No unreviewed safety question is involved.

Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments  
Page 58 of 69

CHANGE TITLE

DCP-854, Rev. 0, Filtered Water Piping

CHANGE DESCRIPTION

The existing filtered water lines in the Turbine Building have corroded to the point where these lines must be replaced due to excessive leakage and wall loss. This design change proposes to replace the existing carbon steel piping with new fiberglass piping. The purpose of this design change is to avoid equipment damage or personnel injury which may result from a filtered water line break.

SAFETY EVALUATION SUMMARY

This design change is safe and does not involve an unreviewed safety question or change to the Technical Specifications. The change in piping material and additional supports to this non-safety system will not increase the probability of failure of this system or any equipment important to safety. No changes to the Updated Final Safety Analysis Report (UFSAR) are required.

The filtered water system is not discussed in the BVPS-1 UFSAR. The system is designed to supply seal water to various pumps and cooling water to other components in both Unit 1 and Unit 2. In general, all equipment supplied which is safety related has a backup source of seal or cooling water. The filtered water system is not required to be operable during any design basis accidents. The filtered water system is required to be operable to supply cooling water to the Unit 2 station air compressors during plant shutdown and/or with a loss of offsite power per BVPS-2 Fire Protection Safe Shutdown Report. This requirement will be taken into consideration during installation.

This change involves only a change in piping material and addition of pipe supports. The pipe is still subject to a failure due to overpressure; however, the design specifications reduce the probability to an acceptably low level. The current source of pipe failure (corrosion) has been reduced or eliminated by the use of corrosion resistant materials. The fiberglass pipe has less resistance to damage caused by external loads; however, problems will be prevented by maintaining adequate installation clearances from existing equipment which has the potential to impact the system.

There are no Technical Specifications or bases which assume operability or integrity of the filtered water system.

No unreviewed safety question is involved.



CHANGE TITLE

DCP-872, Rev. G, High Mast, High Pressure Sodium Lighting

CHANGE DESCRIPTION

This modification will upgrade the present Security Lighting System by the addition of high mast, high pressure sodium lighting and the replacement of the existing mercury vapor or sodium vapor lamps with high pressure sodium lamps of greater wattage.

SAFETY EVALUATION SUMMARY

The implementation of this modification is considered to be safe. No changes to the Technical Specifications or the Updated Final Safety Analysis Report (UFSAR) are required as a result of this modification.

This modification will not increase the probability or the consequence of an accident previously evaluated in the UFSAR. This modification will comply with the requirements of 10CFR73.46 and ANSI/ANS-3.3-1982. The Lighting System description and Industrial Security description (UFSAR 8.4.4 and 12.7 respectively) will remain valid.

The possibility for the occurrence of an unanalyzed accident will not be created by the implementation of this modification. The Security Lighting System and its power supplies are non-safety-related, and there are no failure modes of the security lamps which would create accidents of a different type than previously evaluated.

No Technical Specification basis is affected by this modification.

No unreviewed safety question is involved.

CHANGE TITLE

DCP-895, Rev. 0, Roof Vents - ERF Substation Oil Transfer Pump Housing

CHANGE DESCRIPTION

The Emergency Response Facility (ERF) Diesel Generator Fuel Oil Transfer Pump (ERFS-P-1A) cubicle is a subgrade concrete structure at the west end of the ERF Diesel Fuel Oil Storage Tank (ERFS-TK-1). This structure has become an accumulation point for moisture, which has disrupted the operability of the fuel oil transfer pumps. A ventilation system consisting of one 5 inch diameter plastic vent pipe and a wind driven rotating turbine exhaust fan will be installed to improve circulation of dryer air through the cubicle to remove excess moisture.

SAFETY EVALUATION SUMMARY

This modification is considered safe. No unreviewed safety questions exist nor are any changes to the Updated Final Safety Analysis Report (UFSAR) or the Technical Specifications required. This modification will reduce the amount of condensation in the ERF Diesel Generator Fuel Oil Transfer Pump Cubicle, and thus improve the reliability of the Fuel Oil Transfer Pumps.

This modification does not affect the evaluation in Section 12.3 of the Updated Final Safety Analysis Report. This modification will serve to improve the reliability of the ERF Diesel Fuel Oil Transfer Pump by reducing the amount of moisture in its cubicle. This modification does not affect any safety-related equipment either directly or indirectly.

Failure of the Fuel Oil Transfer Pumps (ERFS-P-1A, 1B) does not affect any equipment that is needed to safely shut down the station or mitigate the consequences of an accident or malfunction. No failure of this modification can create an accident or malfunction of a different type than previously evaluated in Section 12.3 of the Updated Final Safety Analysis Report.

This modification does not affect the basis for any Technical Specifications.

No unreviewed safety question is involved.

CHANGE TITLE

DCP-1185, Rev. 0, Installation of Air Filter in  
Diesel Generator Air Start Piping

CHANGE DESCRIPTION

The diesel generator air starting systems will start the engine upon receiving a start signal, the solenoid valve (SOV) is energized, allowing air from the tanks to pass through the SOV to the pinion gear and engage with the engine ring gear. Once both pinion gears are engaged, the air is passed through the air starting valve and the air line lubricator, releasing an oil-air mist into the starting motors. The multi-vane motors drive the pinion gears, rotating the ring gear and cranking the engine.

Recently, the air start motors have failed to disengage on several occasions. An investigation by the Instrument and Controls Section revealed that rust particles lodged on the seat of the SOV are preventing proper shut-off.

The purpose of this modification is to install an air filter on the inlet of the air start SOVs so as to prevent future problems with dirt particles lodging under the seat.

SAFETY EVALUATION SUMMARY

The probability of occurrence for an accident previously evaluated in the safety analysis report will not be increased because the existing air start motors that failed to disengage were caused by rust particles lodged on the seat of the SOV, preventing proper shut-off. This design change will assure the air starting system design capabilities are maintained. Therefore, the probability of occurrence for an accident described in the safety analysis will not be increased.

The consequences of an accident previously evaluated in the safety analysis report will not be increased because the diesel generator air starting systems were already evaluated in UFSAR Sections 8.5.2.3 and 8.5.2.6. The redundant air starting system design has already been analyzed such that the failure of one air start system will not prevent the diesel generator from starting.

Installation of the air filters was reviewed and recommended by the vendor. Engineering has also determined that the filter installation will not cause a large pressure drop and the air starting capabilities will not be affected. Periodic filter inspection, or replacement if determined necessary, will further assure the air starting system operates as designed.

The consequence of a malfunction of equipment important to safety as previously evaluated in the safety analysis report will not be increased because the proposed changes will not affect the consequences of any malfunction of safety-related equipment. Malfunction of the air starting system, and diesel generator failure have been evaluated in the safety analysis.

Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments  
Page 62 of 69

DCP-1185, Installation of Air Filter in  
Diesel Generator Air Start Piping (Continue.)

The design basis accident reviewed for potential impact by the proposed design change was the loss of emergency AC-power.

The safety system affected by the proposed design change is the Diesel Generator Emergency Power System.

The possibility for an accident of a different type than previously evaluated in the safety analysis report will not be created because the changes will assure the air starting design capabilities are maintained, and the filter installations will ensure the air start motors disengaged from the engine when the diesel start. Therefore, the possibility for an accident of a different type will not be created.

The possibility for a malfunction of equipment important to safety of a different type than previously evaluated in the safety analysis report will not be created because the materials and the size of the new air filters to be installed meets the original design analysis and is recommended by the diesel generator vendor. QA Category I and seismic installation will minimize the possibility of equipment malfunction.

Failure modes of the proposed design change which were reviewed included the failure of air starting system. However, the redundant air start system's design will ensure the diesel generator reliability is maintained in the event of an accident.

The margin of safety as defined in the basis for any Technical Specification will not be reduced because the proposed changes do not degrade any Technical Specification requirements. No changes to Technical Specification 3/4.8.1 is needed.

This design change to the diesel generator air starting system is considered to be safe and does not involve any unreviewed safety questions. The filters were reviewed and recommended by the manufacturer. This modification will ensure the original air starting system designs are maintained; therefore, UFSAR Sections 8.5.2.2 and 8.5.2.4 and Technical Specification 3/4.8.1 requirements will not be affected.

No unreviewed safety question is involved.

Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments  
Page 63 of 69

CHANGE TITLE

DCP-1187, Rev. 0, Replacement of Flow Transmitter FT-VS-112

CHANGE DESCRIPTION

Flow transmitter FT-VS-112 cannot be calibrated within its tolerance, has been declared inoperable, and removed from service. This instrument has a history of being difficult to calibrate and normally the as-found values are out of tolerance when the maintenance surveillance procedure is performed. The existing flow transmitter (FT-VS-112) Model #1913 (Leeds & Northrup) is obsolete and no longer available. This DCP replaces flow transmitter FT-VS-112 Model #1913 with a reliable transmitter.

Flow transmitter FT-VS-112 does not input to RM-VS-110, but only passes through the monitor (similar to a junction box), and does not affect the operability of the Radiation Monitor.

SAFETY EVALUATION SUMMARY

The probability of an occurrence of an accident previously evaluated in the safety analysis report will not be increased because this change is to be a one-for-one replacement with equipment qualified to meet the requirements of the previous transmitter.

The consequence of an accident previously evaluated in the safety analysis report will not be increased because neither the function nor any protective features are being modified by this change. The design change will only involve a direct replacement with qualified materials.

The probability of a malfunction of equipment important to safety as previously evaluated in the safety analysis report will not be increased because this transmitter does not impact safety nor will the degree of reliability be reduced by the installation of the new transmitter.

The consequence of a malfunction of equipment important to safety as previously evaluated in the safety analysis report will not be increased because the consequence of a malfunction of this transmitter will be identical to the one it replaces. The equipment is not important to safety because the effluent flow may be estimated, if the flow transmitter fails to maintain the recorder operable. Also, there are no automatic functions or manual actions based on the operability of this component.

The design basis accident reviewed for potential impact is the accidental release of waste gas.

The safety systems affected by the proposed design change is the Supplementary Leak Collection and Release System.

The possibility for an accident of a different type than previously evaluated in the safety analysis report will not be created because the system configuration and response will be identical to that which existed prior to the replacement of the transmitter.



DCP-1187, Replacement of Flow Transmitter FT-VS-112 (Continued)

The possibility for a malfunction of equipment important to safety of a different type than previously evaluated in the safety analysis report will not be created because the possible malfunctions of the new transmitter will be the same as the replaced transmitter. If the transmitter malfunctions, and consequently the flow recorder malfunctions, Technical Specifications require that flow be estimated every 4 hours during releases in this pathway.

Failure modes of the proposed design change which were reviewed include failure of the transmitter and recorder.

The margin of safety as defined in the basis for any Technical Specification will not be reduced because the system effluent flow rate measuring device FR-VS-112 will still perform as designed, with no compromises being made in the system safety and reliability.

No unreviewed safety question is involved.

CHANGE TITLE

DCP-1270, Rev. 1, Permanent Utility Tie-Ins for the Outage Trailer Complex

CHANGE DESCRIPTION

Presently, a temporary outage trailer complex is situated east of the paved roadway adjoining the Guard House and the Unit 2 Control Room.

The purpose of this design change is to provide a permanent utility tie-in to the outage trailer complex. Domestic water supply, sewage connection, fire protection (sprinkler), water and telecommunication connection will be provided on a permanent basis. The installation will eliminate all the temporary utility connections that have laid on the walkway which cause a personnel safety hazard.

SAFETY EVALUATION SUMMARY

The probability of an occurrence of an accident previously evaluated in the safety analysis report will not be increased because the proposed modification is not safety-related, and in no way would its inoperability affect plant operation.

The consequence of an accident previously evaluated in the safety analysis report will not be increased. Because the design change is located outside, the failure of this trailer complex and its associated utilities do not impact safety-related equipment and therefore affect no accident consequences.

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

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

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

No safety systems are affected by the proposed design change.

The possibility for an accident of a different type than previously evaluated in the safety analysis report will not be created because these changes do not impact the operability of any equipment required for plant safety.

The possibility for a malfunction of equipment important to safety of a different type than previously evaluated in the safety analysis report will not be created because the proposed modification is not safety-related, and it is located outside of safety areas. Therefore, the change will have no impact on safety related equipment.

The margin of safety as defined in the basis for any Technical Specification will not be reduced because the installation of this outage trailer utility tie-in will not affect any Technical Specification.

No unreviewed safety question is involved.



CHANGE TITLE

TER-4817, Rev. 0, LT-RC-459, Pressurizer Level Transmitter  
Sealed Reference Leg

CHANGE DESCRIPTION

This Technical Evaluation Report (TER) supports an Updated Final Safety Analysis Report (UFSAR) change to reflect the actual plant configuration of the Pressurizer Level gauges. All three level transmitters LT-RC-459, 460 and 461, have sealed reference legs.

Sometime around the second refueling outage the sealed reference leg for level transmitter LT-RC-459 was changed to an open reference leg (with Westinghouse concurrence) after finding its bellows damaged. The UFSAR was updated to reflect this change. During the 7th refueling the bellows for LT-RC-460 and 461 were found to be damaged and a request was made to replace them with open reference legs similar to LT-RC-459. Based upon Westinghouse letter DLW-89-536, which identified a concern related to Hydrogen dissolution in the open reference legs, the sealed reference legs were restored.

SAFETY EVALUATION SUMMARY

The dissolution of Hydrogen in the open reference legs was found to cause a 20% error in level readings, the sealed reference legs provide only a 2% error.

This change restores the pressurizer level to the original plant design and does not introduce any new failure modes. The most common failure modes is cracking of the bellows in the sealed leg. Since these are used for normal level control of the pressurizer and produce no safety-related signals (which are provided by pressure instruments) and since a failure in any one leaves two other level transmitters for redundancy, no safety significance is attributed to the failure of any one level transmitter.

This change to the UFSAR will reflect the current condition of the pressurizer level control transmitters, which is the original design of the system. The probability of failure is not increased.

Restoration of Level transmitters LT-RC-459, 460, and 461 to their original design (sealed reference leg) will reduce the error (20% to 2%) of the indicated level by eliminating Hydrogen dissolution concerns in the open reference leg.

This change has no effect on radiological assumptions and consequences for any design basis accidents.

This change to the UFSAR will document that the pressurizer level transmitters have been restored to their original plant design and therefore create no new types of accidents.

TER-4817, Pressurizer Level Transmitter Sealed Reference Leg (Continued)

This change does not introduce any new types of malfunctions because the pressurizer level transmitters have been restored to their original plant design.

No changes in the Pressurizer Level High Reactor trip setpoint are being made.

This change will have no impact on the basis for any Technical Specifications.

No unreviewed safety question is involved.

CHANGE TITLE

TER-6064, Rev. 0, Change the Normal System Arrangement for Valve 1FO-81 as shown on Drawing 8600-RM-53A to be Consistent with the Operating Manual.

CHANGE DESCRIPTION

The proposed change involves valve 1FO-81, which is used to isolate the cross-connect line between the fuel holding tank transfer pump (EE-P-4A & B) discharge piping and the holding tank fill line. The proposed change will revise Updated Final Safety Analysis Report (UFSAR) Figure 9.14-1 to show the valve (1FO-81) shut. This valve is normally shut to accommodate fuel oil transfer from the fuel holding tank to the fuel storage tanks, and fuel oil hold tank fill operations.

Operations personnel identified a discrepancy between the Operating Manual Chapter 36 Section 3 Valve List and UFSAR Figure 9.14-1. The valve list showed the valve as normally shut and the UFSAR Figure showed the valve as normally open. It should be noted that Design Change Package (DCP) 390 final As-Built drawing 8700-RM-53A-10B-6 and later revisions (thru RM-53A-19 revised October 1990) also show the valve as normally open.

The proposed change would resolve this discrepancy by revising the UFSAR Figure to show the valve shut.

This change involves piping associated with the emergency diesel generator fuel oil holding tank (EE-TK-6). This 7,000 gallon fuel tank is used for receiving new fuel oil, and as a holding reservoir while tests of new fuel oil are performed. After the fuel oil is tested and accepted, it can be transferred to the 20,000 gallon fuel oil storage tanks.

SAFETY EVALUATION SUMMARY

There are no operating or design parameters affected by this change. With valve 1FO-81 normally closed, the system will be aligned to allow fuel oil transfer from the fuel oil hold tank to the fuel oil storage tanks, and to allow hold tank fill operations.

There are no credible failure modes associated with the change. Valve 1FO-81 should be shut during hold tank fill operations to prevent untested oil from being inadvertently transferred to the fuel oil storage tanks. This valve should also be shut when transferring fuel oil from the hold tank to the storage tanks to prevent recirculation of the fuel oil back to the hold tank. Refer to UFSAR Figure 9.14-1, Fuel Oil System For Emergency Diesel Generators.

The change involves a valve in the Emergency Diesel Generator Fuel Oil System. However, this change does not affect operation of the Emergency Diesel Generator Fuel Oil System or any other safety systems or systems important to safety.

Beaver Valley Power Station Unit 1  
1990 Report of Facility Changes, Tests, and Experiments  
Page 69 of 69

TER-6064, Change the NSA for Valve 1FO-81 in UFSAR  
to be Consistent with the Operating Manual (Continued).

Technical Specifications require that the fuel storage tanks (EE-TK-1A & B) contain 17,500 gallons of fuel and that the level be verified periodically. Changing the alignment of valve 1FO-81 to normally shut will have no effect on the fuel storage tanks, or the capability of the fuel storage tanks and downstream components to provide the quantity of fuel oil required by Technical Specifications. Therefore, the change will have no effect on the ability of the system to perform its function or the probability of failure of the emergency diesel generator fuel oil system.

The performance of the emergency diesel generator fuel oil system will remain unchanged. Since the change will not affect the performance of the emergency diesel generators and their associated fuel oil systems, the change will have no impact on the assumptions and radiological consequences of design basis accidents.

There are no failure modes associated with the change. Since there are no failure modes associated with this change, the probability of occurrence of the design basis accidents identified will be unaffected.

Since no equipment described in the Technical Specifications or accident analysis are affected, no acceptance limit will be affected.

The change will have no effect on the operability or surveillance requirements for the emergency diesel generators or associated fuel oil systems, and thus will have no effect on the Technical Specification Basis.

No unreviewed safety question is involved.