

Beaver Valley Power Station Unit 1
Report of Facility Changes, Tests, and Experiments
January 23, 1995 - January 22, 1996

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CHANGE TITLE

DCP-675 Radiation Monitor Flush Line Modification

CHANGE DESCRIPTION

This modification installed permanent piping to replace hose connections and temporary hose used to flush various radiation monitor lines with primary grade water. Hose connections were retained for draining the lines. This change substantially reduced the potential for contamination of the operator with primary grade water which contains tritium.

Because the new configuration performs the same basic function as the previous arrangement and because applicable piping codes were applied, no unreviewed safety question was created.

CHANGE TITLE

DCP-819, Rev. 1 Type "C" Leak Test Connections Modifications

CHANGE DESCRIPTION

This DCP made various changes that reduce testing and preparation time during containment penetration testing. This reduction in man-hours results in reduction in personnel exposure. Changes included addition of permanently installed test connections, installation of permanent vent and drain connections, replacement of test plugs with a valve and cap on systems containing liquid, and sparing of two penetrations which are no longer used.

Because the new connections provide pressure boundaries which are as effective as the previous configuration and the NRC had previously approved sparing of the two penetrations by granting a license amendment, no unreviewed safety question was involved.

CHANGE TITLE

DCP-1230, Rev. 1 Reactor Coolant System Mid-Loop Level Indication

CHANGE DESCRIPTION

DCP-1230 replaced an existing temporary level indication system with a permanent system. This includes two permanently installed level transmitters on the "C" loop, a permanent ultrasonic level transmitter mounting strap on the "A" loop hot leg, and associated electronics and indicators. The ultrasonic sensor may be installed when needed to provide level indication at the RHR inlet.

Because no new connections to the Reactor Coolant System are being made and there are no new failure modes, this change did not involve an unreviewed safety question.

CHANGE TITLE

DCP-1910 Sample Taps at Turbine Plant Sample Panel

CHANGE DESCRIPTION

Sample connections were provided at the turbine plant sample panel to support use of corrosion products monitors. The new 1/4" taps were installed in existing lines.

No unreviewed safety question was involved because the system is not safety related and no new failure modes are introduced.

CHANGE TITLE

DCP-2070, Midland Water Supply - Connection to Site Domestic Water System

CHANGE DESCRIPTION

A water meter pit was installed in the Site Engineering Building parking lot, and the Borough of Midland water supply was connected to the "Site" Domestic Water System. The Borough of Midland supplies potable water to the site for drinking and sanitary purposes.

Because the Domestic Water System is non-safety related and does not interact with safety related systems, no unreviewed safety question was involved.

CHANGE TITLE

DCP-2074, Rev. 0 Rerouting of Auxiliary Feedwater Area Drain Tank Radiation Monitor Sample Line

CHANGE DESCRIPTION

This DCP rearranged Rad Monitor (RM-DA-100) so that it discharges liquid directly to the auxiliary feedwater area drain tank. Monitor RM-DA-100 previously discharged to the tank through a connection to the tank's vent line. This drew in air which pressurized the tank and impeded flow to the tank from floor drains.

The change did not involve an unreviewed safety question because it does not impact any safety systems.

CHANGE TITLE

DCP-2078, Rev. 1 River Water System Flushing Modification

CHANGE DESCRIPTION

This DCP added a 16" line and associated isolation valves to bypass river water flow around the recirculation spray coolers. This provided the ability to flush the stagnant river water supply lines for the coolers while eliminating the possibility of debris being carried into the coolers.

Because the line is normally isolated and because it was designed to the same code as other river water piping, no unreviewed safety question was involved.

CHANGE TITLE

DCP-2100 Reversal of DCP 1756

CHANGE DESCRIPTION

DCP 1756 removed check valve internals and changed valve lineups for river water supplies to the charging pumps. This was done to gain increased river water flow. Subsequent cleaning operations permitted DCP 2100 to restore the plant to the condition that existed prior to DCP 1756. This safety evaluation authorized UFSAR changes reflecting the restoration.

Because the change restored components to the prior configuration described in the UFSAR, no unreviewed safety question was involved.

CHANGE TITLE

DCP-2104, Rev. 1 Diesel Generator River Water Line Upgrade

CHANGE DESCRIPTION

Due to corrosion of the original 6" river water lines for the emergency diesel generators, these lines were replaced by pipe with better corrosion resistance properties. In addition to the change in material, the DCP also made changes to routing of the lines, location of valves, elimination of a branch line which provided the least desirable of several make-up water sources to the fuel pool, and elimination of the chemical addition portion of the diesel generator cooling system.

The new materials have improved properties, the relocated components have been adequately separated or protected, fuel pool makeup water is available from other sources, and the non-safety related chemical addition system has proven to be unnecessary; therefore, no unreviewed safety question was involved.

CHANGE TITLE

DCP-2106 Turbine Overspeed Protection System

CHANGE DESCRIPTION

This change increased reliability of the Turbine Overspeed Protection and Control System (OPC) by:

- adding a second input to the OPC and
- changing its output to "two out of two" logic,
- changing the electrical overspeed trip circuit to "one out of two" logic rather than "one out of one,"
- removing the OPC generator breaker open permissive,
- removing the OPC circuit defeat when the auxiliary speed channel is greater than 125% of rated speed,
- removing the defeat of the overspeed trip when the main speed channel does not equal the auxiliary speed channel, and by
- making modifications to improve the capability of the electro-hydraulic system to regain control of turbine speed following a loss of external load OPC actuation.

No unreviewed safety question was involved because the change improved reliability of the system and as a result should prevent some unnecessary reactor trips.

CHANGE TITLE

DCP-2122 Auxiliary Feedwater Chemical Addition Line Modifications

CHANGE DESCRIPTION

Auxiliary feedwater chemical addition lines which are used for wet lay-up of the steam generators were modified to provide positive isolation of the line by adding removable spool pieces. This prevents migration of corrosive chemicals into downstream carbon steel piping when the system is not in use.

Because the system function has not been changed and the system remains normally isolated during operation, the change did not involve an unreviewed safety question.

CHANGE TITLE

DCP-2128 Replacement of 4160V and 480V Emergency Bus Degraded Grid Undervoltage Relays

CHANGE DESCRIPTION

This DCP replaced 4160V and 480V emergency bus degraded grid undervoltage relays with relays which are more accurate. This replacement (along with the setpoint changes which it will allow) will reduce the likelihood of unnecessary emergency bus separation from the normal supply.

More precise relays allow setpoint changes which improve performance while continuing to protect against the same undervoltage limit as the original relays. Therefore, this change did not involve an unreviewed safety question.

CHANGE TITLE

DCP-2133 Heating Improvements for the Alternate Intake Structure

CHANGE DESCRIPTION

This change provided a permanent concrete pad for placement and anchoring of propane tanks as well as related piping, supports valves and regulators needed to connect the tanks to the heating system. Ducting and damper changes were also included in this DCP.

Because the auxiliary intake structure contains no safety related equipment and the proposed configuration cannot initiate any accidents and is not used to mitigate any design basis accidents, no unreviewed safety question was involved.

CHANGE TITLE

DCP-2160 Radiological Access Tracking System

CHANGE DESCRIPTION

This DCP replaced self-reading chamber type pocket dosimeters with alarming dosimeters for most monitoring situations. Unlike their predecessors, the new dosimeters possess both an accumulated dose alarm and a dose rate alarm. These can be set to customized values based on the Radiation Work Permit (RWP). Readers and data handling equipment were provided for processing data obtained from the dosimeters during RWP log-ins and log-outs.

The new dosimeters and data handling equipment do not interface with, alter, or interfere with any safety system. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

TER 6403 Replacement of Carbon Steel Globe Valve RW-303

CHANGE DESCRIPTION

This change replaced a carbon steel globe valve (RW-303) with a 3/4" stainless steel ball valve. The new valve will be less susceptible to corrosion and the ball valve design will reduce maintenance time during cleaning. This valve functions as a drain valve in the Turbine Plant River Water System.

Because the Turbine Plant River Water System is not safety related and the system performance is not changed by this TER, no unreviewed safety question was involved.

CHANGE TITLE

TER 7063, Rev. 1 Charging Pump Cubicle Ventilation Flow Change

CHANGE DESCRIPTION

This change allowed normal charging pump cubicle ventilation flow to be directed through the Supplementary Leak Collection and Release System (SLCRS) rather than the Auxiliary Building Ventilation System. This reduces differential pressures across various doors and also ensures adequate cooling of the cubicles in the event that auxiliary building ventilation is diverted to SLCRS. Unlike the previously existing design, radiation monitoring provided by SLCRS does not provide an automatic isolation function. Instead, a CIB signal causes SLCRS to divert to a filtered pathway.

Because SLCRS was designed to accommodate charging pump cubicle flow and because potential events resulting in an airborne release in the pump cubicles are bounded by existing accident analyses, no unreviewed safety question was involved.

CHANGE TITLE

TER 8837 Replacement of SMB-00 Motor Operators with SB-00 Motor Operators

CHANGE DESCRIPTION

This TER permitted the substitution of a different type of valve motor operator on various valves found in the Reactor Coolant System, Charging System and Safety Injection System. The new operator offers added protection for the valve by providing improved over-thrust protection in the closing direction.

The failure modes for these operators are the same as for the previous operators and the new operators have been determined to be equivalent to those being replaced. Thus, no unreviewed safety question was identified.

CHANGE TITLE

TER 8859 Replacement of SMB-3 Motor Operators with SB-3 Motor Operators

CHANGE DESCRIPTION

This TER permitted the substitution of a different type of valve motor operator on three valves found in the Safety Injection System. The new operator offers added protection for the valve by providing improved over-thrust protection in the closing direction. As part of this conversion, the valves' motor brakes were removed and limit switch brackets were changed to accommodate the new type of operator.

The failure modes for these operators are the same as for the previous operators and the new operators have been determined to be equivalent to those being replaced. Thus, no unreviewed safety question was identified.

CHANGE TITLE

TER 8860 Replacement of SMB-2 Motor Operators with SB-2 Motor Operators

CHANGE DESCRIPTION

This TER permitted the substitution of a different type of valve motor operator on a valve found in the Residual Heat Removal System. The new operator offers added protection for the valve by providing improved over-thrust protection in the closing direction.

The failure modes for these operators are the same as for the previous operators and the new operators have been determined to be equivalent to those being replaced. Thus, no unreviewed safety question was identified.

CHANGE TITLE

TER 9015 Replacement of Needle Valve with Globe Valve

CHANGE DESCRIPTION

This TER permitted the substitution of a 3/4" globe valve for the previous needle valve which was used as a temporary instrument connection point in the Reactor Coolant System. As a result of a leaking weld, the previous valve was discarded and temporarily replaced with a plug.

Because the replacement valve is of the same pressure class, material and seismic qualification, no unreviewed safety question was involved.

CHANGE TITLE

TER 9066 Addition of Pipe Cap on Primary Plant Demineralized Water Storage Tank Drain

CHANGE DESCRIPTION

This TER permitted the addition of a pipe cap on a drain line from the primary plant demineralized water storage tank. This serves as a barrier to potential leakage through the drain valve. In addition, this TER revised the drawings to include pipe class breaks at the tank which were previously not shown.

Because the addition of a pipe cap does not alter the function of the drain line, no unreviewed safety question was identified.

CHANGE TITLE

TER 9259 UFSAR Drawing Changes for the Supplementary Leak Collection and Release System

CHANGE DESCRIPTION

This TER evaluated various differences between plant drawings depicting the Supplementary Leak Collection and Release System. Differences were identified in such areas as normal positions of valves and dampers, depiction of components, and specification of administrative controls. Because one of these drawings is included in the UFSAR, a safety evaluation of items differing from the UFSAR was prepared.

Because the Supplementary Leak Collection and Release System, as depicted on the revised drawing, functions as intended and has no effect on the outcome of design basis accidents, no unreviewed safety question was involved.

CHANGE TITLE

TER 9267 Replacement of 3" Charging System Gate Valve

CHANGE DESCRIPTION

This TER authorized the replacement of a 3" gate valve (MOV-CH-289) with a valve of slightly different construction. The replacement valve was of the same size, material and stroke time, but does not have valve stem leak-off (VSLO) provisions.

Because the Charging System performance is unaffected by this change and the consequence of leakage without VSLO provisions is insignificant, no unreviewed safety question was involved.

CHANGE TITLE

**TER 9303 Turbine Plant Sample System and Station Compressed Air System
Configuration Inconsistencies**

CHANGE DESCRIPTION

This TER was initiated to evaluate inconsistencies between design documents and the actual plant configuration for the non-safety related Turbine Plant Sample System and Station Compressed Air System. To resolve some of these inconsistencies, drawings (including UFSAR figures) were revised. Inconsistencies included such topics as incorrect specification of line sizes, incorrect piping configuration, incorrect power source specification for a sample pump, and failure to reflect various minor field modifications.

Because no safety related systems or design basis accident analysis results are affected by these changes, no unreviewed safety question was involved.

CHANGE TITLE

TER 9316 Rerouting of Radiation Monitor Discharge Line

CHANGE DESCRIPTION

This change rerouted the effluent from the steam generator blowdown sample radiation monitor so that it can be discharged either to the Liquid Waste System (previously the only available option) or to the River Water System. This added flexibility reduces the amount of unnecessary water being processed by the Liquid Waste System.

Because no safety related systems or design basis accidents are affected by these changes, no unreviewed safety question was involved.

CHANGE TITLE

TER 9324 Removal of Valve Stem Leak-off Lines for Safety Injection Valves

CHANGE DESCRIPTION

This TER authorized the removal of valve stem leak-off provisions from three safety injection accumulator discharge isolation valves. This change was made to accommodate the use of a more preferable valve yoke and because modern packing materials do not require this provision. The existing lines were cut and capped.

Because the Safety Injection System performance is unaffected by this change and the consequence of leakage without VSLO provisions is insignificant, no unreviewed safety question was involved.

CHANGE TITLE

TER 9361 Revision to UFSAR Seismic Classification Terminology

CHANGE DESCRIPTION

Because the UFSAR used the terms "Seismic Category" and "Seismic Class," this TER was prepared to avoid confusion in the use of these terms. The use of "Seismic Class" terminology was replaced with "Seismic Category" terminology.

The change had no effect on the scope of structures, systems, or components requiring seismic qualification and had no effect on the manner in which qualification is demonstrated. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

TER 9370 Change of Normal Position for Containment Leakage Monitoring System Open Pressure Line Isolation Valves

CHANGE DESCRIPTION

Open pressure line isolation valves for the Containment Leakage Monitoring System were previously maintained normally open and have been changed to normally closed. The flow path through them, which provides containment pressure to a manometer, is no longer in use.

The change does not alter the function or position of the containment isolation valves for the affected lines and Leakage Monitoring System instruments that monitor the containment are not affected by this change. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

TER 9385 Removal of Administrative Control for Boron Injection System Valve

CHANGE DESCRIPTION

Administrative controls ensuring that the boron injection surge tank outlet isolation valve is open have been removed by this TER. This flow path is used for recirculation of the tank.

Because recirculation flow is verified every 24 hours per Technical Specifications the correct position of this valve is certain and no unreviewed safety question is involved.

CHANGE TITLE

TER 9393 Installation of Test Connection on Pressurizer Vent Line

CHANGE DESCRIPTION

This change involved inserting a pipe tee and capped nipple into a 1" pressurizer vapor-space vent line. This connection was used to leak test two solenoid operated valves connected to the line.

No unreviewed safety question was involved because the new arrangement meets the same design requirements as the remainder of the system.

CHANGE TITLE

TER 9403 Increase in Ventilation Flow to Charging Pump Cubicle

CHANGE DESCRIPTION

This TER increased the minimum specified ventilation flow to the "B" charging pump cubicle. This change was necessary to accommodate an increase in pump horsepower resulting from replacement of the pump rotor.

Because ventilation provided to the cubicle originally exceeded the newly specified minimum and this change affects documentation only, no unreviewed safety question was involved.

CHANGE TITLE

TER 9414 Removal of Auxiliary Feedwater Pump Oil Cooler Minimum Flow Specification from UFSAR

CHANGE DESCRIPTION

The UFSAR describes the auxiliary feedwater pumps and their associated oil coolers. It also specifies the minimum short-term recirculation flow which was believed necessary to provide adequate cooling flow to the oil coolers. Because these flows were found to be excessive, this safety evaluation was performed to allow removal of the short-term recirculation flow specifications from the UFSAR.

For accidents requiring auxiliary feedwater, the pumps deliver more than enough flow to the steam generators to satisfy minimum flow requirements. Flow alarms allow adequate time to correct low flow conditions. Therefore, reliance on oil cooler flow in the short-term is not necessary and no unreviewed safety question was involved.

CHANGE TITLE

**TER 9421 Revised UFSAR Figure Specifying Quality Classification of Quench
Spray Chemical Addition Tank and Fill Line**

CHANGE DESCRIPTION

The UFSAR figure depicting the Containment Depressurization System was revised to show the location of the quality class break where the fill line meets the chemical addition tank. The class break was previously not shown in the figure.

Because this new detail added to the figure did not affect the QA Category of any component, no unreviewed safety question was involved.

CHANGE TITLE

TER 9548 Excess Letdown Cooler Drain Line

CHANGE DESCRIPTION

This TER authorized revision of a UFSAR figure to include a drain line and 3/4" valve in the Reactor Plant Component Cooling Water System supply to the excess letdown cooler.

Because operating and design parameters for the Reactor Plant Component Cooling Water System have not changed, no unreviewed safety question was involved.

CHANGE TITLE

TER 9591 Removal of Containment Isolation Valves in Containment Leakage Monitoring System

CHANGE DESCRIPTION

Four open pressure line isolation valves for the Containment Leakage Monitoring System were previously maintained normally closed because the flow path through them (which provided containment pressure to a manometer) was no longer in use. These four open pressure lines which originate in containment lead to their respective isolation valves outside containment and then to a common line with a pair of containment isolation valves in series. The pair of containment isolation valves has been eliminated by cutting and capping the four lines between their respective isolation valves and the point where they join into a common line and by removing various unneeded equipment. The four open pressure line isolation valves have been sealed shut.

Because the change does not alter the performance of Leakage Monitoring System instruments that monitor the containment and a tested double barrier (sealed shut isolation valve and cap) is provided for each of the four lines, no unreviewed safety question was involved.

CHANGE TITLE

TER 9673 Retirement of Control Room Area Radiation Monitor

CHANGE DESCRIPTION

This TER retires one control room area radiation monitor. This monitor provided no control or actuation functions.

Four other radiation monitors provide adequate warning to personnel. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

**TER 9736 Change to Normal Position of Containment Instrument Air Receiver
Blowdown Isolation Valves**

CHANGE DESCRIPTION

Moisture in the containment instrument air receivers may be removed either by a mechanical condensate trap or by automatic solenoid blowdown valves. Due to poor reliability of the solenoid blowdown valves, the normal position of their respective isolation valves has been changed to closed. Condensate will be removed by the mechanical drain traps.

Because condensate may be removed using other existing equipment provided for this purpose, no unreviewed safety question was involved.

CHANGE TITLE

**TER 9738 Retirement of Containment Instrument Air Receiver Solenoid
Blowdown Valves**

CHANGE DESCRIPTION

Moisture in the containment instrument air receivers may be removed either by a mechanical condensate trap or by automatic solenoid blowdown valves. Due to poor reliability, the solenoid blowdown valves have been retired. Condensate will be removed by the mechanical drain traps.

Because condensate may be removed using other existing equipment provided for this purpose, no unreviewed safety question was involved.

CHANGE TITLE

**TER 9775 Temporary Modification 1-95-09, Removal of Feedwater
Recirculation Line Drain Valves**

CHANGE DESCRIPTION

Due to potential for vibration induced failure, a pair of series isolation valves which serve as a low point drain on the feedwater recirculation line were eliminated. The 3/4" drain pipe stub was capped. A safety evaluation was first prepared to support a temporary modification. A subsequent safety evaluation was prepared to support a TER treating the modification as permanent.

Because this change has no effect on system performance and other drains are available at the same elevation, no unreviewed safety question was involved.

CHANGE TITLE

**TER 9816 Supplementary Leak Collection, Radiation Monitoring, and Control
Room Ventilation Systems Drawing Revisions**

CHANGE DESCRIPTION

Various changes were made to drawings for the Supplementary Leak Collection and Release System, Radiation Monitoring System, and Control Room Ventilation System. These changes were made to provide consistency between several types of drawings maintained for these systems. Types of changes include changes to normal valve or damper positions, adding or changing identification numbers to some components, adding components, changing component types (valve type, for example), changing notes, and other miscellaneous changes. Some of these were also reflected in UFSAR figure revisions.

This TER authorized changes to plant documentation but no physical plant changes were authorized. Based on this it was determined that no unreviewed safety question was involved.

CHANGE TITLE

TER 9908 Reachrod Installation for Circulating Water System Valve

CHANGE DESCRIPTION

Valve CW-59 is located in a Circulating Water System drain pit and discharges water to the river during draining of the circulating water lines into the pit. This TER permitted replacement of the original handwheel operator with a reachrod operator to enable operation from outside the pit.

Because the function or use of the valve is unchanged, no unreviewed safety question was involved.

CHANGE TITLE

TER 10240, DCP 797 Relocation of Load Shedding Controller for Nonsafety Diesel Generator

CHANGE DESCRIPTION

This safety evaluation was performed to allow revision of the UFSAR to reflect relocation of the programmable load shedding logic controller for the diesel generator which supplies the ERF substation. The relocation was made to ensure that spurious breaker actuations do not occur as a result of an Appendix R event.

No unreviewed safety question was involved because there are no design basis accidents affected by this change and the change introduces no new failure modes.

CHANGE TITLE

Revised Minimum Flow for Diesel Generator Coolers

CHANGE DESCRIPTION

Due to replacement of river water supply piping for the emergency diesel generators, it was possible to specify a greater minimum required flow to the diesel coolers so that fouling limits may be raised and river water pump minimum operating point requirements may be decreased.

Because the river water system continues to achieve its safety function with these new limits and the plant is not being physically changed, no unreviewed safety question was involved.

CHANGE TITLE

Removal of Shippingport Atomic Power Station 138KV Tap From Switchyard

CHANGE DESCRIPTION

Changes were made in the switchyard 138KV bus tie protection to accommodate decommissioning of the Shippingport Atomic Power Station (SAPS). Various SAPS inputs to protection and breaker trip signals to SAPS have been removed. Some components have been replaced and relocated.

Because appropriate redundancy is maintained and performance of the switchyard is not adversely affected, no unreviewed safety question was involved.

CHANGE TITLE

Change to Administrative Controls for Charging Pump Cooler River Water Outlet Isolation Valves

CHANGE DESCRIPTION

Because the charging pump cooler river water outlet isolation valves are maintained in a throttled position to maintain adequate minimum flow without exceeding the maximum specified for the coolers, it was decided to apply administrative controls to ensure correct valve position.

Because the change was intended to ensure that an established valve position is maintained, no unreviewed safety question was involved.

CHANGE TITLE

Change to Normal Valve Positions and Administrative Controls for Steam Generator Drain Tanks Bypass

CHANGE DESCRIPTION

The normal valve position for the steam generator drain tanks bypass to liquid waste isolation valve was changed from locked closed to open. This valve is located in a confined space and this change makes the procedure for alignment more efficient and more consistent with ALARA principles.

Because isolation valves downstream of the affected valve are normally closed to prevent flow from the drain tanks to the Liquid Waste System, no unreviewed safety question was involved.

CHANGE TITLE

Change to Normal Valve Positions to Bypass Liquid Waste Prefilter

CHANGE DESCRIPTION

The normal valve positions for the Liquid Waste System were changed to bypass the prefilter for a liquid waste demineralizer. Backwashing the prefilter generates an undesirable amount of liquid waste. Experience has shown that use of the prefilter is not necessary.

Because experience has shown that the prefilter does not make a significant contribution to the performance of the Liquid Waste System, no unreviewed safety question was involved.

CHANGE TITLE

Change to Normal Valve Position for Reactor Plant Component Cooling Water Chemical Addition Tank Inlet Isolation Valve

CHANGE DESCRIPTION

The reactor plant component cooling water chemical addition tank inlet isolation valve is now maintained normally open. This allows continuous flow through the tank to aid in mixing and for oxygen control.

Because continuous flow through the tank has no potential effects beyond those already analyzed, no unreviewed safety question was involved.

CHANGE TITLE

Removal of Component Cooling Water to Fuel Pool Heat Exchanger Return Valve Position Indication from UFSAR

CHANGE DESCRIPTION

The UFSAR was changed to remove reference to the return valve for component cooling water serving the fuel pool heat exchanger. Loss of heat removal is otherwise adequately detected by several loss of flow alarms and temperature alarms.

There are no safety related systems or design basis accidents affected by this change and the change introduces no new failure modes. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

Removal of Dissolved Oxygen Content Specification for Primary Water Storage Tanks

CHANGE DESCRIPTION

The UFSAR was revised to eliminate the dissolved oxygen content specification for water being delivered to the primary water storage tanks. This avoided the need to repair or replace the primary grade water deaerator. EPRI information indicates that deaeration of primary grade makeup has indiscernible benefits.

Because no safety systems are modified and the performance of safety systems is not affected, no unreviewed safety question was involved.

CHANGE TITLE

Change in Administrative Controls for Charging Pump Minimum-Flow Arrangement

CHANGE DESCRIPTION

This change permitted removal of power from valve MOV-1CH-373 to ensure that spurious closure is not possible. The valve provides a minimum flow path for the charging pumps under some plant conditions.

Because the change provided further assurance that the system will function as intended, no unreviewed safety question was involved.

CHANGE TITLE

Cooling Tower Pumphouse Ventilation Temporary Modification

CHANGE DESCRIPTION

Due to failure of the recirculation damper for the cooling tower pumphouse ventilation, this temporary modification was implemented to stop recirculation flow. This change ensured sufficient flow of outside air until permanent repairs could be made.

This change, which was implemented only during warm weather, kept the ventilation system in its normal summer operating condition. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

Temporary Leak Repair of Steam Generator Manway

CHANGE DESCRIPTION

This temporary modification allowed a secondary steam generator manway leak to be repaired by wire wrapping and injection with sealant. The safety evaluation authorized this repair to remain in place until the next plant outage when permanent repairs were made.

Because the temporary repair did not change the system failure modes and the system design functions were maintained, no unreviewed safety question was involved.

CHANGE TITLE

Temporary Operating Procedure to Flush River Water Supply Lines for Control Room Air Conditioning

CHANGE DESCRIPTION

This safety evaluation was prepared to allow flushing of river water supply lines to the backup cooling coils in the Control Room Air Conditioning System. This procedure required the temporary attachment of a booster pump to the coils being flushed.

Because appropriate safety precautions were to be exercised to prevent overpressurization, no unreviewed safety question was involved.

CHANGE TITLE

Freeze Seal in Reactor Coolant Pump Seal Bypass Line

CHANGE DESCRIPTION

It was determined that a freeze seal would be used as a clearance point for repairing piping on the number 1 seal bypass line for a reactor coolant pump. This was proposed to accommodate work on a degraded downstream weld while this portion of the system is not in use.

Contingency plans were made to mitigate a potential leak resulting from seal failure and any potential leakage was bounded by existing LOCA analyses. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

Temporary Operating Procedure to Troubleshoot Flow Problems in Control Room Air Conditioning

CHANGE DESCRIPTION

This safety evaluation was prepared to allow introduction of pressurized nitrogen in the river water supply lines downstream of the backup cooling coils in the Control Room Air Conditioning System. This was intended to agitate possible piping restrictions downstream of the coils and was to be performed while river water was flowing through the system.

Downstream piping was found to be larger than the 3" piping where the restriction was believed to be. The only valve between the suspected blockage and the discharge to the cooling tower basin was a 6" locked open butterfly valve. Because the possibility of dislodged material blocking discharge flow from other components further downstream was remote and flow to important components downstream was to be monitored during the procedure, no unreviewed safety question was involved.

CHANGE TITLE

Temporary Modification to Isolation Valve in Deluge System

CHANGE DESCRIPTION

This modification allowed installation of a clamp on the valve stem of the deluge system main isolation valve serving the Turbine Building Basement. A limit switch and its associated alarm were removed to accommodate the clamp. This temporary measure was needed to maintain the packing pressure boundary until permanent repair parts became available.

The clamp disabled the valve in its normal (open) position, but other valves were available to isolate the system if necessary. The system remained operable and the clamp arrangement was designed to withstand system pressure. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

Operation of Uncoupled Cooling Tower Pump Motor for Testing

CHANGE DESCRIPTION

A temporary operating procedure was prepared to operate a cooling tower pump motor while it was uncoupled from the pump. This operation involved the bypassing of various controls and interlocks and was to be performed for post-maintenance test purposes.

Because the motor protection relays remained operable and the pump was uncoupled, associated systems were not affected by the procedure and no unreviewed safety question was involved.

CHANGE TITLE

Temporary Modification to 48V DC ERF Bus Control Power

CHANGE DESCRIPTION

This proposed temporary modification allowed the battery charger to supply 48V DC control power for ERF 4160V and 480V buses while batteries were being replaced. This configuration was planned to be in effect for approximately eight hours during which battery backup power would not be available.

Provisions were made to manually trip appropriate breakers if a failure of the charger occurred. In addition, procedures were available which addressed ERF unavailability. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

Condensate Cleanup by High Capacity Blowdown System

CHANGE DESCRIPTION

This safety evaluation was performed to allow a procedure change for processing condensate by the Liquid Waste System using an existing connection. In addition, it allowed condensate to be cleaned up by the high capacity blowdown system which returns effluent to the condenser. This procedure requires manual throttling of a valve to avoid exceeding the design pressure of piping which connects the systems.

In accordance with this safety evaluation, all systems are to be operated as designed and this procedure is only to be used when 10CFR20 limits cannot be exceeded. Failures in the Condensate System, Liquid Waste System or Blowdown System cannot initiate any design basis accidents and are bounded by accident analyses for those systems. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

Temporary Heater for Refueling Water Storage Tank Pit

CHANGE DESCRIPTION

This change placed a temporary area heater in the refueling water storage tank pit to avert the possibility of auxiliary feedwater line freezing.

Because this modification does not affect design basis accidents and cannot create new accidents, no unreviewed safety question was involved.

CHANGE TITLE

Temporary Heat Trace for Chemical Waste Sump Discharge Line

CHANGE DESCRIPTION

In order to prevent freezing, temporary heat trace was installed on a portion of the Water Treatment System chemical waste sump discharge line.

Because nonsafety related power was used and the Water Treatment System is not needed for safe operation of the plant, no unreviewed safety question was involved.

CHANGE TITLE

Replacement of Bulk Hydrogen Storage System Valve with a Plug

CHANGE DESCRIPTION

This safety evaluation permitted the substitution of a threaded plug for a threaded valve in the Bulk Hydrogen Storage System. The valve was cracked and a replacement was not readily available. As a result, a pressure indicator was removed from service.

Because the plug is no more likely to fail than the valve was, and this change does not affect system performance, no unreviewed safety question was involved.

CHANGE TITLE

Temporary Operating Procedure to Discharge Boric Acid Hold Tank

CHANGE DESCRIPTION

A temporary operating procedure was developed to control discharge of the boric acid hold tank to the river via temporary hose connection to the liquid waste discharge header. The tank contained four weight percent boric acid solution, a silica contaminant and other radioactive isotopes. The contaminant could not be removed by normal processing.

The temporary hose is sufficiently rated for pressure, possible ruptures are no more consequential than already analyzed in the UFSAR, and the tank will be sampled and analyzed in accordance with a radioactive waste discharge authorization prior to discharge. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

Mechanical Blocking of Power Operated Relief Valves

CHANGE DESCRIPTION

This safety evaluation allowed two of three power operated relief valves to be mechanically blocked open by clamping collars to the operators. This action was necessary to ensure that adequate relief capacity was available for the Reactor Coolant System to avoid overpressurization below the Technical Specification temperature limit.

Because the attachment of collars was used to satisfy a Technical Specification requirement, no unreviewed safety question was involved.

CHANGE TITLE

Core Physics Monitoring During Refueling

CHANGE DESCRIPTION

Reactor Surveillance Procedure 1/2RST-49.01, "Core Physics Monitoring During Refueling," is performed to monitor the source range detectors (i.e., reactivity of the reactor core) during reload activities. This procedure was revised to allow the high flux at shutdown alarm and containment evacuation alarm for both source range channels to be blocked during the insertion of the first two fuel assemblies during reload (i.e., the source bearing assemblies). This revision was necessary to prevent the alarms from continuously sounding in the containment during insertion of the source bearing assemblies.

Because this change eliminates a nuisance alarm and the source range count rate is being monitored to prevent inadvertent criticality, no unreviewed safety question was involved.

CHANGE TITLE

Temporary Modification to Cooling Tower Outflow Screen Frames

CHANGE DESCRIPTION

This change allowed steel channel to be welded to the deteriorated frames for the cooling tower screens. This was intended to provide reinforcement until permanent repairs could be implemented.

This proposed change only slightly increased the probability of an analyzed event. However, the potential impact of this modification has not modified the plant response previously predicted for this event. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

Temporary Modification to Investigate Condenser Hotwell Sample Pump Priming Problems

CHANGE DESCRIPTION

This change included replacement of a discharge check valve for the condenser hotwell sample pump with an instrument isolation valve, addition of a pump recirculation line, and replacement of a pressure indicator with a compound gauge capable of reading both vacuum and pressure. These temporary changes were intended to aid in identifying a solution to difficulties in priming the pump during condenser operation.

No unreviewed safety question was involved because the materials and installation for the temporary configuration were the same as the original equipment and the system is not required to function during an emergency.

CHANGE TITLE

Installation of Van Stone Liners in River Water Lines

CHANGE DESCRIPTION

This safety evaluation was prepared to allow replacement of liners in two river water lines and the addition of a liner in a third line. These Inconel liners were to be located in 18 inch piping adjacent to butterfly valves and held in place by the pipe flange. They are intended to mitigate erosion of the pipe caused by throttling of the valves.

The possibility of a liner becoming dislodged and causing damage or flow disturbances was found to be of no significant consequence. Further, this modification has no effect on system performance. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

Operation of Uncoupled Feedwater Pump Motor for Testing

CHANGE DESCRIPTION

A temporary operating procedure was prepared to operate a feedwater pump motor while it was uncoupled from the pump. This operation involved the bypassing of various controls and interlocks and was to be performed for post-maintenance test purposes.

Because the motor protection relays remained operable and the pump was uncoupled, associated systems were not affected by the procedure and no unreviewed safety question was involved.

CHANGE TITLE

Temporary Absence of MOV Torque Switch Limiter Plates

CHANGE DESCRIPTION

This safety evaluation was prepared to permit the temporary absence of torque switch limiter plates on eight Reactor Coolant System and Safety Injection System valves. These valves included the loop isolation valves and the safety injection accumulator test line isolation valves. The limiter plate limits valve actuator output by limiting torque switch travel in the event that torque switch adjusting screws do not remain in their intended position.

Because the plates are not needed to ensure the correct torque setting and these valves perform no safety function, no unreviewed safety question was involved.

CHANGE TITLE

Recirculation Spray Heat Exchangers Wet Layup Procedure

CHANGE DESCRIPTION

This procedure was prepared as guidance for placing the recirculation spray heat exchangers into a chemical wet layup condition. It provided for temporary connection of equipment used for injection of chemicals and for monitoring or sampling of the layup fluid.

Only one of four recirculation spray heat exchangers will be placed in an inoperable condition during performance of this procedure. In addition, the potential impact of ruptures of temporary connections with respect to flooding and reduction of available river water flow were evaluated. Because these conditions were adequately mitigated by plant design and operating precautions, no unreviewed safety question was involved.

CHANGE TITLE

Temporary Installation of Strainers for Circulating Water System Air Release Valves

CHANGE DESCRIPTION

The Circulating Water System uses air release valves to purge accumulated air from the system. Because these valves sometimes fail to seat when all air has been expelled, flooding of the pit which houses them has occurred. This proposed modification was to allow installation of strainers upstream of these valves to remove contaminants which were suspected of interfering with proper valve operation. Clear plastic tubing was also installed on the discharge of the valves so that they could be observed for discharge of water at a more convenient location.

Because this change introduced no new failure modes and had no effect on analyzed accidents, no unreviewed safety question was involved.

CHANGE TITLE

ODCM Change to Allow Use of Alternate Instruments for Verifying Gaseous Effluent Flow

CHANGE DESCRIPTION

This change to the ODCM permitted the use of [RM-CON-1] to be used as an alternate means of obtaining flow readings from three gaseous effluent pathways which are typically monitored by flow recorders. The alternate device receives flow signals from the same transmitters as the flow recorders and will be subject to the same surveillance requirements. This was intended to permit flexibility in maintenance of the flow recorders.

No unreviewed safety question was involved because the change involved only the choice of a source for obtaining flow data for effluent paths and performance of systems was not affected.

CHANGE TITLE

ODCM Change to Turbine Building Sump Sampling Requirements

CHANGE DESCRIPTION

This change proposed that turbine building sump sampling should begin when primary to secondary leakage exceeds a specified rate. At the time this change was proposed, the initiation of sampling had been based upon the concentration of beta and gamma emitters found in the secondary coolant. The concentration based criterion was determined to be inappropriate for use as an indication of primary to secondary leakage considering ODCM limits for discharge from the sumps.

The proposed sampling requirements did not alter the assumptions or radiological consequences of analyzed accidents. Applicable effluent concentration limits and effluent dose limits would continue to be maintained using the new criterion. Therefore, no unreviewed safety question was involved.

CHANGE TITLE

Change to Normal Valve Position of Boron Recovery System Test Tank Inlet Isolation Valve

CHANGE DESCRIPTION

This safety evaluation was prepared to allow revision of the UFSAR to show the normal position of the Boron Recovery System test tank inlet isolation valve as closed rather than open. The valve serves as isolation for the flow path of liquid from BVPS-2. System design allows for processing of BVPS-2 liquid at BVPS-1, but this path is normally not used.

Because this particular line was not used, no change in system performance would result from the proposed change and no unreviewed safety question was involved.

CHANGE TITLE

Change to Procedure for Connecting Monitoring Devices to Operating Plant Equipment

CHANGE DESCRIPTION

This safety evaluation permitted revision of a corrective maintenance procedure which is used when temporarily connecting monitoring devices to operating plant equipment. The change extended the allowed period of time that the device may remain installed from one week to two weeks. It also improved the loading analysis provision of the procedure.

The procedure required that an evaluation which includes a loading analysis must be performed for each point to be monitored. This ensured that safety system performance would not be degraded. Therefore, no unreviewed question was involved in making this procedure change.