

Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385



JUN 26 2002

Docket Nos. 50-336
50-423
B18690

RE: 10 CFR 50.59(d)(2)

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

Millstone Nuclear Power Station, Unit Nos. 2 and 3
10 CFR 50.59 and Commitment Change Report for 2001

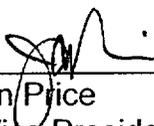
Pursuant to the provisions of 10 CFR 50.59(d)(2), the reports for Millstone Nuclear Power Station, Unit Nos. 2 and 3, are submitted in Enclosures 1 and 2 for changes made to the plant over the period January 1, 2001, to December 31, 2001. Enclosure 3 of this submittal is the 2001 Commitment Change Report for both Unit Nos. 2 and 3. The annual Commitment Change Report is being submitted consistent with the Millstone Nuclear Power Station's Regulatory Commitment Management Program.

There are no regulatory commitments contained within this submittal.

Should you have any questions regarding these reports, please contact Mr. Paul R. Willoughby at (860) 447-1791, extension 3655.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.



J. Alan Price
Site Vice President - Millstone

cc: See next page

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Enclosures (3)

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Docket Nos. 50-336
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Enclosure 1

Millstone Nuclear Power Station, Unit No. 2

10 CFR 50.59 Report for 2001

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S2-EV-99-0154
MMOD M2-96566
FSARCR 00-MP2-1

Rev. 0
Rev. 0

Replace Aerated Waste Discharge Header Sections

Description

This modification replaced sections of the Aerated Liquid Waste Discharge Header. The safety function of the Aerated Liquid Radwaste System and other radioactive waste systems is to minimize the radiological consequences of plant operation on public health and safety.

The original design consisted of ASTM A312 Type 304 Stainless Steel, designed, constructed and tested to the requirements of ANSI B31.7/ASME III Class 3. The modification changed the piping material to ASTM A312 Type 316L stainless steel. Replacement piping and piping components within the Radwaste Quality Assurance (RWQA) portion of the system will be designed, constructed and tested to the requirements of ANSI B31.1 with augmented requirements per Regulatory Guide (RG) 1.143.

Reason for Change

The modification was implemented to improve the corrosion resistance attributes of the aerated waste discharge header piping. The replacement material, 316L stainless steel, is more corrosion resistant than the original 304 stainless steel material. The change in piping codes is being implemented to facilitate replacement and to maximize the cost benefit potential of using ANSI B31.1 in lieu of the originally specified ANSI B31.7/ASME III codes. Although RG 1.143 and the Standard Review plan 11.2 are not license commitments for Millstone Unit No. 2, its use is commensurate with industry standards and NRC acceptance based on the Standard Review Plan.

50.59 Summary

The probability of occurrence of a malfunction of equipment important to safety is not increased since the changes provide a high degree of assurance that the piping will not fail. The probability of occurrence of an accident is not increased since the system is not an accident initiator. The consequences of malfunctions of equipment important to safety and the consequences of accidents are not increased since the modification does not increase the amount or concentration of radioactivity, nor does the activity have an adverse impact on fission product barriers. Since the modification does not introduce new failure modes, the activity does not create new malfunctions or the possibility of different accidents other than previously evaluated in the Safety Analysis Report.

S2-EV-00-0002
DCR M2-00007

Rev. 1
Rev. 1

Millstone Unit No. 2 Spent Fuel Pool Cooling Analysis for 2R13 and 2C14

Description

This design change presents a revised analysis for the Millstone Unit No. 2 spent fuel pool cooling (SFPC) system for the refueling outage at the end of operating cycle 13 (2R13), and for operating cycle 14 (2C14). This change presents the decay heat loads imposed on the spent fuel pool (SFP) by refueling operations, as well as normal operation or emergency conditions, and presents the thermal-hydraulic analysis of the SFP under a variety of conditions employing the SFPC system, the shutdown cooling system (SDC) or combinations of the two.

There are no physical plant modifications associated with this change.

Reason for Change

Plant condition reports and Graded System Reviews identified that portions of the spent fuel pool cooling analysis were inconsistent with existing operating procedures. Due to these inconsistencies, new calculations were developed to correct the identified problems.

50.59 Summary

There are no physical plant changes associated with this design change; the activity serves to correct inconsistencies in the previous design basis. There is no increase in the probability or consequences of existing malfunctions or accidents, nor is there any possibility of creating a new malfunction/accident. The margin of safety is not reduced for End of Cycle 13 refueling and Cycle 14 operation.

S2-EV-00-0012
DCR M2-00001

Rev. 0
Rev. 0

Millstone Unit No. 2 Separation From Unit No. 1 for the Domestic Water Demineralized Water Systems

Description

The Unit No. 1 Demineralized Water System supply to Unit No. 2 Demineralized Water System was cut and capped, and the supply water for the Unit No. 2 Demineralized Water System was rerouted such that the supply piping no longer runs through Unit No. 1. The supply piping to the Unit No. 1 Demineralized Water System (in the Unit No. 2 Turbine Building) has been included as part of the Unit No. 2 Demineralized Water System. The supply piping to the Makeup Water Vacuum Deaerator Tank was rerouted such that the discharge from the Water Vendor Building will be the supply to the tank, and all existing Unit No. 1 demineralized water piping (with the exception of the Chemistry Lab) was permanently isolated from Unit No. 2 (a blind flange and a valve was provided in the Chemistry Lab supply header for future Unit No. 1 use).

The Unit Nos. 1 and 2 Domestic Water Systems were also separated by this modification to support Unit No. 1 decommissioning.

Reason for Change

The Demineralized Water System for Unit Nos. 1 and 2 were cross-tied such that water was supplied to both units from the water treatment facility. This modification eliminates the cross-ties to support Unit No. 1 decommissioning.

50.59 Summary

This modification separates the Unit Nos. 1 and 2 Demineralized and Domestic Water Systems in support of Unit No. 1 decommissioning. This modification does not affect any Design Basis Accidents or their consequences, nor will it increase the probability of occurrence or the consequences of a malfunction of equipment important to safety and it will not create the possibility of a malfunction of a different type. This change will not increase the probability of occurrence or the consequences of an accident previously described in the Safety Analysis Report, nor will it create the possibility of an accident of a different type.

S2-EV-00-0013
M2-00002

Rev. 0
Rev. 0

Millstone Unit No. 2 Separation From Unit No. 1 for the Chemistry Laboratory Drain Piping System

Description

The Chemistry Laboratory drain piping was rerouted to the Unit No. 2 Auxiliary Building Drain System. Commencing in the Chemistry Laboratory, the piping runs through the Chemistry Laboratory floor into and across the Unit No. 1 Radwaste Building mezzanine area. All seven Chemistry Laboratory drains in the mezzanine area tie into a 3" common header which runs north through the Unit No. 2 Service Water Piping Tunnel into the Unit No. 2 Auxiliary Building. The piping then runs in the overhead of the Unit No. 2 Auxiliary Building Drain System. Ultimately, the waste is processed by the Unit No. 2 Aerated Liquid Waste System.

Reason for Change

Millstone Unit Nos. 1 and 2 shared the Chemistry Laboratory facility, with the laboratory drains directed to and processed by Unit No. 1. To support the Unit No. 1 Decommissioning Project, the laboratory drains were rerouted to be processed by the Unit No. 2 Aerated Liquid Radwaste System.

50.59 Summary

This modification does not affect any Design Basis Accidents or their consequences. It does not contribute to any new accidents beyond those already analyzed. The rerouting of the Chemistry Laboratory piping does not increase the probability of occurrence or the consequences of a malfunction of equipment important to safety nor will it create the possibility of a malfunction of a different type.

S2-EV-00-0037
M2-99028
DM2-02-0544-99

Rev. 0
Rev. 0

Millstone Unit No. 2 Fish Return Pipe

Description

This modification installed a fish return piping system to the existing Millstone Unit No. 2 Intake via a modification to the screenwash trough on the south side of the intake. The fiberglass fish return piping directs fish and debris removed from the traveling screens away from the existing trash basket and discharges the fish and debris to the Long Island Sound near the Millstone Unit No. 1 Intake Structure. The modification also filled the service water strainer backwash trough and trash rack trough, outside of the intake, with concrete. The strainer backwash was permanently rerouted and hard piped to a different path, and the trash rakes were removed from the intake. Therefore, neither trough can be used.

Reason for Change

This modification supports the company's environmental policy. The fish return piping will save "hardy" demersal fishes and crustaceans that can survive impingement and the return trip to the sound. The filling of troughs enhances station security and eliminates the need for maintenance activities on the trough covers.

50.59 Summary

This safety evaluation has been generated because the implementation of the modification has an impact to Safety Analysis Report (SAR) Figures 01.02-17 and 5.6-1. DCN DM2-02-0544-99 was generated as the vehicle that incorporated the safety evaluation into this modification. This safety evaluation enveloped all the changes documented within the Design Change Notices with this modification.

The only impact to the SAR was a change in the general arrangement of the intake structure drawing, SAR Figure 01.02-17, and SAR figure 5.6-1 in Change Number 58 of the Final Safety Analysis Report.

The screenwash system is non-quality assurance and non-safety related. It does not support equipment that is important to safety. It is not interfaced or interlocked with any safety related equipment. No function nor malfunction of this system could interrupt the function of safety-related equipment to do its job.

S2-EV-00-0059 Rev. 1
DM3-00-0452-00
M2-00010 Rev. 1
FSAR 01-MP3-3

Wide Range Gas Monitor (WRGM)

Description

This change removed the Millstone Unit No. 1 Main Stack gas normal and high range radiation monitor from the stack gas sample room (Building 126) in order to install a new Unit No. 2 WRGM (RM-8169), dedicated to support Unit No. 2. The existing Unit No. 3 Supplementary Leak Collection and Release System (SLCRS) radiation monitors were previously installed to meet the requirements of Regulatory Guide (RG) 1.97, Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants To Assess Plant and Environs Conditions During and Following an Accident," and are used to monitor effluents from Millstone Unit No. 3.

This modification extends the 16 inch diameter Enclosure Building Filtration System (EBFS) discharge line located in the Site Stack 14' and provides a sample point for the installation of an isokinetic probe that is associated with the Unit No. 2 WRGM. It facilitates the installation of the isokinetic sample probe, effluent flow meters, and sample tubing which was to be connected to the Unit No. 2 WRGM at a later time.

Reason for Change

The decommissioning of Unit No. 1 requires that Systems, Structures and Components (SSCs) associated with Unit No. 1 which support operation of Unit No. 2 and/or Unit No. 3 are separated. This change eliminates Unit Nos. 2 and 3's dependence upon the Unit No. 1 Main Stack gas high range radiation monitor by providing separate dedicated radiation monitors for both Unit Nos. 2 and 3. This allows Unit No. 1 to abandon or demolish Unit No. 1 SSCs without affecting the safe operation of either Unit Nos. 2 or 3.

50.59 Summary

This modification does not increase the consequences of a malfunction of equipment important to safety, does not increase the consequences of accidents, and does not result in a reduction in the margin of safety as defined in the Bases for the Technical Specification addressed by the changes.

S2-EV-00-0071

Rev. 0

M2-00022

Rev. 0

FSARCR 00-MP2-49

Installation of Ericsson Digital Cordless Cellular Phone System for Millstone Unit No. 2

Description

This modification added an Ericsson Inc. Freeset® DCT 1900 communication system to the existing Millstone Unit No. 2 communication system. This digital wireless telephone system is composed of non-safety related and non-seismic qualified base stations, handsets, interconnecting cables and raceways. This telephone system is not subject to the requirements for monitoring the effectiveness of maintenance at nuclear power plants (10 CFR 50.65 and Regulatory Guide 1.160). A Final Safety Analysis Report (FSAR) change was included in this package to update Section 7.8, "Communication Systems," to include the Ericsson Inc. Freeset® DCT 1900 telephone system.

This system is also installed and used at Millstone Unit No. 3.

Reason for Change

This change improves communications between the control room and other areas of the plant. The change provides readily accessible telephone communications for personnel authorized to carry an Ericsson DCT 1900 handset or where a handset is accessible. This system is compatible with and identical to the system installed at Unit No. 3.

50.59 Summary

The Ericsson Inc. Freeset® DCT 1900 telephone system is composed of non-safety related and non-seismic qualified base stations, handsets, interconnecting cables and raceways. This telephone system is not subject to the requirements for monitoring the effectiveness of maintenance at nuclear power plants (10 CFR 50.65 and Regulatory Guide 1.160). The operation of the 1900MHz telephone system is consistent with the operation of the 800MHz Carrier Frequency Trunked Radio System used at Millstone Unit No. 2. There is no change to the Margin of Safety to any radiological boundary or barrier resulting from the installation and use of the Ericsson DCT 1900 telephone system.

S2-EV-00-0078
M2-99055

Rev. 0
Rev. 0

Secondary Sample Station Modification

Description

This modification replaced the secondary sampling station with a skid mounted integrated station which includes an O₂ analyzer, a hydrazine analyzer, and two chilled water coolers. In addition, a new sampling line was run from the common discharge line of the 1A and 1B feed water heaters.

Reason for Change

The change solved two long standing problems related with the Secondary Chemistry sample collection process:

- Environmental Issue: Install chilled water coolers to eliminate the use of domestic water (chlorine), and
- EPRI Guidelines for in-line secondary sample chemistry instructions.

50.59 Summary

The Secondary Chemistry Sampling Station is a non-safety-related system, and the modifications have been determined to have no effect, directly or indirectly on any safety related function. The small increase in heat load on the chiller system was evaluated and determined to be well within the capacity of the system.

There is no change to the Quality Assurance isolation feature of the system. There is no change in the Secondary Chemistry Sampling Station or the Auxiliary Chilled Water System operation or design function as a result of the modification. This change does not result in a malfunction of a different type than previously evaluated in the Safety Analysis Report.

Although the systems addressed are not described in the Final Safety Analysis Report (FSAR), these systems appear in many FSAR figures, and changes to these figures required a safety evaluation.

S2-EV-00-0079
DCR M2-99046
FSARCR 00-MP2-50

Rev. 0
Rev. 0

Nuclear Instrumentation (NI) Upgrade

Description

The wide range NI drawers and the linear power range NI drawers were original plant components manufactured by Gulf General Atomic. Due to parts obsolescence and equipment reliability concerns, the four wide range NI drawers and the four linear power range NI drawers were replaced by this modification. Additionally, the simulator front panel assemblies for the four wide range NI drawers, the four linear power range NI drawers and the audible count rate drawer were also replaced.

Due to the replacement of the NI components, the Final Safety Analysis Report (FSAR) was updated per FSARCR 00-MP2-50.

Reason for Change

Due to parts obsolescence and equipment reliability concerns, components of the four wide range NI channels and the four linear power range NI channels were replaced to increase reliability and serviceability.

50.59 Summary

The upgrade of the excore NI instrumentation wide range and linear power range components, and the revisions to the FSAR Sections, Figures and Table do not adversely affect the operation of any safety or non-safety related structures, systems or components.

The change does not result in any new malfunctions or increase the probability of occurrence or the consequence of an accident or malfunction previously evaluated. No changes to the Operation License or Technical Specifications Limiting Conditions for Operation, Action Statements, or Surveillances are required.

This change does not adversely affect or alter the operability or safety function of the NI systems, reactor protection system, or any other safety related structures, systems or components credited in Chapter 14 of the Millstone Unit No. 2 FSAR or Safety Functional Requirements Manual.

S2-EV-00-0080
DCR M2-00017

Rev. 0
Rev. 0

Maintaining Select Portions of the Site Fire Protection Control and Site Fire Detection, Currently Supported by Millstone Unit No. 1

Description

This change transfers fire detection for the Unit No. 1 Control Room, Cable Vault, Computer Room, and Chemistry Lab From Unit No. 1 to Unit No. 2. This transfer was accomplished by equipment turnover, by assuring a Unit No. 2 power source, and by providing new local and Unit No. 2 Control Room alarm indication.

Reason for Change

The decommissioning of Unit No. 1 creates a situation where the previously existing fire detection is not available to Unit No. 2 unless supplied by a Unit No. 2 power source.

50.59 Summary

The changes made by this DCR for the transfer of fire detection from Unit No. 1 to Unit No. 2 does not adversely affect any design basis accident or its consequences. The ability to achieve and maintain safe shutdown is not impacted by this modification. This change is safe and does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report. This change does not degrade the margin of safety as defined in the basis for any Technical Specification. No Technical Specifications or bases are affected by this change for any mode of operation. This change does not introduce an unreviewed safety question.

S2-EV-00-0082
M2-00023
FSARCR 00-MP2-65

Rev. 1
Rev. 0

Building 110 and Common Area Heating, Ventilation and Air Conditioning (HVAC) Separation Project

Description

Components associated with the HVAC system, which served administrative areas in Buildings 110 and 105, shared by Millstone Unit Nos. 1 and 2, were abandoned due to Unit No. 1 decommissioning.

A new air conditioning unit and related components were procured and installed. In addition to the air conditioning system, the Chemistry Laboratory, located on elevation 14'6", was re-designated as a Unit No. 2 facility. Since the decommissioning of Unit No. 1 resulted in abandonment of the existing ventilation ductwork connecting this system to the release point, a new path from the laboratory to the Unit No. 2 Main Exhaust Stack was provided.

The abandoned existing ductwork between the Unit No. 1 HVAC Equipment Room and the Building 105 office space penetrated the Unit No. 2 Control Room Habitability Boundary and the Unit No. 1 Halon Fire Protection boundary wall. Two sections of ductwork penetrating the Unit No. 2 Control Room entry vestibule were abandoned in place and sealed at both ends to maintain the Control Room Habitability Zone.

Reason for Change

The administrative offices and facilities located in Buildings 110 and 105 became part of Unit No. 2 and were isolated from Unit No. 1 due to Unit No. 1 decommissioning. These areas were served by a common HVAC network, then designated as a Unit No. 1 system. The decommissioning of Unit No. 1 resulted in the abandonment of equipment and components located in the elevation 54'-6" HVAC Equipment Room of the Standby Gas Treatment Building. The air conditioning and laboratory exhaust systems served by these components became part of Unit No. 2 and are required to remain in service.

50.59 Summary

The new air conditioning equipment and ductwork are not safety related and do not interface with any other safety related systems. Final Safety Analysis Report (FSAR) MNPS-2 Section 9.9.9 was revised to reflect this change. The margin of safety for the plant protective boundaries as expressed or implied by the Technical Specifications, FSAR, Safety Evaluation Report or other licensing basis documents was not reduced by the implementation of this activity. There are no accidents of a different type from those already analyzed nor malfunctions of equipment important to safety associated with this modification.

S2-EV-00-0088
DCR M2-00026

Rev. 0
Rev. 0

Chillers X-196A and B Sequencer Replacement

Description

This design change replaces the common sequencer, shared by both chillers X-196A and B, with two individual discharge water temperature controllers (Honeywell Model No. W7100G) that operate independent of each other. Each of the new discharge water temperature controllers will ensure that its respective chiller reliably picks up and drops off heat load in stages. Two new temperature sensors were installed in the discharge lines of the respective chiller units to provide more reliable controller operation.

Additionally, this change installed a discharge cross-tie header vent valve (2-CHW-174), which provides a means to remove air introduced into the Auxiliary Chilled Water System during modification/maintenance activities.

Reason for Change

The installation of a controller for each chiller eliminates the reliance of both chiller units on one common sequencer panel, which in turn also eliminates inherent electrical separation issues associated with the one common sequencer panel. This change also improves component life span and reliability.

50.59 Summary

The common sequencer, which both Chillers X-196A and B share, is a non-safety related system, and the modifications and testing described in this design change have been determined to have no effect, directly or indirectly, on any Safety Related Function. The changes have been reviewed and determined to be safe and do not involve an unreviewed safety question..

S2-EV-00-0098 (97)
M2-00020

Rev. 0
Rev. 0

Millstone Unit No. 1/Unit No. 2 480V/Low Voltage Separation Project

Description

This modification re-powered loads within administrative areas common to Unit Nos. 1 and 2 that are required to remain functional following the decommissioning of Unit No. 1. The majority of these loads are re-powered from an offsite circuit with a remaining few loads being re-powered from the Unit No. 2 Electrical Distribution System. A new 23kV-480V transformer was installed by a separate modification (DMG-00-0051-00) to the west of the Unit No. 2 Turbine Building (TB). Cables from the offsite circuit to the primary side of the transformer were also installed. Additionally, this modification installed the cable, conduit, conduit supports and electrical equipment necessary to re-power the limited remaining loads from Unit No. 2 sources.

Reason for Change

Since Unit No. 1 was the first unit built on the Millstone site, many of the Unit No. 1 systems and areas had been shared with the other units. The existing electrical distribution system was one of these shared systems. There were loads within areas that were common to both Unit Nos. 1 and 2 that were powered from Unit No. 1 sources. These loads are required to remain operable after decommissioning of Unit No. 1. This modification re-powered the majority of these loads from the 23kV offsite circuit and re-powered limited remaining loads from Unit No. 2 sources.

50.59 Summary

The 23kV offsite circuit and the loads to be powered by this circuit are non-safety related and are not credited for any safe shutdown or accident mitigating functions. The new offsite circuit does not interface with the Unit No. 2 electrical distribution system. The Appendix R Emergency Lighting Units that are re-powered from this circuit are all battery powered and will function during an Appendix R scenario regardless of the power supply. The Unit No. 2 Turbine Building crane and some lighting panels are re-powered from non-safety related Unit No. 2 sources. The addition of these loads to Unit No. 2 non-safety related sources have no impact on the ability of the Unit No. 2 safety related electrical distribution system to supply power to safety related equipment.

These changes do not increase the consequence of a malfunction of equipment important to safety, do not increase the consequences of accidents, and do not result in a reduction in the margin of safety as defined in the Bases for the Technical Specifications.

S2-EV-01-0001 Rev. 0
DM2-00-0002-01 Rev. 0

RWST Local Temperature Control

Description

This change modifies the Refueling Water Storage Tank (RWST), Instrument Air (IA) system, and Auxiliary Steam (AS) system to provide an improved method of Operator control of RWST temperature. This change installs a new temperature sensor (TE-3034), which will sense the temperature of the combined RWST Heat Exchanger outlet/Heat Exchanger bypass return flow; installs new temperature indicator, TI-3034, which displays the temperature sensed by temperature sensor TE-3034; and installs new IA valves 2-IA-949A and 2-IA-949B which comprise an auto/manual loading station for existing pneumatic valve 2-AS-76, allowing the Operator to provide fine control of AS flow to RWST heat exchanger X48.

Reason for Change

This change improves control of RWST operating temperature, which is a Technical Specification and Safety Functional Requirements Manual requirement. This modification allows for precise control of RWST bulk temperature, minimizes the potential for exceeding the maximum allowable RWST temperature, reduces the potential for water hammer events by allowing the raising of the AS shell pressure in RWST heat exchanger X48, and removes an Operator burden.

50.59 Summary

This modification does not adversely affect systems or components, the operation of equipment, or any interfacing systems or components. This modification does not increase the probability of occurrence or the consequences of a malfunction of equipment important to safety or a previously evaluated accident and does not create the possibility of a malfunction or an accident of a different type. This modification does not involve an unreviewed safety question and is safe.

Domestic Water Backflow Preventer

Description

New backflow preventers were installed in the Domestic Water (DW) supply line to the Circulating Water (CW) Pumps (2"-JDD-6), and in the line to the Water Box Priming Pumps and Mechanical Vacuum Pumps (3"-JDD-7). An existing backflow preventer (2-WW-355) to the CW Sodium Hypochlorite system was rerouted due to improper installation. To eliminate the requirement for an additional backflow preventer, the DW line to the emergency shower/eyewash station on the Turbine Building (TB) 31'6" (1"-JDD-8) was re-routed. The DW line to the Secondary Sample Station "B" was cut and capped and the DW sample station cooler was retired in place to eliminate a potential DW contamination source.

This modification required a change to a Piping & Instrumentation Drawing (P&ID) 25203-26011 Sheet 2, which is a Millstone Unit No. 2 Final Safety Analysis Report (FSAR) Figure (9.10-02 sheet 2). No additional licensing/design basis changes were required as a result of this modification.

Reason for Change

There are no existing backflow preventers in the DW lines to the water box priming pumps, mechanical vacuum pumps, Secondary Sample Station "B," and to the circulating water pumps. The Connecticut (CT) Public Health Code, Section 19-3-B38a, requires a reduced pressure principle backflow preventer valve in the DW line to all facilities where toxic or objectionable substances are used. The installation of the backflow preventers and the piping modifications were implemented to prevent contamination from the permanent connections and to meet the CT Public Health Code.

50.59 Summary

The modification does not directly or indirectly affect any safety related systems. The change is reflected in the Unit No. 2 FSAR Figure 9.10-02 Sheet 2. The change has no impact on the function or operation of the DW system or the interfacing systems. The Margin of Safety has not been reduced and there will be no adverse impact on public health and safety. The change ensures compliance with the CT Public Health Code, Section 19-3-B38a, with respect to preventing potential contamination of domestic water from permanent system connections.

S2-EV-01-0005
DM2-00-0740-00

Rev. 0
Rev. 0

IST Controlotron UT Flow Transducers

Description

This Minor Modification permanently installed Controlotron UT flow transducers on the Low Pressure Safety Injection (LPSI) and Containment Spray (CS) test header piping 6"-GCB-10. This modification also removed three Controlotron UT flow transducers from the High Pressure Safety Injection (HPSI) minimum flow recirculation piping on the discharge of each HPSI pump.

Reason for Change

This modification makes permanent a proceduralized temporary installation of Controlotron UT flow transducers, eliminates inaccuracies from repeated installation/removal of these transducers, reduces system "out of service time" due to shorter surveillance test times, and provides three transducers (from the removal from the HPSI system) for use elsewhere.

50.59 Summary

The flow transducers are not safety related, not intrusive to the piping system, and their effect on the piping system is negligible. Installation of these flow transducers was previously evaluated via the proceduralized temporary modification process, is safe, and does not constitute an unreviewed safety question.

S2-EV-01-0016
M2-01002

Rev. 0
Rev. 0

Atmospheric Steam Dump Steam Traps

Description

This design change installed ¾" steam traps, with isolation, downstream of the Atmospheric Steam Dump Valves (ADV) 2-MS-190 A/B. The traps are Armstrong Model 11-LD with a #38 orifice, float type traps designed to pass 100 #/hr at 1 psid. They are located in the enclosure building on the 38'-6" elevation. The condensate is routed to floor drains which lead to the aerated drains tank.

Reason for Change

The existing ADVs, valves 2-MS-190 A/B, leaked by, causing an accumulation of condensate on the downstream side of the valve. This condensate was manually drained by Operations multiple times per shift. The drain valves are in the overhead and in the vicinity of hot piping. This was an operator burden and a potential personnel safety hazard. While the isolation valves may be reworked, experience has shown that these valves are not leak tight and some leakage is a normal occurrence. This change allowed for automatic draining of the collected condensate, relieving Operations of the burden and eliminating the personnel safety hazard.

50.59 Summary

This change complies with all Design and Licensing basis requirements for the system. It ensures that an excessive amount of condensate will not build up in the discharge piping of the ADVs. An excessive amount of condensate in the discharge of the ADVs causes the ADVs to become inoperable per Technical Specification section 3.7.1.7 due to concerns about water hammer and slug flow in the discharge piping upon valve actuation. This change ensures that all design basis requirements for the ADVs will be met.

Emergency Diesel Generator (EDG) Lube Oil Temperature Instrument Upgrade

Description

The scope of this evaluation is the changes covered by DM2-00-0085-01 and DM2-01-0085-01. The modification replaced the existing Allen-Bradley EDG Lube Oil Temperature Alarm Switches TS-8799 and TS-8800 with Allen Bradley Temperature Switches that have remote sensing bulbs. The thermowell was also replaced.

This modification replaced eight existing switches and four indicators with eight Omega indicating temperature switches.

This modification changed the set point from 185° Fahrenheit (F) to 195° F. High temperature switch setpoint for Emergency Diesel Generator (EDG) protective shutdown was not changed.

Reason for Change

Since the lube oil temperature switches were mounted directly on the lube oil pipe, they were subject to the same vibration as the pipe. As a result, many vibration induced failures occurred in the past. This modification caused the switch and electrical enclosure to be mounted on a rigid steel structural member and the temperature sensing bulb to be mounted in a thermowell in the pipe. Therefore, EDG reliability is improved and the switch housing with contacts and adjustments is more accessible for maintenance and calibration.

The existing installed generator bearing temperature alarm switches and indicators were obsolete and all of the spares had been used for replacements.

The existing setpoint for the generator bearing alarm actuation of 185° F resulted in spurious alarms during the summer months. The alarm response is for the operators to monitor the temperature using hand held instrumentation, which required increased visits to the diesel room during the performance of the surveillance.

50.59 Summary

This modification changed Final Safety Analysis figure 8.3-5, "A" Diesel Generator (DG) Data Sheet OPS Form 2346A-004, "B" DG Data Sheet OPS Form 2346A-006 and ARP 2591/AB. The change to the type of switch impacted the figure, thus requiring a 50.59. This modification does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety, previously evaluated in the Safety Analysis Report. Additionally, this modification does not degrade the margin of safety as defined in the basis for any technical specification.

S2-EV-01-0019
M2-00032

Rev. 0
Rev. 0

Replacement of Millstone Unit No. 2 Steam Generator Blowdown Sample Radiation Monitor (RM-4262)

Description

This change replaced the existing Steam Generator Blowdown detector, cable and processor with a new detector, cable and processor (RM-4262). The new RM-2000 radiation processor and RM-2300 control and display module are digital processors which utilize digital communication and meet the current standards for EMI noise susceptibility as described in "EPRI Guidelines for Electromagnetic Interference Testing in Power Plants," TR-102323-R1, January 1997. The RM-2000 radiation processor communicates with a new Sorrento Electronics RM-2300 control and display module installed in RC-14 in the control room through a new shielded twisted pair installed between the RM-2000 at the existing detector skid and the new RM-2300 installed in panel RC-14 in the control room.

Reason for Change

The existing detector was susceptible to noise, and was replaced in order to provide more reliable monitoring. The replacement equipment is qualified to EPRI TR-102323, Rev. 1, which maintains higher standards for EMI noise susceptibility than the existing equipment. The replacement of the steam generator blowdown radiation monitor under this change allows for the proper radiation monitoring of leakage from the primary-to-secondary side without spurious isolation.

Recorders RR-8123 and RR-8262 were replaced with the smaller recorder to improve accessibility to equipment inside RC-14. The new RM-4262 relay panel was installed on the center rails of RC-14, below these recorders, and is more accessible under the small Yokogawa recorder.

50.59 Summary

The modification involves non-safety related, non-seismic system and components. The system, components and circuits affected by this modification perform no accident prevention and/or mitigation functions. The change does not modify the existing design in terms of its normal operations and functions. Rather, implementation of this modification ensures that the elements of the system operate in accordance with the established design and licensing bases without the need for operator intervention or spurious blowdown isolation. This change does not impact the assumptions used in any accident analysis, affect plant equipment, plant configuration, or the way the plant is operated.

S2-EV-99-0144 Rev. 0
Temp. Mod 2-99-030 Rev. 0

Temporary Contractor Water Treatment Facility

Description

This temporary modification relocated part of the former water treatment vendor (ECOLOCHEM) outside of building 215 and installed a temporary water treatment facility (IONICS) partly inside and outside Building 215. This temporary modification has been removed.

Reason

This temporary modification maintained a continuous supply of make-up water for Millstone while the new vendor's permanent system was being implemented. This configuration facilitated the ability to run either vendor's system and also allowed Millstone Unit No. 2 to cease operating the Unit No. 2 ECOLOCHEM system.

50.59 Summary

This change did not increase the probability or consequences of a malfunction of equipment important to safety since the water treatment system function was not changed by this temporary modification and the temporary modification did not introduce any new system interactions. The required quality of the temporary water treatment facility product water was consistent with the quality recommendations of the Steam Generator's Owners Group for both Millstone Unit Nos. 2 and 3, and equivalent to the quality produced by the former vendor.

There were no accidents associated with the installation of this temporary modification. The water treatment system does not initiate, prevent or mitigate any of the accidents evaluated in the Safety Analysis Report. It did not interact with safety related equipment in such a way as to introduce an unanalyzed accident.

S2-EV-01-010
Temp. Mod. 2-01-003

Rev. 0
NA

Freeze Seal for Repair of Valve 2-RW-77

Description

This temporary modification installed a freeze seal on line 1 ½" -HCD-30, upstream of valve 2-RW-77 and downstream of the Primary Makeup Water (PMW) header. The freeze seal exhaust was directed to the building exhaust ducting, which must be in service during nitrogen usage.

This temporary modification has been removed.

Reason for Change

Valve 2-RW-77 leaked by the seat and required repair. In order to isolate the valve and not isolate the PMW header, a freeze seal was required on line 1 ½"-HCD-30 between the valve and the PMW header.

50.59 Summary

This temporary modification did not affect any safety related equipment. Installation of the freeze seal provided an isolation boundary to permit repair on valve 2-RW-77, while maintaining other portions of the PMW system. Isolating this portion of the Spent Fuel Pool Cooling & Cleanup System did not affect the probability or consequences of any previously evaluated accidents or malfunctions. The probability and consequences of potential malfunctions and accidents caused by the freeze seal installation is bounded by previously evaluated malfunctions and accidents.

S2-EV-01-011 Rev. NA
Temp. Mod. 2-01-004 Rev. NA

Freeze Seal for Repair of Valve 2-LRR-267

Description

This temporary modification installed a freeze seal on line 1 ½” -HCD-27, upstream of valve 2-LLR-267 and downstream of the Primary Makeup Water (PMW) header. The freeze seal exhaust was directed to the building exhaust ducting, which must be in service during nitrogen usage.

This temporary modification has been removed.

Reason for Change

Valve 2-LLR-267 leaked by the seat and required repair. In order to isolate the valve and not isolate the PMW header, a freeze seal was required on line 1 ½”-HCD-27 between the valve and the PMW header.

50.59 Summary

This temporary modification did not affect any safety related equipment. Installation of the freeze seal provided an isolation boundary to permit repair on valve 2-LRR-267 while maintaining other portions of the PMW system. Isolating this portion of the Liquid Radwaste (LRR) system did not affect the probability or consequences of any previously evaluated accidents or malfunctions. The probability and consequences of potential malfunctions and accidents caused by the freeze seal installation is bounded by previously evaluated malfunctions and accidents.

Docket Nos. 50-336
50-423
B18690

Enclosure 2

Millstone Nuclear Power Station, Unit No. 3

10 CFR 50.59 Report for 2001

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S3-EV-99-0011
DCR M3-99003

Rev. 0
Rev. 0

Reactor Coolant Pump No. 3 Seal Leakoff System Piping Re-route

Description

This change separates the No. 2 and No. 3 RCP seal leakoff piping combined drain. The No. 2 seal leakoff system piping remains piped to the Containment Drains Transfer Tank, while the No. 3 seal leakoff system piping is piped to the Reactor Plant Containment Drains System.

Reason for Change

By permanently piping the No. 3 seal leakoff system piping to the Reactor Plant Containment Drains System, wetting of the exterior surfaces of the RCPs resulting from pressure buildup in the RCP seal drain will be reduced.

50.59 Summary

The permanent separation of the No. 2 and No. 3 RCP seal leakoff system does not affect any Design Basis Accident or its consequences. It does not contribute to any new accidents beyond those already analyzed and is therefore safe and does not present an unreviewed safety question. It does not increase the probability of occurrence or the consequences of a malfunction of equipment important to safety, nor does it create the possibility of a malfunction of a different type. This separation does not increase the probability of occurrence or the consequences of an accident previously evaluated in the Safety Analysis Report, nor does it create the possibility of an accident of a different type.

S3-EV-99-0105
DCR M3-99020

Rev. 0
Rev. 0

Upgrade OFIS and ERDS Computer System

Description

This change upgrades the Offsite Facilities Information System (OFIS) and Emergency Response Data System (ERDS) computer systems for Millstone Unit Nos. 2 and 3. The upgrade replaces the main frame based OFIS and ERDS systems with a new data server/Wide Area Network supported architecture located on site. Remote off-site computers with telephone lines for data communications have been retired.

Reason for Change

This change eliminates dependence on obsolete components that were difficult to maintain (which could lead to prolonged failure of ERDS), makes ERDS/OFIS Y2K compliant, and separates ERDS/OFIS from the Northeast Utilities (NU) IT department as part of the divestiture of Millstone by NU.

50.59 Summary

The upgrade of ERDS/OFIS meets all of the requirements of 10 CFR 50 Appendix E Section VI, "Emergency Response Data System," and the current design basis for OFIS, and better serves Emergency Response personnel and the NRC Operations Center. The upgrade has no impact on the functional performance of the systems during an emergency. ERDS/OFIS is non-safety related, is properly separated and isolated from plant safety related systems, and does not control nor have any interface with safety related systems. This upgrade does not introduce any accident initiators, alter any fission product barriers, or cause any dose release to the public. This upgrade does not degrade the performance of safety systems and does not impact the margin of safety as defined in the Technical Specifications. Therefore this upgrade is safe and does not involve an unreviewed safety question.

S3-EV-99-0122
DM3-00-0319-99

Rev. 0
Rev. 0

Re-Routing of Drain Line from 3ARC-RE21

Description

This change deletes valve 3ARC-V950, a normally open 3/8" globe valve used to drain the condenser air ejector radiation monitor to the turbine building floor, and connects a 3/8" drain line from the condenser air ejector radiation monitor sample chamber into the discharge piping.

Reason for Change

This change diverts the condensate which forms inside the condenser air ejector radiation monitor sample chamber, from the floor of the turbine building to the process vent header, and eventually to an existing drain in the auxiliary building designed to handle this liquid. This change also eliminates the need for the drain collection rig and the need for Operations to periodically empty the collection rig.

50.59 Summary

This change is safe and is not an unreviewed safety question. Because the three fission product barriers are not affected by this change, the consequences of a postulated accident are not changed.

S3-EV-00-0003	Rev. 1
E3-EV-00-0009	Rev. 1
DCR M3-00004	Rev. 1
Temp. Mod. 3-00-012	Rev. 0

Installation of Non-Safety Related Underdrain System (SRW) Pump in Engineered Safety Features Building (ESFB)

Description

Design change M3-00004 will move the location for removal of groundwater that has circumvented the butyl rubber membrane to a new sump location in the "A" Containment Recirculation System (RSS) cubicle. The new sump will be provided with a non-safety related deep well electric submersible pump inserted from the ESFB roof via a casing pipe. The sump and casing pipe provides a new Supplementary Leak Collection and Release System (SLCRS) boundary within the ESFB. The groundwater removed by pump 3SRW-P5 will be routed to new tank 3SRW-TK1. Tank 3SRW-TK1 will be installed in the location of the existing, abandoned-in-place, Chemical Addition Tank, 3QSS*TK2. The existing pumps, 3DAS*P15A/B, will be removed and the associated piping and support equipment will be cut back or abandoned-in-place. The porous concrete drains to sumps 3DAS*SUMP7A/B will be capped and sealed. The sump covers and extensions will be removed and the sumps will be used for collection of cubicle piping leakage, hydrogen recombiner drains, and condensation.

Temporary Modification 3-00-012 provides electrical and service air in support of the installation of the equipment in the "A" RSS cubicle. Non-vital 480V power was provided by MCC 32-2J, compartment 3M. The power was distributed locally to two welding machines, two High Efficiency Particulate Air filters and two circulating fans.

The Service Air system provided a source of compressed air for pneumatic tools which were used in this construction phase. One of the primary purposes of this air system is to power pneumatic tools.

Reason for Change

To preclude the potential for (RSS cubicle) flooding, this groundwater was being removed by non-safety related pumps 3DAS-P8A/B during normal operations, and by safety related pumps 3DAS*P15A/B during Loss of Normal Power and post-accident conditions. The groundwater removal protects the safety-related RSS pumps from immersion and the containment steel liner from the hydrostatic effects of flooding. The existing safety-related sump pumps had proven to be high maintenance components. A commitment had been made to replace the air motor-driven sump pumps, 3DAS*P15A/B, with electric sump pumps prior to the startup from Refueling Outage 7. This was implemented by DCR M3-00004.

The pre-refueling outage (RFO) 7 construction activities associated with the Reactor Plant Aerated Drains (DAS) sump pump modification (DCR M3-00004) required temporary electrical power and service air. This was implemented by Temp. Mod. 3-00-012. The construction activities were completed in the ESF building sump area.

S3-EV-00-0003	Rev. 1
E3-EV-00-0009	Rev. 1
DCR M3-00004	Rev. 1
Temp. Mod. 3-00-012	Rev. 0

(continued)

50.59 Summary

The new sump pump system isolates the RSS cubicles from groundwater intrusion by removal of the groundwater through a self contained system, thus eliminating flooding potential of systems and components within the RSS cubicles. The new system removes groundwater utilizing one non-safety-related electric pump. Redundant pumps are not necessary since the new collection sump is sized to provide 32 hours following a Loss of Coolant Accident (LOCA) to maintain a failed pump. The new collection sump and casing pipe have been designed and will be installed to QA CAT I requirements including seismic. The function and postulated failures of the new system were evaluated and determined that neither can initiate an event or affect other accident mitigating equipment. Additionally, the new SLCRS boundary is designed such that off-site dosage is not increased.

The new system creates the possibility of a malfunction of different type than previously evaluated in the SAR because of the systems dependence on electrical power; because only one non-environmentally qualified, non-safety-related pump is provided; and portions of the ESFB structure are now credited with preventing RSS cubicle flooding. The current plant licensing bases for Containment Structure and ESFB design features for protection against below-grade water has been established in License Amendment No. 168 (March 17, 1999). The current plant licensing basis includes deviations from the acceptance criteria defined in Standard Review Plan (SRP) 3.4.1, Flood Protection and Regulatory Guide (RG) 1.26, "Quality Group Classifications and Standards for Water, Steam and Radioactive Waste Containing Components of Nuclear Power Plants." Past NRC review and approval included consideration of non-safety related quality classifications for components in accessible areas; use of design standards other than the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Class 1, 2 or 3; qualification issues associated with inaccessible safety related pumps; and periodic testing for these inaccessible pumps. The proposed change involves safety classification and "code & standards," SRP 3.4.1 and RG 1.26 deviations which go beyond that which was previously approved by the NRC. Based on the above considerations, this change was defined as an unreviewed safety question. License Amendment 195 was approved for this unreviewed safety question.

S3-EV-00-0004
DM3-00-0003-00

Rev. 0
Rev. 0

Re-establish Core Bore in Engineered Safety Features (ESF) Building Base Slab

Description

This change re-establishes a core bore through the ESF Building floor slab, removes sampling line 3DAS-001-401-3, grouts line 3SRW-006-001-03 in the same location, installs a curb around the core bore location, and provides a blind flange/cover for line 3SRW-006-001-03 and the curb.

Reason for Change

Future work for the removal of groundwater from the Containment Recirculation Spray system (RSS) cubicles is proposing to use this re-established core bore as a water inlet path.

50.59 Summary

This change has been reviewed and it has been determined that it does not adversely impact any previously evaluated malfunctions or accidents, or create the possibility of new malfunctions or accidents. This change has been determined to have no adverse impact on the ESF Building, RSS or Reactor Plant Aerated Drain systems, is safe to implement, and does not involve an unreviewed safety question.

S3-EV-00-0006	Rev. 0
M3-0006	Rev. 0
Temp. Mod. 3-99-023	Rev. 0

Main Generator Stator Leak Monitoring System (SLMS) Installation

Description

This change modified the Millstone Unit No. 3 Main Generator Stator Cooling System by installing a General Electric (GE) SLMS adjacent to the main generator stator cooling skid to monitor the main generator electrical windings for water leaks and provide oxygen to the stator winding coolant. SLMS provides continuous monitoring of the tank vent effluent as well as provides metered injection of oxygen into the bottom of the Stator Coolant Water Storage Tank (SCWST).

As part of this design change, Temp. Mod. 3-99-023 was removed. This temporary modification had installed a temporary instrument air connection on top of the SCWST for providing a continuous bleed of oxygen (instrument air) into the tank. It also had installed an oxygen monitor for verifying the stator coolant is oxygenated within a satisfactory level. This modification package provides a new permanent oxygen monitor as part of the SLMS system installation.

Reason for Change

Millstone Unit No. 3 had operational problems associated with the generator. Field grounds were discovered on the rotor during plant operation in the late 90s, which required down powering of the plant. Pleating across the Teflon tubes was discovered. The cause of this event was attributed to low oxygen levels within the stator water cooling system. As a result, Temp Mod 3-99-023 was installed to provide stator cooling water oxygenation as well as provide a means for monitoring stator water oxygen levels. The GE SLMS was installed as a permanent modification to improve water chemistry and reduce internal copper erosion of the stator winding.

50.59 Summary

The generator stator cooling system is non safety related and therefore can not adversely affect any safety system from performing its intended safety function. The installation of the SLMS provides the capability to monitor the main generator electrical windings for leaks and provide oxygen to the stator cooling system. The purpose of this system is to acquire generator winding leak information such that a controlled shutdown could be made if serious winding leaks were identified, thus preventing an unplanned turbine generator and reactor trip from full power operation. The addition of the SLMS provides increased reliability associated with main generator operation.

S3-EV-00-0007 Rev. 0
DM3-00-0026-00 Rev. 0
DM3-00-0840-99 Rev. 0

Turbine Exhaust Hood High Temperature Trip Logic Change/Installation of Temperature Indicators SST-TI1000 & 1001

Description

DM3-00-0026-00 modifies the Turbine Exhaust Hood High Temperature Trip Logic from a one out of three logic configuration to a two out of three logic configuration and creates a new exhaust hood high temperature priority alarm.

DM3-00-0840-99 justifies the undocumented installation of two temperature gauges in the turbine plant sampling system. No field work is involved with this design package.

Reason for Change

The modification of the Turbine Exhaust Hood High Temperature Trip Logic from a one out of three logic configuration to a two out of three logic configuration will help reduce unnecessary turbine trips. Justification of the undocumented installation of two temperature gauges in the turbine plant sampling system will allow for update of affected Piping and Instrumentation Drawings.

50.59 Summary

The modification of the Turbine Exhaust Hood High Temperature Trip Logic is safe and does not present an unreviewed safety question. This change, coupled with the creation of a new priority alarm, will prevent a single switch malfunction from causing a plant trip while maintaining a level of automatic protection.

The previous installation of temperature indicators SST-TI1000 & 1001 is also considered safe and not an unreviewed safety question.

S3-EV-00-0008
M3-99033
FSARCR 00-MP3-002

Rev. 1
Rev. 1

Removal of Air Ejector Radiation Monitor Channel 3ARC-RE21 Blowdown Isolation Feature and Setpoint Change

Description

This modification eliminated the automatic isolation of Steam Generator Blowdown on a high radionuclide concentration alarm condition on the Condensate Air Ejector Radiation Monitor Channel. It established default ALERT and ALARM setpoints as well as added a RATE OF CHANGE ALARM setpoint.

Reason for Change

This modification eliminated the automatic isolation of Steam Generator Blowdown feature associated with Air Ejector Radiation Monitor Channel 3 ARC-RE21. This removed the alternate plant configuration status associated with this channel. Establishment of new ALARM and ALERT setpoints as well as the establishment of a RATE OF CHANGE ALARM help meet certain elements of NEI 97-06, "Steam Generator Program Guidelines."

50.59 Summary

This change does not increase the probability of a malfunction. Malfunctions evaluated included the failure to manually isolate a steam generator from the main control board, the inadvertent isolation of Steam Generator Blowdown, and the adequacies of the ALERT and ALARM setpoints.

There is no increase in the probability or consequences of a Steam Generator tube rupture accident. There is no reduction in the margin of safety provided by a Steam Generator isolation following a tube rupture. This change is bounded by the Final Safety Analysis Report accident analysis for a Steam Generator tube rupture which assumes "Manual" isolation of the Steam Generator Blowdown. Defense in depth is maintained since Steam Generator Blowdown is automatically isolated by safety injection, containment depressurization actuation, or Steam Generator Blowdown high radioactivity.

Installation of Isolation Valve for "B" Waste Test Tank

Description

A three inch plug valve, 3LWS-V51, was added to line 3LWS-003-050-04, the discharge line from the "B" Waste Test Tank (WTT). This change provided the needed isolation to allow the "B" WTT to be operated independently from and in parallel to operations performed on the "A" WTT, thus resulting in more efficient and expeditious processing of Radioactive Liquid Waste at Unit No. 3. Additionally, this change places the discharge piping for the "B" WTT in a configuration consistent with the other radwaste tanks: "A" WTT, "A" and "B" High Level Waste Drain Tanks, "A" and "B" Low Level Waste Drain Tanks.

Reason for Change

This change was completed to ensure expeditious processing of Radioactive Liquid Waste at Millstone Unit No. 3. Historically, delays in system outages have resulted during refueling outages due to high liquid processing volumes. This was the result of the piping configuration associated with the Waste Test Tanks, which permitted operation of only one tank at a time, thus limiting WTT cleanup volumes. This change allows two tanks to be processed simultaneously and independently, increasing processing volume capability.

50.59 Summary

The valve added to line 3LWS-003-050-04 is not safety related, and per design, does not affect or impact safety related systems. This modification was installed to allow operating flexibility within the Radioactive Liquid Waste System (LWS) system only. The valve installed is the same design as the valve installed at the same location on the opposite parallel line 3-LWS-003-044-04. The installation of valve 3LWS-V51 meets the design requirements of the LWS system, was installed per spec SP-ME-570, and meets the design requirements of SP-ME-572 class 153 piping. The valve design is presently used in other parts of the LWS system with satisfactory performance, ensuring that the valve design will meet the necessary pressure boundary requirements for a Radioactive Liquid Waste System (RWQA) system. No Design Basis Accidents or their consequences are affected. The activity does not introduce any new conditions or malfunctions that could increase the probability or consequence of existing malfunctions which have already been analyzed.

S3-EV-00-0015
DCR M3-00013

Rev. 0
Rev. 0

Millstone Unit No. 3 Refueling Machine, Mast, and Fuel Transfer System Upgrade

Description

This change provides modifications and upgrades to the Refueling Machine, Mast and Fuel Transfer Systems to enhance the operation of the systems.

Reason for Change

These modifications and upgrades will improve reliability, performance and maintainability of the Refueling Machine, Mast and Fuel Transfer Systems.

50.59 Summary

The modifications and upgrades to the Refueling Machine, Mast and Fuel Transfer Systems do not change the basic functions of these systems. The design changes within this DCR have been seismically evaluated to remain attached during Safe Shutdown Earthquakes and Operating Basis Earthquakes. Based on a review of the design changes contained within this DCR, the conclusion is drawn that these changes are safe, do not represent an unreviewed safety question, and have no impact on the health and safety of the public.

E2-EV-00-0006	Rev. 0	Integrated Safety Evaluation
SG-EV-99-0006	Rev. 2	Early Release Evaluations
S2-EV-00-0005	Rev. 0	Appendix R Lighting Evaluation
S2-EV-00-0029	Rev. 0	Unit 2 GDC 5/GDC 17 Evaluation
S2-EV-00-0051	Rev. 0	Appendix R Program Evaluation
S3-EV-00-0019	Rev. 2	Unit 3 GDC 5/GDC 17 Evaluation
S3-EV-00-0020	Rev. 0	Station Blackout Evaluation
DCR M3-99039	Rev. 0	Modification Package

4160V Cross Tie of Millstone Unit No. 2 to Millstone Unit No. 3

Description

This design change installed a 4160 volt bifurcated electrical cross-tie from Unit No. 3 to Unit No. 2 between the 34A and 34B bus to the 24E bus. The 14H bus to 24E bus cross-tie was removed. The modification added a new fuel tank to the Unit No. 3 Station Blackout (SBO) emergency diesel generator (EDG) to satisfy the anticipated 72 hour SBO event duration. The Unit No. 3 SBO EDG will power the connection.

Reason for Change

The electrical interconnection is a key feature of the Unit No. 2 licensing and design basis. The connection acts as the GDC 17 alternate off-site source, the SBO alternate AC source and the 10 CFR 50 Appendix R safe shutdown source. The existing Unit No. 1 cross-tie was removed as part of the separation of all Unit No. 1 interconnections, supporting the decommissioning goals.

50.59 Summary

This change did create unreviewed safety questions. With respect to Unit No. 2, the modification introduces the possibility of a different type of malfunction than previously evaluated. A one-time test of the new interconnection includes parallel operation of the Unit No. 3 SBO EDG with Unit No. 2 on-line. The test is required to verify adequacy of the new 3 MVA feeder cable. With respect to Unit No. 3, the modification affects 10 CFR 50 Appendix A, GDC 17 in that 1) the new 3 MVA load decreases the margin of safety for minimum switchyard voltage, 2) switchyard breaker 13T must remain open when the Unit No. 3 RSST is out of service, and 3) the 3 MVA load is principally induction motor load and increases the short circuit availability on the 4160V system.

The integrated safety evaluation thoroughly evaluated the unreviewed safety questions. The qualitative safety determination stated that the change is safe. The new cross-tie will improve the Unit No. 2 response to a SBO. The cross-tie will sufficiently supply power to Unit No. 2 for the three area (R-1, R-11 and R-16) Appendix R fires. The change will not increase the probability of initiation of an event or the probability that operators will fail to mitigate an event or the probability that mitigating equipment will fail. It will not increase the consequences of an accident.

S3-EV-00-0023
M3-00002

Rev. 0
Rev. 0

Installation of Mechanical Seals in Millstone Unit No. 3 Service Water (SW) System

Description

This modification installed a rubber sleeve and seal assembly in a buried section of SW piping. This section of piping, which is encased in concrete, is a fabricated tee at which SW supply lines 3SWP-030-190-3 and 3SWP-012-013-3 intersect. Both these SW lines provide cooling water to downstream safety related components.

The sleeve and seal assembly provides a protective layer on the inside surface of the piping and does not form part of the pressure boundary of the system, which continues to be the Class 158 pipe together with its concrete encasement.

This modification was done during Refueling Outage (RFO) 7.

Reason for Change

Evidence of erosion in pipe spool 3SWP-012-3 was reported. It was determined that the pipe surface would continue to meet ASME Section III code requirements until RFO7, at which time a mechanical seal would be installed in the degraded section of pipe to prevent further deterioration, and maintain the integrity of the pipe wall thickness. The pipe spool was UT inspected before installation of the sleeve and seal assembly to verify that it still met minimum wall thickness required by ASME Section III. The choice of a mechanical seal for the pipe lining material was made because the environmental conditions required for the application of epoxy coatings cannot be supported at the location of spool piece 3SWP-012-3.

50.59 Summary

The seal is located upstream of all of the SW System safety related heat exchangers and failure could result in debris loading of a heat exchanger. This evaluation has concluded that failure of this seal is no more likely than that of the currently installed and previously analyzed epoxy coatings. The forces acting to dislodge the seal, causing it to fail, are less than those maintaining the seal in place and as a result, reduction in the cooling capability of any heat exchanger is unlikely.

The installation of the rubber sleeve and seal assembly does not increase the possibility or probability of a malfunction of equipment important to safety that has not already been analyzed. This modification does not introduce any new failure mode that changes the SW system's performance acceptance limits to support components required for accident mitigation, and to maintain the Margin of Safety related to the Plant Protective Boundaries.

3CND-SAS1 Modifications

Description

This modification established the throttling of the 3CND-SAS1 sample sink isolation valves as the method for reducing sample pressure and removed the pressure control valves (PCVs) that had been used to perform this task. The sample sink includes ten parallel identical sample flow paths that monitor conductivity of the condensate stream in the condensate demineralizer (CND) system, including the common inlet and outlet lines and the effluent from each demineralizer.

This change also slightly lowers the normal sample inlet pressure to correspond with the pressure recommended by the vendor for the conductivity analyzer of the sample sink. It slightly raises the setpoint of each of the ten sample sink relief valves (RVs). It increases the size of the discharge line from each of the ten sample sink RVs and the size of the common discharge header to minimize the potential for backpressure to be seen by the RVs. The change make several minor changes to the Piping and Instrumentation Drawings to reflect the as-built configuration of the sample sink.

Reason for Change

The 7 psig setpoint of the sample sink PCVs is too close to the 8 psig setpoint of the downstream RVs and has resulted in continual lifting of the RVs. The 7 psig setpoint for the PCVs is higher than the 5 psig maximum operating inlet pressure recommended by the manufacturer of the sample sink conductivity analyzer. The existing RV setpoint of 8 was raised to 12 psig to provide a greater margin between normal sample pressure and the RV setpoint. The size of the RV discharge lines and header were increased to minimize the potential for backpressure to be seen by the RVs.

50.59 Summary

The change is minor in nature and has no impact on the condensate (CNM) system. It could only affect the ability of the CND system to perform the condensate conductivity monitoring function stated by Final Safety Analysis Report Sec. 10.4.6.5 if the sample sink inlet isolation valves, which will be administratively controlled in the throttle position, were mistakenly placed in the fully closed position. Even the loss of the conductivity monitoring function would have no safety impact. It does not affect any assumptions made by accident analysis with respect to the CNM or feedwater systems. It only affects the sampling subsystem of the CND system, which is not safety related and is not credited for accident mitigation or safe shutdown.

S3-EV-00-0030
DM3-00-0043-00
FSARCR 00-MP3-28

Rev. 0

Modify Engineered Safety Features (ESF) Status Light Windows

Description

This modification adjusts the way selected components are indicated within the ESF Status array. It moved several components into different ESF status groups, removed a component that no longer receives an ESF actuation signal, and combined several components into common ESF status windows.

Reason for Change

Several historical plant changes altered the normal operating position or ESF signal for some ESF actuated components but failed to remove or relocate them to the appropriate ESF status group. Additionally, several components are arranged such that one of the two redundant components will satisfy the ESF actuation requirement. These were combined to reflect this either/or functional relationship.

50.59 Summary

The changes will not increase the probability of occurrence or consequences of any previously evaluated malfunction or result in a new malfunction of any equipment important to safety. The ESF status panel indications are not credited in the response to or mitigation of any plant accidents. The changes cannot increase the probability of occurrence or consequences of a previously analyzed accident or cause any new accidents. The ESF status panel is not discussed or credited in any plant technical specifications. The changes do not reduce the margin of safety as defined in the basis for any technical specification.

S3-EV-00-0045
DM3-00-0190-00

Rev. 0
Rev. 0

Auxiliary Building Sample Panel Room Ventilation

Description

This change provides an additional non-safety related exhaust branch duct in the auxiliary building sample panel room from the sample panel floor drain area, up to a tie-in point in the existing room exhaust duct.

Reason for Change

While taking a Reactor Coolant System sample, radioactive gases are given off from the sample panel floor drain termination cover and create localized noble gas concentration areas. This results in detectable limits of noble gases around the sample sink area which impedes the whole body frisk of personnel in the vicinity and causes Health Physics personnel to respond. Installation of this permanent exhaust branch eliminates these problems.

50.59 Summary

The non-safety related Auxiliary Building normal ventilation supply and exhaust system and changes to it are not credited with performing any accident mitigation function. Failure of the system does not initiate any postulated events analyzed by the Safety Analysis Report (SAR). The fission product mitigation function of the safety related Engineered Safety Features (ESF) ventilation filtration system is not affected by this change. This change has been reviewed, determined to be safe, and does not involve an unreviewed safety question.

Replace Spent Fuel Cooler Thermal Relief

Description

This modification changed out the Spent Fuel Pool Cooler Thermal Relief Valves 3SFC*RV52A/B to a different but equivalent valve. Valves 3SFC*RV52A/B are Lonergan Relief Valves, Model LCT-14, and were no longer available. Per discussion with the Anderson Greenwood Crosby Company, which purchased the Lonergan Valve Company, the Crosby series OMNI 900 relief valve is a suitable replacement relief valve for the Lonergan LCT-14.

Reason for Change

Spent Fuel Pool Cooler Thermal Relief Valves 3SFC*RV52A/B were leaking at the base to bonnet joint. The bonnet gasket is soft iron and corrosion at the gasket face of the bonnet was the suspected cause of this leakage. The base and bonnet are stainless steel. The Spent Fuel Pool System is a stainless steel system and the leakage should be prevented by replacement with an all stainless steel relief valve with suitable gaskets.

The change out of the relief valve will eliminate any leakage at the gasket areas (new seat area and better gasket material), and will adjust the set pressure and back pressure to reflect actual plant conditions and valve operation in the system.

50.59 Summary

The change out of the relief valve to a different but equivalent valve does not change the Engineering basis, Licensing basis or Design basis of the system. The relief valve is designed to the appropriate code requirements and has been evaluated by the valve manufacturer as a suitable replacement. The relief valve is installed as a thermal relief valve for the Spent Fuel Cooler when the cooler is isolated. This isolation limits the safety significance of the isolated piping. However, the cooler and piping inside the isolation valve is rated for a pressure greater than the set pressure of the relief valve. When the cooler and relief valve are in service, the relief valve spring pressure is 75 psig, which is sufficiently above the pump shutoff head of 66 psig to ensure the relief valve will not lift in service. The relief valve set pressure and back pressure have been adjusted to match how the relief valve has been adjusted in the past. This ensures that the relief valve will not perform differently than in the past, lift prematurely or unnecessarily, or not be able to reset. The modification does not increase the probability of an accident or malfunction, affect accident mitigation, increase the consequences of an accident or affect the consequences of previously evaluated malfunctions.

S3-EV-00-0057	Rev. 0
S2-EV-00-0076	Rev. 0
M3-00026	Rev. 0

Main Stack Separation

Description

The existing 375 foot high main ventilation stack at Millstone was a Millstone Unit No. 1 component. This stack was the elevated release point for ventilation systems operating in all three Millstone units. Because Unit Nos. 2 and 3 safety related ventilation systems discharging into this stack must remain in service during and following the decommissioning of Unit No. 1, it was re-designated a Unit No. 3 component. This modification describes the method by which the Unit No. 1 ventilation systems connected to the stack were removed from service, and sealed. This change also accounts for the capability of Unit Nos. 2 and 3 ventilation systems connected to the same stack to meet their respective design and licensing bases following isolation of the Unit No. 1 systems.

Reason for Change

Both Unit Nos. 2 and 3 utilize the Unit No. 1 main ventilation stack as the elevated release points for their secondary containment ventilation systems as well as for discharge of gaseous waste. The decommissioning of Unit No. 1 necessitated the separation and rededication of the ventilation stack to support the Unit Nos. 2 and 3 design and licensing bases. Both Unit Nos. 2 and 3 continue to operate without interruption during and following the decommissioning of Unit No. 1. The subject design change report provides details and justifications by which the changeover was accomplished.

50.59 Summary

Implementation of this modification does not result in increased levels of fission products released to atmosphere. The calculated dose rates for the site boundaries as well as for both Unit Nos. 2 and 3 Control Room Habitability Zones did not change following completion of these changes.

When the Unit No. 1 ventilation and gaseous waste systems discharging to the stack were removed from service, and all openings in communication with the stack from Unit No. 1 were sealed, the Unit Nos. 2 and 3 systems connected to the stack remained fully operable and in strict compliance with their designated safety related functions.

The performance limits of the Unit No. 2 Enclosure Building Filtration System and the Unit No. 3 Supplementary Leak Collection and Release System required for accident mitigation and maintenance of safe shutdown continued to support the margin of safety related to the plant protective boundaries for both Unit Nos. 2 and 3.

S3-EV-00-0059
DM3-00-0145-00

Rev. 0
Rev. 0

Removal of Tank 3QSS*TK2 and Installation of Tank 3SRW-TK1 During Power Operation

Description

This change removes abandoned chemical addition tank 3QSS*TK2 and installs non-safety related groundwater underdrains storage tank 3SRW-TK1.

Reason for Change

Removal of tank 3QSS*TK2 and installation of tank 3SRW-TK1 is required by DCR M3-00004, "Installation of Non-Safety Related SRW Pump in Engineered Safety Features (ESF) Building." Removal of tank 3QSS*TK2 is necessary due to radioactive contamination and the low likelihood of successful decontamination. Installation of tank 3SRW-TK1 is required to store groundwater collected from beneath the Containment/ESF Building.

50.59 Summary

Based on a review of the precautions and the controlled implementation procedure, the conclusion is drawn that the activities (removal of tank 3QSS*TK2 and installation of tank 3SRW-TK1) are safe, do not constitute an unreviewed safety question and have no impact on the health and safety of the public.

Modification of Turbine Building (TB) Floor Drains Sump Pumps 3DFT-P2A/B Control Logic

Description

This change modified the control logic associated with TB Floor Drains Sump Pumps 3DFT-P2A and B, as detailed in DM3-00-0276-00, as well as updated Section 9.3.3 of the Final Safety Analysis Report (FSAR) due to the resulting control philosophy changes. The TB Floor Drains Sump Pumps 3DFT-P2A and B control circuitry was modified such that the pumps no longer operate on a lead/lag basis whereby the lead pump would start on a sump high level condition and the lag pump would automatically start on a sump high-high level condition.

Reason for Change

The TB Floor Drains Pumps 3DFT-P2A and B were being operated manually as opposed to the normal automatic operation due to potential environmental concerns. With the development of a significant leak within the TB, treated water entering the TB floor drains sump would be automatically pumped out of the sump to the yards drainage system and eventually out to the sound. Further, the release to the environment would not be terminated without manual operator action to secure the TB floor drains sump pumps. This would result in a prompt environmental report with potentially large volumes of non-permitted water being released to the environment. Due to this concern, manual initiation of the sump pumps was being performed every four hours, becoming an operational burden. Also, the TB floor drains sump pump totalizer timers had been found to be problematic in nature. The timers do not advance properly and the reset thumb wheel does not function properly at all times.

50.59 Summary

The control logic changes will limit the potential for an uncontrolled release of non-permitted fluid into the sound by tripping of the pumps if running, and defeat of the sump pumps auto start circuitry upon detection of a high level condition within the sump. The high level alarm function will provide Operations with advanced notification of an abnormal condition associated with the TB floor drains sump. This change will not result in any increase in either the probability of occurrence or consequences of a malfunction of equipment or accidents previously evaluated in the Safety Analysis Report. It will not result in the possibility of a malfunction or accident of a different type than previously evaluated nor reduce the margin of safety as defined in the basis for any technical specification.

Replace Condensate Hydrazine Feed Pumps 3CNC-P2A and 3CNC-P2B

Description

Condensate hydrazine feed pumps (3CNC-P2A and 3CNC-P2B), manufactured by Yarway Corporation and installed in the condensate chemical feed system (CNC), were replaced with pumps furnished by Jesco American Corporation (JAC), which took over the Yarway product line. The replacement pumps are a JAC Model 5711-11-3432 metering pump. These pumps are furnished with ½ inch suction discharge connections in lieu of ¾ inch connections. Minor piping modifications were required. The pumps' external relief valve piping and associated supports, which were left abandoned by the removal of relief valves 3CNC-RV50 and 3CNC-RV51 per Design Change MP3-90-96, were removed. Piping and Instrumentation Drawing (P&ID) 25212-26931 (EM-131A) was revised to show the new pumps' suction and discharge size differences and the removal of abandoned relief valve piping.

Reason for Change

Condensate hydrazine feed pumps (3CNC-P2A and 3CNC-P2B), manufactured by Yarway Corporation, were worn and needed to be replaced.

50.59 Summary

The design of the new pump does not alter any basic pump design parameters or functions. Replacing the condensate hydrazine feed pumps and removing associated abandoned relief valve piping does not introduce an operational change to any plant system, structure or component. The condensate hydrazine feed pumps are part of the CNC system and are used for injecting hydrazine solution into the condensate system upon demand for maintaining system chemistry. The ability of the pumps to perform this function is not impacted by these changes. This activity requires a 50.59 because the size change of the pump suction and discharge connections and the removal of abandoned relief valve piping affects the system's P&ID and Final Safety Analysis Report figure.

S3-EV-00-0084	Rev. 0
S2-EV-00-0094	Rev. 0
M3-00012	Rev. 0

Millstone Unit No. 3 Re-powering of Unit No. 1 Fire Pump Houses, Stack, and Auxiliaries

Description

This modification transferred the Unit No. 1 Fire Pump House and associated equipment, the Unit No. 1 Fire Water Tanks and associated equipment, and the Unit No. 1 Main Stack and specified equipment to Unit No. 3. Signals from the Unit Nos. 1 and 2 Fire Pump Houses were run to the Unit No. 3 Control Room. Additionally, a ground fault detector was added to the new backup power source for the Unit No. 1 Fire Pump House. The transfer of ownership of the Unit No. 1 systems was accomplished by equipment turnover, by assuring a Unit No. 3 power source, and by providing new Unit No. 3 Control Room alarm indication.

Reason for Change

The decommissioning of Unit No. 1 resulted in the need to turn over the existing Unit No. 1 systems, shared between the operating units, to either Unit Nos. 2 or 3. The Unit No. 1 Fire Pump House, Main Stack, and their Auxiliaries were no longer available to Unit Nos. 2 and 3 unless supplied by a Unit No. 3 power source. Since this equipment was transferred to Unit No. 3, appropriate system indication was provided for annunciation in the Unit No. 3 Control Room.

50.59 Summary

This change does not adversely affect any design basis accidents or their consequences. This change provides an acceptable power source from Unit No. 3 to support continued operation of Unit Nos. 2 and 3. The ability to achieve and maintain safe shutdown is not impacted by this modification. This change does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report and does not degrade the margin of safety as defined in the basis for any Technical Specification. No Technical Specifications or bases are affected by this change for any mode of operation.

S2-EV-00-0086
DM3-01-0117-00

Rev. 0

Erosion/Corrosion Replacement for 3-SVH-006-031-4

Description

This activity replaced a portion of carbon steel class 151 line 3-SVH-006-031-04, which was degraded by Flow Accelerated Corrosion (FAC), with stainless steel class 302 piping, fittings and valves. This material is less susceptible to FAC than the existing carbon steel and will last until end of plant life with no further replacements or inspections required.

Reason for Change

The existing piping was projected to erode to below its minimum allowable wall thickness during the next operating cycle. In order to assure continued plant operation and compliance with design codes, this piping needed to be replaced. The choice of stainless steel insures that replacement of the piping will not be required for the remainder of Millstone Unit No. 3's plant life and removed this line from the requirements of continued wall thinning inspections.

50.59 Summary

This change impacts Piping & Instrumentation Drawing EM-124A, section M-9, which is figure 10-04-03, Sheet 1 in the Final Safety Analysis Report and thus requires a 50.59.

The replacement piping and components comply with all design codes, specifications and standards for Millstone Unit No. 3 and will not degrade plant system performance in any way. This change is an improvement in the reliability of the Feed Water Heater Vents and Drains (SVH) system and reduces the need for monitoring and repair of the system over the life of the operating plant.

S3-EV-01-0002
DM3-00-003-01
FSARCR 01-MP3-2

Rev. 0

Revise Back Pressure and Spring Pressure for Relief Valves that Discharge to the Primary Drains Transfer Tank (PDTT)

Description

The change revised the Final Safety Analysis Report described back pressure of the non-bellows equipped safety related relief valves (RV) that discharge to the spring pressure to reflect the PDTT normal operating pressure of 4 psig and the standing head of water in the common discharge header to the PDTT. The changes in RV spring pressure are small and well within the allowed opening pressure tolerance. Therefore, none of the RVs needed to be physically reset to implement this modification.

Reason for Change

The RV analyses for RVs that discharge to the PDTT utilized an incorrect backpressure value. Some RVs were assumed to have a bellows seal even when the RVs were not equipped with a bellows seal.

50.59 Summary

This change does not increase the probability of occurrence or the consequences of events that may result in radiological doses to the public. The change affects RVs which provide overpressure protection for segments of the Emergency Core Cooling System (ECCS) when these segments are not in use and isolated. The change ensures compliance with ASME III requirements for overpressure protection.

This change revised an FSAR section which incorrectly stated that the ECCS RVs have a bellows seal to isolate the valve spindle and spring assembly from system fluids. The lack of the bellows seal for the ECCS RVs has no affect on the all stainless steel components or proper functioning of the RVs and the RV design does not allow leakage of potentially highly radioactive system fluids to the building environment.

This change also incorporated actual back pressure values due to PDTT gas pressure and water head in the RV discharge line. This change will not result in early lifting of RVs since there is no change in set pressure. Since early lifting of the affected ECCS RVs will not occur and primary coolant (or ECCS flow) will not be lost through a lifting RV or released to the building environment, neither the probability of occurrence of a Mode 4 Loss of Coolant Accident during Residual Heat Removal cooldown nor the consequences of an accident where ECCS operation is credited is increased by this change.

S3-EV-01-0004
DM3-00-0364-00

Rev. 2

Replace Centrifugal Charging Pump Minimum Recirculation Flow Orifice Assemblies
3CHS*RO46A/B/C

Description

This change installed a new multi-stage Restriction Orifice (RO) in each of the three Charging Pump minimum flow recirculation lines. The new orifice assemblies replaced the existing ROs supplied with the Charging Pumps by Pacific Pump Company. Implementation included post modification testing.

Reason for Change

This change alleviated the gas stripping phenomena that had occurred in the low pressure region of these multi-stage restriction orifices during Volume Control Tank (VCT) pressure excursions. The new multi-stage restriction orifices are specifically designed to improve the low pressure conditions in the vena contracta area of the last orifice stage. This improvement allows VCT pressure transients up to 20 psid without degassing concerns at these components.

50.59 Summary

The installation of the new restriction orifice assemblies (3CHS*RO46A/B/C) in the charging pump minimum flow recirculation line will not affect any Design Basis Accident or its consequences. The change will not contribute to any new accidents beyond those already analyzed. The new ROs are designed, fabricated, installed and tested in accordance with applicable specifications and meet all requirements of the original design. Therefore, pressure boundary integrity is maintained and the probability of occurrence of a previously evaluated malfunction of equipment important to safety has not been impacted. Since the pressure boundary is not impacted, the changes can not alter any previous assumption made in the radiological consequences analysis nor affect the mitigation of radiological consequences of a malfunction of equipment described in the Final Safety Analysis Report.

S3-EV-01-0017
DM3-00-0190-01

Rev. 0
Rev. 0

Removal of Emergency Diesel Generator (EDG) Fuel Header Return Check Valves Internals

Description

This change permanently removed the “B” EDG fuel return header check valve internals. This change required an update to Piping and Instrumentation Drawing 25212-26917 Sheet 1 which is a Millstone Unit No. 3 Final Safety Analysis Report Figure. No additional licensing/design basis changes were required as a result of this change.

Reason for Change

This change was based on a review of system configuration and associated performance requirements after having discovered the internals for 3EGF*V969 & V970 were removed. There is no retrievable record of having removed the internals from these valves. The condition was discovered during corrective maintenance to repair minor fuel weepage at the downstream threaded connections to 3EGF*V969 during Unit No. 3 Refueling Outage 6.

50.59 Summary

This change does not impact operation or starting of the EDG. The lack of functional fuel return header check valves has not impacted the performance of any monthly or 18 month surveillance testing. Additionally, the function of the check valves is to prevent draining of the fuel return headers and fuel injector pumps during standby conditions. This function is not necessary in the Unit No. 3 installation as the return header to Fuel Oil Day Tank is above the elevation of the engine fuel header, which precludes draining of the header during standby conditions.

S2-EV-01-0031
DM3-00-0273-01

Rev. 0

Millstone Unit No. 3 Main Steam System (MSS) Turbine Driven Auxiliary Feedwater (TDAFW) Pump Turbine Casing Sentinel Valve (3MSS*RV58) Removal

Description

The TDAFW pump turbine casing has a sentinel valve (3MSS*RV58). The purpose of this ¾ inch relief valve is to open when turbine exhaust pressure is greater than 25 psig and warn plant personnel of an excessive turbine exhaust back-pressure condition. If the exhaust pressure subsequently decreases, the valve has a function to close. This change eliminated this valve from the plant's design.

Reason for Change

This valve has been observed to open and quickly (\approx 1 second) reseal during a turbine start (i.e., the relief valve opens and quickly reseals approximately 5 seconds after the steam admission valves open). The sentinel valve elimination minimizes the potential for TDAFW pump failure due to the sentinel valve failing to reseal when the valve opens during a turbine startup transient. If the sentinel fails to reseal, a harsh ambient environment may be created due to steam entering the Engineered Safety Feature Building (ESFB) TDAFW pump room. Thus, this equipment malfunction could challenge TDAFW pump operability.

50.59 Summary

The Margin of Safety inherent in the physical protective boundaries (fuel matrix/cladding, Reactor Coolant System pressure boundary and containment) is not decreased by this change because there is no impact to credited AFW flow rates or assumed pump start time. Sentinel valve elimination has no impact on the AFW system's design function or system reliability. There is no impact on applicable codes and standards compliance.

The following temporary modifications were previously reported as installed and have since been removed:

Temp. Mod. 3-95-159

Reactor Coolant Pump (RCP) #3 Seal Leakoff Temporary Lines (all RCPs)

Installed & reported 1995, Removed 2001

Temp. Mod. 3-99-026

Installation of Check Valve 3SWP*V1099 Without Internals

Installed & Reported 1999, Removed 2001

Temp. Mod. 3-98-034

Pump 3-FWS-P1 Pressure Recording and Monitoring

Description

This temporary modification was installed and has been removed. This temporary modification permitted the installation of a pair of pressure transducers on each main feedwater pump (one pump at a time).

Reason for Change

As part of the investigation into the impeller failures on the Motor Driven Feedwater Pump, the vendor indicated that the monitoring of suction and discharge pressure pulsations would provide additional data to help in determining the root cause.

50.59 Summary

The installation did not affect the performance or operation of the feedwater pumps. The pressure transducers and fittings were installed per design specification and met the design requirements for the condensate and feedwater piping. The transducers were not to be connected to any permanent plant instrumentation or control circuitry.

S3-EV-00-0060

Rev. 0

Temp. Mod. 3-00-007

Rev. 0

Containment (CTMT) Equipment Hatch Manway Cover Installation

Description

This temporary modification allowed replacement of the CTMT Equipment Hatch Emergency Manway cover with a temporary manway cover in modes 5, 6 and 0. This temporary cover has lengths of pipe which penetrate and are welded to the cover. This cover became a special device which allowed access into the containment while maintaining a Containment Boundary (i.e., a closed barrier or maintains a closed system outside containment).

Reason for Change

During refueling outages, Steam Generator Eddy Current Testing (ECT) and Secondary Side Cleaning are performed concurrent with fuel movement. To complete either task in a timely manner, direct access into the containment for the ECT/Sludge Lancing equipment (e.g., cables, fiber optics, and hoses), is necessary during periods requiring a containment boundary.

To ensure that a release of fission product radioactivity within containment will be restricted from escaping to the environment during core alterations, technical specifications require the establishment of Containment Closure (i.e., all potential leakage paths are closed or capable of being closed). Containment closures consist of the establishment of a single boundary (i.e., one door, one valve).

50.59 Summary

With the installation of this temporary modification (i.e., manway cover installed), there were no penetrations which communicated or provided direct access from the containment atmosphere to the outside environment. Once in place the cover became a passive component. Quality Assurance materials and welds ensured the quality of the temporary cover. There is no loss of function, or potential leakage path to the outside atmosphere resulting from a fuel handling accident.

This change did not introduce any new malfunctions or impact the consequences of any previously evaluated malfunction and did not change or impact the accident analysis.

S3-EV-00-0090

Rev. 0

Temp. Mod. 3-00-018

Rev. 0

Temporary Support for Removal of 3SWP*V68

Description

This temporary modification installed a temporary support on the piping near valve 3SWP*V69 and removed valve 3SWP*V68 to allow for coating inspections. The removal of the valve for piping inspections necessitated that the "B" train of Service Water (SW) be out of service.

This Temporary Modification has been removed.

Reason for Change

The ARCOR epoxy coating in the service water piping at the inlet to the "B" Reactor Plant Component Cooling (CCP) heat exchanger had to be inspected during 3R07. In order to maintain operability of the "A" SW train and "A" CCP heat exchanger and to maintain availability of the "C" CCP heat exchanger with this valve removed, a temporary vertical pipe support was required.

50.59 Summary

Technical Evaluation M3-EV-97-0108, Rev. 1, considered the support configuration and determined that the structural and seismic integrity of the "A" train of SW was maintained by installation of this temporary modification when 3SWP*V68 was removed. The support provided vertical support of the CCP heat exchanger inlet piping and maintained SW piping structural and seismic integrity while the valve was removed for inspections. The support was not bolted down and was put in place such that it would not adversely affect the "B" header operability prior to taking this header out of service for repairs. A visible gap was maintained between the support and the piping until the "B" SW header was declared inoperable. The installation of the support maintained the "A" CCP heat exchanger operable and maintained the "C" CCP heat exchanger in an available status so that the two CCP heat exchangers could be used for heat removal if required.

S3-EV-97-0424 Rev. 0
Temp. Mod. 3-01-005 Rev. 1

Installation of Freeze Seal to Support Repair of 3SIH&MV8806

Description

The temporary modification installed a freeze seal on line 3-SIL-008-154-02, upstream of valve 3SIL*MV8806.

This temporary modification has been removed.

Reason for Change

The freeze seal allowed leak testing of the downstream check valve.

50.59 Summary

This 50.59 was written for Temp. Mod. 3-97-062 which installed a freeze seal to allow repair of valve 3SIH*MV8806. Temp. Mod. 3-01-005 was installed during mode 5 with the same conditions evaluated. An operable boration flow path was provided via a Boric Acid Storage Tank to an operable charging pump and into the Reactor Coolant System. This met the requirements of Technical Specification 3.1.2.1.

An assessment of the freeze seal was performed by Design Engineering. The additional mass added by the freeze seal was deemed insignificant in the 8" line and no additional supports were required. The piping configuration was reviewed and found to have sufficient flexibility to absorb the contraction of the pipe due to the freeze seal at the specified location. The probability of a freeze seal failure was low due to the relatively low system pressure (~100 psig). Leakage by a failure of the freeze seal was bounded by the existing flood analysis.

S3-EV-01-0018 Rev. 0
Temp. Mod. 3-01-006 Rev. 0

Removal of 3QSS-RO43

Description

This temporary modification reinstalled the piping on the Refueling Water Storage Tank (RWST) recirculation line without the orifice plate (3QSS-RO43). A gasket was installed between the two flanges. The gasket meets the requirements of SP-ME-572 for class 152 piping.

Reason for Change

A leak was identified on 3QSS-RO43. This orifice is part of the RWST recirculation path. The orifice was removed to repair the leak. Maintenance could not reinstall the orifice due to fit-up problems. This line is needed for cooling of the RWST and therefore it was requested the pipe be put back together without the orifice. This temporary modification will be in place until 3QSS-RO43 can be put back into the system or until a design change in accordance with the Design Control Manual is performed to permanently remove it from the system.

50.59 Summary

The removal of 3QSS-RO43 will not affect any Design Basis Accident or its consequences. It will not contribute to any new accidents. The RWST remains operable and in compliance with its Technical Specification Requirements with or without 3QSS-RO43 in place. The section of piping being affected by the removal of 3QSS-RO43 will still be there if needed for certain accidents. The Quench Spray System (QSS), Emergency Core Cooling System and RWST recirculation pumps will not be exposed to runout conditions as a result of the removal of 3QSS-RO43.

S3-EV-01-0027 Rev. 0
Temp. Mod. 3-01-024 Rev. 0

Maintain Electrohydraulic Control (EHC) Electrical Lock Out Solenoid Valve 3TMB-SOV143 Energized During +24 Volt Ground Investigation

Description

This temporary modification energized the electrical lock out solenoid valve, 3TMB-SOV143, located in the turbine front standard, to prevent a turbine trip during troubleshooting of the electrical trip solenoid valve (ETSV).

While the electrical trip section of backup overspeed protection was locked out, an additional jumper wire was installed to de-energize, and removed to energize the ETSV as part of troubleshooting controlled under AWO M3-01-08943. With the lock out valve energized, the ETSV was inoperable and could not trip the turbine. As controlled by Temp. Mod. 3-01-024, this jumper was removed prior to de-energizing the electrical lock out solenoid valve and restoring electrical backup tripping.

Reason for Change

The Temp. Mod. was necessary to allow troubleshooting of the ground in the electrical trip solenoid valve without taking the turbine off line. The troubleshooting was performed to exactly locate the ground on the EHC system +24 volt bus, which had been isolated to the ETSV circuit by prior troubleshooting. The ETSV, which is part of the back up turbine trip, is normally energized during turbine operation but was de-energized during troubleshooting.

50.59 Summary

The function actuated under the temporary modification is a built in function intended to prevent a turbine trip during testing of the electrical trip system. During the time that the electrical trip function of turbine overspeed protection was locked out, the primary overspeed control function and the backup mechanical overspeed trip was operable. The only accident possible as a result of this activity was a turbine trip, which is considered a Class II accident that is recovered from with no core damage.

No changes were made to safety related components, plant configuration or the way any safety system responds to plant conditions. Therefore, the probability of an analyzed accident was not changed and an accident of a different type was not possible. Because the three primary boundaries to fission products are not affected by this change and because the Final Safety Analysis Report chapter 15 basis acceptance limits are not changed, consequences from an analyzed accident are not changed.

S3-EV-01-0030 Rev. 0
Temp. Mod. 3-01-026 Rev. 0

Defeat Stator Cooling Turbine Runback Signals

Description

This temporary modification disconnected the inputs from temperature switch 3GMC-TS40, pressure switch 3GMC-PS33 and the current to stator coolant flow comparator CFC-1 to turbine runback and trip circuitry to prevent a turbine runback or trip during troubleshooting.

This temporary modification has been removed.

Reason for Change

The modification was necessary to allow troubleshooting of the cause of the turbine runback and protection circuit energized annunciator received.

50.59 Summary

This temporary modification had no effect on accident acceptance criteria. This temporary modification did not affect any safety related structure, system or component used to maintain reactor safety or integrity. The purpose of the protection feature being defeated was to prevent damage to the main generator due to a problem with stator cooling. During the time it was defeated, the automatic stator cooling pump transfer and start feature was operable, stator temperature continued to be monitored by the Foxboro AI system and stator cooling temperatures and pressures were constantly monitored at both the stator cooling panel and in the control room. Other diverse turbine trip features were operable. If either setpoint for degraded stator cooling temperature or pressure had been reached, the operators would have manually tripped the turbine to prevent damage to the generator.

There were no changes to safety related components, plant configuration or the way any safety system responds to plant conditions. Therefore, the probability of an analyzed accident was not changed and an accident of a different type was not possible. Because the three primary boundaries to fission products were not affected by this change and because the Final Safety Analysis Report Chapter 15 basis acceptance limits were not changed, consequences from an analyzed accident were not changed.

S3-EV-01-0038 Rev. 0
Temp. Mod. 3-01-035 Rev. 0

Disable CO₂ Fire Suppression System in Cable Spreading Area (CSA) and Non-Conforming Condition Acceptance

Description

This temporary modification disables the CSA carbon dioxide total flooding fire suppression system which is a manually initiated fire suppression system. This modification is accomplished by locking closed valve 3-FPL-V45 (to be shown locked closed on the Piping & Instrumentation Drawing (P&ID) and adding a note stating that the system has been locked out and no carbon dioxide fire suppression system is available for the CSA. Procedural guidance which would otherwise potentially direct CSA carbon dioxide fire suppression system discharge is being changed to reflect this design.

Reason for Change

Relative to the plant design, it is necessary to disable the CSA carbon dioxide total flooding fire suppression system because carbon dioxide transport pathways to the Control Room, Auxiliary Shutdown Panel, (ASP, West Switchgear) and the Fire Transfer Switch Panel (FTSP, East Switchgear) areas can not be corrected such that habitability in these areas can be ensured subsequent to a CSA carbon dioxide discharge. In the fire shutdown design, the ASP and the East and West Switchgear Areas are assumed to remain habitable given a CSA fire and subsequent fire suppression system manual discharge.

In this document, carbon dioxide leakage to the Control Room and East and West Switchgear areas is defined as the “non-conforming condition.” This temporary modification with the associated 50.59 with a Fire Protection Review also serves as a vehicle for accepting “as-is” the “non-conforming condition” into the plant design basis per the guidance of NRC GL-91-18, Revision 1, October, 1997.

50.59 Summary

The temporary modification does not introduce undesirable system interactions, has no effect on the accident initiating events, accident mitigation, protective boundaries, radiological consequences, control room habitability design features, or the capability to achieve and maintain safe shutdown following a fire.

This 50.59 is based on the 3TRM-7.4, Fire Protection System, CSA Action Statement remaining in effect during the period this temporary modification is in place.

Docket Nos. 50-336
50-423
B18690

Enclosure 3

Millstone Nuclear Power Station, Unit Nos. 2 and 3

Annual Commitment Change Report for 2001

Commitment Changes

Commitment Number *	Original Commitment	Revised Commitment	Summary of Change
B15223-05	Personnel who perform the duties of a Unit Duty Officer will hold a Senior Reactor Operator (SRO) license or possess equivalent knowledge to an SRO and will review Unit-specific MP Technical Specifications, 10CFR21 implementation procedure, Corrective Action Program procedure, Emergency Notification and Communication Procedure, and 10CFR50.9(b), 10CFR50.72, and 10CFR50.73 reporting procedure. Completion of qualifications will be documented and demonstrated to plant management.	Personnel who perform the duties of a Duty Officer will hold a Senior Reactor Operator (SRO) license or possess equivalent knowledge to an SRO and will review Unit-specific MP Technical Specifications, 10CFR21 implementation procedure, Corrective Action Program procedure, Emergency Notification and Communication Procedure, and 10CFR50.9(b), 10CFR50.72, and 10CFR50.73 reporting procedure. Completion of qualifications will be documented and demonstrated to plant management.	<p>Removed the word "Unit" from original wording which was: "Personnel who perform the duties of a Unit Duty Officer ..."</p> <p>Unit No. 1 no longer has a duty officer. Procedures are changed to reflect the new name of Duty Officer for Units 2 and 3.</p>
B17934-01	Refueling procedures will require that one train of Spent Fuel Pool (SFP) cooling with sufficient backups be available at the commencement of a full core off-load. Due: Prior to implementation of License Amendment	Refueling procedures will require that one train of SFP cooling with sufficient backups be available at the commencement of a full core off-load. Due: January 26, 2001	Date change only. Commitment due date was originally set for December 9, 2000. Implementation of the license amendment was delayed, and commitment due date was subsequently changed to January 26, 2001.
B17934-02	Compensatory measures for restoring SFP cooling will be described in an operating procedure and will include use of a dedicated temporary power cable for the SFP cooling pumps. Due: Prior to implementation of License Amendment	Compensatory measures for restoring SFP cooling will be described in an operating procedure and will include use of a dedicated temporary power cable for the SFP cooling pumps. Due: January 26, 2001	Date change only. Commitment due date was originally set for December 9, 2000. Implementation of the License Amendment was delayed, and commitment due date was subsequently changed to January 26, 2001.

* References

Letter No.	Document Information	Subject
B15223	NU letter dated November 13, 1995 J. F. Opeka to U.S. Nuclear Regulatory Commission	Millstone Nuclear Power Station, Unit Nos. 1 and 3 Pilot Program Summary Report NEI Guidelines for Managing NRC Commitments
B17934	NU letter dated December 21, 1999 Raymond P. Necci to U.S. Nuclear Regulatory Commission	Millstone Nuclear Power Station, Unit No. 3 Request for Additional Information on Full Core Off-Load License Amendment (TAC No. MA4586)